CITIZENSHIP IN CONTEXT:
INVESTIGATING THE EFFECTS OF WORK GROUP CLIMATE ON ORGANIZATIONAL CITIZENSHIP PERCEPTIONS AND BEHAVIOR

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Business Administration)
in The University of Michigan
2010

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ACKNOWLEDGEMENTS

Although there is only one name on the cover of this dissertation, this research has truly been a collaborative effort. I consider myself lucky to have so many people to thank.

To the faculty members at the University of Michigan who composed my dissertation committee, an enormous thank you for your wisdom and flexibility, and for challenging me to push beyond what I thought possible. To my dissertation chair, Wayne Baker, you have been a source of guidance and encouragement in so many ways, beginning long before the dissertation process began and lasting through every stage thereafter. You fueled my interest in doing field research, pushed me to explore topics and settings about which I was passionate, and have always provided a balanced perspective and wise words (and a sushi lunch) when things seemed to go awry. I have so enjoyed getting to know you, and am honored to have been able to work with you. I will look back fondly on the countless times I said or thought, "What would I do without Wayne?!?" To Gretchen Spreitzer, Rich Gonzalez, and Jim Lepkowski, I have benefited greatly from your responsiveness, diversity of expertise, and insightful questions and feedback. To Gretchen, I cannot thank you enough for providing a friendly conversation and a calm voice on many occasions. To Rich and Jim, I owe my confidence in the methods and statistics used in this dissertation to you. To my entire committee, I feel lucky to have been given the opportunity to get to know each of you better through this dissertation work.

I would also like to thank the entire Management & Organizations group at the University of Michigan, as well as the many members of the broader academic community at Michigan and beyond who took an interest in me and my work, and who provided insight and inspiration along the way, particularly: Amy Wrzesniewski, Adam Grant, Sue Ashford, Jane Dutton, Jerry Davis, Jeffrey Sanchez-Burks, Kathie Sutcliffe, Lingling Zhang, Brady West, Cindy Shindledecker, Steve Pennell, Christie Brown, Ruth Blatt, Shasa Dobrow, and Jennifer Tosti-Kharas.

As well, I am extremely appreciative for the help from my contacts and friends at the organization where I collected the data for this research. In particular, Brian, Jennifer, Michelle, Tina, Todd, Neal, and Prasad, thank you for your time, curiosity, and commitment to rigor and quality at every step. I could not have completed this work without your guidance and mentorship, and I cannot envision anyone with whom I would have rather collaborated on this project. I am grateful for your generosity and patience, and look forward to many more fun and fruitful collaborations, in many forms.

This dissertation would not have been possible without generous financial support. Thank you to Karen and Paul Van Weelden for the 2008-2009 Van Weelden Award (via the Rackham Graduate School), the Rackham Graduate School for a Graduate Student Research Grant, the Ross School of Business for a Doctoral Research Grant, and the Bredar and Glauber Family Foundation for the 2009 EGEP grant.

To my friends at Michigan, who became a family, I am especially grateful. In particular, Brent Rosso, my cohort-mate, you have been a dear friend and the best project "pardner" one could ask for since the first month I arrived in Ann Arbor. To Dan Gruber, thank you for countless smiles, advice, and perspective throughout the past four years. I

have such admiration for you both and feel so fortunate to have gone through this program with you. I am thankful to so many other friends, as well, who have been a source of positivity and camaraderie during the many stages of graduate school, both in Michigan and elsewhere: Cynthia (Macht) Link, Jennifer (Eckerman) Yarger, Melissa Forbes, Zoe McLaren, Mary MacInnes, Matt Gregory, Brooke Jennett, Erica Labovitz, Thalia Lankin, Nathan Wilson, Flannery Stevens, Adam Cobb, Maria Farkas, Natalie Cotton, Marlys Christianson, John Paul Stephens, Georges Potworowski, and many more.

Finally, and most importantly, I am incredibly thankful for the love, support, and encouragement from my family. To my sister, Anne, you are a true confidante and friend, and without your care, warmth, humor, and "survival kits," I cannot imagine having completed this dissertation. You are a gift. To my parents, thank you for being wonderful role models, for your unconditional support, and for providing me with an exceptional education both at home and beyond. To my entire family – grandparents, uncles, aunts, parents, and sister – I am in awe of what you do. You continually remind me how meaningful work can be, and push me to inspire as much life, passion, and impact in my work as each of you does, or have done, with yours. Thank you for everything.

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ABSTRACT

Employees engage in countless "acts of citizenship" that benefit their organizations but may not be included in formal job descriptions. Yet, with few exceptions, scholarship on organizational citizenship behavior (OCB) has largely overlooked the context in which this behavior occurs, assuming that OCB takes the same form across work contexts and is primarily influenced by individual-level factors, such as job attitudes. This dissertation offers a new lens through which to view organizational citizenship behavior that brings the richness of the social context into focus. First, I argue that an "organizational citizen" is a type of work role that is defined and constrained by contextual factors, rather than a caricature of an individual who engages in the same set of fixed behaviors across all work contexts. I explore this theory through Study 1, a qualitative investigation of the nature and meaning of organizational citizenship in a modern, high-tech organization. Findings broadly suggest that perceptions of OCB are indeed susceptible to contextual influence, and that some existing dimensions and scales used frequently by organizational scholars to operationalize and measure OCB may not be generalizeable to all work contexts, particularly those in the knowledge economy. As well, new dimensions of OCB emerged from Study 1, such as social participation and health and well-being behavior, which may be more relevant for modern work contexts. In Study 2, I test the effects of the social context on OCB quantitatively using multilevel modeling with 543 employees from 118 work groups. This investigation specifically examines the effects of a work group's citizenship climate – characterized by the

dimensions of group trust, fairness, cooperative norms, autonomy, and perceived opportunities for activities outside core job requirements – on OCB as rated by peers and managers. Findings indicate that the salient, proximal context in which OCB is embedded – the work group – has a direct effect on individual citizenship behavior; however, this effect is complex. While higher group mean levels of some citizenship climate dimensions were positively associated with OCB, greater dispersion of perceptions within the work group about such dimensions was also associated with more OCB in some cases. Together, these results suggest that multiple mechanisms, ranging from communal exchange schemas to role uncertainty to the perceived risk of engaging in OCB, underlie relations between the work group citizenship climate and individual OCB. Lastly, I test the effects of OCB on individual performance evaluations. Contrary to prior studies, findings did not show a strong relationship between these two variables. Rather, findings from Studies 1 and 2 together suggest that new forms of OCB may have a stronger effect in aggregate on more macro-level performance outcomes (e.g., organizational innovation), than they do on individual-level performance.

In summary, this dissertation contributes to the rich body of research on organizational citizenship behavior by examining numerous ways in which the social context may influence the nature and meaning of OCB, the extent to which individuals engage in these behaviors, and the subsequent ways in which OCB in a given context impacts organizational performance. As such, it has important implications for the future study of OCB and for the practices that employees and managers adopt to cultivate the appropriate type and level of OCB in their work groups.

PART I

THEORETICAL AND EMPIRICAL FOUNDATIONS

CHAPTER I

INTRODUCTION

> "No organizational planning can foresee all contingencies within its own operations, can anticipate with perfect accuracy all environmental changes, or can control perfectly all human variability… An organization which depends solely upon its blueprint of prescribed behavior is a very fragile social system" (Katz & Kahn, 1966, p. 338)

People do many things at work that are good for their organizations, but are not specified in formal job descriptions. Indeed, as the quote above indicates, organizations rely on employees' willingness to engage in such activities, even though they may not be explicitly rewarded (Katz, 1964; Katz & Kahn, 1966). Many terms have been coined to describe this category of behavior, such as cooperation (Barnard, 1938), extra-role behavior (Katz, 1964; Van Dyne, Cummings, & McLean Parks, 1995), spontaneous behavior (Katz & Kahn, 1966), prosocial organizational behavior (Brief & Motowidlo, 1986), organizational spontaneity (George & Brief, 1992), contextual performance (Borman & Motowidlo, 1997), and others. However, most scholars refer to this category of behavior as "organizational citizenship behavior" (OCB; Bateman & Organ, 1983; Organ, 1988; Smith, Organ, & Near, 1983), and to the people who engage in it as "organizational citizens" or "good soldiers" (Organ, 1988).[1]

[1] For the sake of parsimony and given convergence in the literature around the OCB construct, all activities that have been categorized as OCB or as a similar construct (e.g., organizational spontaneity, prosocial organizational behavior, etc.) will be referred to in this dissertation as "citizenship behavior" or "OCB."

Historically defined as "behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988, p. 4), OCB has become one of the more widely-studied topics in the field of organizational behavior (N. P. Podsakoff, Whiting, Podsakoff, & Blume, 2009; Vigoda-Gadot, 2007).[2] The intrigue with this topic is likely due to at least two reasons. First, citizenship behavior and positive outcomes tend to go hand-in-hand. Many studies have shown that OCB is positively related to performance, one of the most sought-after outcomes in the organizational studies literature, at the individual, unit, and organizational levels of analysis (Ehrhart, Bliese, & Thomas, 2006; N. P. Podsakoff et al., 2009; P. M. Podsakoff et al., 2000). In addition, OCB is purported to contribute to a healthier and more positive work environment (Organ, 1988; Organ & Ryan, 1995). Secondly, OCB presents an enticing intellectual challenge for scholars: because these behaviors are typically not included in job descriptions or official company policy, they can easily go unnoticed, undefined, and unmeasured. As a result, scholars have been tempted to uncover and understand these "other" kinds of behaviors, and to develop theories that explain the processes through which they contribute to individual and company success. Thus, for both practical and theoretical reasons, OCB has become a topic of great interest.

Since the development of the construct, scholars and practitioners alike have paid most attention to understanding the antecedents of citizenship (Morrison, 1996; Parker, 1998; N. P. Podsakoff et al., 2009; Schneider, 1990). Particularly given the increasingly demanding nature of modern work (Green, 2006; Hewlett & Luce, 2006), there is interest

[2] In line with the definition of OCB, the focus of the present research is only on activities that are thought to have a positive impact on the organization. For research on discretionary employee behavior that is detrimental to the organization, see research on "organizational misbehavior" (Vardi & Weitz, 2004).

in understanding when and why employees will engage in these types of unanticipated and discretionary activities, even despite increasingly complex core job tasks and long work hours. To date, most scholars have looked to micro-level individual differences in such things as personality traits or job attitudes to explain why people engage in different levels of citizenship (Bateman & Organ, 1983; Blakely, Andrews, & Fuller, 2003; Blatt, 2008; George & Brief, 1992; Kwantes, Karam, Kuo, & Towson, 2008; Morrison, 1994; Organ, 1994; Organ, Podsakoff, & MacKenzie, 2006; Organ & Ryan, 1995; Smith et al., 1983). These existing studies have shed light on important dispositional and attitudinal factors contributing to OCB and have helped build a foundation for this body of literature; however, the strong focus the individual level of analysis has left the field with a limited view of citizenship behavior. The field lacks a thorough understanding of the variables and processes occurring at more macro-level levels in the social environment that may change the nature and meaning of organizational citizenship across different settings, or influence individuals to engage in OCB.

Given the proven effects of social context on individual perceptions and behavior (Bandura, 1977, 1986; Graen, 1976; Mead, 1934; Schneider, 1975), a thorough examination of the effect of the work context on employee perceptions of and engagement in citizenship behavior is overdue. The goal of this dissertation is to begin addressing this gap in our understanding. It presents a new lens through which to conceptualize organizational citizenship, taking the richness of the work context into consideration. By linking research on organizational climates (Schneider, 1975), work group processes (Hackman, 1992; Kozlowski & Bell, 2003), and role theory (Biddle & Thomas, 1966; Graen, 1976; Linton, 1936; Mead, 1934; Moreno, 1953), I suggest that

the context in which the work occurs – operationalized through the "citizenship climate" construct (Schneider, 1975; Schneider, Gunnarson, & Niles-Jolly, 1994) – will have a systematic effect on employees' perceptions of what it means to play the role of a "good citizen" in a particular context, as well as the type and level of OCB that they display.

This dissertation is organized into four parts, each of which contains individual chapters. Part I includes Chapters I through IV, and presents the broad theoretical foundations upon which the dissertation is based, as well as a summary of the multi-method research design and the site at which the research was conducted. Specifically, in Chapter II I review the literature on organizational citizenship behavior, including the history of the construct, existing research, and potential limitations to the way this topic has been studied to date. In Chapter III, I offer an updated theory of citizenship that draws on role theory (Biddle, 1979; Biddle & Thomas, 1966; Graen, 1976; Mead, 1934) and propose hypotheses about the multilevel relationships between citizenship climate, citizenship behavior, and individual performance. In Chapter IV I provide an overview of the overall research design and research site. Part II includes Chapters V and VI, and presents the methods, analyses, and results of Study 1, a qualitative study exploring the nature of citizenship in different work contexts within a modern organization in the high-tech industry. Specifically, Chapter V presents the study design and methods for Study 1, and Chapter VI reviews the analyses and findings for this study. Part III includes Chapters VII and VIII, and presents the methods, analyses, and results of Study 2, a quantitative study utilizing survey methods, through which I test hypotheses. Specifically, Chapter VII presents the study design and methods for Study 2, and Chapter VIII reviews the analyses and results of this study. Lastly, Part IV is composed only of

Chapter IX, which offers a discussion of the main contributions of this dissertation to the organizational literature, implications for managers, directions for future research, and concluding remarks.

CHAPTER II

LITERATURE REVIEW

The body of literature on organizational citizenship behavior has contributed much to the field of organizational behavior despite its relatively short history. In this chapter, I review the existing literature on OCB, beginning with the origin and history of the construct as well as the main dimensions that have been identified, operationalized, and tested to date. Then, I review the literature on the antecedents and outcomes of citizenship behavior. Finally, I discuss some of the main limitations I see in how this topic has been studied, as well as how this dissertation takes a step toward filling these gaps.

Organizational Citizenship Behavior: A History of the Construct

The notion of "organizational citizenship" behavior was first introduced to the literature and pioneered primarily by Organ and colleagues (Bateman & Organ, 1983; Organ, 1977, 1988; Smith et al., 1983). These authors offered the construct as a way to explain the apparent lack of empirical relationship between job satisfaction and core job performance (Bateman & Organ, 1983; Organ, 1977). In response to years of findings demonstrating only a low to moderate relationship between these two constructs, Organ and colleagues proposed that scholars had been measuring the wrong kind of performance; they argued that a stronger link between job satisfaction and performance should arise when performance was operationalized using behaviors falling outside

employees' core jobs, since employees have more control over these types of activities and will therefore engage in them – or withhold them – more readily based on job attitudes (Organ, 1990).

Now, decades of research on OCB would suggest this hypothesis was accurate. Scholars have concluded that the true correlation between job satisfaction and job performance is approximately .30 (Judge, Thoresen, Bono, & Patton, 2001), while the relationship between job satisfaction and OCB is estimated to be stronger, approximately .44 (Organ, Podsakoff, & MacKenzie, 2006). These initial findings caught the attention of the field, given scholars' desire to understand and explain performance, and sparked a rich research stream. A recent review found that over 650 articles have been published on OCB since Organ and colleagues introduced the term in the early 1980s (N. P. Podsakoff et al., 2009).

What is OCB? A Review of Common Dimensions

After Organ and colleagues (Bateman & Organ, 1983; Organ, 1977) initially conceptualized the OCB construct, early research used qualitative methods to identify the types of activities that comprised organizational citizenship behavior. Through interviews, supervisors at a manufacturing company were asked to describe instances of "helpful, but not absolutely required, job behavior" (Smith et al., 1983, p. 656); in other words, things they like their employees to do, but that they cannot explicitly enforce, and for which they cannot promise any tangible rewards (Organ, 1997). Through this study and others using similar methods, five main categories of OCB were proposed by Organ (1988) and continue to be the most commonly tested dimensions in modern research: altruism, conscientiousness, sportsmanship, courtesy, and civic virtue (P. M. Podsakoff,

MacKenzie, Moorman, & Fetter, 1990). Altruism is defined as "all discretionary behaviors that have the effect of helping a specific other person with an organizationally relevant task or problem" (Organ, 1988, p. 8). Conscientiousness involves going "far beyond the minimum necessary" on job role requirements (George & Brief, 1992, p. 312; Organ, 1988). Sportsmanship is defined as the avoidance of "complaining, petty grievances, railing against real or imagined slights, and making federal cases out of small potatoes" (Organ, 1988, p. 11). Courtesy entails "touching base with those parties whose work would be affected by one's decisions or commitments" (Organ, p. 12). Finally, civic virtue behavior involves participating responsibly in the political life of the organization such as through attending meetings, giving personal time to issues, and voicing concerns (George & Brief, 1992; Graham, 1991).

As the body of research on OCB has grown, scholars have proposed numerous other dimensions beyond the original five categories described above. In a recent review of the literature, Organ and colleagues (2006) counted more than 25 dimensions of OCB, including such new categories as loyal boosterism (Graham, 1986; Moorman & Blakely, 1995), cheerleading (P. M. Podsakoff & MacKenzie, 1994), and self-development (George & Brief, 1992; George & Jones, 1997).[3] Yet, despite the introduction of new dimensions of OCB over the years, most research has still tended to operationalize the construct using the original five categories, or a subset thereof (Organ, 2006), by using the survey items developed and tested by Podsakoff and colleagues (1990). For the sake of developing a more parsimonious and unified research stream, Organ and colleagues (2006) proposed grouping the 25 dimensions into seven overarching categories of OCB:

[3] See Appendix A for full list of dimensions identified by Organ and colleagues (2006), and associated survey items used to operationalize and measure each construct.

helping (which includes altruism, courtesy, cheerleading, and peacemaking); sportsmanship; organizational loyalty; organizational compliance; individual initiative; civic virtue; and self-development (Organ et al., 2006).

Citizenship Perceptions: Moving Beyond a Fixed View of the OCB Construct

As discussed above, scholars have expended great effort attempting to identify all the dimensions of OCB that may exist. However, in doing so, many have acknowledged the inherent difficulty in identifying and measuring citizenship behavior due to the need to make judgment calls about what activities constitute in-role versus extra-role behavior (e.g., see Graham, 1991; or the final chapter of Organ, 1988). Although a typology of OCB categories helps scholars organize the literature and grow a robust stream of research, putting forth any typology of OCB – whether it contains 5 or 25 dimensions – makes the assumption that there exists some objective conceptualization of citizenship, and that OCB should "look" the same across people and contexts even if measurement is difficult. For instance, it suggests that the nature and meaning of organizational citizenship behavior is the same in different work environments. Organ and colleagues (2006) raise the possibility that perceptions and manifestations of certain dimensions of citizenship might differ across contexts (p. 311); however, this possibility is articulated more as a problem for scholars trying to hone in on the most comprehensive typology, rather than as an empirical research question.

To the extent that scholars would use a typology of OCB categories as a menu of options and select certain dimensions based on which are most relevant in a given research setting, this approach may be worthwhile. Yet, based on my review of the literature and comments by Organ and colleagues (2006), most scholars select the five

main categories described previously, or a subset thereof, regardless of research context. Therefore, although a typology of OCB is useful, I review literature below that suggests scholars should question its universality, and should more carefully consider which dimensions are relevant in a given research site before proceeding with operationalization and hypothesis testing.

Perceptions of Citizenship across Individuals

One reason why a universal typology of OCB may not exist is the possibility that perceptions of citizenship differ across individuals. Morrison (1994) was the first to pose this question, and argued that different individuals would classify behaviors differently (e.g., as "in-role" or "extra-role," based on whether they perceive the activity as being within the boundaries of their jobs or outside of it). In an influential study, she found that employees do differ in their conceptualizations of OCB, with many employees seeing some of "OCB-like" activities as residing within the boundaries of their jobs. In discussing this phenomenon, Morrison introduced the construct of perceived job breadth, defined as the cognitive boundary where employees "draw the line between in-role and extra-role behavior" (1994, p. 1544). She showed that not only do employees and their supervisors often differ in their perceptions of job breadth, but that depending on certain variables, employees with the same job descriptions may also perceive the breadth of their jobs differently. For instance, those with higher levels of job satisfaction and organizational commitment tend to perceive their jobs more broadly, as do those with shorter organizational tenure. Acknowledging differences in perceived job breadth is not only interesting theoretically, but it is practically important, since Morrison (1994) found that employees who define their jobs more broadly actually engage in more activities

historically defined as OCB (e.g., helping, etc.), arguing that when individuals believe they will obtain valued rewards for a particular activity, they will have more motivation to engage in it (Morrison, 1994).

Morrison's (1994) introduction of the perceived job breadth construct spawned a lively stream of research on employees' cognitive perceptions of job and role breadth, and their implications for OCB and other important outcomes, such as job performance (e.g., Bachrach & Jex, 2000; Morgeson, Delaney-Klinger, & Hemingway, 2005). This growing body of literature includes constructs similar to perceived job breadth, such as flexible role orientations (Parker, 2000; Parker, Wall, & Jackson, 1997) and in-role citizenship orientations (Vey & Campbell, 2004), each of which measures the breadth of activities that employees perceive to be within their work roles, but in different ways.

Due to these criticisms of the original conceptualization of OCB (e.g., the notion that job boundaries are subject to employee interpretation) and the desire to resolve minute differences between the constructs in the nomological net (e.g., prosocial organization behavior, contextual performance, etc.), Organ (1997) modified the definition of OCB to include any activity that "supports the social and psychological environment in which task performance takes place (Organ, 1997, p. 95). By doing so he eliminated the necessity for these behaviors to be discretionary (i.e., extra-role), but maintained that OCBs are less likely to be seen as required and rewarded than are more traditional core job activities. However, while this modification to the definition of OCB was published more than a decade ago, most researchers still conceptualize OCB as those behaviors falling outside the scope of one's job, and use the original definition of OCB in empirical work (cf. Coyle-Shapiro, Kessler, & Purcell, 2004).

Perceptions of Citizenship across Contexts

The research discussed above indicates that different individuals may perceive OCB-like behaviors in different ways. As well, scholars have suggested that people in different contexts may have systematically different conceptualizations of citizenship due to situational mechanisms. Context is defined in the organizational behavior literature as "the surroundings associated with phenomena which help to illuminate that [sic] phenomena, typically factors associated with units of analysis above those expressly under investigation" (Cappelli & Sherer, 1991, p. 56). Thus, internal organizational characteristics provide a context for individual members, and the external environment provides a context for organizations (Johns, 2006). Despite the broad acknowledgement of the important effects of one's work context on the meaning and type of behavior that occurs within it (Barley & Kunda, 2001; Graen, 1976; Salancik & Pfeffer, 1978), the impact of context on perceptions of the nature of OCB is surprisingly underexplored.

Some recent studies (e.g., A. Cohen, 2007; Farh, Earley, & Lin, 1997; Farh, Zhong, & Organ, 2004; Kwantes et al., 2008; Lam, Hui, & Law, 1999) have started to develop theory about the different ways citizenship is construed in different contexts. Indeed, emerging empirical research has found that there are systematic differences in how people perceive OCB across international boundaries (e.g., in US vs. China; Farh et al., 2004; Lam et al., 1999), or amongst people socialized in different cultural viewpoints (Kwantes et al., 2008). However, in these studies scholars have operationalized the "context" at the individual level, such as by using demographic variables to represent individuals' national or societal cultures (Euwema, Wendt, & Van Emmerik, 2007; Farh, Zhong, & Organ, 2004), categorical variables capturing the type of organization to which they belong (e.g., state-owned or privately-owned; see Farh et al., 2004), or self-reports

of personal cultural values or beliefs (Cohen, 2007; Kwantes et al., 2008). Although these studies raise important questions about the impact of context on citizenship perceptions, they fail to operationalize the contextual variable at the appropriate level of analysis (Kozlowski & Klein, 2000), thus inferring the influence of context on perceptions of citizenship while possibly measuring something else (Brockner, 2005; Lawrence, 1997). As well, scholars have not specifically examined the social context, namely the practices, decisions, and norms resulting from social activity and interaction within a given context, on citizenship perceptions and behavior.

Outcomes and Antecedents of OCB

Scholars have examined numerous antecedents and outcomes of OCB, which are presented below. I begin by reviewing the outcomes, given that the case for continued research on OCB has often been based on its association with outcomes of interest, namely performance. Following that, I review the main antecedents identified to date.

Outcomes of Organizational Citizenship Behavior

Performance (and Other Positive Outcomes). The study of OCB originated from an interest in better explaining factors that contribute to employee performance (Bateman & Organ, 1983). Since then, performance has remained the main outcome variable studied in this literature, at multiple levels of analysis (Ehrhart, Bliese, & Thomas, 2006; N. P. Podsakoff et al., 2009). With few exceptions, scholars have consistently found positive relationships between the two constructs, and have proposed numerous reasons to explain them. For example, at the individual level, scholars often argue that the positive relationship between OCB and performance is a result of the implicit inclusion of OCB in performance evaluations; therefore, people who engage in

OCB tend to be rewarded with better evaluations, even when these behaviors are not explicitly included in job descriptions or directly evaluated (MacKenzie, Podsakoff, & Fetter, 1991). At the macro level, authors have argued that OCB contributes to the development of social capital (Bolino, Turnley, & Bloodgood, 2002), which facilitates individual and organizational functioning and improves performance through improved knowledge-sharing and innovation (Burt, 1992).

Beyond performance, scholars have also linked OCB to an array of other positive outcomes. For instance, studies have found that higher individual-level OCB is associated with greater rewards, promotions, and ratings of management potential (Shore, Barksdale, & Shore, 1995; Van Scotter, Motowidlo, & Cross, 2000). Furthermore, scholars have theorized that the established positive outcomes may facilitate additional future success for people who engage in more OCB, such as the selection for higher profile projects, minimized risk of being laid off, or better relationships with coworkers and supervisors (Organ et al., 2006). At higher levels of analysis, scholars have theorized that by "'lubricating' the social machinery" (Organ et al., 2006, p. 199), OCB may enhance managerial productivity, free up resources for more productive purposes, help coordination processes between coworkers, or even attract and retain better employees by making the organization a more attractive place to work (Organ et al., 2006).

The "Darker" Sides of OCB. Although the positive outcomes of OCB have received most of the scholarly attention, the acknowledgement that OCB-like behaviors may not be perceived as discretionary by all employees spawned a stream of research exploring some potential "dark sides" of this behavior. Three main streams of research have addressed this. The first, pioneered by Bolino and colleagues (e.g., Bolino, 1999;

Bolino, Varela, Bande, & Turnley, 2006), examines the varied motivations for engaging in OCB, calling particular attention to the possibility that OCB-like behaviors may be undertaken for self-serving reasons. Drawing on the impression management literature, these authors suggest that citizenship and impression management behavior often "look" the same, and therefore employees may engage in these behaviors primarily for personal gain rather than for the benefit of their organization (Bolino, 1999). Indeed, they find that when self-serving motives are ascribed by observers to the actor (e.g., people can see through their apparent "good soldier" behavior), the positive relationship between OCB and performance evaluations is diminished (Bolino, 1999; Bolino et al., 2006).

The second emerging stream of research examines the costs of excessive levels of OCB to individuals and organizations. Focusing on the potentially deleterious effects on individuals, Bolino and Turnley (2005) find that employees engaging in particularly high levels of OCB are more likely to experience overload, job stress, and work-family conflict. The authors note that as organizations expect more and more from employees, these results may become more pronounced. At a more macro level, the same authors (2003) warn that it may be counterproductive for organizations to expect employees to engage in "escalating" (p. 70) levels of OCB for two main reasons: employees may begin neglecting core job responsibilities, and employees may develop competitive tendencies surrounding who can engage in the most OCB, leading to a less cooperative work environment at the aggregate level.

The third stream of research on the potential dark sides of citizenship focuses on "compulsory citizenship behavior" or "CCB" (Vigoda-Gadot, 2006, 2007). Focusing primarily on the effects of abusive supervisors, Vigoda-Gadot's (2006, 2007) research

suggests that in the presence of such supervisors (e.g., those demanding employees to engage in certain types of OCB-like behaviors, such as helping), activities that employees or scholars have previously characterized as acts of citizenship, or more discretionary, become implicitly regulated by managers and thus perceived as compulsory by employees. Rather than contributing to a more productive organization, which is a central component of the very definition of OCB (Organ, 1997), Vigoda-Gadot's (2007) results parallel Bolino and Turnley's (2005), indicating that CCB is associated with more employee stress, organizational politics, intentions to leave the organization, negligent behavior, and burnout. Furthermore, CCB was negatively related to employee innovation, job satisfaction, and core job performance.

In tandem, these emerging streams of research suggest that there may be a threshold at which organizations or managers could encourage, reward, or even enforce so much "citizenship" behavior that it no longer produces positive results, thus becoming a qualitatively different phenomenon from the original concept of OCB.

Antecedents of Organizational Citizenship Behavior

It is not surprising, given that most research finds a strong positive relationship between OCB and performance (N. P. Podsakoff et al., 2009), that much scholarship has examined its antecedents. Scholars and practitioners want to know what prompts employees to take action and go "above and beyond" for their organizations. Not unlike scholars investigating the antecedents of citizenship perceptions, discussed previously, scholars studying citizenship behavior have also tended to remain rooted in the psychological tradition by examining mostly individual-level antecedents (Kwantes, Karam, Kuo, & Towson, 2008). To date, dispositional characteristics (e.g., self-

monitoring, conscientiousness) and work-related attitudes and beliefs (e.g., job satisfaction, organizational commitment, perceived organizational and leader support), have been identified as key predictors of OCB (Bateman & Organ, 1983; Blakely, Andrews, & Fuller, 2003; George & Brief, 1992; Morrison, 1994; Organ, 1994; Organ et al., 2006; Organ & Ryan, 1995; Smith et al., 1983). Why do these individual characteristics influence citizenship behavior? On the whole, researchers implicate mechanisms of exchange (Blau, 1964) and equity (Adams, 1965), suggesting that when employees believe they are treated fairly by others or their organizations, they will feel compelled to reciprocate and offer something in exchange (Stamper & Van Dyne, 2001).

The strong focus on individual-level antecedents has prompted calls in the field for a rigorous empirical investigation of the influence of social context on both perceptions of and engagement in citizenship (Ehrhart, 2004; George & Jones, 1997; Schneider et al., 1994). Recent studies have started to answer this call (e.g., Kidwell Jr., Mossholder, & Bennett, 1997), the majority assessing the influence of one type of context – that of a "procedural justice climate" – on OCB (Ehrhart, 2004; Lin, Tang, Li, Wu, & Lin, 2007; D. M. Mayer, Nishii, Schneider, & Goldstein, 2007; Naumann & Bennett, 2000). Procedural justice climate is defined as "a distinct group-level cognition about how a work group as a whole is treated" (Naumann & Bennett, 2000, p. 882). Scholars examining the effect of procedural justice climate on OCB operationalize the contextual variable at the group level of analysis, which is methodologically appropriate. However, these theories are still primarily driven by the psychological mechanisms of equity and exchange (Adams, 1965; Blau, 1964), rather than more socially-driven mechanisms such

as social information processing (Salancik & Pfeffer, 1978), social learning (Bandura, 1977), or normative pressure (Thibaut & Kelley, 1959).

Psychological mechanisms underlying the relationship between context and citizenship behavior should not be discounted. They offer key insights, and a thorough understanding of organizational citizenship should take into account a variety of mechanisms, ranging from those at the individual level to those at higher levels of analysis. However, psychological accounts of citizenship behavior are over-represented in the literature at present. In the next chapter I elaborate on existing theory and propose hypotheses to explain OCB using processes that more directly implicate the social context.

CHAPTER III

A NEW LENS ON CITIZENSHIP: INCORPORATING THE SOCIAL CONTEXT

The notion that the social environment can have an enormous impact on how people interpret aspects of their work, as well as how they do their work, is not new (Blumer, 1969; Cappelli & Sherer, 1991; Johns, 2006; Mead, 1934; Parsons, 1951; Salancik & Pfeffer, 1978; Schneider, 1975; Wrzesniewski, Dutton, & Debebe, 2003). Yet, despite the prevalence of the OCB construct in the organizational literature and the regularity with which scholars administer the existing OCB scales, the influence of the social environment on citizenship perceptions and behavior is still surprisingly underexplored (Farh et al., 2004; Kwantes et al., 2008). Not only is this relationship important to explore for the advancement of this body of scholarship, but it has significant practical applications as well; if citizenship behavior is the product of contextual influences, managers seeking to moderate the levels of citizenship behavior in their organizations would take different measures than if citizenship is mostly driven by individual characteristics.

As job descriptions become increasingly vague (Bridges, 1994) and employees are expected to engage in broader and more emergent work roles (L. E. Davis & Wacker, 1987; Parker, 2000), the conceptualization of an "organizational citizen" as someone who simply engages in activities beyond some hypothesized, formal boundary of their prescribed job seems antiquated. One wonders how employees in this new world of work

define the bounds of “expected” versus “discretionary” behavior given such fluid job roles. While this shift poses important questions about how OCB is conceptualized in modern times, it would be bold to suggest that these recent changes in the nature of work are the first or only example of an instance where accepted conceptualizations of citizenship may not apply. Rather, these trends may simply offer a new context in which to conceptualize citizenship. In light of this, one wonders why scholars have not considered how the context within which work is conducted may have always influenced the nature and engagement in organizational citizenship behavior.

The Role of an Organizational Citizen

At present, an organizational citizen is conceptualized as an individual who engages in a set of fixed behaviors (e.g., activities composing the altruism, conscientiousness scales, etc.) that are consistent across different work contexts. In this way, OCBs are akin to personality traits that individuals carry with them from one work environment to the next. To investigate the influence of the social context on citizenship, I posit that it is first necessary to reconceptualize the notion of an organizational citizen from a person who carries this fixed set of behaviors with him or her across contexts, to someone who enacts the role of an organizational citizen differently depending on the context he or she is in.

As such, I propose drawing on the role theory. Role theory aims to explain patterns of human behavior (Biddle & Thomas, 1966) and has a long and rich tradition in sociology, influenced particularly by the work of Mead (1934), Moreno (1953/1934), Linton (1936), Merton (1949), Parsons (1951), and Biddle and colleagues (1966; 1979; 1986). A role is a pattern of behaviors "characteristic of one or more persons in a

context" (Biddle, 1979, p. 58) and is based on expectations and norms within this context of occupants of the role. For instance, the role of a father or teacher may be different in different social contexts. Many role theorists invoke a theatrical metaphor to explain the central tenets of the theory, explaining that roles in social systems are not unlike roles in a play: performances by different actors in the same role tend to be similar, given that each actor has the same script, the same instructions from the director, and similar reactions from the audience (Biddle, 1986; Biddle & Thomas, 1966). Likewise, people in society occupy certain positions (e.g., father, teacher), and their "role performance" (Biddle, 1966, p. 4) in these positions is influenced by many factors, including social norms and demands, role performances of others, reactions from observers, and the individual's own skills and personality. Biddle (1966) says that, "in essence, the role perspective assumes, as does the theater, that [individual] performance results from the social prescriptions and behavior of others, and that individual variations in performance, to the extent that they do occur, are expressed within the framework created by these factors" (p. 4). Thus, the context both enables and constrains role-specific behavior. Unlike the conceptualization of an individual engaging in a fixed set of behaviors irrespective of his or her context, a role-based view sees the individual's behavior as a product of the person and the situation.

In organizational environments, formal roles are often linked to particular positions in the organizational hierarchy, and are generated by expectations of occupants in that position (Graen, 1976, p. 1201; Gross, Mason, & McEachern, 1958; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). These expectations typically reflect official organizational policy as well as normative pressure from informal groups (Biddle, 1986);

Biddle and Thomas (1966) note that some roles are overt and prescribed, while others are more emergent or inferred (p. 31). Therefore, even job roles that seem most formalized can be interpreted or enacted in different ways. As well, although employees are typically hired for a specific "core" job role, they may play numerous informal roles within their organization (e.g., mentor, leader, subject matter expert, or even office "gossip").

I posit that role theory has important implications for the conceptualization of organizational citizens, as well. Rather than using the boundary of one's job as the threshold for categorizing a particular behavior as a form of citizenship, as most other scholars have done, I argue that it may be more realistic to conceptualize an "organizational citizen" as a type of role that some employees enact. Using Organ's (1997) definition of citizenship, I argue that the role of an organizational citizen is likely to be less overt or prescribed than that of a core job role. However, since all roles are socially constructed (Biddle, 1979; Biddle & Thomas, 1966; Graen, 1976; Mead, 1934), the role of an organizational citizen will still be subject to expectations. Depending on the particular context within which the role is situated, different expectations will be imposed on occupants of the role, and therefore the role will include different behaviors in different contexts. For example, an organizational citizen in a traditional manufacturing organization may be someone who always reports promptly for his/her shift (Smith et al., 1983; Van Dyne, Graham, & Dienesch, 1994), whereas arriving at work at a particular time may be irrelevant in virtual work environments. Likewise, in a knowledge-based organization, constructively challenging the ideas of coworkers may be a characteristic of an organizational citizen since this behavior has been linked to improved innovation and creativity (Amabile, 1996); however, this behavior may be counterproductive in an

organization that relies on adherence to rules and a strict chain of command, such as the military. Therefore, the specific behaviors comprising the role of an organizational citizen should differ between contexts.

If the nature of citizenship behavior differs by context, how do employees know what constitutes OCB in their work setting? Given that citizenship expectations are unlikely to be documented or prescribed (Organ, 1997), they will be more ambiguous than expectations of core job roles. Therefore, employees will need to look to cues in the work environment to understand "what a good citizen looks like *here*." Although all work roles are socially constructed (Graen, 1976) and individuals reduce uncertainty about such roles and expectations through social interactions (Salancik & Pfeffer, 1978), the social environment in which one works may become particularly important for employees in understanding the role of a good citizen than for interpreting expectations for their core job role, given fewer explicit guidelines.

In addition to changing the way scholars view organizational citizenship theoretically, a role-based theory of citizenship has important practical implications for the study of OCB. By assuming that citizen roles are socially constructed, this approach necessitates that scholars question and test the nature of citizenship in situ before testing hypotheses, to ensure citizenship is operationalized accurately in a given setting. The dangers of assuming that citizenship "looks" the same across contexts are well-illustrated by examining some of the survey items that have been commonly used to measure OCB in the past. One commonly-used item asks participants to assess the degree to which their "attendance at work is above the norm" (P. M. Podsakoff et al., 1990); a high score is thought to indicate a higher degree of citizenship behavior. Although this is one of the

most common items used to operationalize the "conscientiousness" dimension of citizenship, it is unlikely to capture the localized notion of citizenship in modern companies that offer flexible working arrangements such as telecommuting or job-sharing, given that employees may not be expected to go to the workplace every day. Likewise, for organizations keen on promoting creativity and innovation, an employee who "does not take extra breaks" (Smith et al., 1983) may not be considered a better organizational citizen, given that taking breaks may allow for more positive affect and thus more disparate associations between ideas, both of which have been linked to higher levels of creativity (Amabile, Barsade, Mueller, & Staw, 2005).

Undoubtedly, certain dimensions of citizenship will be more generalizeable across contexts than others; however, the above examples are just a few that illustrate why it is necessary to understand the nature and meaning of citizenship in a given context before automatically using existing dimensions and survey items to operationalize the construct and test hypotheses. While the characterization of an organizational citizen and the measurement instruments used to assess OCB may have been relevant in previous research, they may not be relevant in all eras or contexts.

Contextual Influence on Organizational Citizenship Role Perceptions and Behavior

Using the role-based conceptualization of an organizational citizen, one might ask which social factors will influence citizenship role perceptions and behaviors, and what mechanisms underlie these relationships. As discussed in the previous section, roles tend to be determined by expectations and norms (Biddle, 1979). Recent theoretical work in the OCB literature has begun to suggest that group norms may have an influence on perceptions of and engagement in citizenship behavior (Ehrhart & Naumann, 2004;

George & Jones, 1997), but these theories have yet to be tested. Below, I build on these theories to propose hypotheses about multilevel relationships between these variables.

Social Interaction and Citizenship Perceptions

A well-established literature on symbolic interactionism in sociology suggests that people take action based on the meaning they ascribe to various things in their environment, and that these meanings are derived from social interactions (Mead, 1934). As people observe and interact with others, they interpret one another's behavior, constantly modifying the meaning of their environment, and their resulting actions. Likewise, social interaction and the social environment at work will influence individuals' work-related behavior indirectly by giving individuals cues about the meaning of various aspects of the work environment (Wrzesniewski et al., 2003) and what is appropriate behavior for a given role in a given context (Blumer, 1969; Salancik & Pfeffer, 1978). In this way, individuals' perceptions of various aspects of the work environment (e.g., the role of an organizational citizen) will develop through meaning-making processes, which are derived through social interactions.

Consistent with these assertions, I propose that the nature and meaning of citizenship will be based on individuals' interactions and observations of their social environment. Therefore, the nature of citizenship is unlikely to be the same across all work environments (e.g., sportsmanship may not be perceived as a type of OCB in every context). Other scholars have applied this logic to suggest differences in citizenship perceptions across national cultures (Farh et al., 2004; Kwantes et al., 2008); however, I argue that even by examining far more micro-level contexts, such as different contexts within the same organization, differences in citizenship perceptions should be visible. For

instance, if a newcomer in one part of an organization observes coworkers regularly offering to help one another, he might come to believe that offering to help others is an expected part of his core job role; conversely, a newcomer to a different work group that does not observe such helping behavior might determine that helping is more discretionary, and therefore an act of citizenship (Bommer, Dierdorff, & Rubin, 2007). Likewise, if a newcomer takes part in playful activities or informal conversations with coworkers and supervisors he may come to believe these activities are condoned by supervisors and therefore good for the work environment, subsequently interpreting them as acts of citizenship rather than a waste of time. Based on this premise, I propose the following:

> **Hypothesis 1:** Employees' perceptions of the behaviors that characterize "organizational citizenship behavior" will vary by work context.

Work Groups as Salient Social Contexts

If the social context acts as such a resource to employees in interpreting experiences and behavior at work, it is important to identify the particular level of context (e.g., group, business unit, organization, etc.) that is most relevant to citizenship perceptions and behavior. Salancik and Pfeffer (1978) argue that the extent to which cues and information are more salient to individuals, they will have greater influence on individuals' beliefs and attitudes. For this reason, it makes sense to choose the most salient context within which individuals receive cues to conduct research on the influence of the social environment on organizational citizenship perceptions and behavior.

Research suggests that for individuals working in organizations, the immediate work group is the most prominent or salient social context (Hackman, 1992; Kozlowski

& Bell, 2003). Drawing on Alderfer's (1977) definition of a group, a work group is defined as a collection of individuals within a work organization:

> (1) who have significantly interdependent relations with each other, (2) who perceive themselves as a group, reliably distinguishing members from nonmembers, (3) whose group identity is recognized by nonmembers, (4) who, as group members acting alone or in concert, have significantly interdependent relations with other groups, (5) whose roles in the group are ... a function of expectations from themselves, from other group members, and from non-group members" (p. 230).

Work groups within organizations are often defined by the supervisor to which the group members report, since these individuals tend to work interdependently, and are easily distinguished as a group due to their similar reporting relationships (George, 1990). Work groups are typically nested within larger entities (e.g., business units), within organizations, and the influence of the macro-level entities tends to be filtered through work groups (Hackman, 1992).

Members of the same work group are exposed to many of the same environmental stimuli, such as policies, work group practices, supervisors, physical spaces, and events (Hackman, 1992; Naumann & Bennett, 2000). As well, work group members interact regularly, prompting strong socialization influences on one another (Ostroff & Kozlowski, 1992). Due to these common, unavoidable influences and interactions, work group members tend to develop shared meanings, which characterize their beliefs and accumulated knowledge about practices and norms (e.g., related to the organization, job duties, etc.) (Hackman, 1992; Mead, 1934), resulting in a convergence of work group members' beliefs and behavior over time (Schneider, 1975). Given the proximity of group-level stimuli to the individual, the influence of one's work group will likely have a stronger influence on individual behavior than will the influence of higher-level stimuli,

such as those at the organization level (Hackman, 1992). Therefore, in this research I posit that the work group is the most appropriate level at which to evaluate perceptions of citizenship, given its proximity to the individual.[4]

Work Group Citizenship Climates

The climate within one's work group is a way of characterizing the shared group-level beliefs described above. A climate is informally defined as "the way things are around here" (Reichers & Schneider, 1990, p. 22), but more precisely as the "shared perceptions of organizational policies, practices, and procedures, both formal and informal" (Reichers & Schneider, 1990, p. 22). A climate helps guide employee behavior by making salient the particular behaviors that are appropriate and supported (Argyris & Schon, 1996; Reichers & Schneider, 1990). Work environments are characterized by climates specific to countless dimensions, such as motivation, leadership, innovation, rewards, safety, justice, and more (Ehrhart, 2004; Hofmann, Morgeson, & Gerras, 2003; Mayer et al., 2007; Schneider, 1990; Schneider et al., 1994). It is the job of the researcher to identify the most salient dimensions of the overall group climate in order to best assess how the overall climate may impact a particular criterion of interest (Schneider, 1975).

Typically, scholars conduct research to determine the key macro-level influences on a given type of behavior (e.g., innovation or safety behavior) in order to identify the main dimensions of their associated climates (e.g., the climate for innovation, climate for safety, etc.) (Burningham & West, 1995; Li, Gao, & Tang, 2008; F. G. Stevens, 2008; Zohar, 2000). Although scholars have speculated about the existence of a climate for citizenship behavior (Schneider et al., 1994), such a climate has not been specifically

[4] These assertions are based on the assumption that work group membership is relatively stable, so individuals have repeated opportunities to share experiences and interactions.

defined, unpacked theoretically, or tested empirically. Therefore, before testing hypotheses about the effects of a work group's citizenship climate on citizenship behavior, it is necessary to define the construct, propose dimensions of such a climate, and unpack the mechanisms underlying the relationship between the hypothesized dimensions and resulting citizenship behavior.

Definition and Dimensions of Citizenship Climates

I define citizenship climate as a distinct group-level cognition that characterizes a favorable context for organizational citizenship behavior in a given work environment. More specifically, it is the shared belief amongst group members about certain policies, procedures, and norms in the work group that have bearing on citizenship behavior – namely, the things employees do that contribute to the social and psychological environment in which their task performance takes place (Organ, 1997). Not unlike a climate for a particular kind of weather, which is the convergence of several variables (e.g., geographic latitude, topography, wind patterns, etc.), a citizenship climate should likewise be composed of multiple dimensions, and the convergence of these dimensions will lead to a stronger climate for citizenship. However, just as a "warm weather climate" does not necessary mean the weather is always warm, a citizenship climate does not necessary always equate to the precise levels of citizenship displayed in a work group at a given time. Rather, it simply captures the conditions in the group that would make citizenship behavior more likely or favorable (e.g., group-level antecedents of OCB). Consistent with previous research on work groups (Hackman, 1992), I posit that more macro-level, distal environmental factors (e.g., the broader economic outlook,

organizational financial health, etc.) will influence citizenship behavior through more proximal, group-level citizenship climates.

Schneider and colleagues (1994) proposed that a citizenship climate is composed of shared beliefs along three main dimensions: (1) fairness and trust, (2) norms of helpfulness and cooperation, and (3) a reward system based on broad contributions. Higher shared perceptions along these dimensions create a stronger climate for citizenship. While these authors' assertions have provided a starting point for research on citizenship climates, they have not yet been tested. In addition, it is necessary to unpack these dimensions and use theory to explain why each should create more favorable conditions for citizenship behavior before moving ahead with testing hypotheses. I offer such theory and hypotheses below, and also discuss the possibility of additional dimensions of a citizenship climate.

Fairness and Trust. Group-level fairness is defined as shared group-level cognition regarding the extent to which group members are treated fairly (Naumann & Bennett, 2000). This cognition refers to an overall perception of fairness resulting from distributive, procedural, and interactional justice perceptions (Ambrose & Schminke, 2009). Group-level trust is the shared belief about members' willingness to be vulnerable to the actions of another party (R. C. Mayer, Davis, & Schoorman, 1995). Schneider and colleagues (1994) argue that employees perceiving higher levels of fairness and trust in their work environments will be more willing to proactively work outside the boundaries of what is explicitly expected of them, and take action that will benefit their work group or organization.

Schneider and colleagues' (1994) assertions about the effects of group-level perceptions of fairness and trust on OCB predated the recent rise in research about the effects of procedural justice climate on OCB, but would invoke similar mechanisms. Procedural justice relates specifically to the fairness of procedures used to make decisions (Thibault & Walker, 1975), and is thought to affect OCB through mechanisms of equity and social exchange (Liao & Rupp, 2005; Naumann & Bennett, 2000; Rupp & Cropanzano, 2002). Individuals are more likely to do something extra for someone else when they expect the other person to behave in fair and equitable ways (Adams, 1965) and "repay" the favor, financially or otherwise (Blau, 1964). The form of exchange just described is direct; for example, a focal actor helps a coworker, and expects that coworker will help him in return in the future. In the case of citizenship behavior, which is thought to be done without expectation of direct rewards (Organ, 1997), the expected return for such behavior is likely to be lower, or more indirect and generalized (Lévi-Strauss, 1969; Molm, Collett, & Schaefer, 2007; O'Connell, 1984) if it exists at all. The generalized exchange effect may be even stronger in the case of a work group than a dyadic exchange, such that the focal individual may not be directly compensated for his act of citizenship, but he can trust that others will also voluntarily engage in acts of citizenship that benefit the whole. Therefore, I expect shared perceptions of fairness and trust to increase individual-level citizenship behavior within the work group due to mechanisms of indirect or generalized exchange, and I offer the following hypotheses:

> **Hypothesis 2A:** The higher the shared perceptions of fairness in the work group, the higher the level of citizenship behavior displayed by individual group members.
>
> **Hypothesis 2B:** The higher the shared perceptions of trust in the work group, the higher the level of citizenship behavior displayed by individual group members.

Group Norms for Citizenship Behavior. Norms of helpfulness and cooperation are posited to be the second component of a citizenship climate (Schneider et al., 1994). Group norms, defined as informal guidelines for acceptable and unacceptable behavior that develop through social interactions among group members (Cialdini & Trost, 1998) are a strong social force in group life (K. Davis, 1950; Hackman, 1992), and a form of social control (O'Reilly & Chatman, 1996). Norms are functional for groups, since they serve to regulate behavior in the group even when formal mechanisms for control are absent (Thibaut & Kelley, 1959). Previous scholars have suggested that groups most commonly develop norms around behavior that is important for the group, which would otherwise require continuous oversight or direct social influence (Hackman, 1992; Thibaut & Kelley, 1959), such as behaviors that "ensure group survival, increase the predictability of group members' behavior, avoid embarrassing interpersonal situations, or give expression to the group's central values" (Feldman, 1984, p. 47).

Ehrhart and Naumann (2004) proposed a model of the effect of work group norms on group-level OCB; still, the rationale behind their model should apply similarly to individual displays of OCB. Drawing on Cialdini and colleagues (1991), Ehrhart and Naumann (2004) argue that norms may influence citizenship behavior in two ways, through descriptive or injunctive means. Descriptive norms arise when individuals observe the behavior of other group members, and come to define certain common behaviors as appropriate (Thibaut & Kelley, 1959). Using the “social proof” heuristic, group members begin to engage in the behaviors themselves due to the assumption that these behaviors will lead to success (Cialdini & Trost, 1998). This is similar to Bandura’s (1977) theory of social learning, but involves a time component; the more individuals

observe others engaging in certain behaviors, the more they will define the behavior as appropriate, learning it themselves, and engaging in it in the future. Injunctive norms arise more directly through the mechanism of normative influence, defined as pressure on individuals to conform in order to receive social approval (Deutsch & Gerard, 1955). As such, injunctive norms specifically prescribe certain behavior in individuals (Cialdini & Trost, 1998). Therefore, group norms may influence citizenship behavior through two different mechanisms: role modeling and normative influence.

Why should norms develop around OCB? Citizenship behaviors, by definition, are activities that promote the effective functioning of the organization by supporting the social and psychological environment in which task performance takes place (Organ, 1997), and have been recognized as behaviors that are essential to the success and survival of organizations (Katz & Kahn, 1966; N. P. Podsakoff et al., 2009). Thus, they fall into Feldmans's (1984) description of activities around which norms are most likely to develop. Simultaneously, OCB is less likely to be directly rewarded than core task performance, and thus separated from the formal means of control (Organ, 1997). For this reason, group norms around citizenship behavior may be even more important for group success and survival than are norms for core job behaviors, since without this normative pressure employees are less likely to endure any formal repercussions for neglecting this behavior.

Thus, group norms of helpfulness and cooperation are likely to exist in work groups, and to produce greater levels of individual helping and cooperation behavior – two common forms of citizenship behavior (P. M. Podsakoff & MacKenzie, 1997). As discussed previously, however, the nature of citizenship is likely to differ across contexts.

Therefore, helpfulness and cooperation may not be the most relevant dimensions of citizenship in every context. For this reason, it is necessary to broaden Schneider and colleagues' (1994) assertion and test the effect of norms for citizenship behavior, in general, based on the way citizenship is conceptualized in the research context. As such, I propose the following:

> **Hypothesis 2C:** The higher the norms for citizenship behavior in the work group, the higher the level of citizenship behavior displayed by individual group members.

Rewards for Broad Performance Contributions. The final dimension of a climate for citizenship proposed by Schneider and colleagues (1994) is a shared perception among group members of a fair reward system based on broad contributions. Schneider and colleagues (1994) argue that if employees see the reward system as only rewarding specific behaviors in a "piece-rate" way (p. 25), employees will assume that the organization only values behaviors that are specifically related to core job activities. If, on the other hand, employees perceive that a more varied set of productive behaviors (e.g., citizenship behaviors) are considered important and are rewarded, they will engage in more OCB, presumably due to an expectation that these behaviors will be rewarded in some way. This general hypothesis is similar to that tested by Morrison (1994), who found that when employees perceived OCBs to be in-role, or rewarded, they engage in them more frequently. Morrison explained this finding by arguing that in-role behavior is more likely to be linked directly to extrinsic rewards (Katz, 1964; Morrison, 1994; Organ, 1988), and employees are more motivated to engage in behavior when they expect that it will be rewarded. Scholars have yet to empirically investigate the extent to which

perceptions that the reward system is based on broad contributions will affect individual OCB, however.

Why should shared perceptions surrounding rewards affect individual OCB? This effect may be due to expectations of direct social exchange (Blau, 1964; Lévi-Strauss, 1969); to the extent individuals believe they will be rewarded formally (e.g., with a better performance evaluation) or informally (e.g., public recognition), they may be more likely to engage in OCB. Furthermore, it is likely that a collective perception of the nature of the reward system will have an effect on individual behavior over and above individual perceptions of the same system. Employees see how other members of their work group behave, how they are treated, and what behaviors are rewarded. Thus, employees form opinions and perceptions of the organizational policies, practices, and systems that relate to the work group based not only upon their own experiences, but also on their observations of others' interaction with these policies or systems (Bandura, 1977, 1986). For example, having observed coworkers' behaviors during the year, the level of coworkers' end-of-year bonuses or the amount of recognition given by supervisors will be interpreted by others in the work group as cues about which activities are rewarded in general, just as the level of one's own bonus will be interpreted as such. Therefore, asking work group members about the types of behaviors that are rewarded, or their perceptions of how fair the reward system is for the work group in general may yield more nuanced information about prevailing perceptions of the reward system than would simply asking which behaviors of one's own are rewarded, or the extent to which a particular work group member believes he is fairly rewarded. Therefore, I argue the following:

Hypothesis 2D: The higher the shared perceptions that broad performance contributions will be rewarded, the higher the level of citizenship behavior displayed by individual group members.

Additive Effect of Citizenship Climate Dimensions. Together, I propose that these three dimensions contribute to a citizenship climate. I posit that the dimensions will have an additive effect, such that the lack or deflation of any of the single dimensions will lower the level, although not completely eliminate, the strength of the citizenship climate. Looking at these dimensions as a whole, one may argue that a stronger citizenship climate may produce views that citizenship is actually required rather than discretionary, based on the existence of social pressure to engage in such behaviors, or the notion that these activities are either directly or indirectly rewarded. Following the tenets of role theory (Biddle, 1979), I posit that because all roles are based on expectations, citizenship may indeed feel expected in some cases. However, I follow Organ's (1997) definition of OCB, which suggests that the perception that some OCB-like activities are expected or rewarded does not disqualify these behaviors from being considered acts of citizenship, so long as they still contribute positively to the social and psychological environment in which core task performance takes place (Organ, 1997). Therefore, it is possible that a citizenship climate could prompt individuals to act like "good citizens" for more instrumental reasons (Bolino, 1999). It is up to individuals and their supervisors to regulate these effects for the productivity and health of the group.

Additional Dimensions of Citizenship Climates. Schneider and colleagues (1994) proposed the aforementioned three constructs as the main dimensions of a citizenship climate; however, they did not elaborate on why these were chosen, or whether there may be other dimensions. Therefore, in this dissertation I allow for the

possibility that these three dimensions are not exhaustive. This possibility will be assessed inductively using qualitative methods (see overview of study design in Chapter IV); therefore, hypotheses related to additional dimensions are not proposed here.

Dispersion of Perceptions and Climate Strength

In addition to the main effects of the three citizenship climate dimensions on individual citizenship behavior, proposed above, recent research on organizational climates has suggested that the dispersion in perceptions (e.g., variance) within the group about each climate dimension may influence outcome variables, as well. In particular, Schneider, Salvaggio, and Subirats (2002) argue that the interaction of the main effect of each climate dimension and the dispersion in perceptions can be used as a measure of climate strength.

Previous literature on climate strength has tended to argue that stronger shared perceptions enhance the effect of climate dimensions on dependent variables. However, I posit that more convergence in perceptions may not always be associated with stronger relationships with individual behavior. As reviewed above, prior research on OCB has found that employees with lower levels of organizational tenure define their jobs more broadly and engage in higher levels of citizenship behavior (Morrison, 1994). Morrison (1994) argues that this result is likely due to newer employees feeling more uncertain about expectations and thus engaging in higher levels of citizenship behavior to ensure they are completing all required activities.

Using this logic, it is conceivable that employees experiencing uncertainty or role ambiguity for any reason – due to low organizational tenure or otherwise – may engage in higher levels of citizenship behavior, not only to ensure they are completing required

activities, but also to create opportunities to observe others and learn about role requirements. Indeed, like any other workplace behavior, the act of engaging in citizenship may offer opportunities for social learning (Bandura, 1977) or social information processing (Salancik & Pfeffer, 1978). Therefore, I argue that not only will employees engage in social interaction, in general, in order to clarify the nature of OCB in a given context, but they may also *use* acts of OCB as a means through which to do so. In this way, OCB can be interpreted as a proactive means through which employees learn about role expectations (Grant & Ashford, 2008).

The dispersion of perceptions amongst individual group members about the citizenship climate in their work group offers an opportunity to test this theory. The dispersion of perceptions is a way to assess the extent to which individual group members' cognitions are similar or different – in other words, how much they agree about "the way things are around here" (Reichers & Schneider, 1990, p. 22). In the case of groups with greater dispersion in individual perceptions, employees may perceive greater mixed social cues about acceptable practices within the group; these cues influence individuals' perceptions and certainty about role expectations. In the case of greater mixed messages, it is conceivable that individuals will engage in more activities beyond the scope of their specific job roles in an attempt to clarify these expectations. Thus, I argue that greater dispersion of perceptions on any of the climate variables will create greater uncertainty in the group, and will produce more citizenship behavior.

> **Hypothesis 3A:** Greater dispersion of perceptions within the group about group fairness will be positively associated with individual citizenship behavior.
>
> **Hypothesis 3B:** Greater dispersion of perceptions within the group about group trust will be positively associated with individual citizenship behavior.

Hypothesis 3C: Greater dispersion of perceptions within the group about group norms for citizenship will be positively associated with individual citizenship behavior.

Hypothesis 3D: Greater dispersion of perceptions within the group that broad performance contributions are rewarded will be positively associated with individual citizenship behavior.

These effects are likely to be particularly strong for dimensions of OCB involving interpersonal social interaction (e.g., the "altruism" or "courtesy" dimensions in previous research). However, hypotheses are not offered about specific dimensions of citizenship, as it is necessary to first identify the dimensions that are most relevant in this context.

In previous research, scholars have conceptualized climate "strength" as a measure of within-group variability about a given climate variable (Schneider et al., 2002); climates are thought to be stronger when there is less within-group variability. Previous research on service climates (Schneider et al., 2002) and safety climates (Zohar & Luria, 2005) has found that stronger climates tend to enhance the effect of climate variables on outcomes. Likewise, to the extent that group members receive more consistent cues from the work group practices affecting citizenship behavior (e.g., fairness, trust, norms, and rewards), it is logical that they would engage in higher levels of OCB. However, this logic contradicts with the previous hypotheses that greater *dispersion* in perceptions will be associated with higher levels of OCB. Because of the theory supporting both sets of hypotheses, I offer the following competing hypotheses:

Hypothesis 4A: Climate strength moderates the relationship between shared perceptions of group fairness and individual OCB; in particular, individual OCB will be highest when shared perceptions of group fairness are high and dispersion in perceptions is low.

Hypothesis 4B: Climate strength moderates the relationship between shared perceptions of group trust and individual OCB; in particular, individual OCB will

be highest when shared perceptions of group trust are high and dispersion in perceptions is low.

Hypothesis 4C: Climate strength moderates the relationship between shared perceptions of group norms for citizenship and individual OCB; in particular, individual OCB will be highest when shared perceptions of group norms for citizenship are high and dispersion in perceptions is low.

Hypothesis 4D: Climate strength moderates the relationship between shared perceptions that broad performance contributions are rewarded and individual OCB; in particular, individual OCB will be highest when shared perceptions that broad contributions are rewarded are high and dispersion in perceptions is low.

Organizational Citizenship and Employee Performance

By nature of its definition, organizational citizenship behavior is behavior that improves organizational functioning; therefore, even when such behavior is not explicitly included in an employee's job description, prior research suggests that employees will be rewarded with higher performance evaluations when they engage in more OCB. Scholars presume that this effect occurs due to the implicit consideration of multiple types of employee behavior during performance evaluations (MacKenzie et al., 1991). Thus, I propose the following hypothesis to re-assess this established relationship in a new research context:

Hypothesis 5: The higher the level of citizenship behavior displayed by an individual employee, the higher his/her performance evaluation.

CHAPTER IV

OVERVIEW OF STUDY DESIGN AND RESEARCH SITE

This chapter provides an overview of the research design and methods that were used to test my theory and hypotheses. The design includes both qualitative and quantitative components. Below, I describe the strategy underlying the choice of this research design and the specific research site where data were collected.

A Multi-Method Research Design

The effects of social context on citizenship perceptions and behavior were investigated in this dissertation using multiple methods. Multiple methods are advised in social science research so the researcher may triangulate, or "zone in" on the particular topic of interest (Campbell & Fiske, 1959; Singleton & Straits, 1999, p. 393). Qualitative and quantitative methods can be used most effectively in tandem if the researcher pays close attention to the relative importance of each method to the overarching goal of the project, and the sequence in which the methods are used (See Figure 4.1; Morgan, 1998).

My broad aim in this dissertation was to investigate the effect of the social context on citizenship perceptions and behavior. In order to explore the nature and meaning of the constructs of interest and ensure appropriate operationalization of them in the survey, it was first necessary to conduct qualitative research. Qualitative methods are a particularly appropriate choice when researchers need to assess meaning and nuance, and want to "get an insider's view of reality" (Singleton & Straits, 1999). This methodology

is also often used to clarify constructs in a given research setting before operationalizing and testing them quantitatively.

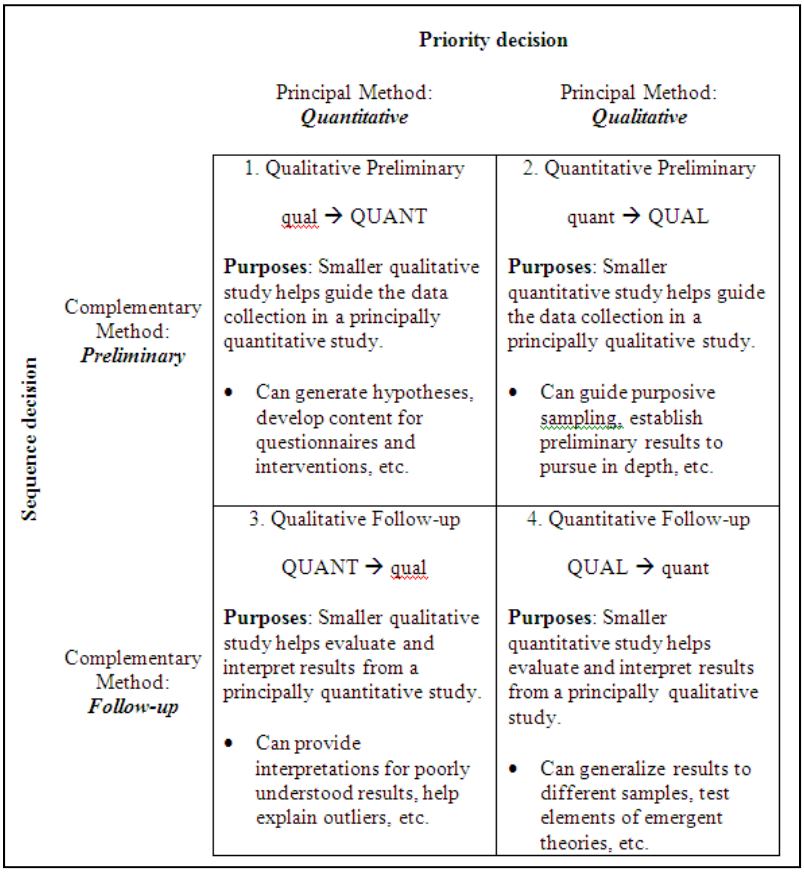

Figure 4.1. Combining Qualitative and Quantitative Methods

After investigating the phenomena qualitatively, I used survey methods to quantitatively assess relationships between group-level climate variables and individual OCB. Survey methods were ideal for accomplishing this goal, since they enable researchers to gain broad understanding of a social problem which is difficult for a researcher to assess through his or her own observation (Groves, Fowler, Couper, Lepkowski, Singer, & Tourangeau, 2004). My hypotheses were not testable in a rigorous way through my observation alone for two main reasons. First, some of the variables (e.g., perceptions of work group citizenship climate) were not observable since they

reside in respondents' cognitions and emotions. Secondly, I would not have been able to confidently observe the variables that may have been outwardly visible and thus more observable (e.g., citizenship behaviors), since as an outsider of the organizational culture, I have not internalized the underlying cultural assumptions (Schein, 1985). This naiveté would have introduced possible error in my interpretation of observed behavior. Finally, I would not have been able to obtain enough observations to adequately test my hypotheses using rigorous statistical methods using my own observations alone. Therefore, I elected to use a survey. This combined, multi-method approach is customary in rigorous survey design procedures (Groves et al., 2004). For these reasons my dissertation research fits into Morgan's first quadrant (see Figure 4.1, above): quantitative methods were primary, but qualitative methods were used first as a complementary method. The specific research design, methods, and results of each study are presented in the following two chapters: Chapter V reviews Study 1, the qualitative portion of the research, and Chapter VI reviews Study 2, the quantitative portion.

Research Site

Testing hypotheses about the effect of work group climates on citizenship perceptions and behavior could be effectively accomplished by comparing work groups within or between organizations. In the case of organizations whose work groups conduct similar work and have similar expectations and norms, it may be necessary to test hypotheses across organizations to ensure enough variance in citizenship climate between work groups (Kozlowski & Klein, 2000); however, to the extent that one organization encompasses diverse sub-groups, hypotheses may be tested by comparing groups within the same organization. Since I was interested in assessing differences between micro-

level contexts, I elected to compare work groups within one organization with diverse sub-groups. As such, this research can be seen as a conservative test of my hypotheses, since variance is limited to that within one organization.

Given that the nature of work has changed in recent decades (Arthur & Rousseau, 1996; Barley, 1996b), it seemed most relevant to test my hypotheses in a "modern" work environment that reflects recent trends, and thus could provide greater insight into the future of citizenship across many types of organizations. This was particularly important given that the bulk of existing research on OCB has been conducted in more traditional organizations – primarily in manufacturing, retail, or healthcare industries – and with lower-level, often hourly employees (Organ et al., 2006). In the latter type of settings, more rigid job descriptions and hierarchies tend to be imposed on employees (DiPalma, 2005; Dorf & Kusiak, 1994), potentially making it easier for people to determine which activities are expected and which are more discretionary. As a result, not only does the organizational studies field lack a thorough empirical test of the effects of context on citizenship, as discussed earlier, but the types of research sites represented in this literature seem outdated, as well.

For these reasons I used a "modern" organization for my research site in order to test my hypotheses while also shedding light on more systemic changes to the nature of citizenship in modern work environments. What does a modern work environment look like? Scholarship suggests that such a workplace is one that primarily employs knowledge workers (Barley, 1996a; Drucker, 1969), imposes more flexible job boundaries (Bridges, 1994); empowers employees (Spreitzer, 1995), expects them to innovate and change their roles to best accomplish tasks (L. E. Davis & Wacker, 1987;

Kanter, 1983; Parker, 2000; Spreitzer, 1996); and is characterized by a flatter organizational hierarchy (Lashinsky, 2006; Rahrami, 1992). By utilizing such a site, it was possible to test my aforementioned hypotheses about the effect of context on citizenship perceptions and behavior, and also glean insights into more sweeping changes in how modern employees define what it means to play the role of a "good citizen" for their organization, affording an opportunity to evaluate whether existing theories of citizenship hold in more modern settings.

Organizational Citizenship in the Technology Industry

Given the desire to use a modern organization as my research site, it made sense to select a site in the technology industry for two main reasons. First, this industry has a particularly strong influence on societal trends. Not only does the technology industry shape the everyday lives of people around the world through its products, but, more importantly for this research and organization theory, it has a strong, indirect effect on society through its tendency to experiment with new organizational forms, unique organizational cultures, and groundbreaking employee relations policies (Kunda, 2006). According to Kunda (2006, p. vii),

> …the high-tech industry's role in post-industrial world, "is not limited only to the inexorable stream of innovative computing and communications products that have provided its necessary material conditions; high-tech is also the source of widely diffused ideas that shape our worldview and the way we life: beliefs about what work means, templates for how to best organize and manage it, images of who we are – or might become – when we do so.

Secondly, the technology industry is a particularly interesting venue for studying citizenship at this time in history, due to its tendency to use more flexible working arrangements. Research suggests that when knowledge workers are given flexibility to think, decide, and act with greater discretion, they tend to be more satisfied, innovative,

and productive (Peters, 1987; Rahrami, 1992). Given that technology companies primarily employ knowledge workers, it is not surprising that these firms deliberately use more fluid job descriptions and looser organizational hierarchies given their positive associations with knowledge workers' performance (Lashinsky, 2006). Indeed, these structural changes are strategic responses to the changing nature of the work people do. However, without clear structure or job descriptions to offer direction, employees in such organizations are likely to experience higher levels of uncertainty about expectations and role requirements (Rizzo, House, & Lirtzman, 1970). In these cases, individuals will need to look to more unspoken or tacit cues in their environments to better clarify what is expected of them, and the appropriate ways in which to behave regarding one's job tasks and social interactions; thus, the work group's citizenship climate is likely to be particularly determinant of citizenship perceptions and behaviors in these settings, making them fertile grounds for testing my hypotheses.

Specific Research Setting

My research site, Initech[5], is a leading multinational company in the technology industry that primarily employs knowledge workers and is headquartered in Silicon Valley, CA. Initech is an ideal site at which to conduct this research for at least three reasons. First, as mentioned above, the technology industry is particularly suitable for studying modern workplace trends, given its influence on other organizations and society's views about working, in general (Kunda, 1986).

Next, of all the companies in the technology industry, Initech is a particularly high-profile, influential organization, and has won awards for its unique organizational

[5] Pseudonym.

culture and innovative employee relations practices (e.g., it has been selected for *Fortune's* "100 Best Companies to Work For" list). This type of public recognition and legitimacy suggests that other companies will be more likely to imitate its practices (DiMaggio & Powell, 1983; Meyer & Rowan, 1977); thus, the findings from this research may be especially suggestive about future trends in organizational citizenship than would findings from another organization.

Finally, Initech tends to use non-specific job descriptions, vague promotion criteria, and maintains a relatively flat organizational hierarchy while simultaneously espousing extremely high, yet broad, expectations for employee performance. As described above, this is an ideal site in which to study the effects of social context on citizenship perceptions and behavior, since employees are given few explicit clues about what an organizational citizen is or does; instead, employees must look to cues in their environment to determine for themselves what is expected, and how to behave. The chapters that follow provide in-depth overviews of the design, methods, analyses, and results of the two studies used to investigate my dissertation hypotheses.

PART II

A QUALITATIVE INVESTIGATION OF CONTEXTUAL INFLUENCE ON ORGANIZATIONAL CITIZENSHIP PERCEPTIONS AND BEHAVIOR

CHAPTER V

STUDY 1: METHODS

Study 1 was a qualitative investigation of organizational citizenship behavior in the high-tech industry. The study utilized focus group methodology and a stratified random sample of employees at Initech,[6] a large multinational company headquartered in Silicon Valley, California, to investigate the nature and meaning of citizenship behavior in a modern work environment, explore the dimensions of a citizenship climate, and guide the design of the survey for Study 2. Methods used to collect data for Study 1 are reviewed below; analyses and results of this study are presented in Chapter VI.

Given the proven effects of the social context on how employees interpret the meaning of aspects of their work environment (Salancik & Pfeffer, 1978) and learn what is considered appropriate behavior (Bandura, 1977), an investigation of the relevance of the historical dimensions of OCB is overdue. In addition, it was important from a practical standpoint to evaluate whether the existing dimensions of citizenship (e.g., altruism, conscientiousness, etc.) were representative of "citizenship" in my research setting, and whether existing survey items adequately operationalized these dimensions, before testing hypotheses quantitatively.

[6] Pseudonym

Krueger and Casey (2000) note that designing a quantifiable survey instrument before listening to opinions and perceptions of members of the target population can be hazardous. Despite these warnings, as well as acknowledgments by scholars of OCB about the ambiguous nature of the activities that constitute in-role versus extra-role behavior (e.g., see Graham, 1991; or the final chapter of Organ, 1988), surprisingly few scholars have assessed the nature of OCB in a given research setting prior to administering surveys to test hypotheses (see Morrison, 1994, and Podsakoff & MacKenzie, 1994, for exceptions). To combat these potential issues, I conducted 12 focus groups at Initech prior to developing the survey instrument. My main goals in doing so were to (1) gain a broad understanding of the nature and meaning of citizenship in this context by identifying the main dimensions of OCB; and (2) to identify the underlying dimensions of a citizenship climate, with an eye toward determining whether dimensions proposed by Schneider and colleagues (1994) would be supported and exhaustive.

Focus Group Method Overview

Focus groups are small groups of people brought together for a face-to-face discussion about a given topic, and guided by a moderator (Edmunds, 1999; Groves et al., 2004). They are commonly used prior to survey design so the researcher may "learn about the common nomenclature of concepts, how terms are used, what common perspectives are taken by the population on key issues, etc." (Groves et al., 2004, pp. 243-244), as well as to ensure all dimensions of a given phenomenon are identified (Krueger & Casey, 2000). Focus groups are composed of seven to ten people, selected based on certain common characteristics relevant to the research topic (Krueger, 1994). Typically, the researcher aims to create groups that are homogeneous on key dimensions

related to the research topic, in order to generate the most in-depth conversation; if the overall population is diverse, it is advised that separate groups are conducted with each sub-population (Groves et al., 2004).

During each session, the moderator attempts to foster an open, supportive, and safe atmosphere to encourage honest participation from all participants. To move the discussion along, the moderator poses a series of carefully-designed, open-ended questions, and participants are encouraged to discuss each topic and to feel free to disagree with and influence one another (Groves et al., 2004). As the discussion progresses, the moderator does not adhere strictly to a script; rather, he or she may probe on certain topics, attempt to draw out quieter participants, and seek reactions to comments (Groves et al., 2004). As a result, it is important that the moderator not only be skilled in facilitation, but that he/she also have a deep knowledge of the research topic in order to direct the conversation in the most useful and rigorous manner.

Focus groups are ideal for developing a better understanding about a given phenomenon because they allow the researcher to observe individuals in social interaction as they develop, describe, and discuss attitudes and perceptions (Edmunds, 1999; Krueger, 1994). As a result, the researcher obtains richer and dynamic information about *why* people believe or feel what they do, rather than simply *what* individuals report that they believe, which is the typical data collected through individual interviews (Krueger, 1994). Groves and colleagues (1994) also assert that focus groups are particularly critical in the survey design process as a way to help researchers get a sense of the "range of experiences or perceptions that respondents will be drawing upon to form

their answers" (p. 245), which help researchers write relevant survey items for the population at hand.

Sample

Sampling for many focus groups is not done randomly, but is instead based on convenience (Krueger, 1994) or even self-selection (e.g., see www.findfocusgroups.com). In these cases, generalizeability may be compromised; however, these techniques are sometimes necessary to obtain an adequate number of participants relevant to the research topic or willing to participate given timing and cost constraints. Krueger (1994) acknowledges these difficulties, but advises researchers to avoid convenience sampling if possible, given the possibility for biased results. To optimize rigor and generalizeability to the Initech population, I used a stratified random sampling approach, with the intention of considering other approaches if initial response rates were poor. Due to adequate response, I did not modify this strategy.

Stratified random sampling involves first sub-dividing the total population into "mutually exclusive segments, called strata, based on categories of one or a combination of relevant variables. Simple random samples then are drawn from each stratum, and these subsamples are joined to form the complete, stratified sample" (Singleton & Straits, 1999, p. 150). True random sampling requires that each member of a given population (or, in this case, a given stratum) have an equal possibility of being selected; therefore, this approach is only possible when a complete list of the population is available. I was provided with a complete list of all employees at Initech in order to create the sample for the focus groups, which made this sampling technique possible. However, based on advice from contacts at Initech and theories of socialization (Parsons, 1951; Wentworth,

1980), I removed employees who were part-time, or had less than three months tenure with Initech before drawing the sample, given that these sub-populations have had less exposure to the organization and the phenomena of interest.[7]

Per the guidance of Groves and colleagues (1994), I sought to create groups that were homogeneous on key dimensions related to the research topic, and separate diverse sub-populations. After conversations with representatives from Initech about logical ways to segment the company to create homogeneous groups with regard to OCB while separating particularly diverse sub-populations, I decided to use business units as the strata, and separate groups accordingly so all employees in a given group were from the same business unit. Business units at Initech are created functionally (e.g., Engineering, Marketing, Sales, etc.); therefore, my segmentation approach is in line with organizational research suggesting that different functional areas of an organization organize and operate differently based on the nature of their work (Lawrence & Lorsch, 1967). Given that the topic of the research related to the nature of things people do at work, it was logical to separate groups by work function given that people in different functions engage in diverse job tasks, and thus potentially different types of OCB.

To reflect the relative percentage of the total US-based employee population at Initech within each business unit, I organized 10 focus groups in the US as follows: Engineering (3), Sales (3), Operations (1), Marketing (1), Human Resources (1), General Administration (e.g., Finance and Legal) (1). To reflect the distribution of the employee population around the country, seven of the above groups were conducted at Initech's headquarters in Silicon Valley, California; two were conducted in their second-largest

[7] At Initech, employees with less than three months tenure are still considered "new." After that, people are thought to have been adequately socialized.

office in a large city on the East Coast, and one was conducted in a smaller office in the Midwest, which is representative in size and function of many of Initech's smaller satellite offices in the US. In addition to these 10 groups, two additional groups composed of employees outside the US and based in various business units were added to validate US-based data (one group was from the Europe/Middle East region, and another was from the Asia/Pacific region). These two groups were conducted using videoconference technology, a common medium for meetings at Initech. The overall response rate was 46%, and the final sample consisted of 75 participants in varied job functions across departments. Among them, 58.7% (N = 44) were male, 56% were white (N = 42), and 89.3% (N = 67) were based in the United States.

Procedure

Development of Moderator Guide. I developed a moderator guide for the focus groups to address the main goals of Study 1: (1) to investigate the nature of meaning of citizenship at Initech, and (2) to verify the dimensions of a work group citizenship climate. Following guidelines by Krueger (1994), the moderator guide included five main categories of questions: opening, introductory, transition, key, and ending questions. In drafting the questions I followed best practices in focus group question development and aimed to keep questions short and open-ended whenever possible, and to use words familiar to participants that would be used in this context to describe the topics at hand (Krueger & Casey, 2000).[8] I also designed several activities to further engage participants (Krueger & Casey, 2000).

[8] For instance, I was advised that the terms "core" and "non-core" were most appropriate to use when describing "in-role / expected" activities versus those that are "extra-role / discretionary."

During the development of the moderator guide I consulted with experts from the Institute for Social Research (ISR) at the University of Michigan,[9] who provided guidance and reviewed the materials at several points. Once a draft had been approved by my contacts at ISR, I sought feedback from employees at Initech who have PhDs in related fields (e.g., Industrial/Organizational Psychology and Sociology) and are familiar with the topic of the study as well as Initech's organizational culture. Based on their feedback, I revised the materials and moderator guide again slightly.

Next, I conducted a pilot focus group with 12 volunteers from Initech's headquarters over lunch to test the moderator guide and materials. I moderated the group as planned; then, participants provided feedback afterward on such things as question wording, timing, and materials. I made several final modifications to the moderator guide and materials based on this feedback.

Participant Recruitment. Following the pilot, I recruited participants for the 12 focus groups. Previous research on OCB has found that individuals with greater tendencies to engage in OCB respond more frequently to research studies (Spitzmüller, Glenn, Sutton, Barr, & Rogelberg, 2007), thus introducing potential non-response bias. To combat this issue, I offered incentives to participants in an effort to more successfully recruit people with lower tendencies to engage in OCB who may not have otherwise participated. In general, $25-$30 incentives are customary in focus group research; however, since Initech conducts many focus groups and employees are not typically given incentives, I was advised that $20 would be viewed as a very generous amount. Therefore, I used $20 gift cards to Amazon.com as the incentive.

[9] The Institute for Social Research (ISR) is regarded as an authority on the subject of focus group design and implementation.

When recruiting focus group participants, it is customary to over-recruit by only 10-25 percent (Krueger, 1994); however, my contacts at Initech indicated that response rates for employee focus groups tend to be only 30-40 percent (without incentives). Taking this into consideration, and since I was offering incentives, I over-recruited by approximately 50 percent.

To create the invite list for each focus group, I separated the total employee population by business units, then used a random number generator to randomly select approximately 15 employees to invite to each focus group. This was done with a target of 6-8 attendees per group in mind. To ensure privacy and encourage open communication within the focus groups, lists were checked to ensure groups would not include more than one person from a given work group, and that employees were not invited to the same group as their direct supervisor. On this basis, several employees were removed from the sample before invitations were sent, and replaced with individuals from different work groups with similar demographics (e.g., organizational tenure, job level, etc.).

Invitees received emails inviting them to the sessions from a member of Initech's Human Resources department, who was one of my contacts for the duration of this project. I was informed by numerous people within Initech that it was important to have an Initech employee send this invitation to convey sponsorship for the study. Emails were sent approximately one week prior to each session, and explained the general topic of the session, its importance to Initech, how participants were selected, and how comments would be used. Confidentiality was emphasized. When groups had a particularly low response rate the day before the session, I followed up with individual phone calls to encourage people who had not yet responded.

Data Collection. Focus group sessions were held on-site in conference rooms at Initech, and were audio-recorded with permission of the participants. A note-taker was present at each session in case the audio recorder malfunctioned, but he or she did not participate in the conversations. I moderated each session, following the pre-determined moderator guide to address my main aims per best practices (see Appendix A; Krueger, 1994; Krueger & Casey, 2000), and probing topics as necessary. Sessions lasted for an hour, and participants were given the gift cards at the conclusion of the session.

I began by greeting participants and gave them a background about myself and the study, and asked for their permission to tape record the session. Then, I began with the questions. **Opening** questions are meant to be answered by everyone in the group, and are designed to be rather brief (e.g., within 10-20 seconds) and factual rather than opinion-based (Krueger, 1994). For an opening question in this study, I asked participants to provide their first names, and to give an example of anything they had done at work the day before. This was intended to get them thinking in terms of their behaviors and activities at work. I wrote everyone's example on a dry erase board in the conference room as they were offered.

Introductory questions are intended to introduce the general topic of the discussion and to begin fostering dialogue among the participants (Krueger, 1994). For this set of questions, I returned to the set of activities participants had listed in the opening questions and asked them to comment on whether they thought each activity was "core" to their job, or "non-core." For those characterized as "non-core" I asked whether they perceived these behaviors to be mandatory or more voluntary.

Transition questions link the introductory questions to the deeper key questions by giving some background about the topic of the focus group (Krueger, 1994). Before asking these questions, I gave participants more detail about the study topic and provided them with a general definition of organizational citizenship behavior (but without using this term) in line with the most recent definition in the literature (Organ, 1997). Then, I asked participants to take five minutes and write down as many examples of this type of behavior as they could, explicitly saying that these activities should be things they have done themselves or actually witnessed others doing at Initech rather than things they believe would fall into this category but had never seen, done, or experienced. This procedure is similar to that used by other researchers interested in identifying dimensions of OCB in a new research context (e.g., Farh et al., 2004).

Once the five minutes were up, I asked participants to call out examples of their activities, and I wrote them on the dry erase board as they were stated. After everyone had provided one or more examples, I asked what criteria they had used to determine whether a behavior was a "non-core" behavior, and probed accordingly. After several minutes of conversation, and once several criteria had been mentioned, I asked if any key categories of "non-core" behavior that they had seen at Initech had not been mentioned.

At this point I moved into the **key** questions, which are the central questions in the study, and drive the analysis (Krueger, 1994). I distributed a list of 25 activities used by previous researchers to operationalize existing dimensions of OCB (e.g., altruism, conscientiousness, civic virtue, etc.) and informed participants that the items had been used by previous researchers (not at Initech) in order to study "non-core" behavior (see Appendix D). I noted that one of the goals of the study was to assess how well this list

captured what "non-core" behavior "looks like" at Initech. Participants were asked to categorize each activity as either "core / expected" "non-core, more expected than voluntary," "non-core, more voluntary than expected," or "not applicable in my work group." A space for comments was provided next to each item, and participants were instructed to write comments if an item was difficult to answer, particularly if they selected the "Other" option. This procedure is similar to that used by Morrison (1994) to determine whether certain activities were appropriate to use as operationalizations of OCB at a particular research site, as well as whether different employees had different perceptions of various OCB-like activities. In addition to the 25 existing items, I also included 10 new items based on prior knowledge of high-tech work environments and work group practices in an effort to test items that might capture the localized nature of citizenship at Initech. Participants were not informed that some of the items were new.

After they had completed their ratings, I facilitated conversation using the following discussion questions in order to understand the underlying rationale for their categorizations: "How well does this list [of items] capture the range of non-core activities you identified earlier?" "What categories of non-core behaviors at [Initech] are missing?" "How relevant are these activities at [Initech]?" "Would the activities [the items are] talking about be considered "voluntary" [at Initech]?" and "Did you categorize any of the activities as core [non-core, etc.]? Which ones? Why?"

Once discussion on this topic slowed, I transitioned into the other area of key questions, which concerned the dimensions of citizenship climate. Using previous focus group questions surrounding organizational climates as a guide, I asked questions such as: "What happens at [Initech] that encourages/discourages you or your coworkers from

doing these things?" "What does it say about [Initech] that these things happen here?" "To what extent are these activities important at [Initech]? How do you know?" and "What impressions do you get of people who do these things more/less often?"

When approximately five minutes remained in the hour, I transitioned to the **ending** questions. These questions are intended to wrap up the conversation, allow participants time to reflect on what has been covered, and give the opportunity for participants to add final comments that may not have been covered yet (Krueger, 1994). Often, moderators will ask an "all things considered" question (Krueger, 1994) at this point. To this end, I concluded the groups with the questions, "All things considered, do you feel like we've come up with a comprehensive list of non-core activities that [Initech employees] do that are good for the organization but that are less likely to be explicitly rewarded?" and "Do you have any other thoughts, feedback, or questions about this research?" To conclude, I thanked participants, provided several means through which to contact me or my contacts in Initech's Human Resources Department if they had additional thoughts or questions, and provided them with their Amazon.com gift cards.

The next chapter provides an overview of the analyses and results of this study, as well as a discussion of the main findings.

CHAPTER VI

STUDY 1: ANALYSES, RESULTS, AND DISCUSSION

Study 1 was a qualitative investigation of organizational citizenship behavior in the high-tech industry. The main goals of Study 1 were to (1) explore the nature and meaning of organizational citizenship behavior at Initech,[10] a large multinational company headquartered in Silicon Valley, California, and (2) determine the main dimensions of a climate for citizenship. The study utilized focus group methodology and a stratified random sample of 75 employees to address these goals and guide the design of the survey for Study 2. An overview of the methods used to collect data for this study were provided in Chapter V. Analyses, results, and a discussion of the findings are presented below.

Analysis Overview

The analysis of focus group data consisted of several stages in accordance with best practices in qualitative data analysis (Edmunds, 1999; Glaser & Strauss, 1967; Guba & Lincoln, 1994; Krueger & Casey, 2000). These techniques also followed procedures similar to those in prior OCB research (e.g., Farh et al., 2004).

To address the first goal of Study 1 regarding the nature and meaning of citizenship at Initech, I began by evaluating participants' classifications of the list of 35 activities as (1) "core" to their jobs (i.e., expected); (2) "non-core, more expected than

[10] Pseudonym

voluntary;" or (3) "non-core, more voluntary than expected." Since the majority of activities given to participants for classification have been used in previous studies to operationalize acts of citizenship, my analysis of this data was done to broadly assess whether the nature of citizenship at Initech was similar to conceptualizations of citizenship in previous studies of OCB.

Following this analysis, I used inductive content analysis procedures recommended by Hinkin (1998) to analyze the range of "acts of citizenship" generated by participants during the first activity. This procedure is akin to using both grounded theory (Glaser & Strauss, 1967) and Q-Sort (Block, 1978) techniques, and was done to identify the full range of dimensions of organizational citizenship behavior in this context, including potential new dimensions. As a final step toward the first goal and to directly test Hypothesis 1, I used analysis of variance (ANOVA) tests to quantitatively assess whether participants from different business units had systematically different perceptions of the types of activities that constitute citizenship behavior.

To address the second main goal of Study 1, to identify the main dimensions of a climate for citizenship, I used qualitative data analysis methods. More specifically, I analyzed the portion of the transcripts related to citizenship climate, first using a deductive approach (Bitektine, 2008), and then using an inductive approach (Glaser & Strauss, 1967). Results of these analyses are provided below.

Results

Evaluation of Existing Conceptualization & Measurement of OCB

I began by analyzing participants' categorizations of existing survey items measuring OCB as "core / expected", "non-core / expected," "non-core / voluntary", or

"not applicable" to assess whether the nature and meaning of citizenship at Initech were similar to conceptualizations of citizenship in previous studies of OCB, and thus whether existing survey items were adequate measures of OCB in this context.

Of the 35 items given to focus group participants, 32 (91.4%) received at least one "core / expected" response, the most extreme on one end of the continuum, and 34 (97.1%) received at least one "non-core / voluntary" response, the most extreme response on the other end of the continuum. Appendix E lists the items receiving the highest number of each of these responses, respectively. Those receiving most "core" classifications related to complying with rules and deadlines, and helping coworkers. At the other end of the continuum, items receiving most "non-core / voluntary" classifications were the new items tested in this activity (see Chapter V) which related to socializing with coworkers and looking out for coworkers' health and psychological well-being. Overall, these descriptive data suggest that there was variance across the sample on nearly all items as to whether activities were expected components of people's jobs, or more discretionary. This result supports previous findings by Morrison (1994).

Next, I examined the frequency with which participants coded items as "not applicable in my work group." Overall, 22 of the 35 items (62.9%) received at least 1 "not applicable" code. Of the five items receiving the highest number of "n/a" codes, four were from the "generalized compliance" dimension of OCB (Smith et al., 1983); the fifth was from the "loyal boosterism" dimension (Moorman & Blakely, 1995) (see Appendix E). This high number of "not applicable" responses indicates that existing items used to operationalize OCB may not be particularly appropriate in this context.

Furthermore, the ensuing dialogue about the list of items as a whole suggested that although some of the items were considered good examples of "non-core" behavior at Initech, the set of items as a whole (which represented a wide range of existing items from the OCB literature) did not capture the holistic notion of "citizenship" at Initech. Although the terms "citizen" and "citizenship" were never used in the set-up of the activity,[11] a discussion about citizenship, specifically, ensued in the group with General Administration employees. This is illustrated by the quotes below:

> Moderator: Looking at this list [of existing items], how well do you think this list as a whole captures these categories of behaviors – 'non-core' activities at Initech – that we have up on the board?
>
> Participant 1: I saw almost no overlap between [the activities we generated] and what was here [on this list].
>
> Participant 2: I think maybe I was looking for 'upstanding citizen' <Laughter> items…
>
> Moderator: What would an 'upstanding citizen' look like here? What would a good citizen at [Initech] do, activity-wise?
>
> Participant 2: Oh, so like volunteering, helping out, arranging extracurricular activities. Sporting activities or things around the company that's not related to the job.

In one of the groups with Sales employees, a similar point was raised:

> Moderator: What was your reaction in general to this list? How well does it capture [categories of non-core behavior at Initech]?
>
> Participant 1: I think only the last portion really.
>
> Moderator: The last portion?
>
> Participant 1: I think in terms of the social activities, that's very good … But I wouldn't say that was the whole picture.

[11] This choice was made based on feedback from my contacts at Initech who indicated that the phrase used to refer to "citizenship behavior" at Initech is "non-core behavior." Following guidelines from Krueger and Casey (2000) I used this language instead of using citizenship-related terms.

These quotes illustrate that the set of items often used to measure citizenship in other contexts may not fully capture what it means to play the role of a good citizen at Initech.

Dimensions of OCB in this Context

To better understand the nature and meaning of citizenship in my research context, the first goal of Study 1, I next used the set of 615 "acts of citizenship" generated by focus group participants during the first activity. To extract the main categories of citizenship at Initech from this list, I used inductive content analysis procedures with multiple judges, following guidelines from Hinkin (1998).

Content Analysis Overview. First, I entered the 615 acts of citizenship generated by participants into a spreadsheet. I screened all items and discarded 10 of them (1.6%) due to unclear meaning, resulting in 605 usable items. I classified the list of 605 activities into categories, creating new categories as they emerged from the data (Glaser & Strauss, 1967). This initial categorization process produced 69 categories, which I subsequently collapsed into 16 broader, more abstract categories based on conceptual similarity. Following Farh and colleagues (2004), I assumed that if a category had very few cases included within it (e.g., examples provided by focus group participants), most employees do not consider it to be a main dimension of citizenship at Initech or that the category of behavior occurs relatively infrequently. As a result, I eliminated 5 categories with few items, leaving 11 main dimensions of citizenship at Initech. Using these 11 dimensions, I re-classified all items into the new categories, and named each category based on the types of activities within it (see Appendix F).

Next, I removed items that were verbatim duplicates of one another, leaving 576 items. I recruited four doctoral students with knowledge of the organizational citizenship

behavior literature to serve as naïve coders to test the reliability of my classifications (Farh et al., 2004). All coders were given a training session by me in which they were provided with an overview of the research, a definition of each of the 11 categories, and a "translation guide" written by me and verified with employees at Initech to clarify words and phrases unique to the context that were used by some focus group participants. We then worked as a group to classify some practice items. Upon completion of this training, coders worked in pairs with each pair focused on one-half of the item pool (n=288). First, each coder independently classified his or her assigned items into the 11 dimensions. Then, they compared their ratings. Instructions were emphasized and reinforced if questions arose. This process is similar to that of a Q-Sort method (Block, 1978).

Since each of the 576 items were classified by three coders (two doctoral student coders plus myself), there were three possible outcomes: (1) full agreement – all coders classified the item into the same category; (2) partial agreement – coders classified the item into two categories; and (3) no agreement – each coder classified the item into a different category. Of the 576 items, 218 items (37.8%) were found to have full coder agreement, 232 items (40.2%) had partial agreement, and 126 had no agreement (21.9%). To determine which activities were most representative of each dimension for subsequent survey item development, I reviewed the inter-rater agreement for each item described above; activities that were mentioned most frequently by focus group participants and also had full coder agreement were chosen as the best indicators of the given dimension.

Results. Appendix F provides a summary of the 11 main categories of citizenship that emerged from the focus groups. Of these, five aligned reasonably well with existing dimensions of citizenship in the literature: civic virtue, voice, helping, individual

initiative, and organizational pride/loyalty. Six categories emerged that did not align with previously-established categories of OCB, and were named as follows: "health and well-being behavior," "social participation," "self-development," "knowledge-sharing," "administrative behavior," and "professional participation." Below is a definition of the categories that emerged as well as activities that were particularly representative of each.

The first category that aligned with a previous dimension was **civic virtue** behavior. Based on previous literature, I defined this category as "actions indicative of a macro-level interest in the organization as a whole, and the recognition of one's responsibilities as an organizational member" (Organ et al., 2006, p. 310). Examples of activities from focus group participants that emerged as the best indicators of civic virtue behavior included: "Attending Engineering All-Hands Meeting;" "Attending talks;" and "Follow[ing] [Initech] blog posts." This dimension included 12% of all activities generated in the focus groups.

The **voice** dimension that emerged was nearly identical to the voice dimension described in previous literature (LePine & Van Dyne, 1998; Van Dyne et al., 1994; Van Dyne & LePine, 1998). I defined this dimension as "participating in activities, making suggestions, or speaking out with the intent of improving the organization's products, or some aspect of individual, group, or organizational functioning" (LePine & Van Dyne, 1998; Van Dyne & LePine, 1998). Activities that were particularly indicative of this category included: "Noticing low-efficiency meetings and proposing alternate means of communication;" and "Noticing that some people are timid in meetings and encouraging them to speak up." Organ and colleagues (2006) proposed combining this category with the individual initiative dimension of OCB, described below; however, in this study the

two dimensions contained considerably different types of activities and were thus considered distinct. This dimension also included 12% of all activities generated through the focus groups.

Helping behavior was defined as "voluntarily helping coworkers with work-related issues or problems, or preventing the occurrence of work-related problems" (Organ et al., 2006, p. 308), following previous literature. As recommended by recent scholars (Grant & Mayer, 2009; Organ et al., 2006; Van Dyne & LePine, 1998) this dimension combines the original altruism and courtesy dimensions of OCB. Examples of helping behavior from the focus groups included: "One of my team members helped me write a macro;" "Helping someone draft and edit an email;" and "Coming in on a weekend to help somebody." This dimension included 7% of all activities generated.

Individual initiative was defined as "engaging in task-related behaviors at a level beyond what is minimally required or generally expected (e.g., persisting with extra enthusiasm and effort; volunteering to take on extra responsibilities)" (Organ et al., 2006, p. 309). In this case, "task-related behavior" does not necessarily refer to tasks that are core to one's job, but rather tasks that are directly relevant to the organization's products or bottom line but that are not specifically assigned to the individual or rewarded. Examples included: "Cleaning up existing code;" "Excessive time spend on debugging and production issues;" and "Special project tasks (e.g., [Name of Project 1], [Name of Project 2])." This dimension included 6% of all activities generated through focus groups.

The final category that aligned with previous OCB categories was **organizational pride and loyalty**. This was defined as "promoting the organization and its products/services to outsiders, and protecting its competitive advantage" (Organ et al.,

2006, pp. 308-309). This dimension is similar, but not identical to, the previous dimensions of loyalty (Van Dyne et al., 1994), loyal boosterism (Moorman & Blakely, 1995), protecting the organization (George & Brief, 1992), and promoting the organization's image (Farh et al., 2004). Examples of activities included here were: "Providing product support to non-employees (e.g., explaining how to use [Product] to my mom)," "Participating in external-facing events (e.g., volunteering with [Initech])," and "Attend happy hour with users of our software." This dimension included 4% of all activities generated through focus groups.

The first new dimension was named **health and well-being behavior**. This dimension included 18% of all activities generated through focus groups – the largest of all dimensions that emerged – and was defined as activities related to the maintenance or improvement of one's own health and well-being, or in support of others' efforts to maintain their health and well-being. This dimension is similar to existing research in the areas of psychological well-being (Ryff, 1989; Ryff & Keyes, 1995) subjective vitality (Ryan & Frederick, 1997), and work recovery (Fritz & Sonnentag, 2005, 2006; Westman & Eden, 1997), but in addition to the self-focused orientation of these areas of research, this dimension also included activities that were other-oriented, such as acts that enabled coworkers to remain psychologically and physiologically healthy or facilitated others' subjective well-being. Therefore, none of the existing areas of research perfectly aligned with this emergent dimension. Activities that were particularly indicative of this category of behaviors included, "working out at the gym," "Join a 'stretch circle' one of my coworkers organised to get people up from their desk and doing some worthwhile stretches to keep fit and healthy at work," "helping coworkers relieve stress by listening

to rants," and "gave peer bonus to someone in Finance to thank for her help." One employee substantiated the existence of this dimension as a component of "citizenship" at Initech by saying:

> If people weren't concerned for their coworkers or people weren't trying to take criticism positively – if you put this all together and you had none of these, you'd have a very sterile, almost a negative workplace. (General Administration employee, Focus Group 8)

The **social participation** dimension contained 17% of all activities generated, and was defined as the participation in social activities during the workday that are not directly related to core job tasks. Van Dyne, Graham, and Dienesch (1994) also proposed a "social participation" dimension of OCB; however, in their conceptualization social activities were related to the improvement of core job tasks or workplace functioning rather than getting to know one's coworkers on a personal basis, as is this new category. For example, items in their proposed measure of social participation included, "Keeps informed about products and services and tells others," and "Works so personal appearance is attractive and appropriate." Rather, the type of social behavior that emerged from focus groups in this study is more akin to literature on playful workplace interaction (Dandridge, 1986; Glynn, 1994; Mainemelis & Ronson, 2006; Roy, 1960; Sandelands, 2003; P. Stevens, 1980) or work/non-work domain integration (D'Abate, 2005; Nippert-Eng, 1996a, 1996b). Examples of items falling into this category included: "Throwing darts around the floor with 'messages' on them, and then dodging them," "chatting with colleagues about leisure activities," and "Participating in internal, for-fun events (e.g., talent show)." This dimension is most similar to the last portion of items on the list that participants were asked to evaluate during the focus groups, which have not

been used in previous research, but were identified by participants as a better conceptualization of OCB in this context than were existing items.

The **self-development** dimension contained 10% of the items generated through the focus groups, and encompasses activities undertaken to improve one's knowledge, skills, and abilities for the explicit purposes of improving one's contributions to the organization. Although scholars of OCB have offered theory about this dimension in prior research (e.g., see George & Brief, 1992; Katz, 1964; Organ et al., 2006, p. 310), it has not been previously operationalized or tested. Several employees brought up this topic during the focus groups; for example, one participant in the General Administration business unit said the following:

> I see my legal team going to lots of off-site courses on legal issues. And most companies I've attended either don't give you the time, or if they give you the time, they won't pay for it – and we do both. We give the time and we pay. And those courses could be pretty expensive, but they're actually on direct topics – legal-related – that that we're working on. … You get to do it during your work hours. (General Administration business unit employee, Focus Group 8)

Other examples of activities that were generated by the focus groups in this category were: "Participate in a reading group for research papers" and "Course work (e.g., I'm taking classes at Stanford)."

The **administrative behavior** dimension contained 5% of the items generated and was defined as the planning, organizing, controlling, or supervising any aspect of the organization's operations and mission, and maintaining work-related resources. Examples of activities raised in focus groups were "scheduling meetings;" "taking care of details of 'events' that would otherwise go undone;" and "planning team-building activities." This category was similar to some items in the existing "obedience" dimension (Van Dyne et al., 1994), such as "sometimes wastes organizational resources" (reverse-coded) and

"keeps work area clean and neat." However, the obedience dimension also contains items such as "rarely wastes time while at work" and "always comes to work on time," which contradict other dimensions of citizenship that did emerge in this study, such as the social participation and health and well-being dimensions. Therefore, the obedience dimension proposed by Van Dyne and colleagues (1994) was not a perfect match for the description of OCB here.

The final new category of citizenship that emerged was named **professional participation**, and contained 4% of the activities generated. This category was defined as "voluntarily promoting or contributing to one's broader professional community outside the organization (e.g., presenting at conferences, participating in professional associations/networks, etc.)." Examples of activities included in this category were: "Taking part in external events to promote Engineering as a career – especially to women and minorities" and "Wrote article for external trade magazine."

Once these 11 categories were finalized, I reviewed them with employees at Initech to assess their validity. My contacts indicated that they were valid and exhaustive. However, they advised eliminating the self-development and professional participation categories. While they agreed that these types of behavior are good for the organization, the abiding reaction was that they have more of a direct positive benefit for individuals, and the benefit to the organization is more indirect. Therefore, these acts are not as representative of OCB at Initech. Indeed, a close review of the specific activities contained within these categories suggested most were indeed quite self-focused; therefore, these two dimensions were not retained for Study 2.

Perceptions of OCB across Work Contexts

The data described above indicate that the nature of citizenship at Initech is both similar to and different from that in other work contexts, thus providing initial support for my broad hypothesis that perceptions of citizenship can differ across work contexts. However, to more fully assess this possibility and test Hypothesis 1, I used data from focus groups to quantitatively compare perceptions from participants in different contexts within this organization.

Analysis Overview. First, I recoded the response scale into a 3-point Likert-like scale ranging from (1) (core / expected) to (3) (non-core / more voluntary than expected) in order to conduct ANOVAs comparing scores across business units on each of the 35 sample OCB items. Then, I analyzed differences between all business units. Finally, I specifically compared differences between Engineering and non-Engineering employees, since this distinction is particularly salient at Initech.

Results. The ANOVAs comparing all business units to one another indicated five marginally significant differences ($p < .10$). Appendix G summarizes these results. Given the limited variance in the response scale and the relatively small number of respondents ($n=70$), it is not surprising that the tests were only marginally significant. Still, although these results were only marginally significant, they suggest that employees from different areas of the organization may systematically perceive these activities in different ways.

The ANOVAs comparing employees in the Engineering business unit to other business units showed a significant difference at the $\alpha = .05$ level on the "Always meets or beats deadlines for completing work" item, and a marginally significant difference on the "Always comes to work on time" item ($p < .10$). Employees in Engineering perceived both of these items to be significantly more voluntary (i.e., more akin to

citizenship) than did employees in non-Engineering departments, who perceived them to be more core (i.e., expected parts of their job). Transcripts from focus groups support these results and suggest that Engineering employees may perceive activities to be significantly more voluntary than do employees from other business units, in general. For example, in describing the voluntary nature of such activities, one engineer said,

> They're good things to do, but if somebody looks at, 'are these going to take time away from doing the core thing and I'm on your team, and our team [goal] is this,' even though, in general, they are good things to do, if they take away from your team's core goals, you still may get 'dinged,' even though they're good in theory. They're 'running nice.' At a lower priority. (Engineering employee, Focus Group 5).

Conversely, an employee in Sales made the following remark, suggesting that nearly all behaviors on the list provided were expected: "…everything I put down, I found a reason to tie back to core..." (Focus Group 12). Another said, "You won't be successful if you can't do a lot of these things" (Sales employee, Focus Group 3). Thus, the quantitative and qualitative data suggest substantial differences between perceptions of employees in Engineering versus those in non-Engineering business units.

A review of the discussion related to the item, "always comes to work on time," provides additional insight into the different perceptions between Engineering and non-Engineering employees. When asked how they responded to this item, one Engineering employee said he had coded it as "non-core/voluntary" suggesting it would be considered an act of OCB. He then substantiated this classification by saying, "If you've had an 18-hour marathon coding session, yeah, sleep the next day! Don't show up just because you think you need to warm your cube" (Engineering employee, Focus Group 5).

Conversely, Sales employees perceived it to be more expected, on average, to be at work by a particular time. Although this difference in classifications by business unit may be due in part to the nature of the work done in Engineering versus in Sales (e.g., Sales employees needing to work during more traditional work hours in order to interact with their customers), social forces rather than work tasks were the main reason cited by participants for their classifications. For instance, one Sales employee said:

> People in [team name] come to work at 9 a.m. It's kind-of a 'thing,' like you can come to work earlier, you know, and people brag that they were at work at 7 o'clock. If you were at work at 7 o'clock and no one was there, you will tell people you were at work at 7 o'clock. We would love to come in at 10 o'clock if we could, but it was made a point: butts in the seat at 9 a.m. (Sales employee, Focus Group 9)

In addition to these contradicting perspectives, other employees saw this item as too difficult to answer given the multi-national nature of this organization. One employee from the Operations business unit suggested that coming to work on time is neither core nor non-core, but is irrelevant in his group, and thus cannot be accurately assessed, as follows: “My team's around the globe, so, when somebody's across the world in Asia or Australia, there's no 'time' to get to work." (Operations employee, Focus Group 4)

While the quotes above indicate that some areas of the organization may view coming to work on time as an expected behavior, others may see it as an act of citizenship, and others may view it as impossible to categorize, given the distribution of project teams across many different sites and time zones. In the latter case, coming to work at a particular time would not qualify as an act of citizenship since it does not appear to impact organizational functioning positively (or negatively, for that matter).

Overall, although the ANOVA results only showed a significant mean difference between Engineering and non-Engineering departments for one item and marginally

significant differences for several other items between business units, the overall pattern of results from the quantitative and qualitative results presented above suggests that perceptions of activities do differ across contexts within this organization. While the small sample and narrow response scale limits the available variance in responses, thus minimizing likelihood of achieving statistical significance in ANOVAs, the qualitative data support the overarching hypotheses and suggest that with a larger sample or a more differentiated response scale, the quantitative differences would likely become significant. For these reasons, Hypothesis 1 is supported. These results substantiate the decision to proceed with Study 2 and investigate the factors in the work context might influence these different perceptions.

Dimensions of a Citizenship Climate

The second goal of Study 1 was to explore the dimensions of citizenship climate and determine whether the three dimensions proposed by Schneider and colleagues (1994) were valid and exhaustive. To accomplish this, I used deductive and inductive qualitative data analysis techniques (Bitektine, 2008; Glaser & Strauss, 1967).

Deductive Analysis Overview. First, I used deductive analysis procedures to assess whether the three dimensions of citizenship climate proposed by Schneider and colleagues (e.g., fairness and trust, norms for citizenship, and rewards for broad performance contributions; Schneider et al., 1994) would be confirmed as the main dimensions. Deductive research in social science is typically conducted using quantitative methods (Guba & Lincoln, 1994); however, recent scholars have argued that qualitative methods are appropriate for deductive analysis when the variables of interest are new or unique, or lack of adequate quantitative measures exist (Bitektine, 2008). This was the

case here, since citizenship climate is a new construct, and two of the underlying dimensions (rewards for broad performance contributions and norms for citizenship behavior) had not been quantitatively assessed before.

Using established content analysis techniques (Glaser & Strauss, 1967; Strauss & Corbin, 1998), I analyzed the specific portion of the focus group data which related to why employees engage in citizenship behavior (e.g., the second portion of the "key" questions). I assigned codes to the data, noting any time a participant's comment related to one of the three dimensions. This was done with the intention of confirming or disconfirming the theory that these were the three main dimensions of a citizenship climate. Using this process, Schneider and colleagues' (1994) assertions were confirmed;

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of citizenship fairness and trust, group norms, and rewards for broad performance contributions each emerged from the focus group data. Support for each is provided below.

Dimension 1 – Fairness and Trust. As defined in Chapter III, group-level fairness is a shared group-level cognition regarding the extent to which group members are treated fairly, both by one another and by forces external to the group (Naumann & Bennett, 2000). Group-level trust is a shared belief about members' willingness to be vulnerable to the actions of another party (R. C. Mayer et al., 1995). Comments were raised in focus groups both explicitly and implicitly in support of these two group-level cognitions as being key elements of a climate for citizenship. Explicit comments related to trust and fairness included remarks such as, "there's a trust that we're doing the best we can" (Sales employee, Focus Group 12), and discussions of work practices being governed by "the golden rule" (Human Resources employee, Pilot Focus Group).

Other participants described trust and fairness in their work groups less directly, but their examples about the common practices and expectations in their groups indicated that work group members abide by these terms. For example, one participant from Sales described the underlying tone of her work group's context as follows:

> You can walk through [the office] and see coworkers playing ping-pong and you don't think they're blowing off their job. You just know that they're taking a break and they're having fun and they're gonna get the work done. (Sales employee, Focus Group 12)

This quote was taken from a conversation about people's willingness to be vulnerable and to trust their coworkers; in this case, coworkers are not afraid take a break from their work in public and play a game with coworkers, one of the key elements of the social participation dimension of OCB. The trust underlying this example suggests that coworkers empower one another to have control over their work, and they trust each other accomplish their pieces of common goals. Likewise, the quote below suggests that work group practices are conducted in a fair and ethical manner:

> [We] place a lot of importance on the honor system … you have that high ethical standard … your equivalent would be like an upstanding citizen outside in the world. (General Administration, Focus Group 8)

Overall, as evidenced by the quotes above, dialogue in the focus groups suggested that trust and fairness are important components of a climate for citizenship, which supports Schneider and colleagues' (1994) assertion.

Dimension 2 - Group Norms for Citizenship Behavior. Next, participants in nearly every group discussed some form of normative pressure to engage in OCB. Both descriptive and injunctive norms were evident (Cialdini & Trost, 1998; Deutsch & Gerard, 1955; Thibaut & Kelley, 1959). Descriptively, participants spoke of observing others engage in citizenship-related activities and thus assuming they were appropriate

modes of behavior; this reflects the "social proof" heuristic (Cialdini & Trost, 1998). For example, a participant in Human Resources said a work group climate for citizenship results from "role modeling behavior. You see other people doing [these activities]. That sets the tone..." (Focus Group 1). In Engineering, a participant described this mechanism as follows: "Everybody else is doing [these things]! Peer example." (Engineering employee, Focus Group 5)

Others made comments about the injunctive norms; in other words, the enforced pressure to engage in such activities to obtain social approval (Deutsch & Gerard, 1955). In Focus Group 12 one participant described this expectation of employees as "peer pressure, but not in a bad way," while another said, "It's almost like a healthy peer pressure that in order to really fit in, it's important for you to participate [in citizenship-related activities]" (Sales employee, Focus Group 12). In other groups, particularly in the Engineering business unit, participants discussed doing these things so as to not "let down" (Focus Group 5) fellow work group members, suggesting the presence of social pressure to engage in these behaviors.

One of the ways norms have an effect is through sanctions if the norm is violated (Deutsch & Gerard, 1955). Indeed, beliefs that there would be repercussions if employees failed to engage in citizenship behavior were evident in focus groups. For instance, employees spoke of peers passing judgment if they did not comply with these norms. In describing what he thinks when he sees someone not engaging in citizenship behaviors, one participant said he assumes, "…they're not in the swing of things. They don't know what's going on. They're not paying attention to the flavor…" (Engineering employee, Focus Group 6). Likewise, a participant from Sales said,

> I think that sometimes when people aren't involved in a lot of things, some other peers do pass judgment on them. 'Why aren't they involved in other things?' I do think there sometimes is that negative process of, 'This person only does what they were hired for' (Sales employee, Focus Group 12)

The quotes above are representative of many that suggested the presence of norms for organizational citizenship behavior is a key component of a climate for citizenship. To the extent that employees believe their work group's common policies, practices, and procedures involve citizenship behavior, the climate for citizenship is strengthened.

Dimension 3 – Rewards for Broad Performance Contributions. The third proposed dimension of a citizenship climate is a shared belief that broad performance contributions – beyond those contributions specifically related to core job tasks – are rewarded (Schneider et al., 1994). In support of this assertion, many participants discussed formal opportunities to reward "non-core" or citizenship-like behaviors. For example, the use of "peer bonuses" and "spot bonuses" was raised as one way in which employees are recognized and rewarded for engaging in these types of activities, even if they are not directly evaluated or rewarded through the formal reward system. These bonuses are available for employees or supervisors to give spontaneously to recognize others for doing something unexpected or discretionary, but that has a positive impact.

Furthermore, conversations about citizenship and whether it is expected or voluntary suggested that these contributions are at least partially taken into consideration in formal performance evaluations in some business units. One participant said, "Being [a good citizen] is pretty much part of your job description," (General Administration employee, Focus Group 8), and another in the same group followed up by saying,

> If you didn't do them [citizenship behaviors], you would be fine. You would keep your job. But I would say in order to really do well at this company and to even excel, maybe even getting promotions or whatever, it's a kind of "intangible"

> [thing] that you need to do in order to get recognized…So you could argue that that's part of your work obligations if it means that you'll benefit from it. (General Administration employee, Focus Group 8)

Likewise, this sentiment was also evident in other groups. For example:

> The results of things you do and nuances can come through in [performance reviews], right…And so it's not that you can put a bullet point next to each and every thing you've done, but it sort-of culminates in everything adding up. (Operations employee, Focus Group 4)

> There is a section on our self-assessment [in the performance review process] that is "what do you do for the [Initech] community?" So there are real advantages to doing [citizenship-related] tasks outside your core role. (Marketing employee, Focus Group 2)

However, variance between groups was also evident on this dimension. In the Engineering business unit, citizenship behavior appeared to have a weaker link than in other business units to beliefs about whether it would be rewarded. A brief dialogue between two Engineering employees summarized this sentiment:

> Participant 1: I have yet to see [not engaging in acts of citizenship] negatively affect people's [performance evaluations] as opposed to getting something new and innovative in their core done. Antisocial people who get releases out seem to be rewarded. (Engineering employee, Focus Group 5)

> Participant 2: Yeah, you really get rewarded on results. (Engineering employee, Focus Group 5)

This overall pattern of results across Initech supports Schneider and colleagues' (1994) assertions about perceived rewards for broad performance being an element of a climate for citizenship. However, the variance across groups (e.g., particularly Engineering vs. non-Engineering groups) is noteworthy given the apparent presence of low beliefs about rewards for broad contributions coupled with a high value for and

presence of actual citizenship behavior in the Engineering business unit. These results suggest that the power of this dimension to predict OCB may vary across business units.

An interesting tension related to this dimension of a citizenship climate also emerged. Some participants indicated that if they suspect another person believes these types of activities are rewarded, they develop skepticism that the person is only engaging in the behavior in order to obtain such rewards. As a result, the effectiveness of the person's behavior (e.g., the helping, socializing, or efforts to help sustain others' well-being, etc.) suffers. This is in line with Bolino's (1999) theory that OCB may be undertaken for impression management reasons. For example, one manager said:

> It's very transparent when somebody does [citizenship behavior] to be visible, versus somebody who pursues something they're passionate about. It's extremely transparent for me, for other managers, and for peers. And I think lots of times, you notice somebody that – or individuals that are just trying to get their hands into everything. And then I think there's lots of questions about, 'are they doing it because they're passionate about it or are they doing it because they want to somehow artificially become visible because that's what they think will take them to the next level?' (Sales employee, Focus Group 12)

Therefore, while these results suggest that perceived rewards for broad contributions may indeed be a dimension of a citizenship climate, the effects may not always be in the positive direction.

In summary, my deductive analysis of the qualitative data from focus groups supported Schneider and colleagues' (1994) assertions that three main dimensions of citizenship climates are (1) fairness and trust, (2) norms for citizenship behavior, and (3) rewards for broad performance contributions.

Inductive Analysis Overview. Following the deductive analysis, I re-analyzed the data using inductive analysis techniques (Glaser & Strauss, 1967) to assess whether

there was evidence for additional dimensions of a citizenship climate beyond those proposed by Schneider and colleagues (1994). I reviewed transcripts of the focus groups and coded the themes that emerged, letting categories emerge from the data (Glaser & Strauss, 1967; Hinkin, 1998). Using this process, I found evidence for two additional dimensions of a citizenship climate: shared perceptions of (1) autonomy and (2) perceived opportunities for non-core activities. Each is described below.

Dimension 4 – Autonomy. Autonomy is defined as the amount of freedom and discretion an individual has in carrying out assigned tasks (Hackman, 1983), and work group-level autonomy is defined as "the freedom of a team to make decisions about goals (what), work methods (how), planning issues (when), and the distribution of work among team members (Breaugh, 1985; Evans & Fischer, 1992; Molleman, 2000; Rico et al, 1997, p. 116-117). Two underlying mechanisms linking group-level autonomy to OCB are worth noting. First, stronger shared perceptions of autonomy within a group create a weaker overall constraints or "situation" (Mischel, 1977), prompting feelings of self-determination (Deci, Connell, & Ryan, 1989). Individuals are able to choose whether and how they initiate and complete individual activities, leaving more room for the engagement in non-core work tasks (e.g., citizenship behavior) if they so desire. One participant from Engineering described the impact of autonomy on citizenship behavior as follows:

> You can dive in in any way you want to. That helps a lot [in encouraging non-core activities]. The fact that you know you can learn about any project, if there's any technology you're interested in, you can see what's going on at [Initech] around that… It's such an open culture, where anyone can really contribute to anything. (Focus Group 6)

Variance in levels of autonomy between groups was also evident. The quote below illustrates how shared perceptions of autonomy can result in employees feeling more free to engage in public displays of citizenship, whereas in groups that have less autonomy, employees may not engage in such acts as readily, or if they do, they may conceal them:

> In some groups people are more secretive about these kinds of [non-core] things that they do, but in other groups like Engineering they're hanging out without their pants on. Not necessarily, but… <laughter> … the point is, they feel more free to be natural. (Human Resources employee, Focus Group 1)

In comparing Initech to other organizations where he has worked, one of the Engineering participants said the following:

> A lot of these things occur in other workplaces, but… you did it more or less when you could get away with it, little bits of it here and there, but a lot of it you did it when you got away with it. If [my former supervisors] knew you were doing [citizenship-type activities], they'd ask you to focus on the core. (Engineering employee, Focus Group 5)

These examples suggest that when there are shared beliefs that the work group is autonomous, a stronger climate for citizenship arises due to employee control and self-determination.

The second mechanism through which group autonomy may impact citizenship is a need for cooperation. When groups experience low levels of autonomy, it indicates that their tasks are mainly structured externally; therefore, there is no need manage internal processes or make collective decisions (Rico, Molleman, Sánchez-Manzanares, & Van der Vegt, 2007). Conversely, in the presence of high group autonomy, group members have the flexibility to make their own task-related decisions; furthermore, if the work is interdependent, cooperation is required for collective success. Therefore, the higher the

group autonomy, the more "members need to communicate and collaborate to adjust their thoughts and actions and to decide about work issues" (Rico et al., 2007, p. 117). This mechanism was not specifically articulated in focus groups; however, it has been established in previous literature in organizational behavior. Therefore, I argue that it helps substantiate the inclusion of autonomy as a key dimension of a citizenship climate.

Based on this emergent dimension of citizenship climate from the focus groups and the theory provided above, I offer the following additional hypotheses:

> **Hypothesis 2E:** The higher the shared perceptions of group autonomy, the higher the level of citizenship behavior displayed by individual group members.
>
> **Hypothesis 3E:** Greater dispersion of perceptions within the group about group autonomy will be positively associated with individual citizenship behavior.
>
> **Hypothesis 4E:** Climate strength moderates the relationship between shared perceptions of group autonomy and individual OCB; in particular, individual OCB will be highest when shared perceptions of group autonomy are high and dispersion in perceptions is low.

Dimension 5 – Perceived Opportunities for Non-Core Activities. The second dimension of citizenship climate that emerged from the inductive analysis was a shared perception of available opportunities for non-core activities in the work environment – in other words, events or aspects of the context that make it easy or natural to engage in citizenship behavior. To the extent that the group perceived more opportunities for such behavior, employees were more likely to respond to such opportunities and engage in citizenship behavior. This is similar to existing theory on job crafting (Wrzesniewski & Dutton, 2001) which suggests that opportunities for job crafting will be assessed by employees prior to the decision to take action and will subsequently dictate action.

Two underlying mechanisms emerged to explain the effect underlying this dimension, as well. The first was the relative ease of engagement in OCB that results

from opportunities. Such available opportunities enable employees to engage in OCB reactively, expending less effort than if they had to create opportunities proactively. The following comments were indicative of this sentiment:

> The physical location of everyone and the way the cubes are set up [encourages this behavior]. I think everyone's in everyone's business. So, you just talk about like, 'Oh I heard about when you were saying this and this to someone on the phone.' We're all sitting in each other's laps. (Sales employee, Focus Group 9)

> There are a lot of really creative and funny signs all around, telling you to do certain things and how much fun things can be. (Sales employee, Group 12)

> It's more of like a space that we have in our office that you can go and do something that would be considered non-work. Ping-pong just happens to be what we have. (Sales employee, Focus Group 12)

Not only do available opportunities make engagement in citizenship behavior easier, but employees indicated that these opportunities in the environment signaled support for OCB from upper management, limiting the potential risk associated with engaging in them. For instance, one participant said, "[Citizenship behavior] is offered and it's encouraged… you see flyers on the wall and emails are coming into you" (General Administration employee, Group 8). Others said,

> I haven't ever played ping-pong at [Initech], but it's more of working for a company that I know that if I wanted to go play ping-pong or play Guitar Rock Band Hero – as you can tell, I'm very experienced <laughter> – knowing that I work for a company that's okay with that is good. (Sales employee, Focus Group 12)

> You get the impression that this kind-of stuff is okay. I think if [Initech] were to come out and say, 'Oh, all talks are closed down,' or 'We're taking out the [speaker series] program' and stuff people would be more nervous about what they can and cannot do. Like when they host [famous musicians] or something. [Initech's] hosting, so… (Engineering employee, Focus Group 6)

Thus, based on this emergent dimension of citizenship climate from the focus groups and the theory provided above, I offer the following final hypotheses to test in Study 2.

> **Hypothesis 2F:** The higher the shared perceptions of opportunities for non-core activities in the work environment, the higher the level of citizenship behavior displayed by individual group members.
>
> **Hypothesis 3F:** Greater dispersion of perceptions within the group about opportunities for non-core activities will be positively associated with individual citizenship behavior.
>
> **Hypothesis 4F:** Climate strength moderates the relationship between shared perceptions about opportunities for non-core activities and individual OCB; in particular, individual OCB will be highest when shared perceptions of available opportunities for non-core activities are high and dispersion in perceptions is low.

Additional Findings. In addition to these two emergent dimensions of citizenship climate, several additional predictors of OCB emerged from focus groups. First, **shared positive regard** was consistently raised as a reason for engaging in OCB. Participants reported that when group members "like" each other (Marketing employee, Focus Group 2), they're more likely to engage in acts of citizenship to positively contribute to the group and organization. Individual-level positive regard has been found to predict OCB amongst knowledge workers in previous studies, as well (Blatt, 2008). However, at the group-level it does not fall into a strict definition of climate as a set of shared perceptions regarding the policies, practices, and procedures that an organization rewards, supports, and expects (Schneider & Reichers, 1983). Rather, it is more of an affective or relational construct. Therefore, the variable was included in Study 2 analyses, but not considered to be a dimension of the citizenship climate.

Likewise, **group workload** emerged as a potential predictor of citizenship behavior in focus groups. Numerous participants reported that when they and their

coworkers had particularly heavy workloads they were less likely to engage in citizenship behavior. One employee in the General Administration business unit described her work as follows:

> It's 60 hour weeks and it's full with all core work, just like he was mentioning. We have over 200 contracts a week that have to be reviewed, and they come in on a spreadsheet and they're tracked. So when they come in, you gotta review 'em, and they've gotta go out. There's no time for anything but "core" [activities]. I can't even think of… I don't think that I've ever done a "non-core" activity here. (Focus Group 8)

Another, in Engineering, said:

> I think it falls to prioritization too, where it's not too busy, and you're kind-of in a down point in a project cycle, you can go to more talks and stuff like that. But all of a sudden when you're coming up to a release or something, you might be missing a talk, but you have more important things to do. (Focus Group 6)

It's clear that the group's level of workload may impact individual citizenship behavior; however, like positive regard, this variable does not fit the definition of a climate dimension. Therefore, I controlled for it in Study 2, but do not conceptualize workload as a dimension of citizenship climate.

Group member similarity also emerged as a potential predictor of citizenship. Participants commented that the similarity they felt amongst group members prompted them to go out of their way to help one another or socialize. One person summarized this theme as follows:

> I think in many ways it's easy for [Initech employees] to relate to each other. I think many come from similar backgrounds, similar education, similar ages and stages in life, similar living situations, you know, and that makes it conducive for us to wanna hang out with each other and help solve each other's problems and say, like, you know, "I'm pregnant! What does this mean? (Sales employee, Focus Group 9)

As a result, it would appear that greater similarity amongst coworkers may encourage more citizenship behavior. Thus, I will also control for work group heterogeneity along

several dimensions (e.g., gender, ethnicity, job level, organizational tenure, and geography) in quantitative analyses.

Discussion and Conclusion

The main goals of this qualitative study were to assess the nature and meaning of organizational citizenship behavior in a modern work context, and to explore the underlying dimensions of a citizenship climate. The study was undertaken to broadly investigate whether perceptions of organizational citizenship are susceptible to contextual influence, an effect which has been surprisingly underexplored in OCB literature to date. Practically, this study also served to assess whether previous conceptualizations and operationalizations of OCB would be appropriate for use in the subsequent survey study.

Findings from this study suggest that (1) conceptualizations and measurement of organizational citizenship behavior in prior research are not generalizeable to all work contexts and may be systematically outdated; (2) citizenship behavior can take on decidedly different forms in modern, knowledge-based work contexts than it has in contexts used in prior OCB research; (3) the nature of citizenship behavior can differ across micro-level contexts, even within the bounds of one organization; and (4) climates for citizenship are composed of both dimensions proposed in previous research as well as new dimensions. Each of these findings is discussed below.

Results from this study fuel the existing debate about what activities constitute organizational citizenship behavior. Findings indicated that many of the most common items in the existing literature used to conceptualize and measure OCB did not apply in this setting. Moreover, due to the reasons for their irrelevancy in this context (e.g., work groups distributed across time zones, flexible working arrangements, informal office

norms, etc.) and the prevalence of similar structural and social characteristics in other modern work environments, a reasonable conclusion from these findings is that many survey items commonly used to measure OCB may be systematically outdated.

In particular, some items from the foundational literature on organizational citizenship behavior directly contradicted dimensions of citizenship that emerged through the focus groups. For example, the item “does not take extra breaks” (P. M. Podsakoff et al., 1990), which was classified by 17 participants (24.6%) in this study as being “not applicable” in their work group, contrasts with the health and well-being dimension of OCB that emerged here. The item, “does not spend time in idle conversation” (Smith et al., 1983), contradicts with the social participation dimension that emerged here. Likewise, the item, “defends the organization when outsiders criticize it” (Moorman & Blakely, 1995) contradicts the underlying sentiment of the voice dimension, which suggests that criticism – from insiders or outsiders – may be constructive, and thus criticizing the organization may be productive, and thus an act of citizenship, rather than detrimental. Several of these outdated items are from the most commonly-used scale to measure OCB in the current literature (e.g., P. M. Podsakoff et al., 1990), and are conceptually similar to items in other popular scales (e.g., the "OCB-O" scale from Williams & Anderson, 1991). Findings from this study would suggest that these scales are no longer relevant in their current form in work environments similar to that studied in this dissertation. Overall, it appears that scholarship on OCB has not yet caught up to scholarship on the changing nature of work (Arthur & Rousseau, 1996; Bridges, 1994).

In addition to providing insight about the changing nature of citizenship across many modern work settings, this study sheds light specifically on the conceptualization

of organizational citizenship behavior in a knowledge-based organization in two main ways. First, results suggest that the role of an organizational citizen may be more ambiguous in modern, knowledge-based organizations than in more traditional, manufacturing- or production-oriented work contexts – not unlike the core job roles within the former type of context. In a more traditional type of environment, work tasks are more structured, making it easier to determine where one's job role ends and citizenship behavior begins; conversely, without a clearly-specified job description, knowledge workers may have more trouble determining the behaviors on which they are being evaluated versus those that would be considered discretionary acts of citizenship. One focus group participant described this ambiguity as follows:

> It's interesting, because if you don't have a job description, then your [performance evaluation] will also be all over the place because they don't know what criteria they should review you on. And so people will just be looking at what you're actually doing, but they won't necessarily know if that's part of your job. (General Administration employee, Focus Group 8)

Given the intentional ambiguity surrounding job expectations and boundaries at Initech, which is representative of many organizations in the high-tech industry, employees expressed a strong need to look to cues from their immediate environment to determine what behavior is expected and acceptable.

Secondly, the types of citizenship behavior that emerged in this study shed light on the types of activities that contribute to the success of modern, knowledge-based organizations. While conscientiousness and sportsmanship were identified in prior literature as being key categories of citizenship, these dimensions did not emerge as such in this study; rather, dialogue in focus groups suggested that these types of behavior are fully expected or "core" rather than discretionary. Furthermore, the five new categories of

OCB that emerged (health and well-being behavior, social participation, administrative behavior, knowledge-sharing, self-development, and professional participation) provide insight into the types of spontaneous or emergent behavior that organizations may rely on (Katz & Kahn, 1966). These new categories are in stark contrast to some of the foundational dimensions of OCB, such as compliance (Smith et al., 1983), obedience (Van Dyne et al., 1994), and peacemaking (P. M. Podsakoff & MacKenzie, 1994). Whereas earlier dimensions of citizenship such sportsmanship, obedience, and compliance relate to putting extra effort into one's prescribed job tasks, deferring to authority, or going along with the status quo, the new categories (as well as existing categories of OCB that emerged as relevant in this study) tend to take employees away from their core jobs, and implicitly assume that the non-core behavior will complement the core job or the work context in some way.

This shift in the nature of OCB sheds light on the outcomes modern organizations are attempting to achieve. While strict discipline and deference to authority may have promoted key outcomes like efficiency in manufacturing or production settings, it may be more important for modern employees to eschew status differences, generate playfulness, sustain physical and psychological health, and offer constructive criticism to one another, as these things contribute to an energetic and lively exchange of ideas and thus more innovation or creativity (Mainemelis & Ronson, 2006), two key elements of good performance in the knowledge economy. The types of citizenship behavior that emerged in this study are aligned with this shift in goals.

While the findings discussed above suggest that the nature of citizenship may be undergoing a more systematic shift due to sweeping changes in the nature of work, the

findings from this study also lend support to emerging research (Farh et al., 2004; Kwantes et al., 2008; Tepper, Lockhart, & Hoobler, 2001) suggesting that perceptions of citizenship are influenced by the most salient, proximal social context in which the behavior occurs. While previous scholars have identified differences in conceptualizations of citizenship across macro-level contexts (e.g., national culture), this study suggests that individuals in different micro-level contexts (e.g., different work contexts within the same organization) can also have distinctly different views about the nature of citizenship as well. Indeed, employees in different areas of Initech perceived different activities in substantially different ways; despite a small sample and narrow response scale, significant differences were still found. These findings supported the decision to proceed with the survey study (Study 2) to fully assess relationships between social context and citizenship behavior.

Finally, this study both supported and extended the existing theory about the dimensions that compose a climate for citizenship (Schneider et al., 1994). Focus group participants spoke extensively about the role of the social context, in general, as a key predictor of their own citizenship behavior. More specifically, as illustrated by the quotes above, the dimensions proposed by Schneider and colleagues (1994) as composing a climate for citizenship were confirmed: fairness, trust, norms for citizenship behavior, and rewards for broad performance contributions. However, two additional dimensions also emerged. Participants indicated that when policies, procedures, and work practices (e.g., the climate) in their work group conveyed higher levels of autonomy and opportunities for non-core activities, individuals were more likely to engage in

citizenship behavior. Therefore, I operationalized all five of these dimensions of a climate for citizenship in Study 2, and tested their effects on OCB (see Chapters VII and VIII).

Taken as a whole, these findings support the use of a role-based conceptualization of citizenship, offered in Chapter III, whereby the role of an organizational citizen is not fixed, but rather is defined by the salient context in which the role is embedded. As such, the behaviors undertaken by someone enacting such a role will be context-specific; they will depend on the environment he or she is in. Given these findings, I encourage future scholars to explore the relevancy of existing dimensions and measures of OCB prior to conducting research in order to determine what is most appropriate in their given research setting, rather than continuing the debate about what activities do or do not constitute OCB across contexts.

The next phase of this dissertation research builds on the insights that emerged from this study. In the next chapter I provide an overview of the research design and methods for Study 2, a survey designed to test the relationships between a climate for citizenship and individual OCB and performance, using the specific variables identified in this study.

PART III

A QUANTITATIVE INVESTIGATION OF THE RELATIONSHIPS BETWEEN WORK GROUPS, CITIZENSHIP BEHAVIOR, AND PERFORMANCE

CHAPTER VII

STUDY 2: METHODS

Study 2 was a quantitative investigation of the effect of work group citizenship climate on individuals' organizational citizenship behavior and performance. The study utilized survey methodology and a stratified random cluster sample of employees at Initech,[12] a large multinational company headquartered in Silicon Valley, California. The methods used to collect data for Study 2 are reviewed below; analyses and results of this study are presented in Chapter VIII.

Methods

Sample

Like Study 1, Study 2 was conducted at Initech, a large, multinational high-tech company headquartered in Silicon Valley, California (see Chapter IV for detailed description of the research site). Since the bulk of my hypotheses focused on the effects of work group-level variables on individual-level citizenship behavior, it was necessary to survey multiple people from a common work group. Therefore, I used stratified random cluster sampling for Study 2. In this type of sampling the overall population is segmented into strata, and then clusters are randomly selected from within each stratum.

[12] Pseudonym

In this study, strata were defined by business units and clusters were represented by work groups. Strata and clusters were defined based on existing theory and naturally-occurring groups within the Initech organization.

I used business units to define the strata since the overall employee population at Initech is already divided into six main business units: Engineering, Operations, Sales, Marketing, Human Resources, and General Administration (e.g., Finance, Legal, Facilities, etc.). These business units are commonly used to segment the company for internal organizational purposes, so they were determined to be logical for this purpose. Moreover, the type of work conducted within each business unit is considerably different from that in other business units; therefore, it made theoretical sense to apply this sampling frame since the type of citizenship behavior undertaken in a particular business unit could differ based on the nature of the work.

Clusters were defined by work groups, since the work group was one of the focal levels of analysis for this study. Established criteria in the literature suggests that employees are typically considered members of the same work group if they have a common supervisor (George, 1990) and work on interdependent work (Alderfer, 1977). Prior to selecting the sample, I confirmed with my contacts at Initech that this definition of a work group was reasonable in this context, and that employees working for a common supervisor tend to work on interdependent projects. Once confirmed, I drew the original sample for Study 2 using a complete list of work group manager IDs, each representing one work group, which was provided by my contact in the Human Resources department. Using a random number generator I randomly selected manager

IDs; when a particular manager's ID number was selected, all employees reporting to him/her were added to the sample as one cluster. I continued selecting manager IDs and adding their direct reports to the sample until the number of total work group members (excluding managers) in the sample represented 5% of Initech's overall employee population. Using this approach, the original sample included 996 Initech employees from 135 work groups.

As will be described in detail in the Measures section below, I collected different data from the managers of work groups than I did from work group members. Therefore, it was necessary to ensure that each individual in the sample was only categorized as a work group member or a work group manager to keep the two samples fully independent. To do so, I compared the original sample of work group members to that of work group managers, and eliminated 10 groups that included one or more work group members who were also managers of groups selected for the study (e.g., if Groups "A" and "B" were selected for the study, but Group "A" included a member who was also the manager of Group "B," Group "A" was deleted from the sample). In all of these cases, I eliminated the group where the "duplicate" individuals were work group members; I followed this process since it was less likely that the work group containing the manager would have interdependent work, which was one of the criteria of a work group in this setting (Alderfer, 1977).

I next checked the sample against the list of employees who participated in the focus groups (Study 1) to ensure independence between the results from Studies 1 and 2, and eliminated seven work groups that included one or more employees who participated

in Study 1. I replaced these groups with demographically-similar groups (e.g., groups from the same business unit with similar group size and manager demographics).

Following these deletions and substitutions I eliminated three additional groups whose members included individuals at the Director level or above, since Directors typically supervise other employees, suggesting that multiple work groups were included within the selected group. Finally, I was asked by contacts at Initech to eliminate two additional groups due to unexpected organizational changes affecting the groups.

The final sample, including work group members and managers, included 1,001 Initech employees (5.1% of the total employee population); 881 were work group members (from 120 work groups), and 120 were work group managers. Table 7.1 summarizes the sample and compares it to Initech's overall employee population.

Table 7.1
Survey Sampling by Business Unit

	Company Overall		**Survey Sample, Level 1** (Employees)				**Survey Sample, Level 2** (Groups)			
	Employees	Groups	Original Sample		Final Sample		Original Sample		Final Sample	
Business Unit	% of Total Employ-ees in Company	% of Total Groups in Company	# of Employ-ees	% of Total Employ-ees in Survey Sample	# of Employ-ees	% of Total Employ-ees in Survey Sample	# of Work Groups	% of Total Groups in Survey Sample	# of Work Groups	% of Total Groups in Survey Sample
Engineering	41.9%	30.8%	418	42.0%	383	43.5%	48	35.6%	44	36.7%
Operations	4.9%	5.6%	52	5.2%	51	5.8%	8	5.9%	8	6.7%
Human Resources	4.5%	4.6%	47	4.7%	42	4.8%	10	7.4%	9	7.5%
General Admin.	6.9%	9.0%	67	6.7%	45	5.1%	11	8.1%	8	6.7%
Marketing	3.4%	4.2%	35	3.5%	32	3.6%	5	3.7%	5	4.2%
Sales	38.4%	45.8%	377	37.9%	328	37.2%	53	39.3%	46	38.3%
Total	100.0%	100.0%	996	100.0%	881	100.0%	135	100.0%	120	100.0%

Survey Design and Procedure

The survey was designed to assess the constructs of interest, mainly using multiple-item Likert scales. I designed two separate survey instruments (Survey Instruments "1" and "2," respectively) to enable some data to be collected from work

group members, and other data from work group managers. Survey Instrument 1, for work group members, contained three main sections. The first asked participants about their perceptions of the work group climate (independent variables). The second asked them to respond to items assessing two of their fellow work group members' citizenship behavior (dependent variables). The third contained the individual-level attitude and personality scales (control variables). Survey Instrument 2, for work group managers, contained two sections. First, managers were asked to respond to items about the climate in the work group.[13] Next, they were asked to provide a global rating of citizenship behavior for each of their subordinates. The format of each survey instrument is described below, as are the development and validation procedures used to create new measures. The full survey instruments are provided in Appendices I and J. Following typical practices for administering employee surveys at Initech and other large organizations, I administered the survey electronically via the Internet (Thompson, Surface, Martin, & Sanders, 2003).

Survey Item Development and Testing. Whenever possible, I employed existing scales that had been validated in previous literature. However, it was necessary to engage in significant scale development work for measures of OCB, since several dimensions were new, and results from Study 1 indicated that common items used to measure existing dimensions were often poor representations of the dimension in this context (see Chapter VI). The first four dimensions of OCB identified through Study 1 aligned reasonably well with existing dimensions (helping, civic virtue, voice, and individual initiative) so I was able to draw heavily on existing items to measure these constructs.

[13] These data were not analyzed in this dissertation.

The latter four dimensions (knowledge-sharing, administrative behavior, social participation, and health and well-being behavior) emerged from Study 1, and have not been tested in the OCB literature before. Therefore, I developed new scales to measure these dimensions using an inductive approach, following guidelines by Hinkin (1998).

According to Hinkin (1998, p. 107), an inductive approach to survey development is appropriate when the literature does not provide enough existing information to develop a conceptual basis for a construct. Since the four new dimensions of citizenship behavior have not been identified before in the OCB literature, this approach was prudent. Hinkin (1998) recommends beginning the inductive process by asking a sample of respondents to describe aspects of the variable—in the case of this study, the behavior—of interest. Then, responses should be subject to content analysis and sorted into themes using a process such as a Q-Sort with multiple judges (Anderson & Gerbing, 1991; Block, 1978; Kerlinger, 1986). Based on this process, items are developed.

Given that I had already used a Q-Sort to identify the main dimensions of citizenship from Study 1 (see Chapter VI), I used the same results to develop items for Study 2. I developed new items by referring back to the results of the Q-Sort and writing survey items to reflect the nature of the activities that were most commonly coded as examples of each dimension. In some cases, similar constructs and measures were available from other literatures within psychology or organizational behavior (e.g., psychological well-being, subjective vitality, self-actualization, etc.; see Diener, Emmons, Larsen, & Griffin, 1985; Jones & Crandall, 1986; Ryan & Frederick, 1997; Ryff, 1989; Ryff & Keyes, 1995); however, I did not find any established scales from other literatures that would adequately capture the four new dimensions of OCB that

emerged from the focus groups. Therefore, it was necessary to develop new scales for this study. However, I used existing research as a guide wherever possible.

Using established guidelines (e.g., Edwards, 1957; Warwick & Lininger, 1975), I aimed to write items that were clear and concise, and that did not fall victim to common issues that can cause confusion on the part of the respondents (e.g., negatively-worded items) (Harrison & McLaughlin, 1993). I pre-tested 21 items I intended to use to measure the four new dimensions of citizenship with a small group of Initech employees to identify items that were conceptually inconsistent with the constructs they intended to measure (Hinkin, 1998). Following general guidelines by Schriesheim and colleagues (1993), I provided this small group of Initech employees with definitions of each construct, and asked them to comment on whether the wording of any items was unclear, or if any items did not correspond to their intended construct's definition.

After making modifications to the items based on this feedback, I pre-tested the full set of 38 items I intended to use to measure the eight dimensions of citizenship (new and old). I recruited 24 naïve employees to participate in this activity (e.g., people who had not participated in the previous pre-test), and asked them to respond to each item using a 5-point Likert-like scale, the scale I intended to use in the survey. I also provided an "Unclear Item" check-box and open-ended comment field next to every item so respondents could indicate if an item was unclear, or provide specific feedback.

Based on the results from this pre-test, it was necessary to drop or modify 23 of the items, some from new scales and some from existing scales, based on feedback indicating respondent confusion or irrelevancy in this context (e.g., certain words used in

the existing items had different meanings in this context, and other activities were deemed so irrelevant as to be confusing, such as "obeys organizational rules and regulations"). Therefore, I was unable to use all items verbatim from some established scales in the final survey. In these cases, I substituted other items from established scales, or modified items from the existing scale as minimally as possible to eliminate confusion.

Following this second pre-test I finalized a set of 33 items to measure OCB. I aimed to retain at least four items to measure each of dimension of OCB since scholars suggest that at least four items per scale are needed to rigorously test the consistency of items within a latent construct (Harvey, Billings, & Nilan, 1985). However, given that adequate internal reliabilities of scales can still be assessed using fewer than four items (Cortina, 1993) and many arguments are made for shorter scales to reduce respondent fatigue, I retained just three items for two of the scales: civic virtue and knowledge-sharing. Civic virtue was an existing dimension of OCB with well-established items, so three items were deemed adequate. For knowledge-sharing, three items adequately captured the main conceptual facets of the construct that emerged through Study 1.

As a final step in the testing process, I pilot tested the full survey (including independent, dependent, and control variables) with a subset of the final survey sample (n=107 employees from 14 work groups). Feedback from respondents indicated that additional language was necessary on the introduction page of the survey to clarify certain portions of the study.[14] Thus, a longer explanation of the rationale was provided

[14] In particular, respondents wanted more information about the rationale behind using peer ratings of behavior.

on the first screen for subsequent launches. This was the only change made to the survey following the pilot test.

Participant Recruitment. Survey invitations were emailed directly to participants' work email accounts using the survey software program used to build the survey. Work group members and managers received slightly different survey invitations based on the slightly different nature of their surveys. Both emails provided a very brief overview of the survey initiative as well as a link to a secure website to take the survey.

It was important to have an Initech employee send the survey invitation email to convey legitimacy and sponsorship, as well as to minimize the chances of the email being automatically filtered into employees' "spam" filters. Therefore, recruitment emails were sent on behalf of one of Initech's vice presidents in Human Resources (e.g., from the perspective of an invitee, the email came directly from the vice president), which added credibility and sponsorship to the initiative. This vice president is particularly well-respected by Initech employees and is responsible for overseeing organizational culture initiatives, so the survey goals were framed as being part of an organizational culture assessment. Copies of the email invitations are provided in Appendices K and L. Participants were given 10 business days to complete the survey; those who had not completed the survey after one week were sent a reminder message.

Incentives for Participation. As noted in Chapter V, prior research on OCB has found that people with greater tendencies to engage in this behavior respond more frequently to research studies (Spitzmüller et al., 2007), thus introducing potential non-response bias. To combat this possibility here, employees were informed in recruitment emails that everyone who participated would have the option of entering a raffle to win

one of five $100 gift certificates. The aim was to recruit participants with lower tendencies to engage in OCB, who may not have otherwise participated. Incentives are not customarily offered for internal surveys at Initech; therefore, my contacts indicated that this opportunity to win would be viewed as an unexpected and attractive incentive.

Independent Variable Measures

Survey Instrument 1 was used to collect data for all independent variables. All independent variables assessed properties of the work group, but data were collected from individual work group members. This process is customary in multilevel organizational research, and guidelines have been established for ensuring that data collected at the individual level will be conceptually meaningful at the group level (Bliese, 2000; Kozlowski & Klein, 2000). For instance, I followed customary procedure and directed respondents' attention to the work group rather than asking them to respond specifically about their own experiences (e.g., the referent for survey items was "we" rather than "I"). As is the norm in research about group-level constructs, the definition of a "work group" was provided in the instructions for these questions. Guidelines also exist for checking data prior to analyses to ensure it is empirically appropriate to aggregate data collected from individuals to the group-level; these procedures are discussed in the Analysis and Results sections below. All individual scales are also described below. For each item, respondents were asked to respond using a 5-point Likert-like scale, ranging from "Strongly Agree" to "Strongly Disagree," and were also given the option of selecting "Don't Know" or "Prefer not to answer."

Group Fairness. Ambrose and Schminke's (2009) Perceived Overall Justice (POJ) scale was determined to be the closest existing measure to "shared perceptions of

overall fairness in the work group," the construct I intended to assess in this study, based on conversations with scholars who publish in the organizational climate and justice literatures. The POJ scale assesses respondents' general assessment of fairness in their organization, and has been shown to have strong internal reliability in previous research (Ambrose & Schminke, 2009). Given that this study was interested in shared perceptions of fairness in the work group rather than the organization as a whole, I selected the three items from the POJ scale that would best transfer to the work group level of analysis, and modified the wording accordingly. The three items used in this study were: "For the most part, we treat each other fairly," "In general, we can count on each other to be fair," and "Overall, people in this work group are treated fairly." As stated previously, the instructions indicated that respondents should think about their work group as a whole rather than their own individual experiences when responding.

Group Trust. Shared perceptions of trust were measured using a three-item, slightly modified version of Langfred's (2004) measure of trust. Modification was necessary in order to change the referent from the individual (e.g., "I") to the group (e.g., "we"). Items included: "We trust each other a lot," "We know we can count on the other members of this work group," and "We trust all the other members of our work group." Many of measures of trust exist, but this one is most appropriate because it was written with the collective level in mind to characterize overall trust in the work group.

Group Norms for Citizenship. Shared perceptions of group norms for OCB were assessed using a nine-item measure. Four items were taken from Chatman and Flynn's (2001) measure of cooperative norms; Chatman and Flynn's (2001) fifth item was eliminated due to confusion in pilot tests, and another item with close conceptual

similarity from Van Dyne & LePine's (1998) helping scale was substituted; the final four items were developed for this study based on the types of activities that characterize citizenship in this context, based on Study 1. Items from Chatman and Flynn's (2001) scale included such statements as, "There is a high level of cooperation between work group members," and "People are willing to sacrifice their self-interest for the benefit of the work group." New items included: "We push one another to perform to higher standards," and "We look out for one another's personal well-being."

Rewards for Broad Performance Contributions. A review of existing literature indicated that no measure currently exists regarding the perceived breadth of activities rewarded by an organization's informal or formal reward system. Therefore, I measured this variable using three items developed for this study. In writing the items, I considered the nature of the dimension as proposed by Schneider and colleagues (1994), as well as the most current definition of OCB in the literature (Organ, 1997). The three items were: "We are rewarded when we go 'above and beyond' our required jobs at work," "We receive positive recognition for doing voluntary activities that contribute to the social environment at work," and "We receive higher [performance] scores if we volunteer to do things that are not in our job descriptions, but are good for [Initech] overall."

Autonomy. I measured group-level autonomy using the three-item self-determination sub-scale of Spreitzer's (1995) psychological empowerment scale. This scale assesses the extent to which respondents believe they have choice regarding "work methods, pace, and effort" (Spreitzer, 1995, p. 1443), and has been shown to have good reliability in past studies. Given the interest in assessing this variable at the group level of analysis, the referent was changed from the individual to the group. Items included: "We

have significant autonomy in determining how we do our jobs, "We decide on our own how to go about doing our work," and "We have considerable opportunity for independence and freedom in how we do our jobs."

Opportunities for Non-Core Activities. Three items were used to measure the level of perceived opportunities for non-core activities at work. This scale was developed for this study, given that lack of existing measures found in the literature to assess this construct. Items included, "We have opportunities to engage in activities unrelated to our core jobs during the workday," "Our physical work environment provides us with opportunities to engage in activities unrelated to our core jobs," and "Our work group manager supports people who want to engage in activities unrelated to their core jobs."

Dispersion in Perceptions of Climate Dimensions. I measured the dispersion of perceptions within each group for each of the climate variables listed above using the standard deviation of group members' scores. This is the approach advised by other scholars conducting research on organizational climate strength (Schneider et al., 2002). Since standard deviation is actually a measure of disagreement, higher scores on these variables indicate greater disagreement or dispersion of perceptions within the group.

Climate Strength. For each dimension of work group citizenship climate, listed above, I created a measure of climate strength by multiplying the main effect of each variable (e.g., autonomy, opportunities for non-core activities) by the dispersion in perceptions score for that variable. This is the customary way of assessing climate strength in the organizational literature (Schneider et al., 2002). Following guidelines by Aiken and West (1991), I mean centered the main effects and dispersion variables before creating the interaction terms.

Dependent Variable Measures

Two sets of dependent variables were used in Study 2: ratings of individual citizenship behavior, and ratings of individual performance. Ratings of citizenship behavior were collected from peers and managers via surveys, and ratings of employee performance were provided by Initech's Human Resources department.

I used peer and manager ratings of citizenship behavior rather than self-reports for three main reasons. First, this approach eliminated the possibility of common method bias resulting from measurement of the independent and dependent variables using the same source (Campbell & Fiske, 1959; P. M. Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Spector, 1994, 2006). Secondly, this approach eliminated the chance of ratings of OCB being subject to numerous self-report biases (e.g., self-serving bias), a serious concern in prior research on OCB and other types of employee behavior (Harris & Schaubroeck, 1988; Organ & Ryan, 1995; P. M. Podsakoff & Organ, 1986; Schoorman & Mayer, 2008). Finally, I collected data from both peers and managers rather than only one of these sources given that peers and supervisors typically have different types and levels of exposure to employee behavior (Harris & Schaubroeck, 1988). Although peer and supervisor ratings of employee task performance tend to be fairly highly correlated (approximately .62, according to Harris & Schaubroeck, 1988), I wanted to assess whether this held true for OCB, and whether the independent variables had different levels of predictability when citizenship behavior was assessed by different sources.

Peer Ratings of Organizational Citizenship Behavior. Survey Instrument 1 (for work group members) was used to collect assessments of all dimensions of citizenship behavior identified through Study 1 (e.g., helping, voice, civic virtue, individual

initiative, knowledge-sharing, administrative behavior, social participation, and health and well-being behavior). Each participant was asked to assess the citizenship behavior of two randomly-selected members of his/her work group. Previous research using peer ratings of OCB has used a snowball sampling approach (e.g., see Moon, Kamdar, Mayer, & Takeuchi, 2008) to select raters, such that each focal participant must give a survey to one of their peers and ask the peer to provide ratings of OCB. Thus, the participant is able to choose who rates his/her activities. While this approach improves the likelihood that the rater has decent visibility into the ratee's activities and may also improve response rates of the raters, it introduces potential bias since it is probable that participants would ask someone with whom they are more comfortable or friendly for these ratings (Ashford & Cummings, 1983). Therefore, I randomly assigned raters in an effort to obtain more objective assessments of the dependent variable.

The survey software program allowed the names of ratees to be programmed into the design of the survey so survey participants could see the name of the person they were rating as they provided responses (see Appendix I for specific item wording). This was done to keep the name of the person salient while ratings were provided. Prior to being asked to provide ratings, respondents were asked to indicate the level of knowledge they had of each ratee's activities at work, as well as the length of time they had known each ratee. When respondents indicated that they had "no knowledge" of their assigned ratee's activities, the survey software was programmed to use skip logic so the respondent was not asked to provide ratings of that ratee's activities.

As indicated above, the first four dimensions of OCB identified through Study 1 aligned reasonably well with existing dimensions (helping, civic virtue, voice, and

individual initiative) so I employed existing items to measure these constructs. Whenever possible I used scales and items developed by Podsakoff and colleagues (1990) since these are the instruments most commonly-used to measure OCB in the literature (Organ et al., 2006). The latter four dimensions (knowledge-sharing, administrative behavior, social participation, and health and well-being behavior) emerged from Study 1, and have not been tested in the OCB literature before. Therefore, I developed new scales to measure these dimensions using an inductive approach, following guidelines by Hinkin (1998; described above). The measure for each variable is described below.

Helping was assessed using a six-item scale based on original measures of the altruism and courtesy dimensions of OCB developed by Podsakoff and colleagues (1990). Recent scholars have advocated for a "helping" dimension to encompass these two underlying dimensions of OCB, since they have been shown to be conceptually and empirically similar in previous studies (Grant & Mayer, 2009; Lee & Allen, 2002; Organ et al., 2006; Van Dyne & LePine, 1998). Items included: "Helps others who have heavy workloads," "Willingly helps others solve work-related problems," "Is always ready to lend a helping hand to those around him/her," "Tries to prevent problems for coworkers," "Considers the impact of his/her actions on coworkers," and "Communicates with others before initiating actions that might affect them."

Civic Virtue was assessed using a three-item scale based on the original scale developed by Podsakoff and colleagues (1990). Items included: "Attends events that are not required, but help the [Initech] community," "Attends meetings that are not mandatory, but are considered important," and "Keeps up with organizational news (e.g., [Initech]-wide announcements, organizational changes, and so on)."

Voice was measured using a four-item scale based on based on conceptual guidance of Organ and colleagues (2006) and measures developed by Van Dyne and colleagues (1994; 1998) and Moorman and Blakely (Moorman & Blakely, 1995). Items included: "Makes creative suggestions to coworkers," "Voices opinions about work-related issues even if others disagree," "Makes constructive suggestions to improve processes for getting work done," and "Encourages others in the group to voice their opinions regarding issues that affect the group."

Individual Initiative was measured using a four-item scale based on conceptual guidance of Organ and colleagues (2006), and items developed by Bolino and Turnley (2005), Van Dyne and colleagues (1994), and Van Scotter and Motowidlo (1996). Items included: "Volunteers for special projects in addition to his/her core job tasks," "Works beyond the expectations of others," "Seeks out challenging project assignments," and "Learns new skills to improve his/her contributions to [Initech]."

Knowledge-Sharing was measured using a three-item scale developed inductively for this study using procedures described above. Items included: "Takes part in [Initech]-sponsored knowledge-sharing opportunities (e.g., brownbags, talks, training courses, etc.)," "Shares relevant expertise with coworkers on an informal basis," and "Collaborates with others outside the work group."

Administrative Behavior was measured using a four-item scale, also developed for this study, drawing on items from Van Dyne, Graham, and Dienesch's (1994) prior research. Items included: "Pitches in with administrative tasks," "Conserves organizational resources," "Completes routine organizational duties in a timely manner

(e.g., Performance reviews, replying to emails, etc.)," and "Goes out of his/her way to maintain shared organizational property (e.g., whiteboards, common areas, etc.)."

Social Participation was measured using a four-item scale developed inductively for this study based on the results of Study 1, as well as theoretical guidelines from previous scholarship (e.g., Roy, 1960; Sandelands, 2003; P. Stevens, 1980; Wrzesniewski, Rozin, & Bennett, 2002). Items included: "Gets to know his/her coworkers on a personal basis, "Celebrates coworkers' life events (e.g., birthdays, weddings, etc.)," "Participates in informal social activities with coworkers during the workday," and "Is playful in workplace interactions."

Health & Well-Being Behavior was assessed using a five-item scale, also developed inductively for this study based on results of Study 1, as well as theoretical guidelines from existing scholarship (e.g., Fritz & Sonnentag, 2005; Kuhnel, Sonnentag, & Westman, 2009; Ryff, 1989; Ryff & Keyes, 1995). Items included: "Makes others feel comfortable 'being themselves' at work," "Expresses his/her own authentic personality at work," "Makes his/her personal health and well-being a priority," "Supports others' efforts to make their personal health and well-being a priority," and "Praises others when they are successful."

Using the scales above, I created a **Peer Rating Index** score for each person by averaging all available OCB scale scores of their peer ratings.

Manager Ratings of Organizational Citizenship Behavior. Survey Instrument 2 (for managers) was used to collect manager ratings of individuals' citizenship behavior. This variable was assessed using a one-item measure in order to minimize time required

of managers and to try to improve response rates. Managers were provided with background about the study topic, including a broad definition of citizenship behavior in line with that offered by Organ (1997), and were then given several examples of activities commonly mentioned in focus groups as manifestations of OCB at Initech. Examples from a variety of dimensions of OCB were included. Managers were then asked to rate each of their direct reports using a 5-point Likert-like scale, ranging from Strongly Agree to Strongly Disagree, on the following item: "How much do you agree or disagree that <Person X> takes part in activities that are outside their formal, core job tasks (e.g., those captured in job descriptions, etc.), but that are good for [Initech] overall?" (See Appendix J) As in Survey Instrument 1, the software program allowed the names of ratees to be programmed into the design of the survey so managers could see the name of each of their direct reports as they provided responses for them.

Performance Evaluations. Archival data were used for the final dependent variable, individual performance evaluations. The most recent ratings of employee performance were used to operationalize performance for this study, and data were obtained Initech's Human Resources department. Performance at Initech is evaluated on a scale from 1-5, where 1 and 5 are reserved for employees who are performing exceptionally below or above expectations, respectively. Scores are given in increments of .1 (e.g., employees may be rated a 3.2, 3.3, etc.), and are determined based on the employee's performance on project goals agreed upon by an employee and his/her manager at the beginning of each reporting period. The performance evaluation process at Initech includes both manager and peer evaluations; toward the end of each rating period, employees and their managers together determine an appropriate list of 2-5 peers

who are asked to provide input on the employee's performance during the focal reporting period. Performance evaluation recommendations are made by each employee's manager, taking into account the peer evaluations. Ratings are then calibrated by Human Resources personnel, taking into account all of the evaluation recommendations made by managers in the business unit, and each individual is assigned a rating. In sum, employees' ratings are the product of input from managers and peers, as well as comparisons to the employee base across the organization.

Control Variable Measures

Data for the following control variables were obtained through Survey Instrument 1, as well as archival data from Initech's Human Resources databases. The source of the data for each control variable is described below.

Positive regard within the work group was measured and controlled based on findings from Study 2 suggesting that this variable may have an impact on OCB, as well as established empirical relationship between individual-level positive regard and OCB (Blatt, 2008). I used a three-item scale based on a portion of the High-Quality Connections scale, which is in development by Spreitzer and Stephens (2009), and is based on Carl Rogers' (1957) work. Items included: "We show respect for each other as people, "We are friendly toward one another," and "We demonstrate care for members of the work group."

Likewise, I controlled for **workload** during Study 2 analyses. This variable was measured with a three-item scale based on items used in prior research (Beehr, Walsh, & Taber, 1976; Bolino & Turnley, 2005; Schaubroeck, Cotton, & Jennings, 1989). As was done with the perceived autonomy scale described above, the referent in this scale was

changed from the individual to the group, given the interest in assessing this variable at the group level of analysis. Items included, “We rarely seem to have enough time to get everything done at work,” “The amount of work we are expected to do is too great,” and “It often seems like we have more work than we can do well.”

Procedural Justice Climate was measured and controlled in Study 2 since prior research has found a relationship between this type of social context and individual citizenship behavior (Liao & Rupp, 2005; Naumann & Bennett, 2000). By controlling for this variable, my intention was to assess whether new contextual variables would explain additional variance in OCB. I used a four-item scale based on Mayer and colleagues’ (2007) procedural justice climate scale to assess perceptions of fairness specifically associated with the decision-making processes and procedures affecting the work group.

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, and has been shown to have strong reliability in past research (D. M. Mayer et al., 2007). Scale items included: “Decision-making processes are applied consistently (across individuals and situations),” “Decision-making processes are free of bias,” “Decision-making processes are based on accurate information,” and “Decision-making processes uphold ethical and moral standards.”

The four-item scale developed and validated by Quinn and Shepard (1974) was used to measure individuals’ **job satisfaction**. This scale has been used extensively and has been shown to have strong internal validity. Items include: “If a good friend told me that he/she was interested in working in a job like mine I would strongly recommend it,” “All in all, I am very satisfied with my current job,” “In general, my job measures up to

the sort of job I wanted when I took it," and "Knowing what I know now, if I had to decide all over again whether to take my job, I would."

A four-item measure developed by an internal research lab at Initech was used to measure **organizational commitment**. This scale is used annually at Initech, and has been shown to have strong internal validity and reliability. Given that individuals were recruited for this study by a member of the Human Resources department, I anticipated that some may have been hesitant to reply to items asking about their intentions to remain with the organization; therefore, I thought it prudent to use a scale already familiar to them rather than a different measure of organizational commitment from the literature, so as to not prompt any undue question or concern, which could potentially lead to non-response. Items included: "At the present time I am not seriously considering leaving [Initech]," "If I were offered a comparable position with similar pay and benefits at another company, I would stay at [Initech]," "I expect to be working at [Initech] one year from now," and "I expect to be working at [Initech] five years from now."

To control for individual differences in **personality**, I used Gosling, Rentfrow, and Swann's (2003) two-item measures of **extraversion**, **agreeableness**, and **conscientiousness.** These measures have been used widely and have been shown to have solid scale reliability statistics. Respondents were asked to assess pairs of personality traits, and then indicate how much they agreed that each pair applied to them, even if one characteristic applied more strongly than the other. Items used to measure extraversion were: "Extraverted, enthusiastic" and "Reserved, quiet" (the latter item was reverse-coded during analysis). Items used to measure agreeableness were: "Critical, quarrelsome" and "Sympathetic, warm" (the former item was reverse-coded during

analysis). Items used to measure conscientiousness were: "Dependable, self-disciplined" and "Disorganized, careless" (the latter item was reverse-coded during analysis).

Demographics. I obtained data on demographics at both the individual and group levels of analysis. Individuals' **gender, ethnicity**, **job level**, and **tenure with the organization** were obtained through Initech's Human Resources databases and used as individual-level control variables. Using individual-level data from these databases I also computed several **work group heterogeneity** indices on the dimensions of gender, ethnicity, location, job level, and tenure with the organization. Consistent with previous research on work group heterogeneity (Jackson, Brett, Sessa, Cooper, Julin, & Peyronnin, 1991), I computed the coefficient of variation (the group standard deviation of a demographic variable divided by the group mean of the variable) for interval variables (e.g., job level and tenure), and Blau's index of heterogeneity (Blau, 1977) for categorical variables (i.e., gender, ethnicity, and location). Finally, at the group level I also controlled for **group membership stability** using the mean level of group tenure for employees within the group, **work group size,** and **business unit.**

The next chapter provides an overview of the analyses and results of this study, as well as a discussion of the main findings.

CHAPTER VIII

STUDY 2: ANALYSES, RESULTS, AND DISCUSSION

Study 2 was a quantitative investigation of the effect of work group citizenship climate on individuals' organizational citizenship behavior, and the effect of this OCB on performance evaluations. The study utilized survey methodology and a stratified random cluster sample of employees at Initech,[15] a large multi-national company headquartered in Silicon Valley, California. Analyses, results, and a discussion of the findings are presented below.

Analysis Overview

I began the analysis of the survey data by evaluating response rates and checking for missing data. I conducted several analyses to assess potential non-response bias by statistically comparing respondents, partial respondents, and non-respondents on key variables. Next, I assessed the factor structure, discriminant validity, and internal reliability of all scales. Initially, I used exploratory factor analysis (EFA) to assess factor structure; then, I used confirmatory factor analysis (CFA) techniques to confirm the EFA structure and check for discriminant validity between study variables, or the degree to which different theoretical constructs prove to be empirically distinct. CFA helps to determine this by assessing whether models with multiple factors fit the data significantly better than models with fewer factors. After making final modifications to the scales

[15] Pseudonym

using the CFA results, I computed Cronbach's alpha scores for all resulting scales to ensure they met appropriate cut-offs for scale creation.

Once scales were evaluated, I used customary statistical checks to assess whether the climate variables warranted aggregation to the group level of analysis (Kozlowski & Klein, 2000) using the ICC(1), ICC(2), and r_{wg} statistics (Bliese, 2000; James, Demaree, & Wolf, 1993). These tests measured the within and between group variability with which respondents answered items with group-level referents (e.g., citizenship climate variables), to determine whether people in the same work group answered more similarly than did people across work groups on climate dimensions.

Once the appropriate level of analysis was determined for each study variable, I conducted collinearity diagnostic tests. This was done to ensure that the independent variables used in regression analyses would not be correlated at a level that problematically altered interpretation of results.

After all of these statistical checks were completed, I used random effects coefficient modeling (commonly referred to as hierarchical linear modeling or HLM) to test hypotheses. Each of these analyses and their results are described in detail below.

Results

Response Rates

All data obtained through the pilot and full launch of the surveys, including data from incomplete responses, were combined and included in final analyses since survey items did not change between administrations, and the time lapse between the pilot and final launch was minimal (approximately two weeks). I confirmed with my contacts at

Initech that no actions or announcements by Initech or the press were made during this time span that were likely to have altered the pattern of results between sub-samples.

Table 8.1 summarizes response types by work group members and managers (full, partial, empty, or no response), and Table 8.2 summarizes response rates by strata (business units). A full response, as indicated in Table 8.1, means that the respondent clicked Submit at the end of the survey, signaling completion. However, since survey items were not required, a full response does not mean the respondent answered all items. A partial response indicates that the respondent provided some data but did not click Submit. All data from full or partial responses were included in final analyses, and an analysis of the missing data is included below.

Table 8.1
Types of Survey Response / Non-Response

	Level 1: Employees			Level 2: Group Managers	
Type of Response	Frequency	% of Total	Cumulative %	Frequency	% of Total
Full Response	511	58.0%	58.0%	82	68.3%
Partial Response	32	3.6%	61.6%	0	0.0%
Empty Response	83	9.4%	71.1%	0	0.0%
No Response	255	28.9%	100.0%	38	31.7%
TOTAL	881	**100.0%**	**100.0%**	120	**100.0%**

Table 8.2
Response Rate Summary by Business Unit

	Work Group Members				Work Group Managers			
Business Unit	Full	Partial	Total	% of Total	Full	Partial	Total	% of Total
Engineering	200	16	216	39.8%	31	0	31	37.8%
Operations	34	1	35	6.4%	5	0	5	6.1%
Human Resources	32	1	33	6.1%	8	0	8	9.8%
General Administration	26	2	28	5.2%	5	0	5	6.1%
Marketing	14	3	17	3.1%	5	0	5	6.1%
Sales	205	9	214	39.4%	28	0	28	34.1%
Total	511	32	543	100.0%	82	0	82	100%
Percentage	94.1%	5.9%			100.0%	0.0%		

Response Rates for Work Group Members. Electronic survey response records indicated that 626 of 881 work group members (71.1%) invited to take the survey clicked on the email link and accessed the survey online. Of these 626 people, 83 (9.4% of total sample) provided no data and as such their "responses" were deemed unusable and eliminated from future analyses. This left 543 partially or fully completed responses from work group members; thus, the **response rate for work group members** was 61.6%.

The 543 work group members who responded to the survey represented 118 (98%) of the 120 work groups in the sample. Therefore, the **response rate for groups** was 98%. Of these 118 groups, the number of responses per group ranged from 1 (n=2) to 11 (n=2), with a mean of 4.6 responses per group. An average response rate for each group was computed by dividing the number of responses in each group (excluding the manager) by the total number of group members; using this approach, the **average response rate within groups** was 63.6%. In other words, 63.6% of each group's members, on average, responded to the survey, indicating that responses were well-distributed across groups. Response rates by group ranged from 0% (n=2) to 100% (n=13). 92 groups had a group response rate of 50% or greater.

Response Rates for Work Group Managers. Electronic survey response records indicated that 82 (68.3%) of the 120 invited managers clicked on the survey link and completed the survey. All manager records were complete (e.g., no missing data).

Evaluation of Sample Size and Response Rates. As reported above, the final sample included 543 work group members from 118 groups, and 82 managers. Before proceeding, it was necessary to assess whether this sample size was adequate to proceed

with subsequent analyses. In general, given the common need to make tradeoffs between Level 2 cases (i.e., groups) and Level 1 cases (i.e., individuals), scholars tend to agree that statistical power is optimized when there are a higher number of Level 2 cases (Scherbaum & Ferreter, 2009). However, there is little convergence around specific target sample sizes for multilevel analyses (Scherbaum & Ferreter, 2009); one rule of thumb suggests using at least 30 groups of 30 people (Kreft & De Leeuw, 1998), but Scherbaum and Ferreter (2009) acknowledge that this "rule may lead to high levels of power but is probably excessive for most organizational research" (p. 354). In the absence of a commonly-used cut-off, scholars have begun to use publication records as cues about appropriate sample sizes. A recent review of all articles using multilevel analyses and published between 2000-2005 in four top journals in organizational studies[16] found that seven studies used samples between 25-59 work groups, and 11 studies used samples of 60 or more work groups (Kuenzi, 2009). Using all of this information as a guide, I determined that the level of response in this study (543 individuals and 118 groups) is more than adequate for a rigorous test of my hypotheses.

Next, I considered whether the response rate percentages might be problematic. A recent analysis of response rates reported in studies published in five leading management and behavioral sciences journals[17] found that the average response rate for surveys conducted with employees was 61.35% (s.d. 18.4), and for managers was 61.79% (s.d. 21.9) (Baruch, 1999). Based on these findings, the author suggests that management scholars should use 60% $^{+}$/- 1 standard deviation (approximately 20%) as a target when

[16] Journals included in the review were: *Administrative Science Quarterly, Academy of Management Journal*, *Journal of Applied Psychology*, and *Organizational Behavior and Human Decision Processes.*
[17] Journals included in the study were: *Academy of Management Journal, Journal of Applied Psychology, Human Relations, Organizational Behavior and Human Decision Processes,* and *Journal of International Business Studies.*

aiming to publish in top journals in this field. Using this as a guide, response rates in this study (61.6% for employees and 68.3% for managers) meet and exceed the target response rates for publication in top management journals. While this is encouraging, it is still necessary to consider the potential for non-response bias, given that adequate response rates only reduce the risk of bias, but do not guarantee unbiased data (Groves et al., 2004).

Analysis of Missing Data

Since responses were not required, some respondents chose not to answer every question. In addition, respondents could select "Don't Know" or "Prefer not to answer" options for any question. All three of these response options (Don't know, Prefer not to answer, or system-missing) were coded as missing for hypothesis testing. To evaluate whether results may be subject to non-response bias due to missing data, I conducted several analyses, described below.

Frequencies. First, I reviewed frequency statistics. This review suggested nearly no missing data on the variables collected through archival data (i.e., 0% missing data for 14 variables; 0.7% of gender data; 0.8% of the "average time in group" data; and 3.9% of performance evaluation score data). Four control variables whose data were collected through the survey did not have extensive missing data either. All three personality variables (extraversion, conscientiousness, and agreeableness) had less than 10% missing, and job satisfaction had 12.0% missing. However, the organizational commitment variable had 31.9% missing data (n=173).

For the group-level climate variables, all but two variables (dispersion of perceptions within the group on the norms for cooperation and opportunities for non-core

activities variables) had less than 5% missing data at the group level. However, I also assessed missing data at the individual level of analysis since this is the level at which data were collected; here, six of the eight group-level variables had 7% missing data or less (ranging from 1.1-7.2%). However, two variables had higher levels: rewards for broad contributions had 28.5% missing (n=155 respondents), and procedural justice had 24.7% missing (n=134 respondents). Due to this, I assessed response patterns for these variables more closely.

Looking at the raw data from the item responses composing these two scales revealed possible reasons for the high level of missing data. Each scale had very few cases of truly "system missing" data (e.g., where respondents left the item blank); for rewards for broad contributions, the range of "system missing" data by item was 0.2-0.6%, and for procedural justice, only 1.7-1.8%. Most of the missing data were due to respondents answering "Don't know." For the four procedural justice items, the percentage of "Don't know" responses by item ranged from 11.6% (n=63, for the "Decision-making processes uphold ethical and moral standards") to 15.3% (n=83; for the "Decision-making processes are based on accurate information" item). For the rewards for broad performance scale, the largest portion of "Don't know" data came from one item which stated, "We receive higher [performance evaluation scores] if we volunteer to do things that are not in our job descriptions, but are good for [Initech] overall." On this item, 24.1% (n=131) of the respondents selected "Don't know." On the other items in this scale, one had 10.1% (n=55) "Don't know" responses, while the other item had only 4.4% (n=24) "Don't know." Given that the percentage of respondents selecting the "prefer not to answer" option was quite low (ranging from 0.4- 1.1%) for all

seven items composing these scales, it seems respondents believed they were unable to provide the requested data, not that they refused to provide it (Groves et al., 2004).

On the whole, the items composing these two scales asked respondents to comment on things about which they may not have direct visibility; for instance, my contacts at Initech informed me that the guidelines used to evaluate employee performance are often perceived by employees as being vague or unknown. Therefore, to the extent employees are unsure how performance evaluation decisions are made, it is not surprising that respondents selected "Don't know" when asked whether such evaluations take into account activities that are not in their job descriptions.

For the **dependent variables** (peer and manager ratings of OCB), I assessed missing data from both peers and managers. Overall, the dependent variables (DVs) were the worst missing data culprits. Dimensions of OCB (e.g., social participation, helping, etc.) had between 36.6%-58.2% missing data; the overall peer index rating of OCB had 30.2% missing; and the manager ratings had 36.1% missing. This high level of missing data is likely due to three main reasons. First, the DVs were not self-reported, and thus were subject to additional chances for non-response (i.e., from the focal respondent and his/her raters). The percentage of missing data reported above results from cases where the respondent participated in the survey but his/her peers and manager did not provide ratings of his/her OCB. Since I could not determine a priori which people would take the survey and assign all peer raters accordingly to ensure a perfectly matched independent-dependent variable dataset, the dependent variables suffered from higher percentages of missing data. Secondly, if respondents indicated that they had "no knowledge" of their

assigned ratee's activities, the survey's skip logic did not ask them for any subsequent ratings. For these two reasons, the missing data may be an artifact of the survey design.

The third possible reason for higher levels of missing data on the DVs is that people may have felt uncomfortable rating their coworkers or subordinates. Fifteen respondents (2.8% of the 543 total work group member respondents) either stopped the survey once they got to the portion requiring peer evaluations of OCB, or selected "Prefer not to answer" for all of these items and provided no data from this point onward. Five additional respondents skipped the sections asking for peer ratings of OCB, but continued the survey after these sections. One of these respondents submitted a comment at the end of the survey indicating that he was not comfortable rating his peers. Therefore, it is possible that this sentiment was shared by all of these 20 respondents (3.7% of all survey respondents). Although all of the manager responses were complete, it is also possible that some managers who chose not to respond altogether did so due to this discomfort; however, I have no data to test this possibility. While it is helpful to consider this possibility, particular for the design of future surveys, I do not believe this sentiment is likely to have problematically skewed results given the small percentage of respondents falling into this category.

Having reviewed the patterns of missing data, I decided not to impute values. Imputation of missing data is risky in all cases; however, it is particularly ill-advised when the missing data is on the dependent variables, which was the case in this study (Little & Rubin, 2002). Therefore, I proceeded with t-tests and logistic regressions to assess whether the non-responses may have significantly biased the results. I present the results of these analyses below, and then summarize them in aggregate.

T-tests Comparing Respondent vs. Non-Respondent Mean Scores. First, I used t-tests to compare group means between respondents (those completing at least part of the survey) and non-respondents (those clicking on the survey and providing no data, or not clicking on the survey at all) on the following variables: gender; ethnicity; job level; tenure with the organization; size of respondent's work group; heterogeneity of respondent's work group along the dimensions of gender, ethnicity, job level, organizational tenure, and location; peer ratings of organizational citizenship behavior (all dimensions); peer index rating of organizational citizenship behavior; manager rating of organizational citizenship behavior; and performance evaluation scores.

Six of the 18 variables had significant group mean differences: gender, size of respondent's work group, group heterogeneity in job level, group heterogeneity in organizational tenure, manager ratings of OCB, and performance evaluation scores. Of these, women responded in higher proportions than did men ($p < .01$); respondents were from smaller ($p < .01$), and more heterogeneous work groups in terms of job level ($p < .05$) and organizational tenure ($p < .05$) than were non-respondents, they received significantly higher ratings of OCB by managers ($p < .01$), and also had significantly higher performance evaluation scores ($p < .01$). Many of these results are in line with patterns seen in previous research on OCB. However, although these mean differences were significant, the sizes of the differences were quite small. For example, difference in average group size was only 0.61 between respondents and non-respondents (8.62 people versus 9.23 people per group, respectively). Likewise, the average performance evaluation score for respondents was 3.492, while non-respondents' average score was

3.426; since performance is evaluated in increments of .1, this difference of .066 represents a mean difference less than the smallest increment in scores.

Next, given the high number of missing data on the organizational commitment variable, I compared respondents who had any score to those who did not. In this case, I was testing a possibility that respondents with greater intentions to stay would be more likely to respond to this scale, in general. None of the t-test results were significant.

Finally, I ran t-tests to compare the 20 respondents who neglected to provide peer ratings of OCB, despite responding to other items on the survey, to the respondents who did provide peer ratings. Mean differences were not significant on any of the variables listed above. I subsequently compared scores for individuals who the 20 respondents would have rated, had they provided ratings, with the other ratees in the sample; the only significant mean difference was on the group size variable, such that unrated individuals were from groups that were significantly larger than rated individuals. This may suggest that some ratings were omitted due to a lack of knowledge of the ratees' activities, rather than a more fundamental objection to providing the ratings.

Logistic Regressions. Following the t-tests, I conducted a series of logistic regressions to assess whether any variables would significantly predict being rated (i.e., having any score) on each dependent variable. This was done to determine whether raters were more likely to evaluate certain peers or subordinates at all, separate from whether raters were more likely to give certain respondents higher scores.

The following variables were used as IVs: gender; ethnicity; job level; organizational tenure; all group-level climate variables; job satisfaction; organizational

commitment; extraversion; agreeableness; conscientiousness; how much knowledge each of the peer raters reported having about respondents' work activities; and how long each of the peer raters reported knowing the respondents. For peer ratings, few predictors emerged as significant predictors of having a score, and those that did suggest that when raters had more knowledge of the respondents' activities, they were more likely to provide ratings.[18] This is not surprising since, as described above, the survey used skip logic and respondents were not asked to provide ratings of their assigned ratee's activities respondents indicated that they had "no knowledge" of the ratee's activities. For manager ratings of OCB, results suggested that managers were significantly more likely to provide a rating when their subordinates received higher performance evaluations, had higher levels of job satisfaction, and were at higher job levels.[19]

Summary of Missing Data Analyses. Overall, there were relatively high levels of missing data for some variables in this study, particularly the dependent variables. Despite this, results of t-tests suggested that mean scores for respondents and non-respondents on key study variables were not substantially different, even when differences were significant. Results suggested that the highest levels of missing data were due to (1) respondents' beliefs that they did not have enough knowledge to adequately respond, and (2) a tendency for managers not to rate subordinates with lower performance evaluations, job satisfaction, and at job levels. The former result may be

[18] No independent variables significantly predicted being evaluated (e.g., having a score) on the helping, voice, or social participation dimensions of OCB, nor the peer index of OCB. For health and well-being behavior, the first peer rater's knowledge of the respondent's activities was a significant, positive predictor of having a score (exp(B)=2.883; $p < .05$). For civic virtue, two variables were significant positive predictors of having a score: the second rater's knowledge of the respondent's activities (exp(B)=2.485; $p < .05$) and the ratee's perceived level of opportunities for non-core activities (exp(B)=3.169; $p < .05$).

[19] Significant positive predictors of manager ratings of OCB included the following: ratee's performance evaluation rating (exp(B)=280.233; $p < .05$); job satisfaction (exp(B)=3.550; $p < .05$), and job level (exp(B)=2.2391; $p < .05$).

partially due to an artifact of the survey design, given that when peers indicated that they had "no knowledge" of their assigned ratee's activities, the survey design used skip logic so the respondent was not asked to provide ratings of their assigned ratee's activities.

Tests of Factor Structure and Discriminant Validity

Following the analysis of response rates and potential non-response bias, I proceeded with checking the structure of the data. I evaluated the convergent and discriminant validity of study variables using exploratory and confirmatory factor analysis techniques, followed by scale reliability checks by assessing Cronbach's alpha and factor analyses for each scale. A description of analyses and results is below, separated by each portion of the data – independent, dependent, and control variables.

Group-Level Independent Variables. I conducted an exploratory factor analysis (EFA) using principal axis factoring (PAF) and promax rotation to assess the extent to which the group-level variables, several of which measure conceptually-related constructs, were empirically independent. PAF is the type of factor analysis recommended when some or all of the variables in a given study are being measured with scales that have not been statistically validated; in this case, the researcher cannot assume that all of the variance in a given measure can be explained by the factors which emerge (Russell, 2002; Widaman, 1993). Since some of the items and scales measuring independent variables in this study are new or modified, this type of factor analysis was most appropriate for this study. Promax is a type of oblique rotation; such rotations permit factors to be correlated. In social science research it is rare that all factors will truly be orthogonal; therefore, using an orthogonal rotation such as varimax, which does not permit factor correlation, "results in a loss of valuable information if the factors are

correlated, and oblique rotation should theoretically render a more accurate, and perhaps more reproducible, solution" (Costello & Osborne, 2005, p. 3). Given that I expected some or all of the climate variables to be correlated, it was most appropriate to use an oblique rotation, such as promax, in this case.

The initial factor analysis including all 33 items from the group-level variable scales resulted in a seven-factor solution that explained 70.02% of the total variance. Factors were easy to interpret: six of the expected climate constructs loaded onto independent factors, while the three remaining constructs all loaded onto one factor. Details on factor loadings and inter-correlations are provided below.

The first factor, with an eigenvalue of 12.170, included all of the items from the trust, fairness, and positive regard scales, as well as one of the newly-developed items intended for the citizenship norms scale (the latter item's text was, "We look out for one another's personal well-being."). Factor loadings ranged from .472 for the item intended for the citizenship norms scale, to .931 for one of the fairness items. The second factor, with an eigenvalue of 3.277, explained an additional 9.93% of the variance. Six items loaded onto this factor, including the five items representing the norms for cooperation scale (Chatman & Flynn, 2001), as well as another new item intended for the citizenship norms scale. Item loadings ranged from .483 to .768. (Note: the eighth and final item originally intended for the citizenship norms scale did not load strongly onto any of the factors.) The third factor, with an eigenvalue of 1.962 and explaining 5.944% of the variance, loaded only the procedural justice items. Factor loadings ranged from .696 to .867. The fourth factor, containing the autonomy items, had an eigenvalue of 1.803 and explained 5.464% of the variance. Factor loadings ranged from .805 to .875. The fifth

factor, with an eigenvalue of 1.434 and explaining 4.346% of the variance, contained the workload items; loadings ranged from .744 to .856. The sixth factor, with an eigenvalue of 1.315 and explaining 3.985% of the variance, contained the rewards for broad contributions items; loadings ranged from .569 to .823. The seventh and final factor, with an eigenvalue of 1.145 and explaining 3.469% of the variance, contained the perceived opportunities for non-core behavior items; loadings ranged from .451 to .757.

These results suggest that norms for cooperation, autonomy, workload, rewards for broad performance, perceived opportunities for non-core behavior, and procedural justice are indeed distinct factors. Since two of the new items intended for the citizenship norms scale did not load onto the factor with the other items from this scale, and another did not load strongly onto any factor, only the five items representing norms for cooperation (four taken directly from Chatman and Flynn's (2001) scale) were retained.

After dropping these three items I re-ran the factor analysis and the same seven-factor structure was reproduced, this time explaining 72.909% of the overall variance. All items loaded onto their intended dimensions, with the exception of trust, fairness, and positive regard items which continued to load onto one factor. Table 8.3 presents the final results of the EFA with factor loadings and percentages of variance explained.

Factor inter-correlations ranged from negative to positive and were mostly of low to moderate strength. The strongest negative correlation was -.279 between factors 4 and 5, representing the workload and rewards for broad performance dimensions, and the strongest positive correlation was .592 between factors 1 and 7, representing the

Table 8.3
Final Exploratory Factor Analysis Results: Group-Level Variables

Factor	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Eigenvalue	11.252	3.225	1.928	1.796	1.421	1.215	1.035
% of Variance Explained	37.508	10.751	6.426	5.985	4.738	4.052	3.449
Survey Item Label	**Factor Loadings**						
Trust_1	**0.696**	-0.069	-0.006	-0.025	0.006	-0.042	0.279
Trust_2	**0.568**	0.007	-0.004	-0.073	0.029	-0.018	0.243
Trust_3	**0.605**	0.005	-0.017	-0.001	-0.030	0.018	0.273
Fairness_1	**0.910**	0.048	-0.005	-0.021	-0.008	-0.053	-0.058
Fairness_2	**0.847**	0.122	-0.014	0.030	-0.032	-0.115	0.055
Fairness_3	**0.571**	0.100	0.069	0.013	0.218	-0.061	0.029
PosRegard_1	**0.866**	-0.089	0.055	0.006	0.003	0.092	-0.094
PosRegard_2	**0.900**	-0.017	-0.024	0.039	-0.023	0.068	-0.142
PosRegard_3	**0.837**	0.030	-0.062	-0.020	-0.082	0.116	-0.050
ProceduralJustice_1	-0.122	**0.797**	0.035	-0.032	0.067	0.002	0.112
ProceduralJustice_2	-0.025	**0.884**	-0.011	-0.020	-0.079	0.110	0.072
ProceduralJustice_3	-0.011	**0.840**	0.019	-0.040	0.045	-0.036	-0.016
ProceduralJustice_4	0.235	**0.697**	-0.022	0.065	-0.011	-0.051	-0.146
Autonomy_1	-0.055	0.016	**0.871**	-0.001	0.005	-0.020	0.029
Autonomy_2	0.071	-0.039	**0.883**	-0.004	0.000	-0.074	-0.042
Autonomy_3	-0.034	0.056	**0.800**	0.031	-0.043	0.124	0.007
Workload_1	0.053	-0.088	0.059	**0.742**	0.074	-0.021	0.025
Workload_2	-0.013	0.060	-0.079	**0.860**	-0.076	0.036	0.061
Workload_3	-0.058	0.003	0.039	**0.853**	0.014	-0.012	-0.046
RewardsBroadPerf_1	0.025	0.163	0.064	0.048	**0.596**	-0.022	-0.033
RewardsBroadPerf _2	-0.013	-0.078	-0.062	0.006	**0.797**	0.133	0.049
RewardsBroadPerf _3	-0.032	0.020	-0.012	-0.017	**0.816**	-0.054	-0.029
OppsforNonCore_1	-0.009	-0.009	0.047	-0.046	-0.036	**0.845**	-0.053
OppsforNonCore_2	0.011	0.045	-0.068	0.083	0.017	**0.717**	0.092
OppsforNonCore_3	0.095	-0.019	0.050	-0.064	0.147	**0.456**	-0.020
CooperativeNorms_1	0.363	-0.088	0.136	0.004	-0.072	0.037	**0.519**
CooperativeNorms_2	0.321	-0.123	-0.010	0.018	0.109	-0.016	**0.439**
CooperativeNorms_3	0.205	0.088	-0.056	0.017	0.051	0.005	**0.555**
CooperativeNorms_4	0.241	0.039	-0.027	0.019	-0.040	0.044	**0.711**
CooperativeNorms_5	0.301	0.032	0.008	-0.004	-0.035	-0.054	**0.520**

Note. Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

trust/fairness/positive regard and norms for cooperation dimensions. The factors with a correlation closest to 0 were workload and norms for cooperation (r = -.029).

Although the trust, fairness, and positive regard constructs are conceptually-related, the items used to measure these variables were from established scales; therefore, they were expected to be empirically distinct. To further investigate their relatedness, I conducted a confirmatory factor analysis (CFA) using only the items in these dimensions to determine whether a one-factor or three-factor model would best fit the data. I assessed

model fit in several ways, beginning with the chi-square (χ^2) statistic. This statistic is known to be sensitive to sample size; therefore, while my sample size was not of particular concern, I followed customary procedure and examined three addition fit indices which are not sensitive to sample size, namely the Comparative Fit Index (CFI), the Non-Normed Fit Index (NNFI; also called the Tucker-Lewis Index or TLI), and the Root Mean Square Error of Approximation (RMSEA).[20]

Using all of these fit statistics, I found that the three-factor model fit was excellent (χ^2 = 109.656, 25 degrees of freedom, p = .000, NNFI=.957, CFI=.976, RMSEA = 0.074 [90% CI: .060 - .088]).[21] Moreover, all standardized regression weights reported in the CFA output were 0.778 and above with most above .800, which is above the accepted target of .700 (Klem, 2009). In contrast, statistics for the one-factor model indicated a poor fit (χ^2 = 624.175, 27 degrees of freedom, p = .000, NNFI=.719, CFI=.831, RMSEA = 0.188). A comparison of the chi-square statistics between the models was significant (p < .001), indicating that the three-factor model was a significantly better fit. Based on these results and the theoretical rationale for including all independently in hypothesis tests, I retained trust, fairness, and positive regard as unique variables for subsequent analyses. All CFA results are presented in Table 8.5.

As a matter of interest I also conducted a CFA with the trust, fairness, positive regard, and norms for cooperation items, since the two factors on which these constructs

[20] There is ongoing debate about the best statistic to assess model fit. Bagozzi and Edwards (1998) favor the CFI, while other scholars (e.g., Cudeck & Browne, 1983; Kline, 2005) endorse the RMSEA as a comparable or better statistic for this purpose. For this reason, I assess all statistics here.

[21] Until recently, "roughly .90" had been the cut-off for determining a close-fitting model using NNFI and CFI statistics (Kline, 2005); however, recent scholars argue that a better target for NNFI and CFI values is .95 (Hu & Bentler, 1999). For RMSEA scores, most scholars argue that < .05 or .06 indicates a close fit, .05-.08 is reasonable, and greater than .10 indicates a poor-fitting model (Hu & Bentler, 1999; Kline, 2005).

loaded were most strongly correlated (r = .592) in the factor correlation matrix produced by the EFA and described above. Here, I found that a four-factor model was a close fit judging by NNFI, CFI, and RMSEA statistics (χ^2= 237.355, 71 degrees of freedom, p = .000, NNFI =.952, CFI=.968, RMSEA = 0.061 [90% CI: .053 - .07]), while the two-factor model was mediocre at best (χ^2 = 567.971, 74 degrees of freedom, p = .000, NNFI=.863, CFI=.904, RMSEA = 0.103 [90% CI: .096 - .111]) and the one-factor model (χ^2= 1152.95, 77 degrees of freedom, p = .000, NNFI =.714, CFI=.790, RMSEA = 0.150,) was very poor. The comparison of the chi-square statistics also indicated that the four-factor model was significantly better fit than both the two-factor and one-factor models (p < .001).

I conducted one final CFA with the fairness and procedural justice items even though they did not load onto the same factor since they measured conceptually-similar constructs. Results suggested that the constructs were indeed distinct; a two-factor model fit the data very well (χ^2 = 52.384, 13 degrees of freedom, p = .000, TLI = .962, CFA = .983, RMSEA = .07), while a one-factor model was a very poor fit in all respects (χ^2 = 837.522, 14 degrees of freedom, p = .000, TLI = .271, CFA = .636, RMSEA = .307). Furthermore, a comparison of the chi-square statistics confirmed that the two-factor model was a significantly better fit (p < .001). Taking the results of the EFA and CFA together, I retained all nine constructs as distinct group-level variables for subsequent data aggregation and collinearity analyses.

Individual-Level Dependent Variables. As described previously, multiple variables were used to operationalize dependent variables (DVs) in this study. Three of the DVs, namely peer OCB rating index, manager OCB rating, and performance

evaluation scores, were single-item measures and therefore did not require scale reliability analysis. However, the dimensions of OCB rated by peers (e.g., social participation, helping, etc.) were measured using multi-item scales, so a full scale reliability and discriminant validity analysis was necessary.

Each respondent was asked to rate two peers on each of the citizenship behavior items, so the maximum number of peer ratings from the final sample of 543 respondents was 1,086. However, if all ratings were used to assess factor structure and discriminant validity, cases would not have been independent; therefore, I only used the first peer rating provided by each respondent (n=493) to assess the factor structure and discriminant validity of OCB constructs.

Following procedures recommended by Klem (2000) and Kline (2005), I randomly split the sample into thirds, using the first two-thirds (n=329) to initially build the factor structure model using EFA and CFA analyses, and the final third (n=164) to confirm the model using CFA. This sample-splitting approach is optimal in scale development to hone in on the most appropriate structure for the data, as well as the items that best measure each underlying construct. There are no strict guidelines about the percentage of cases in each portion of the split (Klem, 2009); however, it is important to have an adequate number of cases in the sample on which the model is developed. Using the rule-of-thumb that samples should have at least 10 cases for each variable included in the analysis, I chose the two-thirds/one-third split to allow for approximately 330 cases in the model-building sample since there were 33 original OCB items.

To begin, the 33 peer-rated OCB items were entered into an exploratory factor analysis (EFA), again using principal axis factoring (PAF) and promax rotation for the reasons stated above. A six-factor solution emerged that explained 73.93% of the total variance; some factors were easy to interpret, while others were more difficult. After reviewing the factor loadings for each item, six items were immediately identified for deletion due to low loadings (< .400) on all factors, moderate to high loadings (> .400) on multiple factors, or loadings onto factors that did not include any of the other items in their intended scale. The six deleted items included one from the individual initiative scale ("Works beyond the expectations of others."), one from the knowledge-sharing scale ("Shares relevant expertise with coworkers on an informal basis.") and all four items from the administrative behavior scale ("Conserves organizational resources," "Pitches in with administrative tasks," "Completes routine organizational duties in a timely manner (e.g., Performance reviews, replying to emails, etc.)," and "Goes out of his/her way to maintain shared organizational property (e.g., whiteboards, desk spaces, common areas, etc.)."). All of these items had been developed for this study based on data collected in Study 1, except for the individual initiative item, which was based on an item used by Van Dyne, Graham, and Dienesch (1994).

After removing these six items and re-running the factor analysis, a four-factor solution emerged that explained 69.54% of the total variance. One item ("Seeks out challenging project assignments," developed by Van Scotter and Motowidlo's (1996)) did not have strong (> .400) loadings on any of the factors, so it was identified for deletion. All other items loaded mostly unambiguously onto one of the four factors, so they were kept for the next run.

The final EFA resulted in a four-factor solution that explained 69.97% of the total variance. Table 8.4 contains these results. The first factor had an eigenvalue of 12.706, included the four items from the social participation dimension and the five items from the health and well-being dimension. Factor loadings ranged from .390 to .828. The second factor had an eigenvalue of 2.664, included the three items from the civic virtue scale as well as the two remaining items from the knowledge-sharing scale and the two remaining items from the individual initiative scale. Factor loadings ranged from .580 to .899. The third factor had an eigenvalue of 1.695, included the six items from the helping scale, and factor loadings ranged from .365 to .948.

Table 8.4
Exploratory Factor Analysis Results: Individual-Level OCB Variables

Factor	**1**	**2**	**3**	**4**
Eigenvalue	12.706	2.664	1.695	1.127
% of Variance Explained	48.870	10.247	6.519	4.336
Items	**Factor Loadings**			
SocialParticipation_1	**0.771**	-0.026	0.051	0.036
SocialParticipation_2	**0.742**	0.114	0.141	-0.130
SocialParticipation_3	**0.802**	-0.002	-0.143	0.203
SocialParticipation_4	**0.828**	-0.021	0.058	-0.021
HealthWellBeing_1	**0.390**	0.032	**0.520**	-0.046
HealthWellBeing_2	**0.591**	0.005	0.318	-0.149
HealthWellBeing_3	**0.672**	-0.240	0.282	0.002
HealthWellBeing_4	**0.742**	0.110	-0.287	-0.029
HealthWellBeing_5	**0.698**	-0.108	0.196	-0.029
CivicVirtue_1	0.375	**0.790**	-0.339	0.037
CivicVirtue_2	-0.046	**0.769**	0.209	-0.098
CivicVirtue_3	-0.018	**0.580**	0.005	0.103
KnowledgeSharing_1	-0.185	**0.851**	0.007	0.012
KnowledgeSharing_3	-0.083	**0.682**	0.158	-0.035
IndividualInitiative_1	0.084	**0.899**	-0.105	-0.056
IndividualInitiative_4	-0.115	**0.640**	0.286	0.085
Helping_1	0.093	0.018	**0.755**	0.020
Helping_2	-0.139	-0.007	**0.948**	0.032
Helping_3	0.166	-0.102	**0.902**	-0.101
Helping_4	0.084	0.205	**0.682**	-0.056
Helping_5	0.097	0.311	**0.470**	0.005
Helping_6	0.259	0.156	0.365	0.021
Voice_1	0.146	0.057	0.307	**0.457**
Voice_2	-0.031	-0.019	-0.171	**0.841**
Voice_3	-0.135	0.021	0.371	**0.695**
Voice_4	0.349	0.005	0.130	**0.474**

Note. Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

The fourth factor had an eigenvalue of 1.127, included the four items from the voice scale, and factor loadings ranged from .457 to .841.

Next, I conducted a series of CFAs to further investigate the relationship between these items and constructs. A summary of all CFA analyses is provided in Table 8.5. Using the guidelines of Hu and Bentler (1999), the four-factor model identified by the EFA did not fit the data particularly well (χ^2= 761.367, 294 degrees of freedom, p = .000, RMSEA = 0.070, NNFI=.873, CFI=.894). As well, one of the items from the health and

Table 8.5
Confirmatory Factor Analysis (CFA) Results

	χ^2	df	CFI	NNFI	RMSEA	90% CI (Low)	90% CI (High)
Independent Variables							
Trust, Fairness, Positive Regard items							
Three-factor model (final model)	109.66	25	0.976	0.957	0.074	0.060	0.088
One-factor model	624.18	27	0.831	0.719	0.188	0.175	0.201
Trust, Fairness, Positive Regard, Norms items							
Four-factor model (final model)	237.36	71	0.968	0.952	0.061	0.053	0.070
Two-factor model	567.97	74	0.904	0.863	0.103	0.096	0.111
One-factor model	1152.95	77	0.790	0.714	0.150	0.142	0.157
Fairness, Procedural Justice items							
Two-factor model (final model)	52.38	13	0.983	0.962	0.070	0.051	0.090
One-factor model	837.52	14	0.636	0.271	0.307	0.289	0.325
Dependent Variables							
Model-building Sample (n=329)							
Four-factor model (26 items)	761.37	294	0.894	0.873	0.070	0.064	0.076
Four-factor model (25 items)	675.63	270	0.905	0.886	0.068	0.061	0.074
Five-factor model (25 items)	563.24	242	0.921	0.903	0.064	0.057	0.070
Five-factor model (23 items: final model)	519.34	220	0.924	0.905	0.064	0.057	0.072
Five-factor model (21 items)	460.71	179	0.922	0.899	0.069	0.062	0.077
Model-testing Sample (n=164)							
Five-factor model (23 items)	438.83	220	0.881	0.851	0.078	0.067	0.089
Full sample (n=493)							
Five-factor model (23 items)	612.04	220	0.930	0.913	0.060	0.055	0.066
Control Variables							
Job Satisfaction, Org. Commitment items							
Two-factor model (final model)	46.34	19	0.987	0.975	0.048	0.031	0.066
One-factor model	265.50	20	0.883	0.789	0.140	0.125	0.155
Agreeableness, Conscientiousness items							
Two-factor model (final model)	0.56	1	1.000	1.023	0.000	0.000	0.095
One-factor model	41.19	2	0.795	-0.026	0.177	0.132	0.226

Note. CFI = Comparative fit index; NNFI = Non-Normed fit index; RMSEA = Root-mean square error of approximation

well-being dimension ("Makes his/her personal health and well-being a priority") had a very low loading onto its intended factor (.470). After dropping this item from the model, the new CFA had improved fit statistics (χ^2 = 675.631, 270 degrees of freedom, p = .000, RMSEA = .068, NNFI=.886, CFI=.905); however, the standardized regression weight for one of the items on the social participation/health and well-being dimension was still rather low (.616) (Klem, 2009). Because I had theorized that these two dimensions would be distinct, I ran another CFA with five factors, separating these two dimensions. The resulting fit (χ^2 = 563.24, 242 degrees of freedom, p = .000, RMSEA = .064, NNFI=.921, CFI=.903) was better on all fit statistics, and significantly better than the previous model ($p < .001$) according to the chi-square comparison test. Moreover, the standardized regression weights were higher than in the previous model. Therefore, I decided to keep the social participation and health and well-being constructs distinct for future hypothesis testing.

Before finalizing the scales I further investigated the civic virtue/knowledge-sharing/individual initiative dimension since it was difficult to interpret theoretically. The theoretical aim of the civic virtue dimension, based on Organ and colleagues' (2006) conceptualization and supported by the focus groups in Study 1, was to capture actions indicative of a macro-level interest in the organizational as a whole, reflecting a person's recognition of being part of a larger community and accepting the responsibilities that such membership entails; the knowledge-sharing dimension was intended to capture the sharing of knowledge or expertise with coworkers; and the individual initiative dimension was intended to capture the engagement in task-related behaviors at a level beyond what is minimally required or generally expected. Examining the seven items

composing this scale in the CFA, two did not seem to align conceptually with the others; in particular, the item from the knowledge-sharing dimension whose text was "Collaborates with others outside the work group" seemed to reflect more about teamwork than civic duty or membership responsibility; likewise, the item from the individual initiative dimension whose text was "Learns new skills to improve his/her contributions to <the organization>" could have reflected a desire to help the company or to better oneself. Given the lower conceptual agreement with the other items, I dropped these two items and only retained the five items that all reflected the theoretical aim of the original civic virtue dimension. The resulting CFA statistics indicated a better fit (χ^2= 519.338, 220 degrees of freedom, p = .000, RMSEA = .064, NNFI=.905, CFI=.924), with the chi-square comparison test indicating that the improvement over the previous model (with two items apiece from the knowledge-sharing and individual initiative dimensions) was significant ($p < .001$). Therefore, the new civic virtue scale contained five items.

As a matter of interest, I re-ran the CFA a final time using only the three original civic virtue items to determine if the new items significantly improved the fit. The resulting output indicated that the two models fit the data nearly comparably, with some fit statistics better with the larger model including the new items (e.g., CFI, TLI, RMSEA values) and others better with the smaller model (e.g., χ^2 comparison test). Given this equivocal result, I re-examined the item text of the two new items to assess what they would add conceptually to the dimension. Given that the two new items ("Takes part in [Initech]-sponsored knowledge-sharing opportunities (e.g., brownbags, talks, training courses, etc.)" and "Volunteers for special projects in addition to his/her core job tasks") captured some of the most highly-mentioned examples of citizenship behavior in Study 1,

I retained them for subsequent analyses since they represented key facets of citizenship behavior in this context. The final five final dimensions of OCB that remained for subsequent testing were as follows: helping (6 items), voice (4 items), civic virtue (5 items), social participation (4 items), and health and well-being behavior (4 items).

The final step was to confirm the final factor structure using the remaining third (n=164) of the dataset. Using this new data, the fit statistics were still satisfactory (χ^2 = 438.829, 220 degrees of freedom, p=.000, NNFI=.851, CFI=.881, RMSEA=.078), although they were not as good as they were with the dataset used to build the model. However, this weaker result is likely due to the decreased sample size. As a final check, I combined the entire sample of OCB peer ratings (n=493), and the CFA statistics were as follows: χ^2 = 612.041, 220 degrees of freedom, p = .000, NNFI=.913, CFI=.930, RMSEA=.060. This represents a satisfactory fit (Hu & Bentler, 1999).

Individual-Level Control Variables. The final scale reliability and discriminant validity checks were for the control variables that utilized scale measures: job satisfaction, organizational commitment, extraversion, agreeableness, and conscientiousness. I ran two separate analyses, first using only job satisfaction and organizational commitment, and then using the three personality variables.

The first EFA, using principal axis factoring (PAF) and promax rotation, produced a two-factor solution with the job satisfaction and organizational commitment items loading onto separate factors. However, the factor correlation matrix indicated that the factors were correlated at .703, which is high, so I subsequently ran a CFA comparing a two-factor solution to a one-factor solution. The two factor solution was significantly

better than the one-factor solution based on the chi-square comparison test ($p < .001$); as well, fit statistics were considerably better for the two-factor solution (e.g., NNFI = .975 vs. .789, CFI = .987 vs. .883, and RMSEA = .048 vs. .140 for the two-factor vs. one-factor model, respectively). Therefore, despite the high factor inter-correlation, I retained the two distinct constructs for subsequent analyses.

The second EFA, using the personality variables, again used PAF and promax rotation and produced a three-factor solution. Items loaded onto the expected factors. The extraversion factor was only correlated at .145 and .188 with the agreeableness and conscientiousness factors, respectively, while the latter two factors were correlated at .412. Therefore, I ran a CFA comparing a two-factor solution to a one-factor solution using the agreeableness and conscientiousness items, and confirmed that a two-factor solution was a better fit: $\chi^2 = .556$ vs. 41.187, $p = .456$ vs. .000, NNFI = 1.023 vs. -.026, CFI = 1.000 vs. .795, RMSEA = 0.000 vs. .177 for a two-factor vs. one-factor model, respectively). Thus, I retained all three distinct personality variables for subsequent analyses.

Scale Reliability

To assess internal reliability of each scale, I used two approaches. First, I computed Cronbach's alpha statistics; the closer the Cronbach's alpha value is to 1, the higher the internal consistency of the items (Cronbach, 1951). A common rule of thumb suggests that scale reliability is adequate if Cronbach's alpha is above .700 (Nunnally, 1978). However, Cronbach's alpha assumes a unidimensional structure to the scale; therefore, following the assessment of each scale's alpha statistic, I ran a factor analysis

with each set of items independently to assess whether a multi-factor structure was a better fit for the data. Detailed results are below, organized by scale.

Independent Variables. I began by assessing the scale reliability of the citizenship climate dimensions. The three items composing the trust scale were highly correlated (correlations ranged from 0.689 to .735). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.42, which explained 80.8% of the variance. The factor loadings ranged from .817 to .870. The Cronbach's alpha for the scale was 0.876. These results suggest good reliability for the trust measure.

The three items composing the fairness scale were highly correlated (correlations ranged from 0.680 to .834). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.50, which explained 83.5% of the variance. Factor loadings ranged from .778 to .945. The Cronbach's alpha for the scale was 0.894. These results suggest good reliability for the fairness measure.

The five items composing the norms for cooperation scale were moderately to highly correlated (correlations ranged from 0.431 to .685). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 3.21, which explained 64.2% of the variance. The factor loadings ranged from .605 to .871. The Cronbach's alpha for the scale was 0.857. These results suggest good reliability for the norms for cooperation measure.

The three items composing the rewards for broad performance scale were moderately correlated (correlations ranged from 0.551 to .574). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.11, which explained 70.3% of the variance. The factor loadings ranged from .723 to .761. The Cronbach's alpha for the scale was 0.788. These results suggest good reliability for the rewards for broad performance measure.

The three items composing the opportunities for non-core activities scale were moderately correlated (correlations ranged from 0.412 to .565). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.00, which explained 66.7% of the variance. The factor loadings ranged from .598 to .841. The Cronbach's alpha for the scale was 0.749. These results suggest good reliability for the opportunities for non-core activities measure.

The three items composing the autonomy scale were highly correlated (correlations ranged from 0.667 to .699). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.38, which explained 79.3% of the variance. The factor loadings ranged from .819 to .844. The Cronbach's alpha for the scale was 0.869. These results suggest good reliability for the autonomy measure.

The three items composing the positive regard scale were highly correlated (correlations ranged from 0.665 to .754). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.42, which explained 80.6% of the variance. The factor loadings ranged from .791 to .894.

The Cronbach's alpha for the scale was 0.876. These results suggest good reliability for the positive regard measure.

The three items composing the workload scale were highly correlated (correlations ranged from 0.649 to .750). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.39, which explained 79.5% of the variance. The factor loadings ranged from .762 to .888. The Cronbach's alpha for the scale was 0.870. These results suggest good reliability for the workload measure.

The four items composing the procedural justice scale were moderately to highly correlated (correlations ranged from 0.549 to .776). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 3.06, which explained 76.6% of the variance. The factor loadings ranged from .692 to .903. The Cronbach's alpha for the scale was 0.898. These results suggest good reliability for the procedural justice measure.

Dependent Variables. Next, I assessed the scale reliability of the dimensions of citizenship behavior rated by peers, as these were the only dependent variables measured through multi-item scales. Items composing the scales were determined based on the EFA and CFA analyses reviewed above. Similar to the process used for the EFA and CFA analyses above, I only used the first set of peer ratings provided by each respondent (n=493) to assess the reliability of each OCB scales to ensure cases were independent.

The six items composing the helping scale were moderately to highly correlated (correlations ranged from.541 to .764). An exploratory factor analysis using PAF and

promax rotation indicated that there was indeed one factor with an eigenvalue of 4.14, which explained 70.0% of the variance. Factor loadings ranged from .735 to .853. The Cronbach's alpha for the scale was 0.908. These results suggest good reliability for the helping measure.

The four items composing the voice scale were moderately to highly correlated (correlations ranged from 0.557 to .685). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.84, which explained 71.0% of the variance. The factor loadings ranged from .718 to .868. The Cronbach's alpha for the scale was 0.863. These results suggest good reliability for the voice measure.

The five items composing the civic virtue scale were moderately to highly correlated (correlations ranged from 0.476 to .658). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 3.38, which explained 67.5% of the variance. The factor loadings ranged from .629 to .850. The Cronbach's alpha for the scale was 0.879. These results suggest good reliability for the civic virtue measure.

The four items composing the social participation scale were moderately to highly correlated (correlations ranged from 0.561 to .646). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.86, which explained 71.5% of the variance. The factor loadings ranged from .767 to .810. The Cronbach's alpha for the scale was 0.866. These results suggest good reliability for the social participation measure.

The four items composing the health and well-being behavior scale were moderately to highly correlated (correlations ranged from 0.416 to .645). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.52, which explained 63.1% of the variance. The factor loadings ranged from .625 to .792. The Cronbach's alpha for the scale was 0.805. These results suggest good reliability for the health and well-being behavior measure.

Control variables. Lastly, I checked reliabilities for the control variables that were measured using scales. The four items composing the job satisfaction scale were moderately to highly correlated (correlations ranged from 0.616 to .722). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.98, which explained 74.6% of the variance. The factor loadings ranged from .771 to .859. The Cronbach's alpha for the scale was 0.886. These results suggest good reliability for the job satisfaction measure.

The four items composing the organizational commitment scale were moderately to highly correlated (correlations ranged from 0.517 to .623). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 2.76, which explained 69.0% of the variance. The factor loadings ranged from .715 to .816. The Cronbach's alpha for the scale was 0.844. These results suggest good reliability for the organizational commitment measure.

The two items composing the extraversion scale were moderately correlated (r =.612, $p < .001$). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 1.61, which explained 80.6% of

the variance. The factor loadings both equaled .754. The Cronbach's alpha for the scale was 0.805. These results suggest good reliability for the extraversion measure.

The two items composing the agreeableness scale had a moderately low correlation (r =.333, $p < .001$). An exploratory factor analysis using PAF and promax rotation indicated that there was indeed one factor with an eigenvalue of 1.33, which explained 66.63% of the variance. The factor loadings both equaled .576. The Cronbach's alpha for the scale was 0.485. These results pose questions about the reliability for the agreeableness measure. This is not surprising, since some respondents left open-ended comments about the first item in this scale which asked people to evaluate the extent to which they are "critical, quarrelsome," which is intended to be reverse-coded prior to analysis (Gosling et al., 2003). Respondents' comments indicated that being critical and quarrelsome can be positive and constructive traits in this context, to the extent they improve the end-product of people's work; therefore, at a meta-level, being critical and quarrelsome might be considered somewhat prosocial or agreeable (for the organization), making the scale less internally reliable. Despite these issues and the low Cronbach's alpha, I will continue to use the scores for these two items to create an agreeableness scale since the items had a decent positive correlation and loaded onto the same factor.

Finally, the two items composing the conscientiousness scale had a moderate correlation (r =.447, $p < .001$). An exploratory factor analysis using PAF and promax rotation indicated that there was one factor with an eigenvalue of 1.45, which explained 72.3% of the variance. The factor loadings both equaled .576. The Cronbach's alpha for the scale was 0.617. These results suggest decent reliability for the conscientiousness measure. Although the scale alpha was not at the .7 target (Nunnally, 1978), I still used

the mean of respondents' scores on these items to create a conscientiousness score for each person.

In sum, nearly all variables were shown to have strong internal reliability as measured by their inter-item correlations, EFA scores, and Cronbach's alphas. Based on these results, I averaged the items from each scale to create scale scores for each respondent.

Data Aggregation Tests

The main hypotheses in this dissertation are concerned with the effect of variables at a higher level of analysis (work groups) on variables at a lower level of analysis (individuals). It is customary in the organizational climate literature to collect data on group climates from individuals within the group, using the group as the referent in survey items, and then to aggregate responses to the group level if the within-group agreement meets standards for treating variables as shared group properties (Kozlowski & Klein, 2000; D. M. Mayer et al., 2007; Naumann & Bennett, 2000). Therefore, once I had created scale scores on all of the study variables, it was necessary to check whether aggregation of individual-level responses to the group-level was warranted before I could proceed with further analyses. Three statistics are commonly used to assess within-group agreement for this purpose: r_{wg}, ICC(1), and ICC(2). Table 8.6 summarizes the agreement scores for each statistic for group-level climate variables, and results are described below.

The r_{wg} is a statistic that compares observed within-group variance to an expected level of random variance and is calculated using the following equation: $1 - (S_x^2/\sigma_E^2)$, where S is the observed variance on variable x, and σ_E^2 is a benchmark for the expected level of variance in responses that could be expected due to random error (James et al.,

1993). When raters have 100% agreement, S_x^2 will equal 0, and the r_{wg} will equal 1; when raters have any level of disagreement, $S_x^2 > 0$, and r_{wg} will decline. Therefore, unlike the ICC statistics, r_{wg} is not sensitive to the level of between-group variance in the given sample. Rather, it only assesses within-group variance compared to that expected due to random error. In general, scholars agree that the median r_{wg} for the set of groups in a sample should be at least .70 (akin to the target for Cronbach's alpha) to conclude decent within-group agreement on a given variable (Bliese, 2000).

Table 8.6
Summary of Data Aggregation Statistics for Group-Level Variables

	From Unloaded Model in HLM					
Variable	**Sigma-squared**	**Tau**	**ICC(1)**	**p-value**	**ICC(2)**	**r_{wg}**
Autonomy	0.588	0.085	0.127	0.000	0.398	0.76
Fairness	0.409	0.028	0.063	0.010	0.255	0.87
Norms for Cooperation	0.389	0.052	0.117	0.000	0.351	0.84
Opportunities for Non-core Activities	0.640	0.071	0.100	0.001	0.306	0.70
Positive Regard	0.332	0.031	0.086	0.001	0.321	0.88
Procedural Justice	0.704	0.043	0.058	0.087	0.145	0.72
Rewards for Broad Performance	0.740	0.048	0.061	0.135	0.101	0.63
Trust	0.558	0.066	0.106	0.001	0.324	0.74
Workload	0.681	0.173	0.203	0.000	0.528	0.75
Communal Orientation Index (Created post hoc using Fairness, Trust, and Cooperative Norms)	0.339	0.043	0.112	0.000	0.364	0.88

In this study, the median r_{wg} values for trust (r_{wg} = .74), fairness (r_{wg} = .87), procedural justice (r_{wg} = .72), norms for cooperation (r_{wg} = .84), perceived opportunities for non-core activities (r_{wg} = .70), autonomy (r_{wg} = .76), and workload (r_{wg} = .75) were all above the .70 recommendation. The value for rewards for broad contributions was .63, which is slightly below the recommended value; however, given that climates are not defined in binary terms of existence or non-existence, this score does not necessarily indicate the lack of a climate for broad rewards. Rather, convergence on this variable is slightly lower than what is considered desirable.

Next, I examined the intraclass correlation coefficients (ICC(1) and ICC(2)) to further assess the appropriateness of aggregating variables to the group level. Both forms of the ICC assess consistency of responses among raters within a group (Bliese, 2000; Kozlowski & Hattrup, 1992), but in different ways. ICC(1) calculates the proportion of total variance in group members' scores that is explained by group membership; this measure is often conceptualized as the reliability of a single measure of the group mean (James, 1982). Using a random coefficient modeling program such as HLM, ICC(1) can be computed using the following information provided by HLM output: $\tau_{00} / (\tau_{00} + \sigma^2)$, where τ_{00} is the between-group variance and σ^2 is the within-group variance. Bliese (2000) indicated that ICC(1) values between .05 and .20 are reasonable, and that values will rarely exceed .30 in field settings. Using this guidelines, the values for trust (.106), fairness (.063), procedural justice (.058), norms for cooperation (.117), rewards for broad performance (.061), perceived opportunities for non-core activities (.100), autonomy (.127), workload (.203) were all within the expected and acceptable range.

When calculating the components of the ICC(1) equation, described above, HLM also reports the results of a hypothesis test assessing whether observed variance associated with group membership is greater than 0. Scholars tend to use the ICC(1) and p-values from this hypothesis test in tandem to substantiate decisions about data aggregation. As shown in Table 8.6, all p-values in this study were below .05, indicating a significant presence of group-level variance, except for those related to the variables of rewards for broad contributions ($p = .135$) and procedural justice ($p = .087$).

Lastly, I computed ICC(2) values for each of the climate variables. The ICC(2) estimates the reliability of group means (Bliese, 2000) and is sensitive to group size;

when group size is small, ICC(2) scores are likely to be lower, as it would be necessary to have more respondents in order to reliably estimate the group mean. ICC(2) is calculated using output from a one-way random-effects ANOVA, as follows: ICC(2) = (MSB – MSW) / MSB, where MSB = Mean Square Between Groups and MSW = Mean Square Within Groups. Values for study variables ranged from .101 to .528 (See Table 8.6) which is on the low end of ICC(2) values reported in the literature. However, since this statistic is sensitive to group size and the average number of responses per group in this study was relatively small (mean = 4.6), it is not surprising that the ICC(2) values are rather low. Given that there is no established target for the appropriate level of ICC(2) statistics recommended in order to merit data aggregation, scholars tend to look to the r_{wg}, ICC(1), and p-value of the random group effect hypothesis test in order to make the decision about data aggregation. Therefore, I also follow this custom here.

Taking the full set of analyses above into account, I aggregated all of these variables to the group level except for the variable assessing perceptions about rewards for broad contributions. Although the procedural justice scale had a p-value greater than .05, indicating that the differences between groups are less on this variable than they are for others, the r_{wg} was still greater than .70, so given that this is only a control variable I decided to proceed in line with my theory and aggregate the scores. For variables that were aggregated, I followed common practice and used the group mean as the aggregated variable score (D. M. Mayer et al., 2007).

Collinearity Diagnostics

The final step before testing hypotheses was to assess whether independent variables were correlated at a level that would create multicollinearity problems in the

regressions. To do so, I followed customary practices and assessed the Level 1 (individual-level) and Level 2 (group-level) correlation matrices, reviewed the collinearity statistics (e.g., tolerance and variance inflation factor (VIF)) for each independent variable, and evaluated the overall model's condition indices and variance proportion statistics (J. Cohen, Cohen, West, & Aiken, 2003; Faraway, 2005). Tables 8.7 and 8.8 show the correlation matrices for Level 1 and Level 2 variables. The results of the collinearity analyses are presented in Tables 8.9 and 8.10 and reviewed in detail below.

An analysis of the Level 1 variables (e.g., individual-level demographics and controls) indicated the presence of high collinearity between the job satisfaction and organizational commitment scales. Although these scales were determined to be distinct using exploratory and confirmatory factor analyses, Table 8.7 indicates that they were correlated at .657 ($p < .001$), which is quite high. Moreover, while each variable's VIF score (2.213 for job satisfaction; 1.917 for organizational commitment) was below the customary cut-off of 4.0 (J. Cohen et al., 2003; Faraway, 2005), the collinearity diagnostic matrix indicated that one factor had a condition index of 26.93, and the variance proportion scores for job satisfaction and organizational commitment on this factor were .879 and .683, respectively. Typically, serious multicollinearity is thought to exist when a condition index is greater than 30; indices greater than 15 suggest possible collinearity problems (Garson, 2009). In the presence of a high condition index, variance proportion scores are used to determine which items are problematic; if two or more variables have a variance proportion of .50 or above for a given factor, these variables have "high linear dependence and multicollinearity is a problem, with the effect that small data changes or arithmetic errors may translate into very large changes or errors in

Table 8.7
Individual-Level (Level 1) Variable Correlations

Variable	Rewards for Broad Contrib.	Dimension-Specific Peer Ratings of OCB: Social Participation	Health & Well-Being	Helping	Voice	Civic Virtue	Global Ratings of OCB: Peer Index Rating	Manager Rating
Rewards for Broad Contributions								
OCB Peer Ratings: Social Participation	-0.114							
OCB Peer Ratings: Health & Well-Being	-0.047	0.745**						
OCB Peer Ratings: Helping	0.037	0.584**	0.676**					
OCB Peer Ratings: Voice	0.014	0.483**	0.561**	0.625**				
OCB Peer Ratings: Civic Virtue	0.065	0.567**	0.566**	0.616**	0.524**			
OCB Peer Ratings: Index	-0.007	0.834**	0.864**	0.847**	0.818**	0.797**		
OCB Manager Rating	-0.056	0.129	0.200**	0.169*	0.186**	0.256**	0.213**	
Performance Evaluation Score	0.039	-0.009	-0.013	0.107	0.171**	0.028	0.038	0.064
Job Satisfaction	0.456**	-0.049	-0.010	0.000	-0.070	-0.016	-0.037	0.028
Organizational Commitment	0.338**	-0.090	-0.025	-0.040	-0.087	-0.028	-0.061	-0.016
Extraversion	-0.018	0.275**	0.232**	0.107	0.134*	0.163*	0.210**	0.201**
Agreeableness	0.095	0.173**	0.075	0.066	-0.113*	0.100	0.040	0.046
Conscientiousness	-0.005	-0.040	0.038	0.076	0.001	0.056	-0.007	0.166**
Gender	0.092	-0.173**	-0.190**	-0.138*	-0.028	-0.065	-0.122*	-0.132*
Ethnicity Category: White	-0.095	-0.054	0.011	0.000	0.116*	-0.019	0.010	0.056
Ethnicity Category: Asian	-0.010	-0.024	-0.013	-0.063	-0.144**	-0.101	-0.078	-0.035
Job Level	-0.003	-0.066	0.012	-0.063	0.113*	-0.082	-0.015	0.001
Organizational Tenure	-0.091	-0.084	-0.017	-0.045	0.052	-0.024	0.005	0.005

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table continued on next page.

Table 8.7 (continued)
Individual-Level (Level 1) Variable Correlations

		Individual-Level Control Variables								
	Perfor-mance Eval. Score	Job Satis-faction	Org. Commit-ment	Extra-version	Agree-ableness	Conscien-tiousness	Gender	Ethnicity Category: White	Ethnicity Category: Asian	Job Level
Job Satisfaction	0.036									
Organizational Commitment	-0.066	0.657**								
Extraversion	0.077	0.062	-0.034							
Agreeableness	-0.105*	0.118*	0.119*	0.079						
Conscientiousness	0.118*	0.141**	0.149**	0.087	0.241**					
Gender	0.023	0.055	0.041	-0.198**	-0.200**	-0.243**				
Ethnicity Category: White	0.080	0.004	-0.009	0.021	-0.097*	-0.025	0.031			
Ethnicity Category: Asian	0.029	0.010	-0.019	-0.033	0.036	-0.003	-0.020	-0.428**		
Job Level	0.114**	0.021	-0.077**	0.007	-0.066	0.048	0.149**	0.124**	0.162**	
Organizational Tenure	0.080	-0.055	-0.167**	0.042	-0.002	0.070	-0.104*	0.066	0.165**	0.293**

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 8.8
Group-Level (Level 1) Variable Correlations

Variable	Group Demographics									
	Group Size	Gender	Ethnicity	Tenure	Job Level	Location	Avg Time in Group	Business Unit: Eng	Business Unit: Sales	Business Unit: Other
Group Size										
Group Heterogeneity in Gender	0.134									
Group Heterogeneity in Ethnicity	0.354**	0.027								
Group Heterogeneity in Organizational Tenure	-0.044	-0.026	0.049							
Group Heterogeneity in Job Level	-0.051	-0.010	0.132	0.124						
Group Heterogeneity in Location	-0.022	-0.059	0.169	-0.088	0.091					
Avg Time in Group	0.233*	-0.013	0.306**	-0.231*	-0.003	0.085				
Department Category: Engineering	0.305**	-0.268**	0.066	-0.127	-0.104	-0.144	0.215*			
Department Category: Sales	-0.062	0.339**	-0.116	-0.055	0.057	0.071	-0.254**	-0.600**		
Department Category: Other	-0.269**	-0.082	0.057	0.204*	0.051	0.081	0.044	-0.439**	-0.455**	
Communal Climate: Group Mean	-0.080	0.038	-0.039	-0.149	-0.026	0.152	0.150	0.030	0.101	-0.147
Communal Climate : Standard Deviation	-0.044	0.154	0.135	0.065	-0.044	-0.107	-0.168	-0.204*	0.177	0.030
Autonomy: Group Mean	0.155	0.082	0.176	-0.151	0.021	0.101	0.290**	0.210*	-0.132	-0.085
Autonomy: Standard Deviation	-0.046	-0.135	-0.093	0.104	-0.136	0.062	-0.279**	-0.109	0.077	0.035
Opportunities for Non-Core Activities: Group Mean	-0.043	-0.114	-0.103	-0.093	0.112	0.046	0.119	0.192*	-0.112	-0.088
Opportunities for Non-Core Activities: Standard Deviation	0.077	0.119	0.044	0.185	-0.069	0.171	-0.019	-0.104	-0.004	0.120
Workload: Group Mean	0.084	0.077	0.144	0.238**	-0.074	0.040	-0.129	-0.149	-0.011	0.179
Workload: Standard Deviation	0.024	0.106	-0.070	0.012	-0.014	-0.079	-0.119	-0.147	0.207*	-0.068
Procedural Justice: Group Mean	0.044	-0.081	0.035	-0.008	-0.084	0.084	0.146	0.328**	-0.070	-0.288**
Procedural Justice: Standard Deviation	-0.058	0.115	0.142	-0.046	0.015	0.114	-0.085	-0.180	0.014	0.189

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table continued on next page.

Table 8.8 (continued)
Group-Level (Level 2) Variable Correlations

Variable	Communal Climate: Group Mean	Communal Climate: Std Dev	Autonomy: Group Mean	Autonomy: Std Dev	Opps for Non-Core: Group Mean	Opps for Non-Core: Std Dev	Workload: Group Mean	Workload: Std Dev	Procedural Justice: Group Mean	Procedural Justice: Std Dev
Communal Climate: Std Dev	-0.410**									
Autonomy: Group Mean	0.213*	-0.126								
Autonomy: Std Dev	-0.293**	0.103	-0.489**							
Opps for Non-Core Acts: Group Mean	0.339**	-0.291**	0.335**	-0.077						
Opps for Non-Core Acts: Std Dev	-0.220*	0.331**	-0.110	0.117	-0.295**					
Workload: Group Mean	-0.126	0.051	-0.236*	0.154	-0.335**	0.211*				
Workload: Std Dev	0.056	0.203*	-0.097	0.027	0.018	-0.027	-0.069			
Procedural Justice: Group Mean	0.467**	-0.269**	0.319**	-0.273**	0.376**	-0.148	-0.199*	-0.164		
Procedural Justice: Std Dev	-0.294**	0.487**	-0.120	0.152	-0.254**	0.214*	0.072	0.041	-0.462**	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 8.9
Summary of Individual-Level (Level 1) Collinearity Statistics

	Collinearity Statistics			
	Model 1: Original Variables		**Model 2:** Dropping Organizational Commitment	
Variable	Tolerance	VIF	Tolerance	VIF
Job Satisfaction	0.452	2.213	0.720	1.389
Organizational Commitment	0.522	1.917		
Rewards for Broad Performance	0.697	1.435	0.707	1.414
Ethnicity Category: Other	0.759	1.318	0.755	1.325
Ethnicity Category: Asian	0.780	1.282	0.776	1.289
Organizational Tenure	0.789	1.267	0.820	1.220
Job Level	0.819	1.220	0.779	1.283
Gender	0.822	1.217	0.817	1.224
Conscientiousness	0.873	1.145	0.897	1.114
Extraversion	0.898	1.114	0.943	1.060
Agreeableness	0.933	1.072	0.933	1.071

Table 8.10
Summary of Group-Level (Level 2) Collinearity Statistics

Variable	Collinearity Statistics					
	Model 1: Original Variables		**Model 2:** Dropping Positive Regard Variable		**Model 3:** Using Communal Climate Index Variable	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
Positive Regard: Grp. Mean	0.126	7.951				
Norms for Cooperat'n: Grp. Std Dev	0.130	7.693	0.186	5.386		
Trust: Grp. Mean	0.158	6.337	0.180	5.557		
Fairness: Climate Strength	0.191	5.230	0.241	4.147		
Fairness: Grp. Mean	0.196	5.100	0.278	3.596		
Procedural Justice: Grp. Mean	0.211	4.735	0.250	4.006	0.352	2.840
Positive Regard: Climate Strength	0.213	4.690				
Positive Regard: Grp. Std Dev	0.215	4.656				
Norms for Cooperation: Grp. Mean	0.226	4.423	0.250	4.007		
Autonomy: Climate Strength	0.233	4.291	0.302	3.314	0.349	2.866
Fairness: Grp. Std Dev	0.237	4.223	0.309	3.235		
Autonomy: Grp. Std Dev	0.274	3.655	0.284	3.518	0.340	2.943
Opps for Non-Core Acts: Clim. Str.	0.276	3.621	0.294	3.396	0.323	3.095
Trust: Climate Strength	0.282	3.544	0.309	3.239		
Trust: Group Std Dev	0.297	3.365	0.314	3.188		
Opps for Non-Core Acts: Grp Std Dev	0.297	3.362	0.332	3.010	0.485	2.063
Autonomy: Grp. Mean	0.310	3.227	0.431	2.319	0.536	1.864
Business Unit: Other	0.315	3.170	0.393	2.547	0.508	1.970
Opps for Non-Core Acts: Grp. Mean	0.351	2.851	0.363	2.758	0.445	2.249
Business Unit: Sales	0.354	2.827	0.381	2.623	0.475	2.104
Avg Time in Group	0.356	2.807	0.386	2.589	0.480	2.082
Workload: Group Mean	0.362	2.763	0.373	2.683	0.425	2.353
Heterogeneity in Ethnicity	0.363	2.752	0.365	2.740	0.406	2.461
Norms for Cooperation: Clim. Str.	0.405	2.469	0.440	2.272		
Workload: Climate Strength	0.407	2.456	0.413	2.423	0.555	1.801
Heterogeneity in Job Level	0.418	2.393	0.451	2.218	0.526	1.903
Procedural Justice: Climate Strength	0.427	2.342	0.512	1.952	0.610	1.641
Group Size	0.429	2.328	0.435	2.301	0.545	1.835
Heterogeneity in Gender	0.450	2.224	0.536	1.866	0.649	1.542
Heterogeneity in Location	0.466	2.145	0.470	2.129	0.533	1.877
Workload: Group Std Dev	0.477	2.094	0.587	1.704	0.676	1.480
Procedural Justice: Grp. Std Dev	0.486	2.058	0.494	2.024	0.536	1.866
Heterogeneity in Org Tenure	0.578	1.729	0.593	1.687	0.638	1.568
Communal Climate: Grp. Mean					0.466	2.145
Communal Climate: Grp. Std Dev					0.438	2.282
Communal Climate: Climate Str.					0.431	2.322

Notes. All group mean and std deviation scores were grand mean centered before entering them into analyses. Climate strength variables are the product of their respective group mean and std deviation scores.

the regression analysis" (Garson, 2009). Based on this guidance, I dropped the organizational commitment variable from future analyses. Given the need to drop either job satisfaction or organizational commitment to avoid multicollinearity problems, I chose this one since it had fewer observations than the job satisfaction scale (370 vs. 478, respectively), thus enabling me to retain the most cases for future analyses. When I re-ran the collinearity diagnostic tests without the organizational commitment variable, all statistics were adequate.

A separate analysis of the Level 2 predictor variables also indicated the presence of problematic levels of collinearity among certain variables (See Table 8.10). In particular, the VIF values for the centered mean scores of positive regard (7.95), trust (6.34), fairness (5.1), norms for cooperation and (4.42) were all greater than the 4.0 cut-off. Furthermore, some of the centered climate strength variables also had VIF scores greater than 4.0. Because positive regard had the highest VIF score, along with very strong and significant correlations with other Level 2 predictor variables (see Table 8.8), I dropped this from future analyses. This was reasonable given that my intention was only to use this as a control variable. Despite this elimination, re-running the analyses still indicated the presence of problematic multicollinearity between the trust (VIF = 5.56), norms for cooperation (VIF = 4.01), and fairness (VIF = 3.60) main effects, as well as the dispersion of perceptions for norms (VIF = 5.39), and fairness climate strength (VIF = 4.15). Table 8.8 shows that many of these variables also have high inter-correlations, despite having strong discriminant validity statistics in the CFAs described above. Thus, although they may be distinct constructs, the data suggest that trust, fairness, and norms for cooperation may be components of a higher-order construct

related to a having a more communal orientation or schema, characterized by assumptions about communal exchange relationships within the group (Clark & Mills, 1979; Goffman, 1961), and with underlying dimensions represented by trust, fairness, and cooperative norms. Based on these results, I created an index score for each respondent by averaging their scores on the dimensions of fairness, trust, and norms for cooperation.

The higher-order construct assessed by the index variable will be referred to as a "communal orientation" at the individual level, and "communal climate" at the group level, since the nature of the construct aligns with prior research on relationships and group dynamics characterized by communal schemas and communal exchange principles, rather than economic schemas and exchange (Blatt, 2009; Clark & Mills, 1979; Goffman, 1961). Clark and Mills (1979) helpfully define communal exchange principles as follows:

> Members of a communal relationship assume that each is concerned about the welfare of the other. They have a positive attitude toward benefiting the other when a need for the benefit exists. They follow what Pruitt (1972) has labeled 'the norm of mutual responsiveness.' This rule may create what appears to an observer to be an exchange of benefits, but it is distinct from the rule that governs exchange relationships whereby the receipt of a benefit must be reciprocated by the giving of a comparable benefit. The rules concerning the giving and receiving of benefits are what distinguish communal and exchange relationships, rather than the specific benefits that are given and received. From the perspective of the participants in a communal relationship, the benefits given and received are not part of an exchange. The attribution of motivation for the giving of benefits is different from that in an exchange relationship. In a communal relationship, the receipt of a benefit does not create specific debt or obligation to return a comparable benefit, nor does it alter the general obligation that the members have to aid the other when the other has a need. (p. 13)

As explained above, in communal exchange relationships individuals' actions are motivated by the need of another rather than the desire to be repaid with a benefit in the future (Clark & Mills, 1979). Action taken for the benefit of another or the group is

prosocial; it is a contribution to the relationship as an entity, or to the whole, in general. In this way, it is similar to generalized social exchange (Lévi-Strauss, 1969; Molm et al., 2007; O'Connell, 1984), such that the individual contributes to the good of the whole – the community – with the assumption that his/her needs will also be attended to in the future, in some indirect way. Drawing on this prior research, I defined a communal climate as a shared perception amongst group members that all will attend to one another's needs, as well as those of the needs of the group, when necessary.

To assess whether the creation of this index would resolve the multicollinearity problems at Level 2, it was first necessary to evaluate whether it was appropriate to aggregate this variable to the group level of analysis. I performed all the customary checks of the data as were done with the other group-level variables described above, and all suggested that aggregation was appropriate (median r_{wg} = .88; ICC(1) = .112, p = .000; ICC(2) = .364). Following the same procedure as was used for the other aggregated variables, I used each group's mean score for the new group score, and used each group's standard deviation on this variable to operationalize the dispersion in perceptions. After centering these two scores, I created a product term to represent the climate strength.

With the new index score entered into the analysis, I re-ran the collinearity diagnostic tests. All values were very good; VIF scores were below the 4.0 cut-off and the condition indices and variance proportion scores in the collinearity diagnostics matrix were significantly improved and below problematic levels. With the adequacy of these results checked, the scales and level of analysis at which all study variables would be measured were confirmed. Table 8.11 presents the means, standard deviations, and internal reliability scores for all study variables.

Table 8.11
Means, Standard Deviations, and Cronbach's Alpha Scores for Study Variables

Variable	N	Mean	Std Dev	Alpha
Individual Level				
Rewards for Broad Contributions	388	3.147	0.888	0.788
OCB: Peer Ratings of Helping	304	4.127	0.655	0.908
OCB: Peer Ratings of Voice	344	3.942	0.717	0.863
OCB: Peer Ratings of Civic Virtue	227	3.897	0.762	0.879
OCB: Peer Ratings of Social Participation	333	4.038	0.717	0.866
OCB: Peer Ratings of Health & Well-Being	308	4.193	0.610	0.805
OCB: Peer Rating Index	379	4.007	0.605	
OCB: Manager Rating	347	3.905	0.928	
Performance Evaluation (1st rating period, 2009)	522	3.492	0.300	
Job Satisfaction	478	3.900	0.858	0.886
Organizational Commitment	370	3.856	0.860	0.844
Extraversion	501	3.386	1.001	0.754
Agreeableness	499	3.834	0.770	0.485
Conscientiousness	501	4.278	0.653	0.617
Gender *(0=female, 1=male)*	539	0.609	0.489	
Ethnicity / White *(0=no, 1=yes)*	543	0.400	0.490	
Ethnicity / Asian *(0=no, 1=yes)*	543	0.215	0.412	
Ethnicity / Asian *(0=no, 1=yes)*	543	0.385	0.487	
Job Level	543	3.963	1.391	
Organizational Tenure	543	3.954	1.427	
Group Level				
Communal Climate (Group Mean)	118	4.042	0.374	
Communal Climate (Std Dev)	116	0.520	0.299	
Trust (Group Mean)	118	3.949	0.466	0.876 (N=518)
Trust (Std Dev)	114	0.683	0.338	
Fairness (Group Mean)	118	4.157	0.400	0.894 (N=523)
Fairness (Std Dev)	115	0.540	0.369	
Norms for Cooperation (Group Mean)	118	4.049	0.398	0.857 (N=515)
Norms for Cooperation (Std Dev)	112	0.547	0.313	
Autonomy (Group Mean)	118	3.978	0.502	0.869 (N=537)
Autonomy (Std Dev)	115	0.681	0.403	
Opportunities for Non-Core Activities (Group Mean)	118	3.610	0.507	0.749 (N=504)
Opportunities for Non-Core Activities (Std Dev)	112	0.732	0.327	
Workload (Group Mean)	118	3.506	0.622	0.870 (N=518)
Workload (Std Dev)	116	0.783	0.388	
Procedural Justice (Group Mean)	115	3.440	0.536	0.898 (N=409)
Procedural Justice (Std Dev)	104	0.710	0.442	
Positive Regard (Group Mean)	118	4.309	0.370	0.876 (N=527)
Positive Regard (Std Dev)	116	0.496	0.284	
Business Unit / Engineering *(0=no, 1=yes)*	120	0.367	0.484	
Business Unit / Sales *(0=no, 1=yes)*	120	0.383	0.488	
Business Unit / Other *(0=no, 1=yes)*	120	0.250	0.435	
Group Size	120	7.350	3.337	
Average time in group *(years)*	119	1.021	0.554	
Heterogeneity in gender composition	120	0.288	0.193	
Heterogeneity in ethnicity composition	120	0.278	0.233	
Heterogeneity in organizational tenure	120	0.271	0.119	
Heterogeneity in job level	120	0.209	0.099	
Heterogeneity in location	120	0.205	0.249	

Hypothesis Testing: Hierarchical Linear Models

Appendix H presents a summary of all Study 2 hypotheses. Hypotheses 2-5 were tested using hierarchical linear modeling techniques (HLM; Bryk & Raudenbush, 1992). This method utilizes random effects coefficient regression analysis, and is the most appropriate approach for testing hypotheses with multilevel data (e.g., such as individuals within work groups) because it allows for the simultaneous analysis of individual- and group-level variance in individual outcomes (see Griffin & Hofmann, 1999, or Kidwell Jr., Mossholder, & Bennett, 1997 for an in-depth discussion).

I tested each hypothesis concerning the effects of group-level climate variables on individual citizenship behavior seven different ways, once for each measurement of OCB, as follows. First, I conducted five regressions, each using one of the specific dimensions of OCB (helping, voice, civic virtue, social participation, and health and well-being behavior) as the dependent variable. Next, I ran one regression using the overall peer index rating of OCB as the dependent variable. Then, I ran a final regression using the manager rating of OCB as the dependent variable. The relationship between citizenship behavior and performance (Hypothesis 5), was tested eight ways: once using each of the five dimensions of citizenship behavior as unique independent variables, once with all five dimensions of citizenship behavior as independent variables, once using the peer index rating of OCB as a unique independent variables, and once using the manager rating of OCB as a unique independent variable.

Model testing followed sequential steps and standard HLM practices (Bryk & Raudenbush, 1992). First, I conducted seven one-way analysis of variance (ANOVA) tests to assess the null models (i.e., a model with the dependent variable and the random

group effect only); these tests calculated the amount of variance in citizenship behavior that resided between groups versus within groups. Results indicated significant between group variance on each of the dependent variables ($p < .05$). In the second step I regressed each of the seven dependent variables on the control variables independently using a random-coefficient regression model. Next, I entered the main effects of the group-level study variables, followed by the dispersion of perceptions variables, and finally the climate strength (interaction) variables. Results are presented in Tables 8.12-8.20 and reviewed below.

Effects of Control Variables on OCB. Table 8.12 presents the results of all control variable regressions. Some observations about the effects of control variables are worth noting. First, results substantiate some existing findings in the OCB literature and beyond. For example, organizational tenure significantly and negatively predicted three of the five forms of citizenship behavior: helping (unstandardized beta = -.062, $p < .05$), social participation (unstandardized beta = -.077, $p < .05$), and health and well-being behavior (unstandardized beta = -.053, $p < .05$), indicating that people who have worked for Initech for more time are less likely to display these forms of citizenship behavior. This is a similar pattern to that found by Morrison (1994) in her study of employee role perceptions and behavior.

Next, participants of Asian ethnicity were significantly less likely to display the voice form of citizenship behavior than were non-Asians (unstandardized beta = -.411, $p < .01$). This aligns with findings from cross-cultural psychology indicating that East Asian cultures socialize individuals to communicate respect toward others in social situations via humility, deference to authority, and minimal public disagreement

Table 8.12
Regression Results for Control Variables

	Helping			Voice			Civic Virtue			Social Participation		
Variable	Coefficient	SE	p-val	Coefficient	SE	p-val	Coefficient	SE	p-val	Coefficient	SE	p-val
(Constant)	4.507**	0.108	0.000	4.227**	0.095	0.000	4.032**	0.154	0.000	4.069**	0.120	0.000
Group-Level Control Variables												
Business Unit: Sales	-0.416**	0.115	0.001	-0.189	0.105	0.075	-0.187	0.170	0.274	-0.016	0.107	0.880
Business Unit: Other	-0.343*	0.157	0.031	-0.353*	0.161	0.030	-0.365	0.226	0.109	-0.030	0.167	0.856
Group Size	-0.009	0.014	0.517	-0.030	0.016	0.058	-0.022	0.018	0.214	-0.016	0.017	0.331
Avg Time in Group	-0.008	0.122	0.948	0.208	0.116	0.076	0.008	0.191	0.967	0.088	0.142	0.537
Heterogeneity in Gender	0.175	0.297	0.556	-0.116	0.247	0.639	-0.214	0.371	0.566	-0.146	0.290	0.616
Heterogeneity in Ethnicity	0.321	0.315	0.312	0.041	0.294	0.890	0.253	0.486	0.603	-0.006	0.357	0.986
Heterogeneity in Org Tenure	-0.787	0.418	0.063	-0.394	0.357	0.273	-0.414	0.521	0.429	-0.796*	0.379	0.038
Heterogeneity in Job Level	0.782	0.427	0.070	1.134**	0.381	0.004	0.713	0.681	0.299	0.877	0.467	0.063
Heterogeneity in Location	0.152	0.234	0.517	0.183	0.207	0.380	0.105	0.323	0.746	0.116	0.230	0.614
Individual-Level Control Variables												
Gender	-0.188	0.096	0.050	-0.035	0.079	0.659	-0.020	0.130	0.880	-0.124	0.090	0.156
Ethnicity Category: Asian	-0.152	0.118	0.199	-0.411**	0.134	0.003	-0.182	0.195	0.350	0.069	0.140	0.615
Ethnicity Category: Other	0.096	0.112	0.393	0.012	0.095	0.901	0.163	0.146	0.267	0.113	0.110	0.323
Job Level	-0.010	0.039	0.796	0.062	0.035	0.075	-0.010	0.051	0.845	0.003	0.040	0.939
Organizational Tenure	-0.062*	0.027	0.022	-0.025	0.029	0.400	-0.061	0.044	0.169	-0.077*	0.040	0.030
Job Satisfaction	-0.004	0.043	0.919	-0.083*	0.041	0.046	-0.060	0.060	0.316	-0.051	0.050	0.271
Extraversion	0.053	0.041	0.200	0.109**	0.034	0.002	0.121	0.063	0.054	0.213**	0.040	0.000
Agreeableness	0.050	0.058	0.390	-0.098	0.051	0.053	0.075	0.084	0.378	0.131	0.070	0.051
Conscientiousness	0.021	0.066	0.752	0.023	0.063	0.711	0.010	0.085	0.907	-0.147*	0.060	0.015
Final Estimation of Variance Components												
Chi-Square	128.6			116.0			117.9			142.2		
df	80			85			68			83		
Standard Deviation (Full Model)	0.213			0.137			0.298			0.243		
Standard Deviation (L1)	0.581			0.632			0.690			0.621		
Variance Component (Full Model)	0.045			0.019			0.089			0.059		
Variance Component (L1)	0.337			0.400			0.476			0.386		
p-value	0.001			0.014			0.000			0.000		

Note. Unstandardized coefficients are shown. * $p < .05$, ** $p < .01$

Table continued on next page.

Table 8.12 (continued)
Regression Results for Control Variables

Variable	Health & Well-Being			Peer Index of OCB			Mgr Ratings of OCB			Performance Evaluation		
	Coefficient	SE	p-val	Coefficient	SE	p-val	Coefficient	SE	p-val	Coefficient	SE	p-val
(Constant)	4.365**	0.088	0.000	4.132**	0.080	0.000	4.073**	0.142	0.000	3.594**	0.040	0.000
Group-Level Control Variables												
Business Unit: Sales	-0.079	0.100	0.432	-0.071	0.077	0.359	-0.156	0.161	0.338	-0.190**	0.036	0.000
Business Unit: Other	-0.110	0.149	0.461	-0.105	0.128	0.411	-0.050	0.163	0.758	-0.122**	0.035	0.001
Group Size	-0.011	0.015	0.464	-0.018	0.013	0.168	-0.022	0.024	0.363	-0.002	0.005	0.641
Avg Time in Group	0.031	0.130	0.814	0.080	0.110	0.468	0.036	0.164	0.826	-0.044	0.030	0.152
Heterogeneity in Gender	0.054	0.268	0.841	-0.123	0.217	0.572	0.756	0.486	0.123	0.037	0.091	0.681
Heterogeneity in Ethnicity	0.206	0.357	0.564	0.187	0.287	0.517	-0.549	0.459	0.235	0.020	0.064	0.757
Heterogeneity in Org Tenure	-0.708	0.429	0.102	-0.570*	0.272	0.038	-1.443**	0.520	0.007	-0.039	0.131	0.766
Heterogeneity in Job Level	0.201	0.453	0.657	0.732	0.380	0.057	1.382*	0.682	0.045	0.407*	0.162	0.014
Heterogeneity in Location	0.139	0.202	0.492	0.050	0.183	0.787	0.423	0.359	0.242	0.042	0.065	0.519
Individual-Level Control Variables												
Gender	-0.155	0.090	0.086	-0.103	0.070	0.140	-0.051	0.117	0.666	0.014	0.037	0.713
Ethnicity Category: Asian	-0.029	0.105	0.783	-0.132	0.117	0.262	-0.078	0.216	0.717	-0.036	0.037	0.336
Ethnicity Category: Other	-0.024	0.098	0.805	0.087	0.087	0.322	-0.098	0.197	0.619	-0.008	0.034	0.816
Job Level	0.020	0.029	0.487	0.018	0.028	0.521	0.031	0.058	0.592	0.012	0.012	0.324
Organizational Tenure	-0.053*	0.025	0.031	-0.027	0.027	0.329	-0.023	0.038	0.549	0.012	0.011	0.264
Job Satisfaction	-0.035	0.038	0.360	-0.032	0.037	0.401	-0.080	0.073	0.278	0.003	0.019	0.888
Extraversion	0.149**	0.035	0.000	0.139**	0.033	0.000	0.152**	0.046	0.001	0.031*	0.013	0.021
Agreeableness	0.047	0.051	0.362	0.022	0.059	0.715	-0.048	0.059	0.417	-0.041*	0.019	0.029
Conscientiousness	-0.021	0.060	0.729	-0.062	0.050	0.218	0.136	0.074	0.068	0.068**	0.023	0.003
Final Estimation of Variance Components												
Chi-Square	137.6			132.679			160.49			107.14		
df	81			87			58			107		
Standard Dev. (Full Model)	0.222			0.153			0.419			0.005		
Standard Deviation (L1)	0.548			0.553			0.747			0.282		
Variance Comp. (Full Model)	0.049			0.023			0.175			0.000		
Variance Comp. (L1)	0.300			0.306			0.558			0.079		
p-value	0.000			0.001			0.000			0.478		

Note. Unstandardized coefficients are shown. * $p < .05$, ** $p < .01$

Table 8.13
Random Effects Coefficient Regression Results
Effect of Work Group on Individual Helping Behavior

	Model 1			Model 2			Model 3		
	Coefficient	SE	p-value	Coefficient	SE	p-value	Coefficient	SE	p-value
(Constant)	4.730 **	0.127	0.000	4.695 **	0.117	0.000	4.779 **	0.121	0.000
Main Effects: Climate Variables									
Group Mean: Communal Climate	0.629 **	0.164	0.000	0.799 **	0.168	0.000	0.735 **	0.160	0.000
Rewards for Broad Performance	-0.003	0.070	0.968	-0.016	0.065	0.809	-0.015	0.065	0.817
Group Mean: Autonomy	0.015	0.137	0.912	0.073	0.140	0.604	0.038	0.134	0.774
Group Mean: Opps for Non-Core Acts	0.048	0.148	0.747	0.030	0.157	0.849	0.016	0.128	0.901
Group Mean: Workload	-0.107	0.099	0.283	0.040	0.098	0.680	0.137	0.117	0.246
Group Mean: Procedural Justice	-0.067	0.135	0.623	0.147	0.112	0.194	0.240 *	0.111	0.033
Main Effects: Dispersion of Perceptions of Climate Variables									
Dispersion of Perceptions: Communal Climate				0.416	0.214	0.056	0.481	0.256	0.064
Dispersion of Perceptions: Autonomy				0.303	0.186	0.107	0.299	0.189	0.119
Dispersion of Perceptions: Opportunities for Non-Core Activities				-0.331 *	0.160	0.041	-0.248	0.141	0.083
Dispersion of Perceptions: Workload				0.279	0.164	0.094	0.140	0.224	0.534
Dispersion of Perceptions: Procedural Justice				0.239	0.140	0.090	0.279 *	0.123	0.026
Interaction Effects: Climate Strength									
Climate Strength: Communal Climate							0.346	0.557	0.535
Climate Strength: Autonomy							-0.210	0.275	0.448
Climate Strength: Opportunities for Non-Core Activities							0.732	0.422	0.086
Climate Strength: Workload							0.702	0.387	0.073
Climate Strength: Procedural Justice							0.377	0.276	0.177
Group-Level Control Variables									
Business Unit: Sales	-0.469 **	0.121	0.000	-0.498 **	0.126	0.000	-0.512 **	0.133	0.000
Business Unit: Other	-0.485 **	0.169	0.006	-0.502 **	0.144	0.001	-0.481 **	0.152	0.003
Group Size	-0.011	0.016	0.512	-0.010	0.016	0.520	-0.020	0.016	0.228
Avg Time in Group	-0.189	0.115	0.102	-0.130	0.102	0.205	-0.108	0.090	0.234
Heterogeneity in Gender	0.147	0.288	0.612	0.275	0.228	0.232	0.100	0.303	0.743
Heterogeneity in Ethnicity	0.418	0.264	0.116	0.388	0.251	0.126	0.541	0.252	0.035
Heterogeneity in Org Tenure	-0.527	0.445	0.241	-0.351	0.448	0.435	-0.426	0.464	0.361
Heterogeneity in Job Level	0.496	0.388	0.204	0.405	0.342	0.239	0.246	0.324	0.450
Heterogeneity in Location	-0.050	0.199	0.804	-0.102	0.170	0.551	-0.012	0.220	0.958
Individual-Level Control Variables									
Gender	-0.217 *	0.097	0.027	-0.193 *	0.096	0.047	-0.202 *	0.095	0.035
Ethnicity Category: Asian	-0.282 *	0.129	0.030	-0.242 *	0.120	0.045	-0.246	0.126	0.052
Ethnicity Category: Other	-0.118	0.132	0.372	-0.093	0.139	0.504	-0.120	0.143	0.404
Job Level	-0.002	0.034	0.949	-0.024	0.033	0.458	-0.044	0.032	0.163
Organizational Tenure	-0.029	0.031	0.348	-0.054	0.028	0.057	-0.053 *	0.027	0.049
Job Satisfaction	-0.081	0.070	0.246	-0.054	0.067	0.427	-0.058	0.063	0.354
Extraversion	0.003	0.049	0.954	0.011	0.047	0.808	0.009	0.048	0.853
Agreeableness	0.100	0.073	0.175	0.113	0.069	0.104	0.105	0.071	0.138
Conscientiousness	-0.029	0.065	0.653	-0.055	0.062	0.377	-0.035	0.062	0.570
Likelihood Ratio Test Statistics									
Chi-Square	126.842			17.478			9.451		
df	6			5			5		
p-value	0.000			0.004			0.091		
Model Statistics									
Deviance	338.182			320.704			311.253		
No. of Parameters Estimated	27.000			32.000			37.000		
Final Estimation of Variance Components									
Chi-Square	83.603			76.358			71.092		
df	68.000			63.000			58.000		
Standard Deviation (Full Model)	0.016			0.010			0.009		
Standard Deviation (L1)	0.589			0.563			0.549		
Variance Component (Full Model)	0.000			0.000			0.000		
Variance Component (L1)	0.347			0.317			0.301		
p-value	0.096			0.120			0.116		

Notes.
Models use Full Maximum Likelihood Estimation.
Model with black shading indicates best-fitting model, according to the Likelihood Ratio Test.

Table 8.14
Random Effects Coefficient Regression Results
Effect of Work Group on Individual Voice Behavior

	Model 1			Model 2			Model 3		
	Coefficient	SE	p-value	Coefficient	SE	p-value	Coefficient	SE	p-value
(Constant)	4.333 **	0.118	0.000	4.328 **	0.109	0.000	4.374 **	0.113	0.000
Main Effects: Climate Variables									
Group Mean: Communal Climate	0.641 **	0.131	0.000	0.700 **	0.138	0.000	0.661 **	0.130	0.000
Rewards for Broad Performance	-0.009	0.052	0.860	-0.005	0.047	0.910	-0.002	0.048	0.970
Group Mean: Autonomy	0.003	0.127	0.980	-0.047	0.131	0.719	-0.064	0.121	0.600
Group Mean: Opps for Non-Core Acts	0.010	0.140	0.945	0.056	0.138	0.684	0.028	0.127	0.823
Group Mean: Workload	-0.178 *	0.068	0.011	-0.083	0.068	0.229	-0.045	0.088	0.609
Group Mean: Procedural Justice	-0.172	0.120	0.156	0.014	0.106	0.893	0.070	0.104	0.503
Main Effects: Dispersion of Perceptions of Climate Variables									
Dispersion of Perceptions: Communal Climate				0.191	0.190	0.321	0.272	0.211	0.201
Dispersion of Perceptions: Autonomy				-0.008	0.186	0.968	0.064	0.198	0.748
Dispersion of Perceptions: Opps for Non-Core Activities				-0.064	0.157	0.685	-0.039	0.152	0.801
Dispersion of Perceptions: Workload				0.259	0.184	0.164	0.167	0.200	0.407
Dispersion of Perceptions: Procedural Justice				0.391 **	0.127	0.003	0.383 **	0.114	0.002
Interaction Effects: Climate Strength									
Climate Strength: Communal Climate							0.301	0.371	0.421
Climate Strength: Autonomy							0.118	0.290	0.684
Climate Strength: Opportunities for Non-Core Activities							0.526	0.337	0.122
Climate Strength: Workload							0.343	0.309	0.270
Climate Strength: Procedural Justice							0.072	0.226	0.750
Group-Level Control Variables									
Business Unit: Sales	-0.213	0.120	0.078	-0.264 *	0.126	0.038	-0.253	0.128	0.053
Business Unit: Other	-0.325	0.181	0.076	-0.423 *	0.161	0.010	-0.395 *	0.166	0.020
Group Size	-0.031	0.016	0.057	-0.034 *	0.016	0.037	-0.040 *	0.017	0.017
Avg Time in Group	0.117	0.106	0.275	0.161	0.095	0.093	0.192 *	0.093	0.042
Heterogeneity in Gender	0.045	0.259	0.864	0.204	0.201	0.312	0.113	0.214	0.598
Heterogeneity in Ethnicity	-0.047	0.239	0.844	-0.097	0.209	0.645	-0.074	0.222	0.739
Heterogeneity in Org Tenure	-0.304	0.337	0.370	-0.206	0.377	0.586	-0.259	0.392	0.510
Heterogeneity in Job Level	0.858 *	0.373	0.024	0.869 *	0.387	0.027	0.805 *	0.395	0.045
Heterogeneity in Location	0.210	0.201	0.299	0.105	0.187	0.577	0.172	0.204	0.403
Individual-Level Control Variables									
Gender	-0.040	0.085	0.643	0.000	0.081	0.999	0.016	0.079	0.837
Ethnicity Category: Asian	-0.400 **	0.131	0.003	-0.389 **	0.126	0.003	-0.397 **	0.133	0.004
Ethnicity Category: Other	-0.119	0.099	0.232	-0.109	0.102	0.288	-0.150	0.105	0.155
Job Level	0.096 **	0.032	0.004	0.078 *	0.032	0.017	0.064 *	0.032	0.049
Organizational Tenure	0.008	0.040	0.845	-0.011	0.039	0.776	-0.008	0.039	0.840
Job Satisfaction	-0.067	0.057	0.243	-0.049	0.057	0.389	-0.049	0.055	0.378
Extraversion	0.071	0.048	0.139	0.079	0.046	0.083	0.084	0.046	0.067
Agreeableness	-0.105	0.073	0.153	-0.089	0.071	0.213	-0.087	0.070	0.216
Conscientiousness	-0.033	0.061	0.583	-0.054	0.062	0.385	-0.044	0.063	0.486
Likelihood Ratio Test									
Chi-Square	174.460			13.469			4.307		
df	6			5			5		
p-value	0.000			0.019			> .500		
Model Statistics									
Deviance	379.260			365.791			361.484		
No. of Parameters Estimated	27			32			37		
Final Estimation of Variance Components									
Chi-Square	86.342			78.873			76.356		
df	71.000			66.000			61.000		
Standard Deviation (Full Model)	0.013			0.010			0.010		
Standard Deviation (L1)	0.607			0.588			0.582		
Variance Component (Full Model)	0.000			0.000			0.000		
Variance Component (L1)	0.369			0.346			0.338		
p-value	0.104			0.133			0.089		

Notes.
Models use Full Maximum Likelihood Estimation.
Model with black shading indicates best-fitting model, according to the Likelihood Ratio Test.

Table 8.15
Random Effects Coefficient Regression Results
Effect of Work Group on Individual Civic Virtue Behavior

	Model 1			Model 2			Model 3			Model 4		
	Coefficient	SE	p-val	Coefficient	SE	p-val	Coefficient	SE	p-val	Coefficient	SE	p-val
(Constant)	4.114 **	0.197	0.000	4.031 **	0.170	0.000	4.026 **	0.169	0.000	4.076 **	0.173	0.000
Main Effects: Climate Variables												
Group Mean: Communal Climate	0.464	0.263	0.081	0.594 *	0.262	0.026	0.641 **	0.230	0.007	0.575 *	0.258	0.029
Rewards for Broad Performance	0.019	0.080	0.810	0.003	0.068	0.966	0.040	0.061	0.514	0.056	0.059	0.347
Group Mean: Autonomy	-0.123	0.229	0.591	-0.145	0.199	0.469	-0.155	0.181	0.396	-0.116	0.182	0.526
Group Mean: Opps for Non-Core Acts	0.259	0.282	0.361	0.389	0.274	0.159	0.509 *	0.237	0.034	0.299	0.212	0.163
Group Mean: Workload	-0.196	0.138	0.161	-0.025	0.134	0.852	0.283	0.159	0.079	0.158	0.154	0.310
Group Mean: Procedural Justice	0.240	0.283	0.398	0.559 *	0.242	0.023	0.864 **	0.220	0.000	0.843 **	0.228	0.001
Main Effects: Dispersion of Perceptions of Climate Variables												
Dispersion of Perceptions: Communal Climate				0.487	0.434	0.265	-0.058	0.482	0.904	0.235	0.430	0.586
Dispersion of Perceptions: Autonomy				0.120	0.304	0.694	0.274	0.297	0.359	0.250	0.282	0.378
Dispersion of Perceptions: Opps for Non-Core Acts				-0.066	0.244	0.787	0.203	0.206	0.328	0.079	0.230	0.731
Dispersion of Perceptions: Workload				0.408	0.248	0.104	0.246	0.260	0.347	0.105	0.250	0.675
Dispersion of Perceptions: Procedural Justice				0.515 *	0.223	0.023	0.780 **	0.216	0.001	0.690 **	0.212	0.002
Interaction Effects: Climate Strength												
Climate Strength: Communal Climate							-1.227	0.673	0.072			
Climate Strength: Autonomy							-0.025	0.395	0.949			
Climate Strength: Opps for Non-Core Acts							1.799 **	0.548	0.002	1.642 **	0.458	0.001
Climate Strength: Workload							1.045 *	0.417	0.015	1.087 *	0.423	0.012
Climate Strength: Procedural Justice							-0.014	0.450	0.976			
Group-Level Control Variables												
Business Unit: Sales	-0.138	0.223	0.536	-0.090	0.226	0.692	0.024	0.221	0.916	0.018	0.212	0.934
Business Unit: Other	-0.331	0.304	0.279	-0.296	0.241	0.224	-0.272	0.219	0.220	-0.224	0.204	0.277
Group Size	-0.010	0.023	0.675	0.000	0.021	0.982	-0.001	0.020	0.947	-0.005	0.019	0.782
Avg Time in Group	-0.186	0.202	0.360	-0.066	0.191	0.731	-0.164	0.188	0.385	-0.087	0.163	0.595
Heterogeneity in Gender	0.065	0.489	0.894	0.208	0.397	0.602	0.224	0.394	0.572	0.040	0.366	0.914
Heterogeneity in Ethnicity	0.089	0.445	0.842	-0.130	0.400	0.745	0.237	0.372	0.527	0.194	0.353	0.584
Heterogeneity in Org Tenure	-0.023	0.621	0.970	-0.004	0.710	0.995	-0.221	0.650	0.734	0.099	0.674	0.884
Heterogeneity in Job Level	0.204	0.676	0.763	0.451	0.682	0.511	0.802	0.532	0.136	0.757	0.563	0.182
Heterogeneity in Location	0.032	0.356	0.929	-0.032	0.319	0.920	-0.357	0.308	0.250	-0.129	0.283	0.649
Individual-Level Control Variables												
Gender	0.059	0.153	0.700	0.158	0.130	0.228	0.213	0.137	0.123	0.215	0.134	0.110
Ethnicity Category: Asian	-0.243	0.186	0.195	-0.281	0.216	0.197	-0.349	0.226	0.125	-0.365	0.232	0.118
Ethnicity Category: Other	-0.019	0.182	0.918	-0.063	0.174	0.719	-0.116	0.181	0.522	-0.144	0.172	0.405
Job Level	-0.031	0.057	0.584	-0.055	0.055	0.321	-0.070	0.058	0.231	-0.084	0.056	0.136
Organizational Tenure	-0.049	0.047	0.294	-0.071	0.048	0.143	-0.056	0.046	0.232	-0.059	0.044	0.182
Job Satisfaction	-0.153	0.108	0.161	-0.102	0.098	0.300	-0.150	0.092	0.105	-0.168	0.089	0.062
Extraversion	0.075	0.080	0.352	0.092	0.078	0.239	0.096	0.077	0.218	0.084	0.076	0.270
Agreeableness	0.150	0.097	0.126	0.165	0.101	0.105	0.160	0.098	0.103	0.170	0.097	0.082
Conscientiousness	-0.028	0.090	0.754	-0.059	0.086	0.498	-0.010	0.088	0.912	-0.006	0.088	0.942
Likelihood Ratio Test												
Chi-Square	145.49			14.38			15.51			2.91		
df	6			5			5			3		
p-value	0.000			0.013			0.009			> .500		
Model Statistics												
Deviance	276.22			261.84			246.33			249.24		
No. of Parameters Estimated	27			32			37			34		
Final Estimation of Variance Components												
Chi-Square	99.36			71.606			62.779			65.009		
df	51			46			41			44		
Standard Deviation (Full Model)	0.307			0.049			0.020			0.019		
Standard Deviation (L1)	0.627			0.650			0.615			0.622		
Variance Component (Full Model)	0.094			0.002			0.000			0.000		
Variance Component (L1)	0.393			0.423			0.378			0.386		
p-value	0.000			0.009			0.016			0.021		

Notes.

Models use Full Maximum Likelihood Estimation.

Model with black shading indicates best-fitting model, according to the Likelihood Ratio Test.

Table 8.16
Random Effects Coefficient Regression Results
Effect of Work Group on Individual Social Participation

	Model 1			Model 2			Model 3		
	Coefficient	SE	p-value	Coefficient	SE	p-value	Coefficient	SE	p-value
(Constant)	4.156 **	0.150	0.000	4.318 **	0.124	0.000	4.341 **	0.138	0.000
Main Effects: Climate Variables									
Group Mean: Communal Climate	0.491 *	0.210	0.022	0.758 **	0.190	0.000	0.779 **	0.179	0.000
Rewards for Broad Performance	-0.155 **	0.049	0.002	-0.171 **	0.047	0.001	-0.162 **	0.046	0.001
Group Mean: Autonomy	-0.101	0.175	0.564	-0.124	0.155	0.425	-0.125	0.151	0.409
Group Mean: Opps for Non-Core Activ	0.083	0.195	0.672	0.013	0.190	0.945	0.012	0.151	0.937
Group Mean: Workload	-0.065	0.097	0.509	0.062	0.075	0.410	0.157	0.088	0.078
Group Mean: Procedural Justice	0.020	0.205	0.924	0.124	0.160	0.439	0.185	0.158	0.246
Main Effects: Dispersion of Perceptions of Climate Variables									
Dispersion of Perceptions: Communal Climate				0.804 **	0.234	0.001	0.789 *	0.297	0.010
Dispersion of Perceptions: Autonomy				-0.025	0.192	0.895	-0.040	0.211	0.849
Dispersion of Perceptions: Opportunities for Non-Core Activities				-0.540 **	0.198	0.008	-0.460 *	0.190	0.018
Dispersion of Perceptions: Workload				0.327	0.178	0.069	0.314	0.187	0.096
Dispersion of Perceptions: Procedural Justice				0.300 *	0.150	0.048	0.325 *	0.152	0.036
Interaction Effects: Climate Strength									
Climate Strength: Communal Climate							-0.166	0.544	0.761
Climate Strength: Autonomy							-0.152	0.337	0.653
Climate Strength: Opportunities for Non-Core Activities							0.868	0.585	0.142
Climate Strength: Workload							0.433	0.352	0.223
Climate Strength: Procedural Justice							-0.132	0.367	0.719
Group-Level Control Variables									
Business Unit: Sales	0.025	0.152	0.871	-0.201	0.143	0.164	-0.204	0.143	0.158
Business Unit: Other	-0.109	0.221	0.622	-0.309	0.172	0.076	-0.310	0.165	0.063
Group Size	-0.011	0.020	0.584	-0.005	0.018	0.774	-0.008	0.018	0.662
Avg Time in Group	-0.144	0.166	0.390	-0.106	0.139	0.446	-0.113	0.142	0.427
Heterogeneity in Gender	-0.086	0.352	0.808	0.014	0.252	0.955	0.044	0.299	0.883
Heterogeneity in Ethnicity	0.135	0.350	0.700	-0.087	0.320	0.787	0.036	0.291	0.902
Heterogeneity in Org Tenure	-0.558	0.432	0.200	-0.434	0.384	0.263	-0.520	0.401	0.199
Heterogeneity in Job Level	0.325	0.526	0.537	0.317	0.467	0.499	0.245	0.468	0.601
Heterogeneity in Location	-0.090	0.287	0.753	0.095	0.239	0.692	0.056	0.252	0.825
Individual-Level Control Variables									
Gender	-0.221 **	0.080	0.007	-0.216 **	0.07	0.004	-0.220 **	0.075	0.004
Ethnicity Category: Asian	0.135	0.148	0.363	0.057	0.14	0.688	0.065	0.150	0.663
Ethnicity Category: Other	0.033	0.156	0.831	0.041	0.15	0.785	0.019	0.151	0.898
Job Level	0.038	0.039	0.333	0.024	0.04	0.520	0.011	0.037	0.756
Organizational Tenure	-0.090 *	0.039	0.021	-0.108 **	0.03	0.002	-0.102 **	0.034	0.004
Job Satisfaction	0.016	0.062	0.804	0.041	0.06	0.504	0.042	0.060	0.487
Extraversion	0.186 **	0.046	0.000	0.163 **	0.05	0.001	0.171 **	0.043	0.000
Agreeableness	0.141 *	0.067	0.036	0.156 *	0.06	0.016	0.154 *	0.067	0.022
Conscientiousness	-0.237 **	0.056	0.000	-0.245 **	0.06	0.000	-0.234 **	0.053	0.000
Likelihood Ratio Test									
Chi-Square	175.78			26.766			5.972		
df	6			5			5		
p-value	0.000			0.000			0.308		
Model Statistics									
Deviance	370.34			343.57			337.6		
No. of Parameters Estimated	27			32			37		
Final Estimation of Variance Components									
Chi-Square	154.16			101.4			95.582		
df	68			63			58		
Standard Deviation (Full Model)	0.326			0.112			0.05		
Standard Deviation (L1)	0.546			0.566			0.566		
Variance Component (Full Model)	0.106			0.013			0.003		
Variance Component (L1)	0.298			0.32			0.32		
p-value	0.000			0.002			0.002		

Notes.
Models use Full Maximum Likelihood Estimation.
Model with black shading indicates best-fitting model, according to the Likelihood Ratio Test.

Table 8.17
Random Effects Coefficient Regression Results
Effect of Work Group on Individual Health & Well-Being Behavior

	Model 1			Model 2			Model 3		
	Coefficient	SE	p-value	Coefficient	SE	p-value	Coefficient	SE	p-value
(Constant)	4.364 **	0.122	0.000	4.423 **	0.120	0.000	4.437 **	0.138	0.000
Main Effects: Climate Variables									
Group Mean: Communal Climate	0.533 **	0.160	0.002	0.641 **	0.157	0.000	0.699 **	0.149	0.000
Rewards for Broad Performance	-0.085	0.046	0.068	-0.098 *	0.044	0.029	-0.096 *	0.045	0.033
Group Mean: Autonomy	-0.196	0.162	0.231	-0.199	0.150	0.189	-0.176	0.137	0.202
Group Mean: Opps for Non-Core Acts	-0.018	0.148	0.902	-0.075	0.164	0.650	-0.084	0.133	0.529
Group Mean: Workload	-0.195 *	0.089	0.031	-0.076	0.075	0.314	-0.030	0.086	0.729
Group Mean: Procedural Justice	0.025	0.144	0.864	0.178	0.119	0.137	0.201	0.116	0.088
Main Effects: Dispersion of Perceptions of Climate Variables									
Dispersion of Perceptions: Communal Climate				0.201	0.193	0.301	0.218	0.232	0.350
Dispersion of Perceptions: Autonomy				0.065	0.166	0.694	0.049	0.164	0.764
Dispersion of Perceptions: Opportunities for Non-Core Activities				-0.462 *	0.176	0.011	-0.450 **	0.168	0.009
Dispersion of Perceptions: Workload				0.264	0.159	0.100	0.224	0.186	0.233
Dispersion of Perceptions: Procedural Justice				0.349 *	0.153	0.025	0.360 *	0.143	0.014
Interaction Effects: Climate Strength									
Climate Strength: Communal Climate							-0.065	0.460	0.889
Climate Strength: Autonomy							-0.254	0.266	0.345
Climate Strength: Opportunities for Non-Core Activities							0.756	0.502	0.136
Climate Strength: Workload							0.143	0.402	0.723
Climate Strength: Procedural Justice							-0.141	0.315	0.656
Group-Level Control Variables									
Business Unit: Sales	0.014	0.132	0.919	-0.084	0.141	0.550	-0.089	0.153	0.562
Business Unit: Other	-0.004	0.157	0.981	-0.126	0.153	0.413	-0.146	0.160	0.364
Group Size	-0.004	0.016	0.807	-0.004	0.017	0.790	-0.004	0.017	0.807
Avg Time in Group	-0.106	0.122	0.389	-0.078	0.107	0.468	-0.076	0.110	0.489
Heterogeneity in Gender	-0.011	0.282	0.969	0.058	0.238	0.809	0.099	0.264	0.709
Heterogeneity in Ethnicity	0.109	0.290	0.709	0.089	0.293	0.762	0.167	0.269	0.537
Heterogeneity in Org Tenure	-0.536	0.455	0.243	-0.159	0.439	0.718	-0.189	0.456	0.678
Heterogeneity in Job Level	0.075	0.361	0.837	-0.093	0.332	0.781	-0.086	0.360	0.812
Heterogeneity in Location	-0.074	0.214	0.728	-0.070	0.204	0.731	-0.059	0.229	0.798
Individual-Level Control Variables									
Gender	-0.204 *	0.098	0.039	-0.204 *	0.091	0.027	-0.197 *	0.091	0.032
Ethnicity Category: Asian	0.020	0.114	0.861	0.001	0.118	0.991	-0.025	0.129	0.850
Ethnicity Category: Other	-0.077	0.133	0.563	-0.061	0.139	0.663	-0.077	0.143	0.592
Job Level	0.063	0.034	0.064	0.055	0.033	0.100	0.050	0.032	0.125
Organizational Tenure	-0.023	0.026	0.374	-0.048	0.026	0.063	-0.043	0.026	0.099
Job Satisfaction	0.011	0.057	0.844	0.046	0.056	0.418	0.046	0.055	0.406
Extraversion	0.124 **	0.044	0.006	0.131 **	0.041	0.002	0.135 **	0.041	0.002
Agreeableness	0.017	0.058	0.772	0.039	0.057	0.494	0.037	0.058	0.521
Conscientiousness	-0.110 *	0.055	0.048	-0.143 *	0.057	0.013	-0.140 *	0.059	0.018
Likelihood Ratio Test									
Chi-Square	124.108			18.908			3.819		
df	6			5			5		
p-value	0.000			0.002			> .500		
Model Statistics									
Deviance	320.067			301.159			297.340		
No. of Parameters Estimated	27			32			37		
Final Estimation of Variance Components									
Chi-Square	82.576			71.217			68.694		
df	66			61			56		
Standard Deviation (Full Model)	0.070			0.013			0.011		
Standard Deviation (L1)	0.563			0.539			0.534		
Variance Component (Full Model)	0.005			0.000			0.000		
Variance Component (L1)	0.317			0.291			0.285		
p-value	0.082			0.174			0.119		

Notes.
Models use Full Maximum Likelihood Estimation.
Model with black shading indicates best-fitting model, according to the Likelihood Ratio Test.

Table 8.18
Random Effects Coefficient Regression Results
Effect of Work Group on Peer Index Rating of OCB

	Model 1			Model 2			Model 3		
	Coefficient	SE	p-value	Coefficient	SE	p-value	Coefficient	SE	p-value
(Constant)	4.224 **	0.114	0.000	4.274 **	0.101	0.000	4.317 **	0.107	0.000
Main Effects: Climate Variables									
Group Mean: Communal Climate	0.511 **	0.167	0.003	0.617 **	0.149	0.000	0.624 **	0.137	0.000
Rewards for Broad Performance	-0.059	0.048	0.213	-0.069	0.043	0.111	-0.064	0.041	0.123
Group Mean: Autonomy	-0.145	0.141	0.306	-0.128	0.129	0.324	-0.157	0.122	0.203
Group Mean: Opps for Non-Core Acts	-0.016	0.148	0.914	-0.032	0.143	0.824	-0.038	0.110	0.731
Group Mean: Workload	-0.143	0.077	0.066	-0.030	0.061	0.626	0.070	0.067	0.298
Group Mean: Procedural Justice	0.037	0.150	0.806	0.208	0.121	0.090	0.292 *	0.114	0.012
Main Effects: Dispersion of Perceptions of Climate Variables									
Dispersion of Perceptions: Communal Climate				0.273	0.189	0.153	0.304	0.234	0.197
Dispersion of Perceptions: Autonomy				0.061	0.125	0.626	0.065	0.138	0.640
Dispersion of Perceptions: Opportunities for Non-Core Activities				-0.321 *	0.124	0.012	-0.234 *	0.105	0.029
Dispersion of Perceptions: Workload				0.294 *	0.140	0.039	0.250	0.162	0.127
Dispersion of Perceptions: Procedural Justice				0.389 **	0.131	0.004	0.404 **	0.116	0.001
Interaction Effects: Climate Strength									
Climate Strength: Communal Climate							-0.045	0.397	0.911
Climate Strength: Autonomy							-0.090	0.232	0.698
Climate Strength: Opportunities for Non-Core Activities							0.840 *	0.401	0.039
Climate Strength: Workload							0.610 *	0.244	0.015
Climate Strength: Procedural Justice							-0.010	0.265	0.971
Group-Level Control Variables									
Business Unit: Sales	-0.041	0.118	0.728	-0.142	0.120	0.243	-0.144	0.123	0.245
Business Unit: Other	-0.096	0.170	0.573	-0.193	0.139	0.170	-0.181	0.133	0.178
Group Size	-0.012	0.016	0.468	-0.010	0.015	0.505	-0.016	0.015	0.280
Avg Time in Group	-0.121	0.114	0.293	-0.075	0.096	0.435	-0.073	0.094	0.437
Heterogeneity in Gender	-0.163	0.256	0.526	-0.047	0.198	0.813	-0.053	0.223	0.812
Heterogeneity in Ethnicity	0.141	0.253	0.580	0.048	0.227	0.832	0.157	0.204	0.443
Heterogeneity in Org Tenure	-0.522	0.329	0.116	-0.334	0.304	0.276	-0.434	0.306	0.160
Heterogeneity in Job Level	0.407	0.390	0.300	0.431	0.367	0.244	0.291	0.356	0.416
Heterogeneity in Location	-0.072	0.218	0.740	-0.099	0.179	0.582	-0.124	0.199	0.535
Individual-Level Control Variables									
Gender	-0.125	0.072	0.082	-0.120	0.063	0.056	-0.125 *	0.063	0.049
Ethnicity Category: Asian	-0.128	0.116	0.273	-0.160	0.113	0.158	-0.136	0.119	0.257
Ethnicity Category: Other	-0.060	0.114	0.603	-0.028	0.112	0.804	-0.063	0.115	0.586
Job Level	0.058 *	0.029	0.048	0.043	0.028	0.125	0.028	0.025	0.263
Organizational Tenure	-0.018	0.035	0.601	-0.031	0.034	0.364	-0.027	0.033	0.409
Job Satisfaction	0.009	0.052	0.862	0.032	0.050	0.522	0.030	0.048	0.534
Extraversion	0.118 **	0.040	0.004	0.124 **	0.038	0.002	0.131 **	0.037	0.001
Agreeableness	0.002	0.064	0.981	0.011	0.063	0.866	0.005	0.063	0.939
Conscientiousness	-0.102 *	0.041	0.014	-0.123 **	0.039	0.003	-0.105 **	0.039	0.008
Likelihood Ratio Test									
Chi-Square	163.72			24.42			10.52		
df	6			5			5		
p-value	0.000			0.000			0.061		
Model Statistics									
Deviance	369.28			344.86			334.34		
No. of Parameters Estimated	27			32			37		
Final Estimation of Variance Components									
Chi-Square	134.14			103.75			98.71		
df	75			70			65		
Standard Deviation (Full Model)	0.196			0.016			0.012		
Standard Deviation (L1)	0.517			0.519			0.507		
Variance Component (Full Model)	0.038			0.000			0.000		
Variance Component (L1)	0.267			0.269			0.257		
p-value	0.000			0.006			0.005		

Notes.
Models use Full Maximum Likelihood Estimation.
Model with black shading indicates best-fitting model, according to the Likelihood Ratio Test.

Table 8.19
Random Effects Coefficient Regression Results
Effect of Work Group on Manager Rating of OCB

	Model 1			Model 2			Model 3			Model 4		
	Coefficient	SE	p-val	Coefficient	SE	p-val	Coefficient	SE	p-val	Coefficient	SE	p-val
(Constant)	4.114 **	0.181	0.000	4.123 **	0.180	0.000	4.122 **	0.205	0.000	4.180 **	0.167	0.000
Main Effects: Climate Variables												
Group Mean: Communal Climate	0.265	0.235	0.262	0.198	0.229	0.390	-0.128	0.204	0.533			
Rewards for Broad Performance	-0.077	0.061	0.205	-0.080	0.064	0.209	-0.077	0.065	0.241	-0.068	0.062	0.275
Group Mean: Autonomy	0.139	0.186	0.457	0.142	0.201	0.481	0.173	0.186	0.356	0.217	0.196	0.272
Group Mean: Opps for Non-Core Acts	0.020	0.183	0.916	-0.015	0.189	0.937	-0.143	0.207	0.494	-0.013	0.205	0.950
Group Mean: Workload	-0.167	0.130	0.203	-0.188	0.126	0.139	-0.149	0.150	0.323			
Group Mean: Procedural Justice	0.261	0.186	0.165	0.173	0.238	0.467	0.315	0.239	0.191			
Main Effects: Dispersion of Perceptions of Climate Variables												
Dispersion of Perceptions: Communal Climate				-0.189	0.554	0.734	-0.152	0.546	0.781			
Dispersion of Perceptions: Autonomy				0.027	0.303	0.929	0.342	0.368	0.356	0.043	0.278	0.877
Dispersion of Perceptions: Opps for Non-Core Acts				-0.154	0.386	0.690	-0.125	0.356	0.727	-0.347	0.304	0.258
Dispersion of Perceptions: Workload				0.009	0.262	0.972	0.041	0.267	0.878			
Dispersion of Perceptions: Procedural Justice				-0.175	0.214	0.414	-0.325	0.207	0.121			
Interaction Effects: Climate Strength												
Climate Strength: Communal Climate							0.461	0.985	0.640			
Climate Strength: Autonomy							1.876 **	0.582	0.002	1.476 *	0.583	0.013
Climate Strength: Opps for Non-Core Acts							-1.532	0.916	0.098	-1.536 *	0.675	0.025
Climate Strength: Workload							0.375	0.471	0.428			
Climate Strength: Procedural Justice							-0.181	0.402	0.653			
Group-Level Control Variables												
Business Unit: Sales	-0.048	0.194	0.804	-0.054	0.200	0.787	0.003	0.218	0.988	-0.135	0.180	0.454
Business Unit: Other	0.030	0.185	0.874	0.059	0.200	0.770	0.184	0.184	0.320	-0.047	0.160	0.770
Group Size	-0.017	0.025	0.489	-0.016	0.028	0.569	-0.027	0.030	0.371	-0.014	0.028	0.613
Avg Time in Group	-0.068	0.180	0.706	-0.098	0.178	0.583	-0.218	0.196	0.271	-0.179	0.184	0.333
Heterogeneity in Gender	0.826	0.497	0.100	0.795	0.494	0.111	0.561	0.591	0.346	0.590	0.567	0.302
Heterogeneity in Ethnicity	-0.719	0.535	0.183	-0.624	0.541	0.252	-0.724	0.548	0.191	-1.002	0.589	0.092
Heterogeneity in Org Tenure	-0.938	0.615	0.130	-0.766	0.717	0.289	-1.263	0.737	0.090	-1.143	0.701	0.106
Heterogeneity in Job Level	1.200	0.717	0.097	1.000	0.727	0.173	0.950	0.911	0.300	0.618	0.758	0.417
Heterogeneity in Location	0.576	0.376	0.128	0.688	0.418	0.103	0.739	0.423	0.084	0.820 *	0.353	0.022
Individual-Level Control Variables												
Gender	-0.077	0.142	0.586	-0.082	0.144	0.572	-0.084	0.140	0.549	-0.098	0.138	0.479
Ethnicity Category: Asian	0.030	0.199	0.879	0.018	0.205	0.930	0.095	0.206	0.644	0.076	0.192	0.691
Ethnicity Category: Other	-0.208	0.234	0.375	-0.197	0.233	0.399	-0.116	0.223	0.604	-0.117	0.221	0.596
Job Level	0.015	0.049	0.766	0.020	0.048	0.679	0.046	0.049	0.348	0.039	0.047	0.408
Organizational Tenure	-0.030	0.046	0.515	-0.027	0.047	0.564	-0.031	0.044	0.481	-0.032	0.044	0.470
Job Satisfaction	-0.064	0.076	0.406	-0.062	0.074	0.406	-0.048	0.075	0.525	-0.045	0.078	0.563
Extraversion	0.092	0.056	0.100	0.086	0.059	0.149	0.094	0.059	0.116	0.095	0.056	0.093
Agreeableness	-0.037	0.083	0.659	-0.037	0.086	0.665	-0.023	0.085	0.791	-0.018	0.083	0.831
Conscientiousness	0.116	0.079	0.146	0.109	0.078	0.166	0.111	0.075	0.139	0.108	0.075	0.150
Likelihood Ratio Test												
Chi-Square	196.62			1.27			11.27			8.56		
df	6			5			5			9		
p-value	0.000			> .500			0.046			> .500		
Model Statistics												
Deviance	483.83			482.57			471.30			479.86		
No. of Parameters Estimated	27			32			37			28		
Final Estimation of Variance Components												
Chi-Square	133.37			130.82			105.46			123.73		
df	52			47			42			51		
Standard Deviation (Full Model)	0.403			0.396			0.319			0.376		
Standard Deviation (L1)	0.711			0.710			0.711			0.711		
Variance Component (Full Model)	0.162			0.157			0.102			0.142		
Variance Component (L1)	0.505			0.504			0.506			0.505		
p-value	0.000			0.000			0.000			0.000		

Notes.

Models use Full Maximum Likelihood Estimation.

Model with black shading indicates best-fitting model, according to the Likelihood Ratio Test.

(Hofstede, 1980; Schwartz, 1994). This behavior is commonly referred to as "saving face" (Ting-Toomey, 1988). Thus, to the extent that participants of Asian ethnicity in this study were socialized in similar cultures, it would not be surprising that they demonstrated less voice behavior, since it is characterized by making suggestions to others and challenging the status quo, which could be interpreted as showing disrespect to coworkers. Although firm conclusions cannot be drawn about the mechanism behind this result given that I did not measure the underlying values of Asian participants (Brockner, 2005), the pattern suggests consistency with previous research.

Finally, participants in the Sales business unit were less likely to display helping behavior (unstandardized beta = -0.416, $p < .01$) than participants from other business units. Previous research has found that when work tasks are designed and rewarded independently rather than collectively (e.g., at a group level), individuals tend to display less cooperation, helping, and learning behavior (Wageman, 1995). At Initech, many employees in Sales are paid partially by commission – a practice unique to this business unit. Although most employees in other business units are not rewarded collectively, the commission-based pay structure may make the independent nature of Sales employees' work more salient thus prompting them to further their own work rather than taking time to help coworkers.

While the aforementioned results are consistent with previous research, other results related to certain control variables do not align with previous findings in the OCB literature. First, the lack of a positive and significant influence of the job satisfaction variable on any of the dimensions of OCB in this study is noteworthy. The positive effect of job satisfaction on OCB has been found repeatedly in past research, and is the finding

that instigated the stream of research on OCB (Organ et al., 2006; Organ & Ryan, 1995). The insignificant effect of job satisfaction in this study could be due to range restriction: more than 80 percent of respondents scored at the midpoint (3) or above on this scale (see Table 12), suggesting that there is limited variance in job satisfaction for employees in this organization, likely attenuating the variable's predictive power. The high mean and relatively low standard deviation for this variable indicate that job satisfaction is more "fixed" in this sample than it may be in other organizational contexts. This is perhaps not surprising given that Initech has been listed on *Fortune* Magazine's "Best Companies to Work For" list for the past several years, and Initech's organizational performance during the time of the study was very good, particularly in light of the economic downturn affecting the U.S. economy at the same time. Therefore, it is possible that employees were especially happy to have a stable job, and one at a company considered to be a good employer, during this time. Regardless of the reason for this relative consistency in job satisfaction in this sample, it affords a rare research opportunity to study an organization where most of the workforce is relatively content. Moreover, it is a particularly interesting context in which to study citizenship, given that job satisfaction has emerged as one of the strongest predictors of OCB in past research (Organ et al., 2006); this allows for a more nuanced exploration of other predictor variables.

Not only did job satisfaction not emerge as a significant positive predictor, but it was actually found to be a significant negative predictor of voice behavior (unstandardized beta = -0.083, $p < .05$). This weak but significant negative effect contrasts with previous research showing that satisfaction with one's work group is a positive predictor of voice behavior (LePine & Van Dyne, 1998). While surprising in

light of that, the finding is consistent with literature that suggests people use voice behavior to communicate dissatisfaction with the status quo and as a substitute for exiting the organization altogether (Hirschman, 1970; Withey & Cooper, 1989). Thus, the fact that individuals with lower job satisfaction displayed more voice behavior is not wholly surprising when scholarship outside the OCB literature is considered.

Next, extraversion and conscientiousness, two of the personality variables, were significant predictors of some forms of OCB. Extraversion had a significant positive effect on voice (unstandardized beta = .109, $p < .05$), social participation (unstandardized beta = .213, $p < .01$), and health and well-being behavior (unstandardized beta = .149, $p < .01$), as well as significant positive effect on overall peer and manager ratings of OCB. Conversely, conscientiousness emerged as a significant negative predictor of one dimension of OCB, social participation (unstandardized beta = -.147, $p < .05$). This finding contradicts the positive effect of conscientiousness on OCB found in previous literature (Organ et al., 2006; Organ & Ryan, 1995). Although the strength of the effects of these personality variables on OCB was found to be weak, it is noteworthy that these traits emerged as significant predictors at all, since dispositional characteristics such as the Big Five are typically not strong predictors of OCB (Organ & Ryan, 1995).

Lastly, heterogeneity in organizational tenure was negatively associated with social participation (unstandardized beta = -.796, $p < .05$), the peer index rating of OCB (unstandardized beta = -.570, $p < .05$), and manager rating of OCB (unstandardized beta = -1.443, $p < .01$), while heterogeneity in job level was positively associated with the voice dimension of OCB (unstandardized beta = 1.134, $p < .01$) and manager rating of

OCB (unstandardized beta = 1.382, $p < .05$). Respondent's gender, group size, and group members' average tenure in the group did not significantly influence OCB.

Effects of Climate Main Effects on OCB. Following the control variable regressions, I conducted at least three additional regressions for each dependent variable to assess the effects of the group-level variables on OCB and test hypotheses. The first regression included the control variables discussed above, as well as the main effects of each group-level climate variable (e.g., communal climate, group autonomy, and opportunities for non-core activities). Results from these regressions are listed in the Model 1 column in Tables 8.13-8.19. Next, I added the main effects of the group perception dispersion variables; results are listed in the Model 2 column in Tables 8.13-8.19. Finally, I added the climate strength variables; results are listed in the Model 3 column in Tables 8.13-8.19. In each of these regressions I included the main effect of perceived rewards for broad contributions at the individual level. I also included the appropriate effects (e.g., the climate variable main effect, the dispersion in perceptions main effect, and climate strength interaction term, respectively) for group workload and procedural justice when adding the other group-level variables.

Likelihood ratio tests were used to determine which of the regressions for each dependent variable best fit the data. Likelihood ratio tests assess the extent to which adding additional independent variables to the model produces a significantly better fit than a model with fewer variables; when the likelihood ratio statistic is sufficiently large there is support for including the additional variables (West, Welch, & Galecki, 2007). Using the results of these tests, I interpreted the model with the best fit for each

dependent variable.[22] The best-fitting models are indicated by black shading in Tables 8.13-8.19.

For the dimensions of helping, voice, social participation, and health and well-being behavior, as well as the peer index rating, the best-fitting model was that which included the main effects of the group-level variables and the perception dispersion variables, but not the interaction terms. For the civic virtue dimension and manager ratings of OCB, the model including interaction terms fit the data significantly better than the main effects models; in these cases, I ran several more regressions with these dependent variables, dropping insignificant predictor variables one at a time until the likelihood ratio test indicated the best fit. For the civic virtue dimension, the best-fitting model was one that included all variables except the interaction terms for communal climate, autonomy, and procedural justice. For the manager rating, the best-fitting model was one that included all variables except the interaction and main effects for group autonomy and available opportunities for non-core activities. The final, best-fitting models for these dependent variables are listed in the Model 4 columns in Tables 8.15 and 8.19. The results presented in the text below are taken from the best-fitting model for each dependent variable.

Hypotheses 2A, 2B, and **2C** predicted that higher shared perceptions of fairness, trust, and citizenship norms, respectively, would be positively associated with higher individual citizenship behavior. These hypotheses could not be tested verbatim for two reasons. First, as described above, I only retained the measure of cooperative group

[22] I accepted larger models (with more independent variables) when the likelihood ratio statistic was significant, as indicated by a χ^2 distribution with the appropriate degrees of freedom at $\alpha = .05$.

norms rather than more broadly assessing citizenship norms. Secondly, the three independent variables (fairness, trust, and cooperative norms) displayed problematic levels of collinearity in early tests of the data, leading to the creation of the communal climate index variable. As a result, the three original hypotheses were combined and tested as follows:

> **Hypothesis 2G:** The higher the shared perceptions of a communal climate (characterized by fairness, trust, and cooperative norms in the work group), the higher the level of citizenship behavior displayed by individual group members.

As indicated by the best-fitting models in Tables 8.13-8.19, the main effect of communal climate on OCB was positive and significant across all peer-rated OCB categories, and the overall Peer Ratings Index. In other words, higher communal climate mean scores were associated with higher individual citizenship behavior, as assessed by peer raters. However, as indicated by Model 4 in Table 8.19, communal climate did not significantly predict OCB as rated by managers, so this hypothesis is not supported when managers assess individuals' citizenship behavior. Therefore, Hypothesis 2G is fully supported when peers evaluate individuals' citizenship behavior, but not when OCB is evaluated by managers.

Hypothesis 2D predicted that higher shared perceptions that broad performance contributions are rewarded in the work group will be positively related to the level of citizenship behavior displayed by individual group members. Due to poor within-group agreement statistics (r_{wg} and ICC(1)) I did not aggregate this variable to the group level; therefore, I could not test the effect of shared perceptions of this variable. However, I still tested the hypothesis using the individual-level data. As is shown in Tables 8.13-8.19, this hypothesis was not supported. Rather, there was an unexpected significant negative

effect of individual perceptions that broad performance contributions are rewarded on social participation (unstandardized beta = -0.171, $p < .01$) and health and well-being behavior (unstandardized beta = -0.098, $p < .05$), suggesting that when individuals perceive that broad performance contributions are rewarded in their work group, they engage in less social participation and health and well-being behavior. This variable had no significant effect on the other three dimensions of OCB (helping, voice, or civic virtue), nor on the global assessments of OCB (peer index or manager rating).

Hypothesis 2E predicted that higher shared perceptions of autonomy in the group would be positively associated with the level of citizenship behavior displayed by individual group members. As is shown in Tables 8.13-8.19, this hypothesis was not supported for any of the measures of OCB. Likewise, **Hypothesis 2F** predicted that higher shared perceptions about the availability of opportunities to engage in activities beyond core job tasks would be positively associated with higher levels of citizenship behavior displayed by individual group members. This hypothesis received no support for any of the assessments of OCB.

In summary, above and beyond the effects of control variables, communal climate emerged as the strongest main effect in predictions of individual OCB. In addition, individuals' perceptions about rewards for broad contributions in their groups was found to have a negative impact on social participation and health and well-being activities.

Effects of Dispersion of Perceptions on OCB. As in Hypotheses 2A-2C, I was unable to test **Hypotheses 3A, 3B,** and **3C** verbatim due to the use of norms for cooperation scale rather than a broader norms for citizenship scale, as well as the need to

create the communal climate index score rather than testing each underlying variable (fairness, trust, norms for cooperation) independently. As a result, the three original hypotheses (3A-3C) were combined and tested as follows:

> **Hypothesis 3G:** Greater dispersion of perceptions within the group about the communal climate (characterized by fairness, trust, and cooperative norms in the work group) will be positively associated with individual citizenship behavior.

Indeed, the main effect of dispersion in perceptions about the group's communal climate emerged as a significant, positive predictor for individual social participation (unstandardized beta = 0.804, $p < .01$), and the effect is nearly significant for individual helping behavior (unstandardized beta = 0.416, $p = .056$). In other words, when there is greater dispersion in perceptions (e.g., disagreement) about a communal climate in the work group, individuals engage in more social participation and helping behavior. Therefore, Hypothesis 3G is partially supported.

Hypothesis 3D predicted that greater dispersion of perceptions within the group that broad performance contributions are rewarded would be positively associated with individual OCB. I did not test this hypothesis since the within-group agreement statistics (e.g., ICC(1), ICC(2), and r_{wg}) did not indicate adequate levels of convergence of group scores, so I did not examine this variable at the group level.

Hypothesis 3E predicted that greater dispersion of perceptions about autonomy would be positively related to individual OCB. As is shown in Tables 8.13-8.19, this hypothesis was not supported. Likewise, **Hypothesis 3F** predicted that greater dispersion of perceptions within the group about available opportunities for non-core activities would be positively associated with individual citizenship behavior. This hypothesis was not supported either. However, the dispersion of perceptions about available

opportunities had a significant negative relationship with helping (unstandardized beta = -0.331, $p < .05$), social participation (unstandardized beta = -0.540, $p < .01$), health and well-being behavior (unstandardized beta = -0.462, $p < .05$), and the peer index rating of OCB (unstandardized beta = -0.321, $p < .05$). These relationships suggest that when there is greater convergence of perceptions in the group around available opportunities for OCB (whether group members perceive high or low levels of such opportunities), group members engage in more of certain types of OCB.

In summary, the dispersion of perceptions within the group of climate variables emerged as a significant predictor of individual OCB in multiple cases. In general, dispersion variables tended to have stronger effects on the dimensions of OCB that involve interpersonal behavior, such as helping, social participation, and health and well-being behavior, but in different directions depending on the climate variable at hand.

Effects of Climate Strength Variables on OCB. As in Hypotheses 2A-2C, I was unable to test **Hypotheses 4A, 4B,** and **4C**, which predicted that climate strength would moderate the relationship between climate variables and individual OCB for the reasons provided above (see discussion of Hypotheses 2A-2C). Therefore, the three original hypotheses were combined and tested as follows:

> **Hypothesis 4G**: Climate strength moderates the relationship between communal climate and individual OCB; in particular, individual OCB will be highest when communal climate is high and dispersion in perceptions is low.

Due to the outcomes of the likelihood ratio tests, this hypothesis could not be explicitly tested because the models that included the communal climate strength interaction terms did not fit the data as well as those without these variables (see Tables 8.13-8.19);

however, had the models with these variables been retained, these effects would not have been significant. Therefore, for several reasons, this hypothesis is not supported.

Hypothesis 4D predicted that climate strength would moderate the relationship between shared perceptions that broad contributions are rewarded and individual OCB; in particular, that individual OCB would be highest when perceptions of such rewards were high and dispersion in perceptions was low. Akin to Hypothesis 3D, discussed above, I could not test this hypothesis since the within-group agreement statistics (e.g., ICC(1), ICC(2), and r_{wg}) did not indicate adequate levels of convergence of group scores. Because of this, I could not create a product term for this variable and this hypothesis was not tested.

Hypothesis 4E predicted that climate strength would moderate the relationship between group autonomy and individual OCB; in particular, individual OCB would be highest when perceptions of group autonomy were high and dispersion in perceptions was low. As indicated by 8.13-8.19, this hypothesis was not supported for any of the peer-assessed dimensions of citizenship nor the overall peer index or manager ratings; however, Table 8.19 indicates that the opposite effect was significant when manager ratings of OCB were used as the dependent variable. Specifically, OCB ratings were highest when perceptions of group autonomy were high, and dispersion in perceptions about autonomy (e.g., disagreement) in the group was also high (unstandardized beta = 1.476, $p < .05$) (See Figure 8.1).

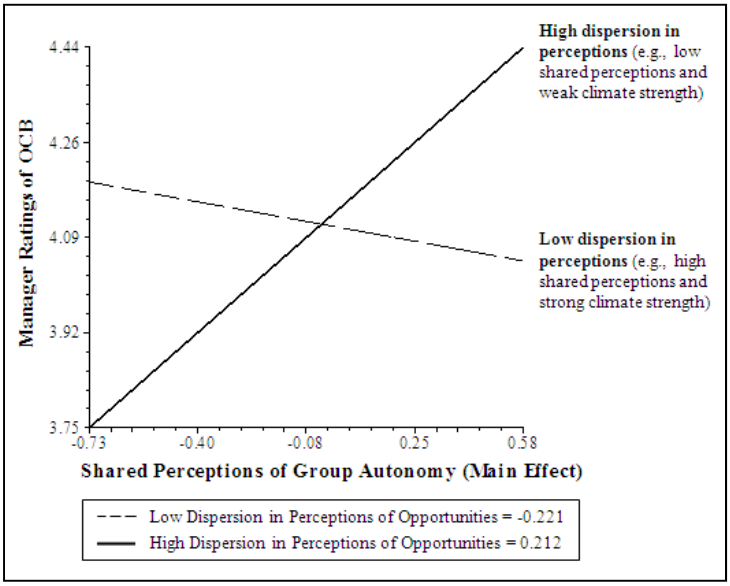


Figure 8.1. Moderating Effect of the Strength of Shared Perceptions about Autonomy on Manager Ratings of OCB

Hypothesis 4F predicted that climate strength would moderate the relationship between shared perceptions of opportunities for non-core behavior and individual OCB; in particular, individual OCB was predicted to be highest when shared perceptions of opportunities for non-core behavior were high and dispersion in perceptions was low. This hypothesis was not supported for any of the peer-assessed dimensions of citizenship nor the overall peer index. However, Table 8.19 indicates that this hypothesis was supported when manager ratings of OCB were used as the DV (unstandardized beta = -1.536, $p < .05$). Individual OCB was highest when shared perceptions of available opportunities for non-core behavior were high and dispersion in perceptions was low (See Figure 8.2). Therefore, Hypothesis 4F is partially supported. However, the opposite effect was significant for civic virtue behavior, such that individuals engaged in the highest levels of citizenship behavior when perceptions of available opportunities were high, and dispersion in perceptions about available opportunities was also high (unstandardized beta = 1.642, $p < .01$) (See Figure 8.3).

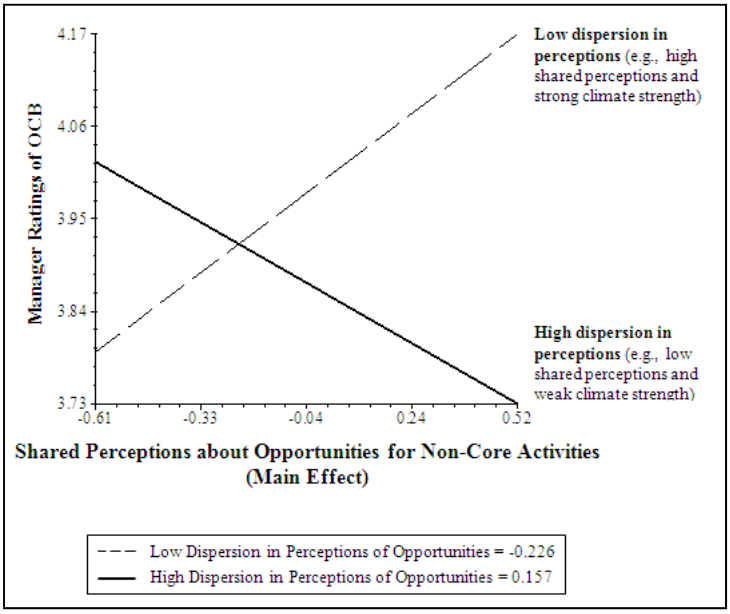


Figure 8.2. Moderating Effect of the Strength of Shared Perceptions about Opportunities for Non-Core Activities on Manager Ratings of OCB

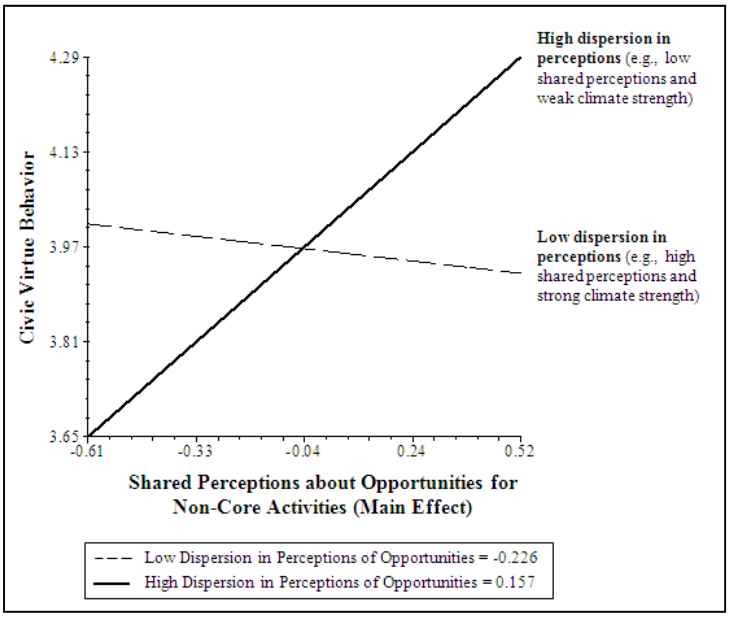


Figure 8.3. Moderating Effect of the Strength of Shared Perceptions about Opportunities for Non-Core Activities on Civic Virtue Behavior

In summary, most of the variables assessing climate strength (i.e., the interaction of the group-level climate dimension main effect and the group's dispersion of perceptions about the climate dimension) were insignificant. When significant effects did emerge, they were more often in the opposite direction than predicted; in other words, weaker climate strength produced higher levels of individual OCB in two cases. Only in the case of available opportunities for non-core behavior did a stronger shared perception within the group produce higher levels of individual OCB.

Effects of Individual Citizenship Behavior on Performance Evaluations. Hypothesis 5 predicted that higher levels of citizenship behavior displayed by group members would be positively associated with their performance evaluations. Although both the independent and dependent variables in this hypothesis were at the individual level of analysis (OCB and performance scores, respectively), I used HLM to test this hypothesis since individuals are nested within work groups; this enabled me to control for group-level characteristics (e.g., group size, etc.) in testing the hypothesis. Results from these regressions are presented in Table 8.20, and indicate that this hypothesis was only supported on the voice dimension (unstandardized beta = .048, $p < .05$); for all other dimensions of OCB and for the global assessments, OCB did not have a significant effect on individual performance evaluations.

Additional Group-Level Effects. Although I did not hypothesize about the effects of group workload or procedural justice climate on OCB, I did include them in the regressions described above as control variables and some noteworthy results emerged. For workload, the interaction of the main effect and the dispersion in perceptions was a significant positive predictor of civic virtue behavior (unstandardized beta = 1.087, $p <$

Table 8.20
Random Effects Coefficient Regression Results
Effect of OCB on Performance Evaluation Scores

	Model 1: Helping			**Model 2:** Voice			**Model 3:** Civic Virtue			**Model 4:** Social Partic.		
	Coeff.	SE	p-val	Coeff.	SE	p-val	Coeff.	SE	p-val	Coeff.	SE	p-val
(Constant)	3.652 **	0.064	0.000	3.597 **	0.049	0.000	3.625 **	0.058	0.000	3.606 **	0.056	0.000
OCB Variables												
Helping	0.034	0.026	0.196									
Voice				0.048 *	0.021	0.022						
Civic Virtue							0.015	0.022	0.518			
Social Participation										0.010	0.021	0.647
Health & Well-Being												
Peer Index Rating												
Manager Rating												
Group-Level Control Variables												
Group Size	-0.012	0.007	0.079	-0.005	0.006	0.410	-0.011	0.007	0.090	-0.010	0.006	0.136
Business Unit: Sales	-0.278 **	0.059	0.000	-0.195 **	0.046	0.000	-0.197 **	0.046	0.000	-0.213 **	0.049	0.000
Business Unit: Other	-0.190 **	0.058	0.002	-0.122 **	0.045	0.009	-0.205 **	0.053	0.000	-0.162 **	0.049	0.002
Avg Time in Group	-0.056	0.038	0.149	-0.080 *	0.036	0.029	-0.068	0.039	0.080	-0.064	0.037	0.084
Heterogeneity in Gender	0.102	0.102	0.319	0.109	0.088	0.218	0.181	0.098	0.069	0.110	0.100	0.273
Heterogeneity in Ethnicity	-0.020	0.086	0.818	-0.003	0.078	0.970	0.049	0.096	0.610	-0.020	0.084	0.815
Heterogeneity in Org Tenure	0.093	0.153	0.543	0.083	0.159	0.603	0.145	0.160	0.370	0.052	0.141	0.711
Heterogeneity in Job Level	0.371	0.197	0.062	0.361	0.192	0.062	0.641 **	0.210	0.000	0.382	0.205	0.064
Heterogeneity in Location	0.142	0.076	0.062	0.11	0.070	0.121	0.136	0.078	0.085	0.077	0.080	0.341
Individual-Level Control Variables												
Job Satisfaction	-0.025	0.022	0.261	0.002	0.024	0.937	-0.016	0.027	0.556	-0.010	0.022	0.651
Extraversion	0.012	0.015	0.407	0.011	0.016	0.502	-0.008	0.019	0.660	0.025	0.016	0.125
Agreeableness	-0.039	0.024	0.097	-0.051 *	0.023	0.027	-0.026	0.031	0.409	-0.040	0.023	0.087
Conscientiousness	0.076 *	0.033	0.021	0.057	0.030	0.061	0.060	0.039	0.128	0.050	0.031	0.107
Gender	0.045	0.049	0.362	0.019	0.046	0.676	0.027	0.055	0.620	0.046	0.047	0.327
Ethnicity: Asian	-0.012	0.050	0.814	0.003	0.045	0.953	0.009	0.053	0.864	0.009	0.049	0.862
Ethnicity: Other / Unknown	-0.008	0.040	0.842	-0.023	0.039	0.561	0.009	0.045	0.848	-0.030	0.041	0.468
Job Level	-0.001	0.013	0.930	0.000	0.011	0.979	0.008	0.014	0.586	0.006	0.012	0.614
Organizational Tenure	0.004	0.012	0.723	0.020	0.012	0.107	0.025	0.015	0.091	0.015	0.014	0.268
Model Statistics												
Deviance	46.40			67.59			24.63			66.85		
Parameters	22			22			22			22		
Final Estimation of Variance Components												
Std Dev (Full Model)	0.01			0.005			0.004			0.018		
Std Dev (L1)	0.266			0.273			0.260			0.273		
Variance Component (Full Model)	0.000			0.000			0.000			0.000		
Variance Component (L1)	0.071			0.074			0.068			0.074		
Chi-square	90.75			92.04			59.56			105.04		
df	84			94			69			91		
p-value	0.288			>.500			>.500			0.149		

Notes. Models use Full Maximum Likelihood Estimation. Performance evaluation scores were assigned at the end of the first quarter of 2009.

Table continued on next page.

Table 8.20 (continued)
Random Effects Coefficient Regression Results (using HLM)
Effect of OCB on Performance Evaluation Scores

	Model 5: Health & W-E			**Model 6:** All Dimensions			**Model 7:** Peer Index			**Model 8:** Mgr Ratings		
	Coeff.	SE	p-val	Coeff.	SE	p-val	Coeff.	SE	p-val	Coeff.	SE	p-val
(Constant)	3.648 **	0.052	0.000	3.619 **	0.067	0.000	3.592 **	0.044	0.000	3.613 **	0.050	0.000
OCB Variables												
Helping				0.059	0.048	0.223						
Voice				0.019	0.036	0.599						
Civic Virtue				0.009	0.032	0.784						
Social Participation				-0.015	0.041	0.706						
Health & Well-Being	-0.022	0.028	0.439	-0.044	0.051	0.387						
Peer Index Rating							0.046	0.026	0.075			
Manager Rating										0.006	0.020	0.763
Group-Level Control Variables												
Group Size	-0.006	0.007	0.371	-0.011	0.008	0.145	-0.005	0.006	0.420	0.002	0.006	0.713
Business Unit: Sales	-0.241 **	0.055	0.000	-0.197 **	0.054	0.000	-0.196 **	0.042	0.000	-0.210 **	0.049	0.000
Business Unit: Other	-0.190 **	0.053	0.001	-0.185 *	0.064	0.005	-0.127 **	0.040	0.000	-0.166 **	0.042	0.000
Avg Time in Group	-0.096	0.040	0.019	-0.071	0.042	0.097	-0.067	0.035	0.054	-0.046	0.042	0.275
Heterogeneity in Gender	0.085	0.099	0.391	0.163	0.101	0.109	0.078	0.085	0.362	0.043	0.134	0.750
Heterogeneity in Ethnicity	0.013	0.083	0.877	0.017	0.090	0.849	-0.017	0.078	0.827	-0.031	0.100	0.759
Heterogeneity in Org Tenure	0.066	0.170	0.696	0.187	0.169	0.269	0.077	0.144	0.591	0.075	0.167	0.655
Heterogeneity in Job Level	0.401 *	0.198	0.045	0.551 *	0.228	0.018	0.399 *	0.189	0.036	0.374	0.215	0.084
Heterogeneity in Location	0.153 *	0.071	0.033	0.129	0.076	0.094	0.071	0.072	0.330	0.014	0.081	0.866
Individual-Level Control Variables												
Job Satisfaction	-0.023	0.024	0.337	-0.029	0.028	0.305	-0.010	0.022	0.657	-0.001	0.024	0.970
Extraversion	0.012	0.018	0.493	0.000	0.021	0.989	0.017	0.015	0.248	0.036 *	0.016	0.027
Agreeableness	-0.064 **	0.024	0.008	-0.031	0.030	0.309	-0.044 *	0.021	0.034	-0.047 *	0.023	0.041
Conscientiousness	0.064 *	0.031	0.038	0.057	0.043	0.187	0.053	0.028	0.061	0.080 *	0.029	0.006
Gender	0.016	0.046	0.725	0.039	0.055	0.477	0.029	0.043	0.500	0.054	0.048	0.263
Ethnicity: Asian	-0.023	0.048	0.627	0.019	0.058	0.745	-0.008	0.043	0.858	-0.047	0.045	0.304
Ethnicity: Other / Unknown	-0.008	0.042	0.846	0.013	0.048	0.789	-0.017	0.038	0.657	-0.042	0.048	0.390
Job Level	0.005	0.013	0.708	-0.004	0.016	0.821	0.001	0.011	0.915	0.015	0.016	0.364
Organizational Tenure	0.014	0.013	0.276	0.023	0.015	0.128	0.023	0.012	0.054	0.016	0.014	0.256
Model Statistics												
Deviance	60.59			17.35			81.32			103.25		
Parameters	22			26			22			22		
Final Estimation of Variance Components												
Std Dev (Full Model)	0.006			0.004			0.005			0.005		
Std Dev (L1)	0.274			0.255			0.275			0.291		
Variance Component (Full Model)	0.000			0.000			0.000			0.000		
Variance Component (L1)	0.075			0.065			0.076			0.084		
Chi-square	88.24			54.82			94.74			76.67		
df	86			64			98			68		
p-value	0.413			>.500			>.500			0.220		

Notes. Models use Full Maximum Likelihood Estimation. Performance evaluation scores were assigned at the end of the first quarter of 2009.

.01); in other words, when groups perceived higher levels of workload but had greater divergence in these perceptions, more civic virtue behavior occurs. Also, greater divergence in perceptions of group workload had a significant positive effect on the peer index rating of OCB (unstandardized beta = .294, $p < .05$). These results are consistent with results related to the other perception dispersion variables, suggesting that greater dispersion in perceptions within a group is associated with more OCB in many cases.

For procedural justice climate, greater dispersion in perceptions had a significant, positive main effect on voice (unstandardized beta = .391, $p < .01$), civic virtue (unstandardized beta = .690, $p < .01$), social participation (unstandardized beta = .300, $p < .05$), health and well-being behavior (unstandardized beta = .349, $p < .05$), and the peer index rating (unstandardized beta = .389, $p < .01$). A positive and significant main effect also emerged for the group level of procedural justice climate on civic virtue behavior (unstandardized beta = .843, $p < .01$). Likewise, these results substantiate findings from the hypothesis tests.

Summary of Hypothesis Tests

A summary of the results of all hypotheses is presented in Table 8.21. Even with a strong set of control variables, five of the eleven hypotheses tested in Study 2 received at least partial support. In addition, in the case of two unsupported hypotheses, the reverse effect was found to be significant, producing results that substantiated other findings.

Of the four main predictor variables – communal climate, rewards for broad contributions, autonomy, and opportunities for non-core activities – three were found to be significant predictors of at least one of the dimensions or global assessments of OCB, either as a main effect or as part of an interaction term. Only one, rewards for broad

Table 8.21
Summary of Hypothesis Test Results for Study 2

Hypothesis	Dimension-Specific Ratings of OCB					Global Ratings of OCB		Summary	
	Helping	Voice	Civic Virtue	Social Participation	Health & Well-Being	Peer Index Rating	Manager Rating	Peer Ratings	Manager Rating
Climate Dimension Main Effects									
2A. Group climate for fairness positively associated with OCB.	Hypothesis combined with H2B and H2C; tested as H2G. See below.								
2B. Group climate for trust positively associated with OCB.	Hypothesis combined with H2A and H2C; tested as H2G. See below.								
2C. Group norms for citizenship positively associated with OCB.	Hypothesis combined with H2A and H2B; tested as H2G. See below.								
2D. Rewards for broad contributions positively associated with OCB.	NS	NS	NS	NS, but reverse direction signif.	NS, but reverse direction signif.	NS	NS	Not Supported	Not Supported
2E. Group climate for autonomy positively associated with OCB	NS	NS	NS	NS	NS	NS	NS	Not Supported	Not Supported
2F. Shared perceptions about opportunities for non-core activities positively associated with OCB.	NS	NS	NS	NS	NS	NS	NS	Not Supported	Not Supported
2G. Group communal climate positively associated with OCB.	Supported	Supported	Supported	Supported	Supported	Supported	NS	Supported	Not Supported
Dispersion in Perceptions Main Effects									
3A. Dispersion of perceptions about group fairness positively associated with OCB.	Hypothesis combined with H3B and H3C; tested as H3G. See below.								
3B. Dispersion of perceptions about group trust positively associated with OCB.	Hypothesis combined with H3A and H3C; tested as H3G. See below.								
3C. Dispersion of perceptions about group norms for citizenship positively associated with OCB.	Hypothesis combined with H3A and H3B; tested as H3G. See below.								
3D. Dispersion of perceptions about rewards for broad contributions positively associated with OCB.	Unable to aggregate variable to group level; hypothesis not tested.								
3E. Dispersion of perceptions about group autonomy positively associated with OCB.	NS	NS	NS	NS	NS	NS	NS	Not Supported	Not Supported
3F. Dispersion of perceptions about opportunities for non-core activities positively associated with OCB.	NS, but reverse direction signif.	NS	NS	NS, but reverse direction signif.	NS, but reverse direction signif.	NS, but reverse direction signif.	NS	Not Supported	Not Supported
3G. Dispersion of perceptions about communal climate positively associated with OCB.	Supported (weak)	NS	NS	Supported	NS	NS	NS	Partially Supported	Not Supported

Table continued on next page.

Table 8.21 (continued)
Summary of Hypothesis Test Results for Study 2

Hypothesis	Dimension-Specific Ratings of OCB					Global Ratings of OCB		Summary	
	Helping	Voice	Civic Virtue	Social Participation	Health & Well-Being	Peer Index Rating	Manager Rating	Peer Ratings	Manager Rating
Climate Strength Effects									
4A. Stronger group climate for fairness positively associated with OCB.	Hypothesis combined with H4B and H4C; tested as H4G. See below.								
4B. Stronger group climate for trust positively associated with OCB.	Hypothesis combined with H4A and H4C; tested as H4G. See below.								
4C. Stronger group norms for citizenship positively associated with OCB.	Hypothesis combined with H4A and H4B; tested as H4G. See below.								
4D. Stronger shared perceptions that broad contributions are rewarded positively associated with OCB.	Hypothesis not tested due to inability to aggregate variable to group level								
4E. Stronger group climate for autonomy positively associated with OCB.	NS	NS	NS	NS	NS	NS	NS, but reverse direction signif.	Not Supported	Not Supported
4F. Stronger shared perceptions of available opportunities for non-core activities positively associated with OCB.	NS	NS	NS, but reverse direction signif.	NS	NS	NS	Supported	Not Supported	Supported
4G. Stronger communal climate positively associated with OCB.	NS	NS	NS	NS	NS	NS	NS	Not Supported	Not Supported
Effect of OCB on Performance Evaluations									
5. OCB positively associated with individual performance	NS	Supported	NS	NS	NS	NS	NS	Partially Supported	Not Supported

performance contributions, was not found to be a significant positive predictor of any of the dependent variables. This variable did emerge unexpectedly as a negative predictor of the social participation and health and well-being dimensions, however.

Several perception dispersion main effects emerged as significant predictors of two dependent variables, but in different directions. Dispersion in perceptions about the group's communal climate was a positive predictor of certain types of citizenship behavior, while dispersion in perceptions about opportunities for non-core activities was a significant negative predictor. In other words, greater disagreement in the group about the communal climate was associated with more OCB, while greater agreement about opportunities for non-core activities was associated with more OCB.

The variables that significantly predicted peer ratings of OCB (either dimension-specific ratings or the peer rating index) were not consistent with those that significantly predicted manager ratings. Of the three variables identified above as significant predictors of OCB, two predicted manager ratings (autonomy and opportunities for non-core activities) and the other (communal climate) predicted peer ratings.

Interestingly, only one dimension of OCB, voice, emerged as a positive predictor of individual performance ratings. This conflicts with previous research on OCB that has tended to find positive associations between individual OCB and performance evaluations (MacKenzie et al., 1991).

These results, as a whole, were found while controlling for job satisfaction and procedural justice climate, two of the strongest predictors of OCB in prior research. While procedural justice climate emerged as a significant predictor in some of the regressions, job satisfaction did not.

Discussion and Conclusion

This study tested the effect of a work group's citizenship climate on individual group members' displays of organizational citizenship behavior in a modern work context, and the resulting impact of individual OCB on performance evaluations. In Chapter III, I argued that the social context within the work group should have an effect on the type and level of OCB in which group members engage. Findings from this study broadly support this overarching hypothesis, despite a strong set of control variables.

Four main patterns emerged from this study and will be discussed in this section. First, several citizenship climate dimensions were found to have a significant impact on group members' citizenship behavior, substantiating this dissertation's broad hypothesis that the social context affects individual OCB. The nuances in the results also shed light on the different underlying mechanisms through citizenship climate dimensions may influence outcomes. Secondly, the dispersion of perceptions within a work group about the group's citizenship climate emerged as an important influence on OCB, lending additional support to hypotheses and illuminating mechanisms that have not been previously explored in the OCB literature. Third, the relationship between group climate variables and OCB differed based on the way OCB was operationalized and measured; in particular, variables that significantly predicted peer ratings of OCB were often different from those that predicted manager ratings. Finally, the relationship between OCB and performance did not support previous findings in the literature; only one dimension of OCB was significantly associated with individual performance evaluations. Each of these patterns will be discussed in more detail below.

Effect of Work Group Citizenship Climate on OCB

Two citizenship climate dimensions emerged as significant predictors of organizational citizenship behavior as rated by peers in this study, but in different ways. The most systematic predictor of individual OCB was the group's communal climate, a higher-order construct introduced in this study composed of the group's underlying shared beliefs about group trust, fairness, and norms for cooperation. Results show that a higher communal climate in the group is positively and significantly related to every dimension of citizenship behavior, as well as the index of peer OCB ratings. Although the underlying variables composing the communal climate construct were hypothesized to have independent effects on OCB, results of the CFAs and collinearity diagnostic tests indicated that they were distinct constructs but highly inter-correlated; therefore, they were operationalized as one higher-order construct through an index variable.

The communal climate construct is based on prior scholarship on communal schemas and exchange relations (Clark & Mills, 1979; Goffman, 1961), and characterizes shared beliefs governing group members' interactions and commitment to the group as whole. It is based on the assumption that group members will take action to respond to the needs of others, without an expectation that benefits will be directly repaid in the future (Clark & Mills, 1979; Goffman, 1961). Thus, the mechanism underlying the relationship between a group's communal climate and individual OCB is a shared communal schema; a belief that the success of the group comes before that of the individual. This finding supports prior scholarship in the OCB literature suggesting that greater cohesion in a work group, which is posited to enhance social rather than economic exchange schemas, is related to more individual-level courtesy behavior (Kidwell Jr. et al., 1997). The presence a communal climate has also been alluded to

before under different terminology by authors studying high-tech companies, such as in Kunda's (2006) seminal study of the culture of a high-tech company in the mid-1980's. Kunda (2006) argues that employees in his research context appeared to feel "a high" that "may be closest to an experience of 'community' or total commitment for many workers, a dramatic, exciting, and almost communal process brought to the corporation" (Kanter, 1983, p. 203, as cited in Kunda, 2006, p. 9).

Because a group's communal climate is based on assumptions about group members' responsiveness to needs of others and their commitment to the group (Clark & Mills, 1979), rather than an expectation of formal or direct instrumental exchange (Blau, 1964; Goffman, 1961), this construct captures informal rather than formal elements of a work group's climate for citizenship. It characterizes the extent to which unofficial work group practices, rather than formal policies or procedures, are conducted in such a way that individuals trust one another to put the needs of others or the group ahead of their own individual needs, if necessary, to behave fairly, and to cooperate.

The other dimension of a citizenship climate found to significantly predict OCB was the perception that group members are rewarded for broad contributions, which relates to the more formal processes and procedures associated with evaluations and rewards that affect the work group. When individuals believe that group members are rewarded for contributions beyond their core job roles, they were less likely to engage in the social participation and health and well-being dimensions of OCB. This is the opposite of what was hypothesized. I see at least three potential explanations for this result. First, higher expectations of such rewards may indicate that the group is operating under assumptions of instrumental exchange principles (a.k.a. direct or economic

exchange, see Blau, 1964; Goffman, 1961), the opposite of communal exchange (i.e., social exchange; Goffman, 1961) principles. When groups share beliefs that interactions are governed by principles of direct exchange, group members believe actions taken to benefit others in the group will be repaid with specific benefits to themselves (Clark & Mills, 1979). In the case of OCB, the expected reward is a higher performance evaluation, tangible rewards, or recognition from other group members or one's supervisor. In light of this, the finding that an expectation of rewards negatively affects the social participation and health and well-being dimensions of citizenship is particularly interesting, given that these dimensions are characterized by the most communally-oriented behavior, related to interacting with and caring for other group members' in a holistic sense rather than simply as professional acquaintances. Thus, these results suggest that the presence of instrumental exchange schemas in the group is likely to detract from the most community-oriented facets of OCB, and substantiates the finding discussed above about the power of a communal climate. These results also offer additional nuance to research suggesting that generalized (indirect) exchange may lead to greater social solidarity than reciprocal (direct) exchange (Lévi-Strauss, 1969; Molm et al., 2007). Taken together, these findings illuminate the richness of the multiple facets – both formal and informal – that compose a citizenship climate.

A second explanation for the negative relationship between perceived rewards and social participation and health and well-being behavior could be the level of relatedness that these types of OCB have with individuals' task behavior. These two categories of OCB contained the most activities generated by focus group participants as being examples of "things people do at work that are good for [Initech] but not part of core job

requirements." If the relative number of activities generated for each category of OCB is interpreted as the extent to which people perceive the category to be discretionary rather than expected, these two categories of OCB can be considered the most discretionary. In this case, if individuals believe they will be rewarded for some broad contributions but not others, they may replace the more voluntary (e.g., least task-related) activities with others that are more likely to be rewarded, given limited time resources. Therefore, the differential predictive power of the rewards for broad contribution variable on different types of OCB may be the result of varying perceptions about the degree to which each OCB category is discretionary or "reward-able."

A final explanation could be that individuals' expectations for rewards are transparent to peers and interpreted with skepticism or wariness. In this case, peers may suspect that the focal individuals' attempts at OCB are actually acts of impression management in order to generate more rewards. This interpretation follows from statements in focus groups (see Chapter VI) that suggest managers and peers are able to differentiate between citizenship motivated by passion and citizenship motivated by interest in recognition or promotion, and that acts motivated by more selfish goals are interpreted poorly. To the extent that such expectations for rewards are visible to peers and interpreted in this way, it is possible raters assigned lower ratings on the social participation and health and well-being dimensions of citizenship because they did not believe their ratees were engaging in these acts authentically or successfully.

Overall, these results shed light on the nuanced mechanisms through which different aspects of the social climate may influence OCB. While study data cannot

directly endorse any above the others, it is probable that all of the processes discussed above are partially responsible for the resulting relationships.

Effect of Disagreement within the Group on OCB

The dispersion of perceptions within work groups about climate variables – in other words, the extent to which group members disagreed about the group's citizenship climate, or "the way things are around here" (Reichers & Schneider, 1990, p. 22) – also emerged as a significant predictor of OCB in interesting ways, once again shedding light on the different reasons why individuals engage in OCB.

As predicted, greater disagreement about the communal climate in the group was associated with more OCB. This contrasts with prior scholarship on organizational climates (Schneider et al., 2002), which tends to argue that stronger shared perceptions enhance the effect of climate variables. Rather, this effect supports theory on social learning (Bandura, 1977) and social information processing (Salancik & Pfeffer, 1978) suggesting that individuals look to significant others in the social environment for cues about appropriate behavior and work practices. To the extent that OCB can be considered a type of proactive behavior in this situation, this finding also supports emerging research suggesting that individuals are more likely to engage in proactive behavior under conditions of uncertainty to clarify role expectations (Grant & Ashford, 2008; Griffin, Neal, & Parker, 2007).

Interestingly, the opposite pattern emerged for perceptions of available opportunities for non-core behavior. In this case, stronger shared perceptions about available opportunities for non-core activities produced more individual citizenship behavior. This effect was not predicted, but supports previous theory and research on

organizational climates suggesting that the exposure to similar environmental stimuli leads to more consistent beliefs and behavior amongst group members over time (Schneider, 1975; Schneider et al., 2002).

These contrasting effects for the dispersion of perceptions about communal climate and perceived opportunities for non-core activities on OCB may stem from the different levels of risk associated with misjudgments about each of these climate dimensions. Misjudgments about the level of trust, fairness, and cooperative norms in the group come with a great deal of risk; if an individual wrongly assumes others are operating under principles of communal exchange and he/she makes contributions to the group and to other group members accordingly, his/her own performance and well-being are likely to suffer if other group members are subsequently unwilling to come to his/her aid when needed. Thus, it is of critical importance that individuals understand the principles of exchange under which the group is operating in order to protect their own success and well-being. More uncertainty is therefore likely to prompt individuals to make concerted efforts to understand others' beliefs. Given that greater dispersion in perceptions about the communal climate was related to more citizenship behavior on the dimensions of helping and social participation, in particular, supports this interpretation, since these are more interpersonally-oriented than other dimensions of OCB operationalized in this study. Both types of behavior require individuals to directly interact with other people, suggesting that individuals may use these interpersonally-oriented acts of citizenship as a way to create opportunities for social learning experiences, and to assess the extent to which others are operating under guidelines of trust, fairness, and cooperative norms.

In the case of perceived opportunities for non-core activities, misjudgments are perhaps less risky. The mechanism underlying the relationship between perceived opportunities and OCB relates to reactivity and ease of action. Unlike the exchange mechanism underlying the effect of communal climate on OCB, this mechanism is not predicated on principles of exchange, thus there is no assumption about direct or generalized reciprocity. Therefore, if individuals perceive more opportunities for OCB relative to their coworkers and take action accordingly, their own future success and well-being are not necessarily compromised if others disagree with their assessment and do not act similarly. For this reason, it is logical that greater dispersion in perceptions did not have a positive effect on OCB in this case.

Instead, it makes sense that a stronger shared perception in the group about available opportunities for OCB would have a positive effect on individual behavior. Focus group participants indicated that they engaged in more OCB when opportunities were available due to the ease with which they could do so; therefore, OCB becomes more reactive than proactive in these cases. Scholars argue that proactive behavior can carry risk to individuals (Grant & Ashford, 2008), since the volitional nature of the activity will prompt others to attribute failure or missteps in such activities to the individual rather than to contextual factors. In the presence of higher shared perception in the group that many opportunities for non-core activities exist, the perception of OCB as a proactive type of behavior may diminish; instead, the actions may be perceived as more reactive, acceptable, and less personally risky. For this reason, a higher shared belief about opportunities reduces the risk associated with engagement in OCB, prompting more of it. The finding that greater shared perceptions of available opportunities

prompted more helping, social participation, and health and well-being behavior, in particular, supports this theory because these types of OCB are conceivably the most personally risky behaviors to individuals in a work environment, given their (typically) distant association with individuals' own work tasks. Thus, engagement in such activities may pose a greater risk when the group lacks a belief that opportunities and support for such activities abound.

Comparing Sources of OCB Ratings

The next pattern that emerged from Study 2 was that the variables that significantly predicted peer ratings of OCB were noticeably different from those that predicted manager ratings. These differences were not predicted; yet, they shed light on the underlying dynamics of behavior within work groups.

In the case of peer ratings, the strongest predictor of OCB across all rating dimensions was the group's communal climate, described above. Additional significant predictors, both in the positive and negative direction, included perceptions about rewards for broad contributions, and the level of disagreement within the group about the level of communal climate and opportunities for non-core activities. Interestingly, most of these predictors did not significantly predict manager ratings of OCB. The only two significant predictors of manager ratings were the strength of the group's shared perceptions of opportunities for non-core activities, and the strength of the group's shared perceptions of autonomy. Akin to the results using peer ratings, manager ratings of OCB were higher when the mean level of perceived opportunities for non-core activities was higher and the dispersion of perceptions was lower. However, the opposite occurred in the case of autonomy; manager ratings of OCB were higher when the mean level of

perceived autonomy was higher, but dispersion in perceptions was also higher (e.g., there was more disagreement about the level of autonomy).

Evaluating the different patterns between peer and manager ratings together indicates that the types of predictors of peer ratings appear more socially-embedded than those that predict manager ratings. Peer ratings were most strongly predicted by assumptions about social exchange relations within the group and the extent to which group members shared the same perception of the group's climate. Rather, manager ratings were most strongly predicted by structural or environmental characteristics: in particular, the level of autonomy or control that group members are afforded, or the opportunities they perceive in their environment for non-core activities.

Two potential reasons for this discrepancy are noticeable. First, members of the same work group at Initech tend to share workspaces, while managers tend to be more physically separated from their subordinates. Furthermore, peers tend to work on interdependent projects, while supervisors' work tends to relate more to oversight and strategy. Due to both of these characteristics, it is possible that peers have more regular opportunities to observe and experience coworkers' OCB than do managers. As a result, managers may look to the organizational structure or environment and assume more OCB is occurring in groups with higher levels of structural autonomy or greater available opportunities for non-core activities, even when peers do not observe actual engagement in such behavior. This explanation is only speculative; however, as other scholars have noted (Harris & Schaubroeck, 1988; Organ et al., 2006), there are a dearth of studies in the employee performance and OCB literatures that use multiple rating sources

simultaneously. Therefore, these findings take a helpful step toward shedding light on the different types and levels of insight that peers versus managers may have.

Effect of OCB on Performance Evaluations

The final pattern that emerged from this study relates to OCB and performance evaluations. Prior research on OCB has systematically found a positive effect between individual citizenship behavior and performance evaluations. In general, scholars explain this relationship by suggesting that raters implicitly include OCB in performance scores (MacKenzie et al., 1991). Based on this, I predicted that ratings of OCB at Initech would also be positively associated with individuals' performance evaluations. Interestingly, while this hypothesis was partially supported since voice behavior had positive impact on performance, the overall pattern of results suggests that OCB generally does not have an effect on performance in this context. Even the significant effect for voice was quite weak (see discussion of results in previous section).

I see at least three possible explanations for this unexpected null effect. First, it is possible that Initech maintains a very narrow view of "performance," and the type of individual performance that is evaluated is only that related to one's own tasks. If this is the case, the norms for citizenship behavior in the work group become particularly important for sustaining this positive behavior, given the lack of formal rewards in the form of performance evaluations for such contributions. Instead, the social context and the expectations around individual behavior – for instance, the communal climate within work groups – are responsible for employees' continued engagement in these activities.

While possible, this first explanation is unlikely given the support in focus groups that some forms of non-core behavior tend to be rewarded in some way in this context.

Therefore, the second explanation for this finding is that the study design of this dissertation contributed to this insignificant effect. Citizenship was operationalized in Study 2 based on the types of activities generated by employees in Study 1 when they were specifically asked to give examples of activities that were not part of their job descriptions. Therefore, it is possible that the types of activities considered to be OCB in this study were less likely to be included in performance evaluations as often as those used in prior studies of OCB, when the context-specific nature of the construct has not been explored prior to operationalization. If this explanation is valid, it calls into question the previous findings that OCB, as a construct, is truly related to performance, since the dimensions of OCB used in prior studies may have included activities that were more expected components of individuals' roles in those contexts, explaining their tacit inclusion in performance ratings.

The third possible explanation is that OCB, as operationalized here, does not relate to individuals' task-specific performance, but does affect overall performance indirectly, in ways that are not as easily measured in a performance evaluation. For instance, socializing in the workplace or contributing to the health and well-being of coworkers may generate positive affect, which has been linked to creativity and innovation in past research (Amabile et al., 2005); thus, OCB may increase employees' ability to apply particularly creative solutions to problems or come up with innovative ideas in their everyday work, but this boost to performance may not be captured in performance evaluations. Likewise, OCB may help to sustain a positive and healthy work environment despite employees' long work hours and stressful working conditions, thus enabling enhanced performance not only for oneself, but one's work group or the

organization as a whole. Indeed, quotes from focus groups in Study 1 lend support to this assertion that OCB has a more indirect effect; for instance, one employee from Marketing said the following:

> I think these activities are really important. I think there are a couple of levels. "Horizontal" things [administrative help for others' projects] are functionally important, and they need to be there because you need people to manage these different things… but it's a pretty superficial level of importance. It's not like a deep psychological benefit to them, they just have to happen. But I think a lot of other things like hanging out with your coworkers, or going to the gym, or things that have more of an intangible benefit that makes everybody – makes you a better person, a better worker, which, in turn, makes people around happier, and that kind of thing. So, I think they're really important. I just think there are multiple tiers of importance. (Marketing employee, Focus Group 3)

An employee from the General Administration business unit concurred:

> I would never go to say [these activities] don't matter, because a lot of these things are positive. They're mostly positive. So if you are doing them, the overall workforce or the workplace will be a more positive environment to work in. If you have the absence of all of those, you might feel it here at [Initech]… I mean if people weren't concerned for their coworkers or people weren't trying to basically take criticism positively – if you put this all together and you had none of these, you'd have a very sterile, almost a negative workplace. (General Administration employee, Focus Group 8)

Therefore, it is possible that the relationship between OCB and individual performance evaluations is not the one that best captures the extent to which an individual's OCB has an impact on his or her continued success or the organization's bottom line. This possibility is discussed in more detail in the next chapter.

The data in this study cannot shed light on the extent to which one of these explanations is a more accurate account of the relationship between OCB and individual performance evaluations. However, given the subjective nature of most employee performance evaluations, it would be bold to suggest that such evaluations are in no way affected by multiple aspects of an individuals' behavior at work, whether this behavior is

officially within the boundaries of a person's job description or not. Therefore, I suspect that the lack of a strong empirical relationship between OCB and performance in this study is due to a combination of the study design or the lack of measurement of the other types of performance that may be most affected by OCB.

While it is perhaps of theoretical interest to continue investigating the nuances of the relationship between OCB and employee performance evaluations, these relationships have already been explored extensively in the organizational literature. As such, I believe there may be less benefit to continuing with this pursuit than there would be from greater investigation of the relationship between individual OCB and new types of performance (e.g., creativity and innovation), OCB and group-level or organizational-level performance, and the mechanisms underlying these relationships. These directions for future research are discussed in more detail in the next chapter.

Limitations

Despite this study's strengths, several limitations qualify the conclusions the can be drawn. First, there was a relatively high amount of missing data, particularly on the dependent variables, which limited the sample size used in regression analyses. The analysis of this missing data suggested that the reason for it was employees' beliefs that they did not have enough information to adequately respond (e.g., to evaluate others' OCB). Therefore, the results are based on responses from people who either (1) actually had more information about peers' or subordinates' citizenship behavior, or (2) felt more confident evaluating such behavior, even if they did not have as much objective information. Without data to determine whether such confidence would lead people to evaluate others more or less positively I cannot assess whether this effect may bias results

in a particular direction. However, readers should be aware of this limitation and interpret results accordingly.

Secondly, data were collected at a single point in time; therefore, although I do not make claims about causality, I cannot rule out the possibility that the effects reported here actually work in the opposite direction (e.g., OCB produces a stronger citizenship climate). The qualitative data from Study 1 do provide support for the direction of effects proposed and found in this study; however, I encourage future scholars to explore these results using longitudinal designs.

Third, performance at Initech is evaluated on a scale from 1-5, where 1 and 5 are reserved for employees performing exceptionally below or above expectations. Thus, the lack of significant effect of OCB on performance could be due to range restriction in the measurement of performance rather than a true lack of relationship.

Finally, the communal climate index variable was created post hoc based on a review of the literature related to communal schemas and communal exchange relationships, rather than through a direct measure of this construct. I encourage future scholars to develop a scale to more directly measure a communal climate, perhaps by modifying the individual-level measure of communal strength (Mills, Clark, Ford, & Johnson, 2004), and to validate the results presented here.

Overall, despite these limitations, the pattern of results in Study 2 support broad hypotheses in this dissertation predicting that the social context has an impact on the level of OCB undertaken by individual employees. In the next chapter I interpret results of Study 1 and Study 2 together, discuss the main contributions from this dissertation to the organizational studies literature, and offer several directions for future research.

PART IV

CONSIDERING THE INFLUENCE OF SOCIAL CONTEXT ON CITIZENSHIP: IMPLICATIONS FOR FUTURE RESEARCH AND PRACTICE

CHAPTER IX

GENERAL DISCUSSION AND CONCLUSIONS

In this dissertation I offered a new lens through which to view organizational citizenship behavior (OCB) that brings the richness of the social context and its implications for OCB into focus. Drawing on role theory, I argued for the conceptualization of an organizational citizen as a unique type of work role that is both defined and constrained by the contexts in which it is embedded, as are all roles in social life, rather than as a caricature of a "good soldier" who engages in a specific set of citizenship behaviors that are consistent across different work contexts. I presented hypotheses predicting that the formal and informal aspects of a work group's climate for citizenship would influence work group members' perceptions of the nature and meaning of citizenship behavior in their work environment, as well as the type and level of OCB in which they engage. Using a multi-method study design and multilevel research methods, I tested hypotheses inductively and deductively.

Theoretical Contributions

This research makes at least five contributions to the organizational behavior literature. First, the qualitative portion of this dissertation advances theory on organizational citizenship behavior by exploring the relevance of the existing

conceptualization and measurement of OCB, and identifying new forms of this behavior which may be more characteristic of OCB in the knowledge economy. Although scholars have long since acknowledged that the nature of work has changed (Arthur & Rousseau, 1996; Bridges, 1994), scholars of OCB have not questioned or updated the conceptualization of the OCB construct with this shift in mind since it was first examined in the 1980s and 1990s. By conducting inductive research about the nature of OCB with knowledge workers in a modern work setting, Study 1 takes a first step toward aligning the study of OCB with recent shifts in the nature of work. Findings from this study show that some commonly-used operationalizations of OCB (e.g., those relating to employee obedience, deference to authority, strict work schedules, and brick-and-mortar work contexts) may be systematically outdated. Simultaneously, new manifestations of OCB emerged that speak to the types of spontaneous activities that sustain employee and organizational performance in the knowledge economy, such as social interaction unrelated to work tasks, and efforts to support coworkers' physical and psychological health and well-being. Based on these findings, I encourage future scholars to explore the nature of OCB in their research settings before choosing the specific variables to operationalize. Moreover, future research should investigate whether the new dimensions of citizenship that emerged in this study are generalizeable to other organizations.

Second, this research theoretically unpacks and operationalizes the citizenship climate construct, which has been discussed briefly in the organizational literature (Schneider et al., 1994), but never elaborated or tested empirically. Findings from the qualitative and quantitative portions of this dissertation confirmed Schneider and colleagues' (1994) assertions that trust, fairness, and cooperative norms are key elements

of a climate for citizenship. In addition to Schneider and colleagues' (1994) proposed dimensions, group autonomy and perceived opportunities for non-core activities emerged as two additional dimensions of a climate for citizenship in both the qualitative and quantitative portions of this research. The final dimension proposed by Schneider and colleagues (1994), the perception that broad performance contributions are rewarded, emerged as a key dimension of a climate for citizenship in the qualitative study, but had an unexpected negative effect on some forms of citizenship behavior in the quantitative study, and null effects on others. Therefore, it is not included as a key dimension of a citizenship climate. Taken together, these results contribute a new conceptualization of a climate for citizenship to the literature, proposing the following as the key underlying dimensions: (1) *communal climate*, a higher-order construct introduced in this study and composed of shared beliefs that work group practices are governed by trust, fairness, and norms for cooperation; (2) *group autonomy*, a shared belief that policies and procedures affecting the work group allow the group to control work tasks and the methods through which tasks are accomplished; and (3) *perceived opportunities for activities beyond core job tasks*, a shared belief that the policies, procedures, and practices affecting the group allow for group members' engagement in activities outside their core job tasks.

Third, findings from the quantitative study deepen the field's understanding of citizenship behavior by situating it in a salient, proximal work context: work groups. Through an empirical investigation of the relationships between dimensions of the group's citizenship climate, dispersion of group member perceptions around climate dimensions, and individual OCB, this research answers calls for a more thorough, multilevel investigation of the relationship between social context and OCB (Farh et al.,

2004; George & Jones, 1997; Kidwell Jr. et al., 1997). Results from this study indicate that the strongest predictor of individual OCB was a group's communal climate, defined above, and this effect explained variance over and above variables shown to be strong predictors of OCB in past research (e.g., job satisfaction and procedural justice climate). Conversely, and unexpectedly, the belief that group members are rewarded for engaging in citizenship was found to diminish individual participation in the most communally-oriented forms of OCB, namely social participation and health and well-being behavior.

Taken together, these findings illuminate the complex and occasionally conflicting group-level dynamics that may influence citizenship behavior. I argued in Chapter VIII that the mechanisms underlying the competing effects of communal climate and reward perceptions may relate to different exchange schemas (Blau, 1964; Goffman, 1961) associated with each of these climate dimensions: data suggest that instrumental exchange schemas (which underlie reward expectations) detract from citizenship behavior, while communal exchange schemas (which underlie a communal climate), enhance citizenship behavior. This pattern of results contrasts with previous theory and research suggesting that expectations of rewards – and thus an instrumental orientation – will increase OCB (Morrison, 1994; Schneider et al., 1994). Rather, these findings substantiate emerging research in the organizational and sociological literature on the positive effects of a sense of community, strong interpersonal relationships, and generalized exchange in the work environment (Blatt & Camden, 2006; Dutton & Ragins, 2007; Dutton, Worline, Frost, & Lilius, 2006; Molm et al., 2007). I encourage future scholars to further explore these uniquely human components of organizational life, which remain understudied in the organizational literature.

Fourth, the findings contribute to the literature on the role of work organizations in our society. The extant research on boundaryless and protean careers (Arthur & Rousseau, 1996; Briscoe & Hall, 2006; Hall, 1996, 2002) suggests that the role of work organizations has shifted from a place within which employees invested multiple years and expected to build a career, to a more temporary landing spot where employees take a self-driven approach to gaining skills and experience, and then leaving to advance their careers elsewhere. Indeed, the popular press has urged employees to develop "brand 'you'" (Pink, 2001), and to pursue individual careers without loyalty to particular organizations, industries, or coworkers. Yet, the nature of citizenship behavior described in this study indicates that under certain conditions, modern employees are willing to invest much more in their work organizations than the extant research suggests. Indeed, examples of citizenship behavior in this study (e.g., the social participation and health and well-being dimensions, in particular) indicate a willingness to contribute to the social environment and to engage in activities far removed from one's work tasks; this involvement is counterintuitive if employees are only interested in building their own skill base and using each organization as a stepping stone. Employees spoke directly about this phenomenon in focus groups, as follows:

> [Initech is] more than just a place you come and you work, you do your 9 to 5 and you leave. You have a community here, and you have people that you hang out with. Almost all of my friends are drawn from the [Initech] community. It is my life, for good and for bad – like 90 percent of my existence is here. (General Administration employee, Focus Group 2)

> It's the expectation when you come in, that [Initech's] gonna provide you with a much more holistic work environment. When I was interviewing, that was such a big selling point… you have to put in the hours, but at the end of the day you can go salsa [dancing]. Or you can go to the gym… All of these things are part of the package of working here. (General Administration employee, Focus Group 2)

These quotes and the empirical relationships found in this study related to the strong power of a work group's communal climate suggest that employees in certain work groups have developed a strong implicit contract (Rousseau, 1995) with Initech. The organization provides them with a more holistic community – a feeling of belongingness to something beyond that of a typical work organization (Baumeister & Leary, 1995) – and in turn employees take action to sustain the community. This strong contract harkens back to scholarship on utopian communities and total institutions (Goffman, 1961; Kanter, 1972). For instance, in his influential essay, Goffman (1961) described "total institutions" as follows:

> A basic arrangement in modern society is that the individual tends to sleep, play, and work in different places, with different co-participants, under different authorities, and without an over-all rational plan. The central feature of total institutions can be described as a breakdown of the barriers ordinarily separating these three spheres of life… Activities are brought together into a single rational plan purportedly designed to fulfill the official aims of the institution (p. 5-6).

Although Goffman's (1961) characterization of total institutions does not precisely match what was observed in this context,[23] the general theme is relevant; for at least some of its members, the organization studied in this dissertation seems to be fulfilling functions beyond those typically fulfilled by modern work organization (Cappelli, 1999). Thus, this research offers unique insight into one organization that seems to be bucking trends in the broader work environment. Rather than organizing to accommodate patterns of employee mobility and transience, the organizing processes observed here attempt to counteract the transience by encouraging employees to abide by communal rather than instrumental schemas. In turn, employees are likely to develop increasing loyalty to this organization

[23] For example, Goffman (1961) also suggests that individuals in total institutions observe strict schedules which are handed down via "formal rulings and a body of officials" (p. 6); this is a contrast to the comparatively autonomous environment observed at Initech.

through their continued investment in it (Bem, 1972; Bolino et al., 2002). Given the legitimacy Initech has gained via prominent media coverage, it is conceivable that other organizations may attempt to mimic the patterns observed here. As such, this research may provide insight into ongoing shifts in the role that modern work organizations play in individuals' lives.

Finally, the fifth main contribution of this study is regarding the relationship between organizational citizenship behavior and performance, both at micro and macro levels of analysis. OCB was – unexpectedly – not found to have a strong significant relationship with performance evaluations in this dissertation. This contrasts with prior research on OCB (e.g., MacKenzie et al., 1991). One of the explanations I offered for this finding in Chapter VIII was that previously-established forms of OCB (e.g., conscientiousness) may have a direct impact on individual productivity and performance, but the new forms of citizenship behavior (e.g., social participation, health and well-being behavior) may have a more indirect effect on performance through transformational mechanisms (Hedström & Swedberg, 1998), such that individual actions are transformed into a collective outcome, but the effect is difficult to measure at the individual level. For instance, focus group participants indicated that OCB in the aggregate has a positive effect on one key organization-level performance outcome: innovation.

> One of the great things is that [citizenship behavior] introduces a lot of novelty into the work environment, and with that novelty comes ideas that wouldn't be there otherwise. (General Administration employee, Focus Group 8)

> I definitely see the activities that allow me to engage socially with [Initech employees] as being very beneficial to [Initech]. There's this manager I met who works in [Sales], and I don't work in [Sales] – I haven't had to do anything with [Sales]. But I was working on internal transfers in Engineering, and he was working on the rotation program in [Sales], and it randomly came up at lunch, and it was this wonderful exchange of ideas that might not really happen if you didn't

> have those opportunities to meet each other and socialize, and have this stuff come up organically. So I've had a lot of situations like that where I'll have a casual conversation with someone that I'll turn into something productive. (Human Resources employee, Focus Group 1)
>
> [Citizenship behavior] is really important to the culture of innovation, which [Initech] is about. That's how we can stay in business. And this kind-of creates that culture. If it was not there, at [Initech], then our pace of innovation, I think, would go down, which would ultimately hurt us. A lot of these things, a lot of the products that are created at [Initech], are because somebody had a bright idea and they played with it, and somebody else thought it was a cool idea and they started working on it, but it never was their core job. So I think it's really a big asset for [Initech]. We would suffer without it. (Marketing employee, Focus Group 3)

These quotes illustrate the possibility that the new forms of citizenship behavior, particularly those related to interpersonal socializing, may have less of an effect on individuals' performance as captured in traditional evaluations, but are still critical for organizational success at more macro levels. There is keen interest in the organizational literature at present in identifying the processes that contribute to creativity and innovation (George, 2008); thus far, citizenship behavior has not been examined as a means through which to generate these types of novel ideas or catalyze innovation. However, findings in this research would suggest new forms of OCB may be a fertile ground for future research on these topics.

Implications for Practice

The power of the work context to influence individual citizenship behavior has important implications for both employees and managers in organizations. While prior research on OCB has focused mostly on individual determinants of this behavior, this research suggests that key facets of the social context may be more powerful predictors of OCB. As such, managers are encouraged to take action to create the type of social context – namely, a climate for citizenship – that will produce the type and level of OCB

that is relevant in their work setting, rather than solely attempting to hire individuals who possess personal characteristics that may predispose them to engage in such behavior. Likewise, individual contributors within work groups can take an active role in creating such a climate by instigating behaviors with their colleagues that are indicative of a communal climate, or creating opportunities for non-core activities. Individual behavior may catalyze similar behavior in others through the social cues employees get from one another about what constitutes acceptable behavior.

Although the findings from this study offer guidelines for managers trying to promote OCB in their organization, the strong relationship between a group's communal climate and OCB also prompts practical concern about sustaining OCB in the modern work environment. Existing scholarship has found that trust and norms in the workplace require prior knowledge and expectations of the people with whom one works (Kramer, 1999); thus, they are strengthened over time. Given that a communal climate is composed of these characteristics, it requires that employees have a shared history and the opportunity to build trust and norms gradually. Yet, given trends toward more transient workplaces (Arthur & Rousseau, 1996; Cappelli, 1999), the opportunity for the development of such trust and norms is put at risk. Indeed, individuals are increasingly building networks and social capital between organizations rather than solely investing in careers within one company. If these trends continue they may give way to less OCB if communal climates within organizations become increasingly rare. Furthermore, to the extent that instrumental exchange schemas underlie boundaryless careers (Pink, 2001), the levels of OCB in modern workplaces may be further compromised.

Despite these concerns, findings from this dissertation indicate that exceptions exist; citizenship behavior was common in this research context, suggesting it can be sustained elsewhere, as well, despite increasing employee mobility at a systemic level. Managers and other leaders may, however, need to more deliberately invest in creating these climates than they might if individual predispositions were to remain with one organization for longer periods of time. To cultivate OCB in modern workplaces, managers are advised to take cues from this research and focus on fostering communal climates in their work groups. Potential strategies could include role modeling the types of trusting, cooperative, and ethical practices that compose a communal climate, given the power of social learning in work groups (Bandura, 1977), actively creating opportunities for social participation, or publicly displaying support for group members' physical and psychological health and well-being. Although some of these actions may seem counterintuitive with regard to work group productivity, findings from this dissertation suggest that they may pay dividends in organizational citizenship behavior.

Directions for Future Research

Findings from this study offer multiple opportunities for future research on the relationships between work context, citizenship behavior, and performance. First, key questions remain about the underlying dimensions of a citizenship climate. Each of the three dimensions of such a climate identified in this research was positively related to some dimensions of citizenship behavior; however, no climate dimensions were positively related to all types of OCB as rated by both managers and peers. Therefore, future investigation would help confirm these dimensions and extend the findings from this dissertation.

Another goal for future research is to operationalize the communal climate dimension directly, rather than through an index of the underlying dimensions of the construct, as was done in this study. Although the index measure allows for a nuanced assessment of this construct, a holistic measure would strengthen conclusions about the relationship between communal climate and OCB. One approach could be to utilize the measure of communal strength proposed by Mills and colleagues (2004), modified for the group level of analysis, to pursue this future investigation.

As well, key questions remain about the mechanisms underlying the powerful effects of a communal climate on OCB. In Chapter VIII I argued that individual communal schemas (Blatt, 2009) may underlie this relationship, while instrumental exchange schemas may underlie the negative relationship between perceived rewards and OCB. I encourage future scholars to operationalize and test the potentially powerful effects of these theoretical mechanisms empirically.

Next, this research raises interesting questions about the different perspectives of peers and managers in evaluating OCB. As discussed in Chapter VIII, peer and manager ratings were predicted by different antecedents, raising the possibility that peers and managers may be assessing two fundamentally different constructs. Indeed, had I only operationalized peer or manager ratings in this study, the conclusions from this dissertation would have been systematically different. Therefore, although this methodological comparison was not the primary focus of this dissertation, it raises provocative questions about the type and level of visibility that different coworkers have into employee behavior at work, and which perspective is more accurate. This distinction has implications for research and practice related to the optimal way to evaluate

employee performance, in general. Future research is needed to further explore the similarities and differences between the sources of ratings.

Finally, I urge scholars to more thoroughly explore the relationship between citizenship behavior and performance, particularly with regard to the effect of OCB on creativity and innovation. Findings from the qualitative portion of this study suggest that new forms of OCB, in particular, are critical for sustaining innovation at more macro levels, even if they do have significant relationships with employee performance evaluations. I encourage future scholars to explore the relationship between OCB and innovation quantitatively, both with regard to the types of OCB that affect innovation as well as the processes through which these effects occur.

Concluding Remarks

Employees engage in countless "acts of citizenship" at work – things that contribute positively to their organization, but are outside their formal job roles. This dissertation expands our understanding of why employees engage in such activities, putting a particular focus on the factors in the work group social context that affect individual behavior. This research also offers key insight into new forms of citizenship behavior, taking a step toward aligning the literature on OCB with the changing nature of work and the knowledge economy. By offering theory about the relationships between the social context and individual citizenship behavior, and subsequently testing hypotheses about these multilevel relationships, the current research challenges existing conceptualizations of an "organizational citizen" as a prototypical individual who takes it upon him or herself to "do good" for the organization. Rather, it proffers some power to the social context, suggesting that organizations and managers have more opportunity

than previously acknowledged to shape the work environment in such a way to encourage these types of positive employee behavior.

APPENDICES

APPENDIX A
Existing Dimensions of OCB and Associated Survey Items

Advocacy Participation	
Van Dyne, Graham, & Dienesch (1994)	Frequently makes creative suggestions to coworkers
Van Dyne, Graham, & Dienesch (1994)	Uses professional judgment to assess right/wrong for organization
Van Dyne, Graham, & Dienesch (1994)	Encourages management to keep knowledge/skills current
Van Dyne, Graham, & Dienesch (1994)	Encourages others to speak up at meetings
Van Dyne, Graham, & Dienesch (1994)	Helps coworkers think for themselves
Van Dyne, Graham, & Dienesch (1994)	Keeps well-informed where opinion might benefit organization
Van Dyne, Graham, & Dienesch (1994)	Does not push superiors to perform to higher standards (R)
Altruism	
Smith, Organ, & Near (1983)	Helps others who have been absent
Smith, Organ, & Near (1983)	Volunteers for things that are not required
Smith, Organ, & Near (1983)	Orients new people even though it is not required
Smith, Organ, & Near (1983)	Helps others who have heavy work loads
Smith, Organ, & Near (1983)	Assists supervisor with his or her work
Smith, Organ, & Near (1983)	Makes innovative suggestions to improve department
Smith, Organ, & Near (1983)	Attends functions not required but that help the company image
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Helps others who have been absent
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Helps orient new people even though it is not required
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Helps others who have heavy work loads
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Willingly helps others who have work related problems
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Is always ready to lend a helping hand to those around him/her
Podsakoff & MacKenzie (1994)	Willingly gives of his or her time to help other agents who have work-related problems.
Podsakoff & MacKenzie (1994)	Is willing to take time out of his or her own busy schedule to help with recruiting or training new [employees]
Altruism toward colleagues	
Farh, Earley, & Lin (1997)	Willing to assist new colleagues to adjust to the work environment
Farh, Earley, & Lin (1997)	Willing to help colleagues solve work-related problems
Farh, Earley, & Lin (1997)	Willing to cover work assignments for colleagues when needed.
Farh, Earley, & Lin (1997)	Willing to coordinate and communicate with colleagues.
Cheerleading	
Podsakoff & MacKenzie (1994)	Encourages other agents when they are down.
Civic Virtue	
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Attends meetings that are not mandatory, but are considered important
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Attends functions that are not required, but help the company image
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Keeps abreast of changes in the organization
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Reads and keeps up with organization announcements, memos, and so on
Podsakoff & MacKenzie (1994)	Attends functions that are not required but help the agency/company image.
Podsakoff & MacKenzie (1994)	Attends training/information sessions that agents are encouraged but not required to attend.
Podsakoff & MacKenzie (1994)	Attends and actively participates in agency meetings.
Conscientiousness	
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Attendance at work is above the norm
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Does not take extra breaks
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Obeys company rules and regulations even when no one is watching
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Is one of my most conscientious employees
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Believes in giving an honest day's work for an honest day's pay
Farh, Earley, & Lin (1997)	Complies with company rules and procedures even when nobody watches and no evidence can be traced.
Farh, Earley, & Lin (1997)	Takes one's job seriously and rarely makes mistakes.
Farh, Earley, & Lin (1997)	Does not mind taking on new or challenging assignments
Farh, Earley, & Lin (1997)	Tries hard to self-study to increase the quality of work outputs
Farh, Earley, & Lin (1997)	Often arrives early and starts to work immediately.
Contextual Performance (generalized)	
Motowidlo & Van Scotter (1994)	Comply with instructions even when supervisors are not present
Motowidlo & Van Scotter (1994)	Cooperate with others in the team

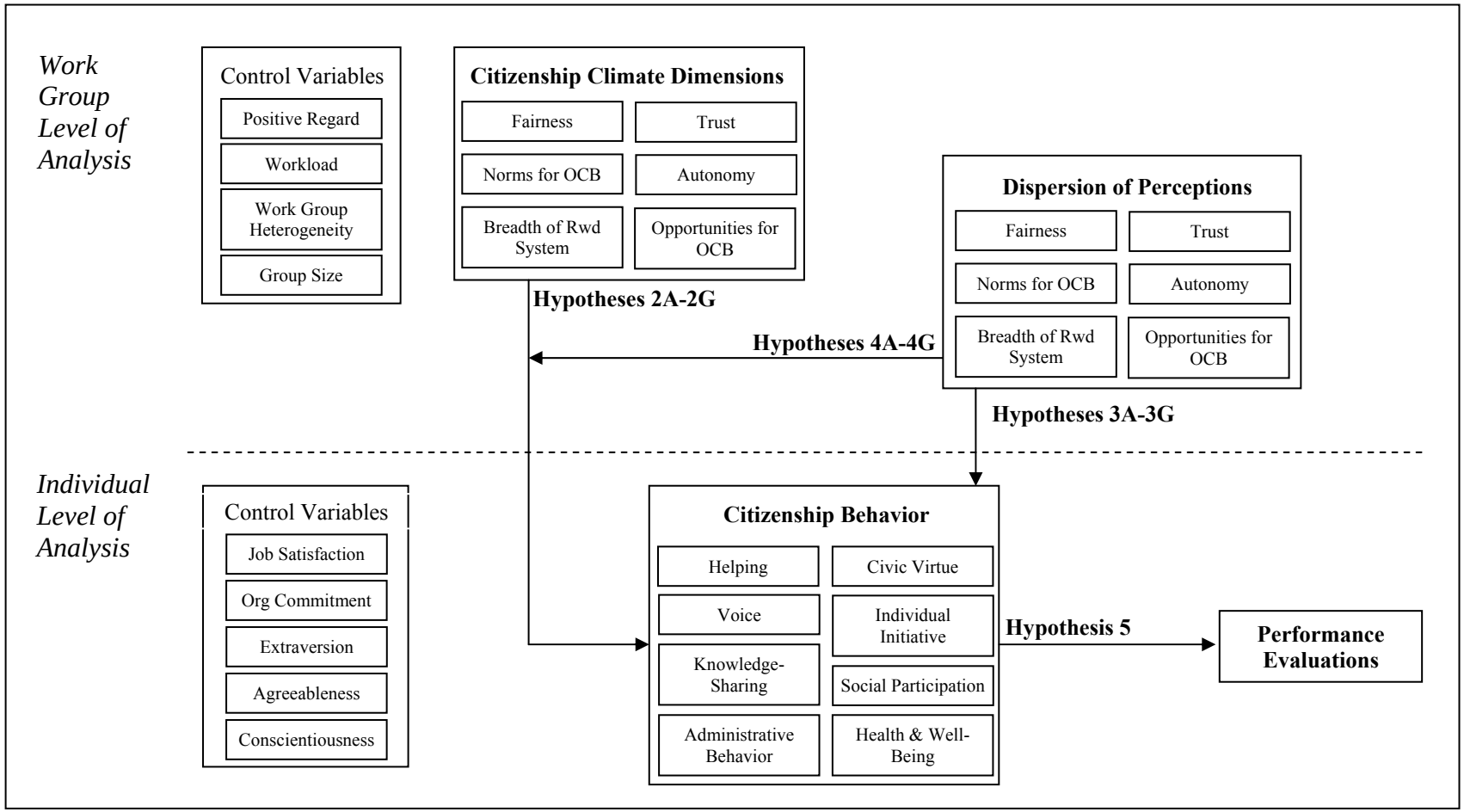
Motowidlo & Van Scotter (1994)	Persist in overcoming obstacles to complete a task
Motowidlo & Van Scotter (1994)	Display proper military appearance and bearing
Motowidlo & Van Scotter (1994)	Volunteer for additional duty
Motowidlo & Van Scotter (1994)	Follow proper procedures and avoid unauthorized shortcuts
Motowidlo & Van Scotter (1994)	Look for a challenging assignment
Motowidlo & Van Scotter (1994)	Offer to help others accomplish their work
Motowidlo & Van Scotter (1994)	Pay close attention to important details
Motowidlo & Van Scotter (1994)	Defend the supervisor's decisions
Motowidlo & Van Scotter (1994)	Render proper military courtesy
Motowidlo & Van Scotter (1994)	Support and encourage a coworker with a problem
Motowidlo & Van Scotter (1994)	Take the initiative to solve a work problem
Motowidlo & Van Scotter (1994)	Exercise personal discipline and self-control
Motowidlo & Van Scotter (1994)	Tackle a difficult work assignment enthusiastically
Motowidlo & Van Scotter (1994)	Voluntarily do more than the job requires to help others or contribute to unit effectiveness
Courtesy	
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Takes steps to try to prevent problems with other workers
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Is mindful of how his/her behavior affects other people's jobs
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Does not abuse the rights of others
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Tries to avoid creating problems for coworkers
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Considers the impact of his/her actions on coworkers
Podsakoff & MacKenzie (1994)	"Touches base" with others before initiating actions that might affect them.
Podsakoff & MacKenzie (1994)	Takes steps to try to prevent problems with other agents and/or other personnel in the agency.
Functional Participation	
Van Dyne, Graham, & Dienesch (1994)	Does not pursue additional training to improve performance (R)
Van Dyne, Graham, & Dienesch (1994)	Avoids extra duties and responsibilities at work (R)
Van Dyne, Graham, & Dienesch (1994)	Does not work beyond what is required (R)
Van Dyne, Graham, & Dienesch (1994)	Volunteers for overtime work when needed.
Van Dyne, Graham, & Dienesch (1994)	Has difficulty cooperating with others on projects (R)
Generalized Compliance	
Smith, Organ, & Near (1983)	Punctuality
Smith, Organ, & Near (1983)	Takes undeserved breaks (R)
Smith, Organ, & Near (1983)	Attendance at work is above the norm
Smith, Organ, & Near (1983)	Coasts toward the end of the day (R)
Smith, Organ, & Near (1983)	Gives advance notice if unable to come to work
Smith, Organ, & Near (1983)	Great deal of time spent with personal phone conversations (R)
Smith, Organ, & Near (1983)	Does not take unnecessary time off work
Smith, Organ, & Near (1983)	Does not take extra breaks
Smith, Organ, & Near (1983)	Does not spend time in idle conversation
Helping	
Van Dyne & LePine (1998)	This particular co-worker volunteers to do things for this work group.
Van Dyne & LePine (1998)	This particular co-worker helps orient new employees in this group.
Van Dyne & LePine (1998)	This particular co-worker attends functions that help this work group.
Van Dyne & LePine (1998)	This particular co-worker assists others in this group with their work for the benefit of the group.
Van Dyne & LePine (1998)	This particular co-worker gets involved to benefit this work group.
Van Dyne & LePine (1998)	This particular co-worker helps others in this group learn about the work.
Van Dyne & LePine (1998)	This particular co-worker helps others in this group with their work responsibilities.
Identification with company	
Farh, Earley, & Lin (1997)	Willing to stand up to protect the reputation of the company
Farh, Earley, & Lin (1997)	Eager to tell outsiders good news about the company and clarify their misunderstandings
Farh, Earley, & Lin (1997)	Makes constructive suggestions that can improve the operation of the company
Farh, Earley, & Lin (1997)	Actively attends company meetings
Individual Initiative	
Moorman & Blakeley (1995)	For issues that may have serious consequences, expresses opinions honestly even when others may disagree.
Moorman & Blakeley (1995)	Often motivates others to express their ideas and opinions.
Moorman & Blakeley (1995)	Encourages others to try new and more effective ways of doing their job.

Moorman & Blakeley (1995)	Encourages hesitant or quiet co-workers to voice their opinions when they otherwise might not speak up.
Moorman & Blakeley (1995)	Frequently communicates to co-workers suggestions on how the group can improve.
Interpersonal Facilitation	
Van Scotter & Motowidlo (1996)	Praise co-workers when they are successful
Van Scotter & Motowidlo (1996)	Support or encourage a co-worker with a personal problem
Van Scotter & Motowidlo (1996)	Talk to other workers before taking actions that might affect them
Van Scotter & Motowidlo (1996)	Say things to make people feel good about themselves or the work group
Van Scotter & Motowidlo (1996)	Encourage others to overcome their differences and get along
Van Scotter & Motowidlo (1996)	Treat others fairly
Van Scotter & Motowidlo (1996)	Help someone without being asked
Interpersonal Harmony	
Farh, Earley, & Lin (1997)	Uses illicit tactics to seek personal influence and gain with harmful effect on interpersonal harmony in the organization (R)
Farh, Earley, & Lin (1997)	Uses position power to pursue selfish personal gain.
Farh, Earley, & Lin (1997)	Takes credits, avoids blames, and fights fiercely for personal gain.
Farh, Earley, & Lin (1997)	Often speaks ill of the supervisor or colleagues behind their backs.
Interpersonal Helping	
Moorman & Blakeley (1995)	Goes out of his/her way to help co-workers with work-related problems
Moorman & Blakeley (1995)	Voluntarily helps new employees settle into the job
Moorman & Blakeley (1995)	Frequently adjusts his/her work schedule to accommodate other employees' requests for time-off.
Moorman & Blakeley (1995)	Always goes out of the way to make newer employees feel welcome in the work group.
Moorman & Blakeley (1995)	Shows genuine concern and courtesy toward co-workers even under the most trying business or personal situations.
Job Dedication	
Van Scotter & Motowidlo (1996)	Put in extra hours to get work done on time
Van Scotter & Motowidlo (1996)	Pay close attention to important details
Van Scotter & Motowidlo (1996)	Work harder than necessary
Van Scotter & Motowidlo (1996)	Ask for a challenging work assignment
Van Scotter & Motowidlo (1996)	Exercise personal discipline and self-control
Van Scotter & Motowidlo (1996)	Take the initiative to solve a work problem
Van Scotter & Motowidlo (1996)	Persist in overcoming obstacles to complete a task
Van Scotter & Motowidlo (1996)	Tackle a difficult work assignment enthusiastically
Loyal Boosterism	
Moorman & Blakeley (1995)	Defends the organization when other employees criticize it
Moorman & Blakeley (1995)	Encourages friends and family to utilize organizational products
Moorman & Blakeley (1995)	Defends the organization when outsiders criticize it
Moorman & Blakeley (1995)	Shows pride when representing the organization in public
Moorman & Blakeley (1995)	Actively promotes the organization's products and services to potential users
Loyalty	
Van Dyne, Graham, & Dienesch (1994)	Represents organization favorably to outsiders.
Van Dyne, Graham, & Dienesch (1994)	Does not go out of way to defend organization against outside threats (R)
Van Dyne, Graham, & Dienesch (1994)	Does not tell outsiders this is a good place to work (R)
Van Dyne, Graham, & Dienesch (1994)	Does not defend organization when employees criticize it (R)
Van Dyne, Graham, & Dienesch (1994)	Actively promotes organization's products and services
Van Dyne, Graham, & Dienesch (1994)	Would accept job at competing organizations for more money (R)
Van Dyne, Graham, & Dienesch (1994)	Would not urge coworkers to invest money in organization (R)
Obedience	
Van Dyne, Graham, & Dienesch (1994)	Rarely wastes time while at work
Van Dyne, Graham, & Dienesch (1994)	Produces as much as capable of at all times
Van Dyne, Graham, & Dienesch (1994)	Always comes to work on time
Van Dyne, Graham, & Dienesch (1994)	Regardless of circumstances, produces highest quality work
Van Dyne, Graham, & Dienesch (1994)	Does not meet all deadlines set by organization (R)
Van Dyne, Graham, & Dienesch (1994)	Is mentally alert and ready to work when arrives at work
Van Dyne, Graham, & Dienesch (1994)	Follows work rules and instructions with extreme care
Van Dyne, Graham, & Dienesch (1994)	Sometimes wastes organizational resources (R)
Van Dyne, Graham, & Dienesch (1994)	Keeps work area clean and neat (obedience)

Van Dyne, Graham, & Dienesch (1994)	Sometimes misses work for no good reason (R)
Organizational citizenship behavior (generalized)	
Bateman & Organ (1983)	Comes up with new, original ideas for handling work.
Bateman & Organ (1983)	Conscientiously follows organizational rules.
Bateman & Organ (1983)	Trains or helps others to perform their jobs better.
Bateman & Organ (1983)	Takes a personal interest in other employees.
Bateman & Organ (1983)	Acts impulsively, on the spur of the moment (R)
Bateman & Organ (1983)	Has ups and downs in mood (R)
Bateman & Organ (1983)	Critically finds fault with other employees. (R)
Bateman & Organ (1983)	Makes sure that things are neat, clean and orderly.
Bateman & Organ (1983)	Tries to look busy doing nothing. (R)
Bateman & Organ (1983)	Resists influence from others, including the boss. (R)
Bateman & Organ (1983)	Acts cheerfully.
Bateman & Organ (1983)	Expresses resentment at being given orders (R)
Bateman & Organ (1983)	Loses touch with things going on around him/her. (R)
Bateman & Organ (1983)	Cooperates well with those around him/her.
Bateman & Organ (1983)	Exhibits punctuality in arriving at work on time in the morning and after breaks.
Bateman & Organ (1983)	Takes undeserved work breaks. (R)
Bateman & Organ (1983)	Complains about insignificant things at work. (R)
Bateman & Organ (1983)	Seeks others' help when he/she needs it.
Bateman & Organ (1983)	Makes positive statements about him/her immediate supervisor.
Bateman & Organ (1983)	Makes constructive statements about the department.
Bateman & Organ (1983)	Purposefully interferes with someone else doing their job. (R)
Bateman & Organ (1983)	Exhibits dependability in carrying out his/her responsibilities.
Bateman & Organ (1983)	Has people go to him/her for assistance.
Bateman & Organ (1983)	Goes out of his/her way to protect other employees.
Bateman & Organ (1983)	Goes out of his/her way to protect organizational property.
Bateman & Organ (1983)	Exhibits annoyance with others. (R)
Bateman & Organ (1983)	Exhibits poor quality work. (R)
Bateman & Organ (1983)	Starts arguments with other employees (R)
Bateman & Organ (1983)	Talks about wanting to quit his/her job (R)
Bateman & Organ (1983)	Wastes material or harms organizational property (R)
OCB-I	
Williams & Anderson (1991)	Helps others who have been absent
Williams & Anderson (1991)	Helps others who have heavy work loads
Williams & Anderson (1991)	Assists supervisor with his/her work (when not asked)
Williams & Anderson (1991)	Takes time to listen to coworkers' problems and worries
Williams & Anderson (1991)	Goes out of way to help new employees
Williams & Anderson (1991)	Takes a personal interest in other employees
Williams & Anderson (1991)	Passes along information to coworkers
OCB-O	
Williams & Anderson (1991)	Attendance at work is above the norm
Williams & Anderson (1991)	Gives advance notice when unable to come to work
Williams & Anderson (1991)	Takes undeserved work breaks (R)
Williams & Anderson (1991)	Great deal of time spent with personal phone conversations (R)
Williams & Anderson (1991)	Complains about insignificant things at work (R)
Peacemaking	
Podsakoff & MacKenzie (1994)	Acts as a 'peacemaker' when others in the agency have disagreements.
Podsakoff & MacKenzie (1994)	Is a stabilizing influence in the agency when dissention occurs.
Personal Industry	
Moorman & Blakeley (1995)	Rarely misses work even when he/she has a legitimate reason for doing so.
Moorman & Blakeley (1995)	Performs his/her duties with unusually few errors.
Moorman & Blakeley (1995)	Performs his/her job duties with extra-special care.
Moorman & Blakeley (1995)	Always meets or beats deadlines for completing work.
Protecting company resources	
Farh, Earley, & Lin (1997)	Conducts personal business on company time (e.g., trading stocks, shopping, going to barber shops). (R)
Farh, Earley, & Lin (1997)	Uses company resources to do personal business (e.g., company phones, copy machines, computers, and cars). (R)

Farh, Earley, & Lin (1997)	Views sick leave as benefit and makes excuse or taking sick leave. (R)
Social Participation	
Van Dyne, Graham, & Dienesch (1994)	Only attends work-related meetings if required by job (R)
Van Dyne, Graham, & Dienesch (1994)	Shares ideas for new projects or improvements widely
Van Dyne, Graham, & Dienesch (1994)	Keeps informed about products and services and tells others
Van Dyne, Graham, & Dienesch (1994)	Works so personal appearance is attractive and appropriate
Van Dyne, Graham, & Dienesch (1994)	Is not involved in outside groups for benefit of organization (R)
Sportsmanship	
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Consumes a lot of time complaining about trivial matters
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Always focuses on what's wrong, rather than the positive side
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Tends to make 'mountains out of molehills'
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Always finds fault with what the organization is doing
Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Is the classic 'squeaky wheel' that always needs greasing
Podsakoff & MacKenzie (1994)	Consumes a lot of time complaining about trivial matters (R)
Podsakoff & MacKenzie (1994)	Always finds fault with what the agency/company is doing (R)
Podsakoff & MacKenzie (1994)	Tends to make 'mountains out of molehills' (makes problems bigger than they are) (R)
Podsakoff & MacKenzie (1994)	Always focuses on what is wrong with his or her situation rather than the positive side of it (R)
Voice	
Van Dyne & LePine (1998)	Develops and makes recommendations concerning issues that affect this work group.
Van Dyne & LePine (1998)	Speaks up and encourages others in this group to get involved in issues that affect the group.
Van Dyne & LePine (1998)	Communicates his/her opinions about work issues to others in this group even if his/her opinion is different and others in the group disagree with him/her.
Van Dyne & LePine (1998)	Keeps well informed about issues where his/her opinion might be useful to this work group.
Van Dyne & LePine (1998)	Gets involved in issues that affect the quality of work life here in this group.
Van Dyne & LePine (1998)	Speaks up in this group with ideas for new projects or changes in procedures.

APPENDIX B
Visual Display of Proposed Relationships between Work Group Climate Characteristics, Individual Citizenship Behavior, and Performance Evaluations



APPENDIX C
Study 1 Materials: Focus Group Moderator Guide

Welcome & Ground Rules (5 minutes)

Hi! My name Kathryn Dekas. I worked with the People Analytics group last summer/fall, and I'll be joining the group full-time in several months. In the meantime, I'm working on my PhD at the University of Michigan and this project is a component of my dissertation research. Thank you for agreeing to participate!

I'm meeting with small groups of [Initech employees] (like this one) in each function, and these sessions are part of a broader data collection project going on this spring. This session will last for an hour, and I'm excited to hear what you have to say. Through these sessions, I'm aiming to get a better understanding of the many things [Initech employees] do that are beneficial to the company or that improve the work environment, but that might not be seen as core job tasks. In other words, we know [Initech employees] do many things at work that aren't in their "core" jobs – these things aren't necessarily articulated as being required, but some [Initech employees] do them and they may help [Initech] stay at the cutting edge in the industry, or contribute to a positive work environment. <*Pause to make sure people understand*> The goal in learning more about these things is to better understand the full range of activities that make [Initech] successful and special.

This will be an informal, open discussion, and I hope you will feel comfortable expressing any views you may have, even if you disagree with others in the room – in fact, especially if you disagree! The goal is for me to learn as much as I can – all of your opinions are valuable, and there are no right or wrong answers. All contributions to this discussion will remain confidential. General themes that emerge across groups will be reported and used to create a future survey. However, any information that is pertinent to you (i.e., your names) will **not** be revealed. Please do the same for one another – whatever is discussed here, keep it confidential.

<*Name*> will be here taking notes during the session to make sure we capture everything accurately, and if it is okay with you I'd like to audio record the session as well. <*Ask for permission.*> Do you have any questions for me before we begin?

Opening questions (5 minutes)

Great! Let's start with introductions before I turn on the tape recorder. We'll go around the room. Please say your first name, and then give us an example of something – anything – you did at work yesterday. This could be a core job task or something you think is "non-core," or outside your core job, but still good for [Initech] in some way. Please be specific with your example. I'll start…. Hi, I'm Kathryn, and yesterday I proofread and pilot-tested a survey for a coworker.

<Kathryn uses the white board to make a list while people talk.>

Introductory questions (15 minutes)

- Looking at this list *<point to white board>*, which of the behaviors listed here would you say are "core" job tasks vs. "non-core?"
- For the activities that you categorized as non-core, how would you categorize these behaviors – are they expected components of your job or more discretionary?

<Discuss>

In this project we're trying to understand all the things [Initech employees] might do at work that you'd say are beneficial to the company or the work environment in some way, but that might be seen as non-core or outside your main job requirements. Before we dive in, please take five minutes and write down as many behaviors as you can that might fall into this category. Try to write down at least 15. To help get started, you might think about what you did yesterday – go through your behaviors and see what comes to mind. Or, think about what you've seen your coworkers doing. Feel free to write down behaviors that might be on the border too!

<Have participants take a few minutes and write a list of behaviors. Ask people to report out spontaneously; keep a list on white board. Goal is to start making a list of behaviors to include in this category. Encourage conversation between participants based on what they are offering. After there is a good-sized list, ask the following questions.>

- What criteria did you use to determine whether something was core or non-core?
- Have we missed any key categories of things that people do around here that might be considered non-core but good for [Initech]?

<Transition>

Main questions (20 minutes)

I'm going to show you a list of survey items that researchers have used in the past on this topic. I'd like to get your opinions about them. For each of these items, do you think the behavior is core or non-core for most [Initech employees], or does it not fall clearly into one of those categories? If you think it is "non-core," would you say it's expected of you, or more voluntary?

<Distribute list of items from the following dimensions – altruism, conscientiousness, civic virtue, courtesy, sportsmanship, self-development, loyal boosterism, etc. Ask people to check a box indicating how they would categorize each activity. After everyone is done, ask the following questions.>

- How well does this list capture the range of non-core activities you identified earlier? *<point to list on white board>* What categories of non-core behaviors at [Initech] are missing?

- How relevant are these activities at [Initech]? <*Remind them that these activities are considered non-core/discretionary by other researchers.*>
- Would the activities they're talking about be considered "voluntary" here?
- Did you categorize any of the activities as "core?" Which ones? Why? <*repeat for other categories*>

<*Transition*>

- What happens at [Initech] that encourages/discourages you or your coworkers from doing these things?
- What does it say about [Initech], or its values, that these things happen here?
- To what extent are these activities important at [Initech]? How do you know?
- What impressions do you get of people who do these things more/less often?

Closing questions (5 minutes)

- All things considered, do you feel like we've come up with a comprehensive list of activities that [Initech employees] do but that are not explicitly rewarded?
- Do you have any other thoughts, feedback, or questions about this research?

We'll wrap things up there for now. Thank you very much for your participation. We know that these kinds of activities are things that people don't often think about, or even notice! That said, if you have any additional thoughts or questions after you leave (now that we've prompted you to think about these things), please feel free to email me. Thanks again! Here are your gift cards.

<*Collect lists of activities and questionnaires*>

APPENDIX D
Study 1 Materials: Worksheet for Categorizing Existing OCB Items

	Instructions: Please categorize each of the following activities by checking the box that best describes it in your work group	Group 1 Core / Expected	Group 2 Non-Core / More Expected than Voluntary	Group 3 Non-Core / More Voluntary than Expected	Group 4 Other or Not Applicable in your w ork group	**Hard to answer? Other comments?** (In particular, if you selected Other or N/A, please explain w hy)
1	Attends and actively participates in meetings.					
2	Reads and keeps up with organization announcements, memos, and so on.					
3	Does not consume a lot of time complaining about trivial matters.					
4	Is willing to take time out of one's own busy schedule to help with recruiting new employees.					
5	"Touches base" with others before initiating actions that might affect them.					
6	Assists others in this group with their work for the benefit of the group.					
7	Praises coworkers when they are successful.					
8	Acts as a 'peacemaker' when others in the organization have disagreements.					
9	Encourages other employees when they are down.					
10	Makes innovative suggestions to improve the department.					
11	Obeys company rules and regulations even when no one is watching.					
12	Does not take extra breaks.					
13	Does not spend time in idle conversation.					
14	Exercises personal discipline and self-control.					
15	Conserves organizational resources.					
16	Always comes to work on time.					
17	Always meets or beats deadlines for completing work.					
18	Works so personal appearance is attractive and appropriate.					
19	Defends the organization when outsiders criticize it.					
20	Keeps abreast of the latest developments in one's field and area.					
21	Learns new sets of skills to expand the range of one's contributions to the organization.					
22	Maintains a positive attitude even when things do not go one's way.					
23	Does not take the rejection of one's ideas personally.					
24	Responds as quickly as possible to others' needs or requests.					
25	Is reachable at all times in case of urgent questions or requests.					
26	Conducts personal errands on-site instead of off-site (e.g., eats meals, uses on-site gym, etc.)					
27	Does not publicly pass judgment about other employees.					
28	Sees one's organization's success as one's own.					
29	Takes time to get to know coworkers on a personal basis.					
30	Jokes around with coworkers.					
31	Socializes with coworkers away from the workplace.					
32	Takes steps to improve the social climate in the workplace.					
33	Voluntarily trains others on work-related topics about which one has expertise.					
34	Voluntarily trains others on non-work-related topics about which one has expertise.					
35	Looks out for the personal well-being of one's coworkers.					

APPENDIX E
Study 1 Results: Participant Categorization of Existing OCB Items

1. **Core / Expected.** 32 items (91.4%) received at least 1 "Core / Expected " response. The top five items receiving this code are listed below. **Note**: At least 50% of item respondents categorized these activities as "Core / Expected."

Meta-Category[1]	Sub-Category[2]	Source	Verbatim survey item	Count of "Core" Reponses	% of Total Item Responses
Civic Virtue	Civic Virtue	Podsakoff & MacKenzie (1994)	Attends and actively participates in meetings.	61	88.4%
Org. Compliance	Conscien-tiousness	Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Obeys company rules and regulations even when no one is watching.	54	78.3%
Org. Compliance	Personal Industry	Moorman & Blakeley (1995)	Always meets or beats deadlines for completing work.	42	63.6%
Helping	Helping	Van Dyne & LePine (1998)	Assists others in this group with their work for the benefit of the group.	35	50.7%
Helping	Courtesy	Podsakoff & MacKenzie (1994)	"Touches base" with others before initiating actions that might affect them.	34	50.0%

2. **Non-Core / More Voluntary than Expected.** 34 items (97.1%) received at least 1 "Non-Core / More Voluntary than Expected" response. The top items receiving this code were:

Meta-Category[1]	Sub-Category[2]	Source	Verbatim survey item	Count of "Non-Core / More Voluntary" Reponses	% of Total Item Responses
N/A	N/A	Pilot-tested in this study	Socializes with coworkers away from the workplace.	60	87.0%
N/A	N/A	Pilot-tested in this study	Jokes around with coworkers.	53	77.9%
Helping	Cheer-leading	Podsakoff & MacKenzie (1994)	Encourages other employees when they are down.	53	77.9%
Helping	Peace-making	Podsakoff & MacKenzie (1994)	Acts as a 'peacemaker' when others in the organization have disagreements.	52	76.5%
N/A	N/A	Pilot-tested in this study	Voluntarily trains others on non-work-related topics about which one has expertise.	52	76.5%
N/A	N/A	Pilot-tested in this study	Conducts personal errands on-site instead of off-site (e.g., eats meals, uses on-site gym, etc.)	49	72.1%
N/A	N/A	Pilot-tested in this study	Takes steps to improve the social climate in the workplace.	46	66.7%
N/A	N/A	Pilot-tested in this study	Takes time to get to know coworkers on a personal basis.	45	65.2%
N/A	N/A	Pilot-tested in this study	Looks out for the personal well-being of one's coworkers.	44	64.7%
Helping	Inter-personal Facilitation	Van Scotter & Motowidlo (1996)	Praises co-workers when they are successful.	38	55.1%

[1] Meta-category assigned by Organ et al. (2006)
[2] Sub-category assigned by source authors

3. **Not Applicable.** 22 items (62.9%) received at least 1 "N/A in my work group" response. The top items receiving this code were:.

Meta-Category[1]	Sub-Category[2]	Source	Verbatim survey item	Count of N/A Reponses	% of Total Item Responses
Org. Compliance	Obedience	Van Dyne, Graham, & Dienesch (1994)	Always comes to work on time.	19	27.5%
Org. Compliance	Conscien-tiousness	Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Does not take extra breaks.	17	24.6%
Org. Compliance	Social Participation	Van Dyne, Graham, & Dienesch (1994)	Works so personal appearance is attractive and appropriate.	15	22.4%
Loyalty	Loyal Boosterism	Moorman & Blakeley (1995)	Defends the organization when outsiders criticize it.	13	18.8%
Org. Compliance	Generalized Compliance	Smith, Organ, & Near (1983)	Does not spend time in idle conversation.	12	17.6%

[1] Meta-category assigned by Organ et al. (2006)
[2] Sub-category assigned by source authors

APPENDIX F
Study 1 Results: Emergent Categories of Citizenship Behavior

OCB Category (and definition)	% of Overall Activities Generated	Verbatim Examples from Focus Groups
Health & Well-Being. Participating in activities to maintain or improve one's own health and well-being, or to support others' efforts to maintain their health and well-being.	**18%**	"Join a 'stretch circle' one of my co-workers organised to get people up from their desk and doing some worthwhile stretches to keep fit and healthy at work!"
Social Participation. Taking part in social activities during the workday that are not directly related to core job tasks.	**17%**	"Participating in internal, for-fun events (e.g., talent show)""Lunches and playtime (foosball, ping-pong, video games)"
Civic Virtue. Taking actions indicative of a macro-level interest in the organization as a whole. Actions reflect a person's recognition of being part of a larger whole and accepting the responsibilities that such membership entails.	**12%**	"Attended Engineering All-hands Meeting."
Voice. Participating in activities, making suggestions, or speaking out with the intent of improving the organization's products, or some aspect of individual, group, or organizational functioning.	**12%**	"Noticing low-efficiency meetings and proposing alternate means of communication."
Self-Development. Activities to improve one's knowledge, skills, and abilities with the explicit purpose of improving one's contributions to the organization.	**10%**	"Training to enhance skills - i.e., mgmt courses."
Helping. Voluntarily helping coworkers with work-related issues or problems, or preventing the occurrence of work-related problems.	**7%**	"One of my team members helped me write a macro."
Knowledge-sharing. Sharing knowledge or expertise with coworkers.	**6%**	"Conversing with non-Engineers to explain engineering topics."
Individual Initiative. Engaging in task-related behaviors at a level beyond what is minimally required or generally expected (e.g., persisting with extra enthusiasm and effort; volunteering to take on extra responsibilities)	**6%**	"Cleaning up existing code."
Administrative Behavior. Planning, organizing, controlling, or supervising any aspect of the organization's operations and mission; maintaining work-related resources	**5%**	"Taking care of details of 'events' that would otherwise go undone."
Organizational Pride / Loyalty. Promoting [Initech] and its products/services to outsiders; protecting its competitive advantage.	**4%**	"Providing product support to non-employees (e.g., explaining how to use products to my mom)"; "Procure schwag"
Professional Participation. Voluntarily promoting or contributing to one's broader professional community outside the organization (e.g., presenting at conferences, participating in professional associations/networks, etc.)	**4%**	"Presented at conference."

APPENDIX G
Study 1 Results: Mean Differences in Perceptions of OCB across Work Contexts

1. Results of ANOVAs Comparing All Business Units.

Meta-Category[1]	**Sub-Category**[2]	**Source**	**Verbatim survey item**	***F***	**p-value**
N/A	N/A	Pilot-tested in this study	Is reachable at all times in case of urgent questions or requests.	2.515	.051
Civic Virtue	Civic Virtue	Podsakoff, MacKenzie, Moorman, & Fetter (1990)	Reads and keeps up with organization announcements, memos, and so on.	2.398	.059
Helping	Altruism	Podsakoff & MacKenzie (1994)	Is willing to take time out of one's own busy schedule to help with recruiting new employees.	2.309	.069
Org Compliance	Obedience	Van Dyne, Graham, & Dienesch (1994)	Conserves organizational resources.	2.074	.095
Sportsmanship	Sportsmanship	Organ, Podsakoff, & MacKenzie (2006)	Does not take the rejection of one's ideas personally.	2.045	.099

2. Results of ANOVAs Comparing Engineering vs. Non-Engineering Groups

Meta-Category[1]	**Sub-Category**[2]	**Source**	**Verbatim survey item**	***F***	**p-value**
Org Compliance	Personal Industry	Moorman & Blakeley (1995)	Always meets or beats deadlines for completing work.	5.104	.027
Org Compliance	Obedience	Van Dyne, Graham, & Dienesch (1994)	Always comes to work on time.	3.357	.073

APPENDIX H
Summary of Hypotheses for Study 2

Relationships between Climate Dimensions and OCB

Hypothesis 2A: The higher the shared perceptions of fairness in the work group, the higher the level of citizenship behavior displayed by individual group members.

Hypothesis 2B: The higher the shared perceptions of trust in the work group, the higher the level of citizenship behavior displayed by individual group members.

Hypothesis 2C: The higher the norms for citizenship behavior in the work group, the higher the level of citizenship behavior displayed by individual group members.

Hypothesis 2D: The higher the shared perceptions that broad performance contributions will be rewarded, the higher the level of citizenship behavior displayed by individual group members.

Hypothesis 2E: The higher the shared perceptions of group autonomy, the higher the level of citizenship behavior displayed by individual group members.

Hypothesis 2F: The higher the shared perceptions of opportunities for non-core activities in the work environment, the higher the level of citizenship behavior displayed by individual group members.

Relationships between Dispersion of Perceptions in the Group and OCB

Hypothesis 2G: the higher the shared perceptions of a communal climate (characterized by shared perceptions of fairness, trust, and cooperative norms in the work group), the higher the level of citizenship behavior displayed by individual group members.

Hypothesis 3A: Greater dispersion of perceptions within the group about group fairness will be positively associated with individual citizenship behavior.

Hypothesis 3B: Greater dispersion of perceptions within the group about group trust will be positively associated with individual citizenship behavior.

Hypothesis 3C: Greater dispersion of perceptions within the group about group norms will be positively associated with individual citizenship behavior.

Hypothesis 3D: Greater dispersion of perceptions within the group that broad performance contributions are rewarded will be positively associated with individual citizenship behavior.

Hypothesis 3E: Greater dispersion of perceptions within the group about group autonomy will be positively associated with individual citizenship behavior.

Hypothesis 3F: Greater dispersion of perceptions within the group about opportunities for non-core activities will be positively associated with individual citizenship behavior.

Relationships between Climate Strength and OCB

Hypothesis 4A: Climate strength moderates the relationship between shared perceptions of group fairness and individual OCB.

Hypothesis 4B: Climate strength moderates the relationship between shared perceptions of group trust and individual OCB.

Hypothesis 4C: Climate strength moderates the relationship between shared perceptions of group norms for citizenship and individual OCB.

Hypothesis 4D: Climate strength moderates the relationship between shared perceptions that broad performance contributions are rewarded and individual OCB.

Hypothesis 4E: Climate strength moderates the relationship between shared perceptions of group autonomy and individual OCB.

Hypothesis 4F: Climate strength moderates the relationship between shared perceptions about opportunities for non-core activities and individual OCB.

Relationship between OCB and Individual Performance Evaluations

Hypothesis 5: The higher the level of citizenship behavior displayed by an individual employee, the higher his/her performance evaluation.

APPENDIX I
Study 2 Materials: Work Group Member Survey

Page 1.

Welcome!
Thanks for participating! You represent an important group of [Initech employees], and we really appreciate your input. The whole survey should take about 15-20 minutes.

What's the goal of the project?
This survey is part of an internal research project sponsored by [Initech's internal research lab]. The overall goal is to better understand activities [Initech employees] do at work that aren't specifically part of their job descriptions or [performance evaluation guidelines], but that contribute to our unique culture. We know [Initech employees] engage in a huge variety of these activities, and that they can range from the invisible and mundane to the flashy and extraordinary. We're aiming to understand more about what these activities are and when/why they occur in order to preserve and support a healthy and fun work environment as [Initech] grows.

What's included in the survey?

The survey has several sections. The first asks about the work environment, the next asks about "everyday" activities, and the last asks about you and your experiences working at [Initech]. The activities described in the survey aren't inherently positive or negative -- depending on many things, [Initech employees] might do many of these things or only a few and still be [high performers].

You're asking me to rate my fellow [Initech employees]?

The portion of the survey that asks about "everyday" activities uses a somewhat unconventional design. Here is some background on why we've chosen this approach.

- **Rating "everyday" behaviors.** Measuring [these activities] through a survey is tricky. One approach is to ask you to report on what you yourself do. This would be our first choice. However, individuals often under-report or over-report their day-to-day behaviors. It's not that people try to mislead -- humans are just hard-wired to see their own behavior differently than others see it. Another approach is to ask people who know you (e.g., peers) to report on these things. For several reasons, this approach tends to be preferred by researchers who study these things.
- **We've decided to use a hybrid approach.** We weighed the pros and cons and decided that every person who takes the survey will be asked to rate two randomly-selected people in their work group (e.g., the group of people who report to the same manager). Some people taking the survey will be asked to rate only coworkers, while others will be asked to rate themselves plus one coworker. We're doing this to follow established guidelines while also enabling comparisons between self-ratings and peer-ratings.
- **About the peer ratings.** We realize that asking you to rate other people might feel like [a performance evaluation]. However, we're not asking about performance-related topics -- the questions are more about "everyday" life at [Initech]. If you're not sure how to answer a question, feel free to use the "don't know" or "prefer not to answer" options, or to skip any question. Also, please know that your responses will remain completely confidential, and that we are interested in aggregate data only. We will not look at these data at the individual level, we will not share team- or individual-level data in any form with your coworkers or your manager, and these questions will only be used for research. They will NOT be used in any kind of performance evaluation. We've included a space at the end of the survey for you to enter comments about the survey process. We'll use your feedback in assessing future projects.

What happens when I'm done?

Your input will be aggregated with that of other [Initech employees], and we'll analyze the results for high-level themes across the company. We share the results with [Initech employees] and we'll make sure to let you know as soon as they're available! Also, everyone who completes the survey will have the option of entering a **raffle** to win one of five **$100 Amazon.com gift cards**.

Ready to begin? Click "Next" below to get started.

We look forward to your feedback and hope you find the survey interesting. For additional information, please refer to the FAQ. If you have other questions or feedback on the survey, please email <name of Initech employee>. Thank you!

Page 2.

Part 1.

[Initech employees] work and interact with one another frequently. The questions below ask for your opinions about common practices and interactions in your work group. When answering, please think about your work group and its members in general, rather than just your own individual experiences.

Note: For the purposes of this survey, please think of your work group as the people who report up to the same manager as you do. If you switched groups recently and therefore believe you cannot adequately respond to the statements, please skip the questions or select "Don't Know."

A. How much do you agree or disagree with the following statements about your work group?

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
We have significant autonomy in determining how we do our jobs.							
We decide on our own how to go about doing our work.							
We have considerable opportunity for independence and freedom in how we do our jobs.							
We have opportunities to engage in activities unrelated to our core jobs during the workday.							
Our physical work environment provides us with opportunities to engage in activities unrelated to our core jobs.							
Our work group manager supports people who want to engage in activities unrelated to their core jobs.							
We are rewarded when we go "above and beyond" our required jobs at work.							
We receive positive recognition for doing voluntary activities that contribute to the social environment at work.							
We receive higher [performance evaluation] scores if we volunteer to do things that are not in our job descriptions, but are good for [Initech] overall.							

B. In my work group...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
There is a high level of cooperation between work group members.							
It is important for us to maintain harmony within the group.							
People are willing to sacrifice their self-interest for the benefit of the work group.							
There is a high level of sharing between members of this work group.							
We assist others in this group with their work for the benefit of the group.							
We push one another to perform to higher standards.							
We look out for one another's personal well-being.							
We socialize with one another during the workday.							

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C. In my work group...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
We trust each other a lot.							
We trust all the other members of our work group.							
We know we can count on the other members of this work group.							
For the most part, we treat each other fairly.							
In general, we can count on each other to be fair.							
Overall, people in this work group are treated fairly.							
We show respect for each other as people.							
We are friendly toward one another.							
We demonstrate care for members of the							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
work group.							

D. In my work group...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
We rarely seem to have enough time to get everything done at work.							
The amount of work we are expected to do is too great.							
It often seems like we have more work than we can do well.							

E. The following questions ask about decisions that affect members of your work group (e.g., salary raises, promotions, training opportunities, project assignments, etc.). Considering the processes and procedures used to make these types of decisions, please indicate how much you agree or disagree with the statements below.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Decision-making processes are applied consistently (across individuals and situations).							
Decision-making processes are free of bias.							
Decision-making processes are based on accurate information.							
Decision-making processes uphold ethical and moral standards.							

Page 4.

Part 2.

[Initech employees] are active, busy, and curious -- often engaging in a huge variety of activities during an average day. These activities may range from the mundane to the extraordinary, the flashy to the invisible.

In this survey we're interested in learning how often some of these activities occur at [Initech]. However (as described on the first screen), rating one's *own* behavior can be tricky -- research shows that people's views of their own behavior aren't always very accurate. Therefore, we're asking everyone to rate two randomly-selected people in their work group (e.g., the group of people who report to the same manager). Some people taking the survey will be asked to rate only coworkers, while others will be asked to rate themselves plus one coworker. As described on the first screen of this survey, we're doing this to follow established research guidelines while also enabling comparisons between self-ratings and peer-ratings.

As a reminder, your responses will remain completely confidential, and we are only interested in aggregate data. The info will never be used to identify you or the coworkers you've rated (e.g., it will not be used for [performance evaluations]).

The first [Initech employee] randomly-selected for you to rate is: **<NAME>**

We know you may have different levels of familiarity with your work group members' activities based on how long you've known each person, how often you see or interact with one another, and how closely you work together. Therefore, before rating <NAME>'s activities, please respond to the two questions below.

How long have you known <NAME>?

- ❍ I have never met him/her
- ❍ Less than 3 months
- ❍ Between 3-6 months
- ❍ Between 7-12 months
- ❍ More than 1 year, but < 3 years
- ❍ More than 3 years, but < 5 years
- ❍ More than 5 years

How much knowledge do you have of <NAME>'s activities at [Initech] during an average week?

- ❍ No knowledge (e.g., I rarely, if ever, see him/her) (1)
- ❍ Little knowledge (e.g., I occasionally see and/or interact with him/her) (2)
- ❍ Some knowledge (e.g., I see and/or interact with him/her several times per week) (3)
- ❍ Good knowledge (e.g., I see and/or interact with him/her multiple times per day) (4)
- ❍ Excellent knowledge (e.g., I see and/or interact with him/her almost all day, everyday) (5)

Page 5.

Thinking about <NAME>'s typical activities, please indicate how much you agree or disagree with each of the following statements.

To what extent do you agree that <NAME>...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Gets to know his/her coworkers on a personal basis.							
Celebrates coworkers' life events (e.g., birthdays, weddings, etc.)							
Participates in informal social activities with coworkers during the workday.							
Is playful in workplace interactions.							
Praises others when they are successful.							
Makes others feel comfortable "being themselves" at work.							
Expresses his/her own authentic personality at work.							
Makes his/her personal							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
health and well-being a priority.							
Supports others' efforts to make their personal health and well-being a priority.							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Attends events that are not required, but help the [Initech] community.							
Attends meetings that are not mandatory, but are considered important.							
Keeps up with organizational news (e.g., [Initech]-wide announcements, organizational changes, and so on).							
Conserves organizational resources.							
Pitches in with administrative tasks.							
Completes routine organizational duties in a timely manner (e.g., performance reviews, replying to emails, etc.).							
Goes out of his/her way to maintain shared organizational property (e.g., whiteboards, desk spaces, common areas, etc.).							

Page 6.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Helps others who have heavy work loads.							
Willingly helps others solve work-related problems.							
Is always ready to lend a helping hand to those around him/her.							
Tries to prevent problems for coworkers.							
Considers the impact of his/her actions on coworkers.							
Communicates with							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
others before initiating actions that might affect them.							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Makes creative suggestions to coworkers.							
Voices opinions about work-related issues even if others disagree.							
Makes constructive suggestions to improve processes for getting work done.							
Encourages others in the group to voice their opinions regarding issues that affect the group.							
Takes part in [Initech] - sponsored knowledge-sharing opportunities (e.g., brownbags, tech talks, training courses, etc.).							
Shares relevant expertise with coworkers on an informal basis.							
Collaborates with others outside the work group.							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Volunteers for special projects in addition to his/her core job tasks.							
Works beyond the expectations of others.							
Seeks out challenging project assignments.							
Learns new skills to improve his/her contributions to [Initech].							

Page 7.

Part 2 (continued).

On the next screen you'll be asked to rate one more randomly-selected [Initech employee] in your work group. The second [Initech employee] randomly-selected for you to rate is: <NAME>.

Before you begin, please answer the two questions below.

How long have you known <NAME>?

❍ I have never met him/her
❍ Less than 3 months
❍ Between 3-6 months
❍ Between 7-12 months
❍ More than 1 year, but < 3 years
❍ More than 3 years, but < 5 years
❍ More than 5 years

How much knowledge do you have of <NAME>'s activities at [Initech] during an average week?
❍ No knowledge (e.g., I rarely, if ever, see him/her) (1)
❍ Little knowledge (e.g., I occasionally see and/or interact with him/her) (2)
❍ Some knowledge (e.g., I see and/or interact with him/her several times per week) (3)
❍ Good knowledge (e.g., I see and/or interact with him/her multiple times per day) (4)
❍ Excellent knowledge (e.g., I see and/or interact with him/her almost all day, everyday) (5)

Page 8.

Thinking about <NAME>'s typical activities, please indicate how much you agree or disagree with each of the following statements.

To what extent do you agree that <NAME>…

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Gets to know his/her coworkers on a personal basis.							
Celebrates coworkers' life events (e.g., birthdays, weddings, etc.)							
Participates in informal social activities with coworkers during the workday.							
Is playful in workplace interactions.							
Praises others when they are successful.							
Makes others feel comfortable "being themselves" at work.							
Expresses his/her own authentic personality at work.							
Makes his/her personal health and well-being a priority.							
Supports others' efforts to make their personal health and well-being a priority.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Attends events that are not required, but help the [Initech] community.							
Attends meetings that are							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
not mandatory, but are considered important.							
Keeps up with organizational news (e.g., [Initech]-wide announcements, organizational changes, and so on).							
Conserves organizational resources.							
Pitches in with administrative tasks.							
Completes routine organizational duties in a timely manner (e.g., performance reviews, replying to emails, etc.).							
Goes out of his/her way to maintain shared organizational property (e.g., whiteboards, desk spaces, common areas, etc.).							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Helps others who have heavy work loads.							
Willingly helps others solve work-related problems.							
Is always ready to lend a helping hand to those around him/her.							
Tries to prevent problems for coworkers.							
Considers the impact of his/her actions on coworkers.							
Communicates with others before initiating actions that might affect them.							

Page 9.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Makes creative suggestions to coworkers.							
Voices opinions about work-related issues even if others disagree.							
Makes constructive suggestions to improve processes for getting work done.							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Encourages others in the group to voice their opinions regarding issues that affect the group.							
Takes part in [Initech]-sponsored knowledge-sharing opportunities (e.g., brownbags, tech talks, training courses, etc.).							
Shares relevant expertise with coworkers on an informal basis.							
Collaborates with others outside the work group.							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Volunteers for special projects in addition to his/her core job tasks.							
Works beyond the expectations of others.							
Seeks out challenging project assignments.							
Learns new skills to improve his/her contributions to [Initech].							

Page 10.

Part 3.

You are almost done! Below are a few final questions about yourself and your experiences working at [Initech].

Please indicate how much you agree or disagree with the following statements about working at [Initech], in general. When answering, please think about your own opinions, rather than considering anyone else in your work group.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
At the present time I am not seriously considering leaving [Initech].							
If I were offered a comparable position with similar pay and benefits at another company, I would stay at [Initech].							
I expect to be working at [Initech] one year from now.							
I expect to be working at [Initech] five years from now.							

Please indicate how much you agree or disagree with the following statements about your current job at [Initech]. When answering, please think about your own opinions, rather than considering anyone else in your work group.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
If a good friend told me that he/she was interested in working in a job like mine I would strongly recommend it.							
In general, my job measures up to the sort of job I wanted when I took it.							
Knowing what I know now, if I had to decide all over again whether to take my job, I would.							
All in all, I am very satisfied with my current job.							

Below are several pairs of personality characteristics. Using the scale, please indicate how much you agree or disagree that each pair applies to you, even if one characteristic applies more strongly than the other. When answering, please think about your opinions about yourself, rather than considering anyone else in your work group. I see myself as...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Extraverted, enthusiastic.							
Critical, quarrelsome.							
Dependable, self-disciplined.							
Reserved, quiet.							
Sympathetic, warm.							
Disorganized, careless.							

Page 11.

Thank you very much! You have finished the survey. Your answers will be submitted by clicking the "submit" button below. If you want to go back to the survey or change your responses, please click the "previous" button.

Raffle Opportunity! To thank you for your time, everyone who submits a survey will be entered into a raffle to win one of five $100 Amazom.com gift cards. If you would prefer not to be included in the raffle, please select the button below.

I do not want to be included in the raffle.

Comments? Please feel free to leave any comments below, or email <Initech employee name> with questions not answered in the FAQ.

APPENDIX J
Study 2 Materials: Work Group Manager Survey

Page 1.

Welcome!

Thanks for participating in this survey. You represent an important group of [Initech employees], and your input will have a direct impact on efforts to maintain and enhance our unique culture.

What does the survey consist of?

The survey consists of several screens, each with a brief set of questions. The whole survey should take about ~5-10 minutes.

What happens when I'm done?

Your input will be aggregated with that of other [Initech employees], and we'll analyze the results for high-level themes across the company -- your responses will never be analyzed at the individual level. Responses will remain completely confidential. Everyone who completes the survey will have the option of entering a **raffle** to win one of five **$100 Amazon.com gift cards**.

Ready to begin? Click "Next" below to get started.

We look forward to your feedback and hope you find the survey interesting. We'll make sure to let you know as soon as the results are available! Please see the FAQ for additional info, or email questions to <Initech employee name>. Thank you!

Page 2.

Part 1.

[Initech employees] work and interact with one another frequently. The questions below ask for your opinions about common practices and interactions in your work group. For the purposes of this survey, please think of your work group as the people who report up to you (i.e., your directs). When answering, please think about the work group and its members in general, rather than individual experiences of particular members.

Note: If you switched groups recently and therefore believe you cannot adequately respond to the statements, please skip the questions or select "Don't Know."

A. How much do you agree or disagree with the following statements about your work group?

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Group members have significant autonomy in determining how they do their jobs.							
Group members decide on their own how to go about doing their work.							
Group members have considerable opportunity for independence and freedom in how they do their jobs.							
Group members are rewarded when they go							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
"above and beyond" their required jobs at work.							
Group members receive positive recognition for doing voluntary activities that contribute to the social environment at work.							
Group members receive higher [performance evaluation] scores if they volunteer to do things that are not in their job descriptions, but are good for [Initech] overall.							

B. The following questions ask about decisions that affect members of your work group (e.g., salary raises, promotions, training opportunities, project assignments, etc.). Considering the processes and procedures used to make these types of decisions, please indicate how much you agree or disagree with the statements below.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
Decision-making processes are applied consistently (across individuals and situations).							
Decision-making processes are free of bias.							
Decision-making processes are based on accurate information.							
Decision-making processes uphold ethical and moral standards.							

Page 3.

Part 2.

[Initech employees] are active, busy, and curious -- often engaging in a huge variety of activities during an average day. These activities may range from the mundane to the extraordinary, the flashy to the invisible.

In this project we're interested in learning how often some of these activities occur at [Initech], and we're asking managers to provide some brief, high-level input about each of their directs' activities. Your responses will remain completely confidential, and will only be analyzed in the context of this study. The info will never be used to identify you or the [Initech employees] you've rated (e.g., it will not be used for [performance reviews]).

How long have you known each of your direct reports (listed below)?

	I have never met him/her	Less than 3 months	Between 3-5 months	Between 6-12 months	More than 1 year, but < 3 years	More than 3 years, but < 5 years	More than 5 years
<NAME>							
<NAME>							

	I have never met him/her	Less than 3 months	Between 3-5 months	Between 6-12 months	More than 1 year, but < 3 years	More than 3 years, but < 5 years	More than 5 years
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							

How much knowledge do you have about each of your directs' activities at [Initech] during an average week?

	No knowledge (e.g., I rarely, if ever, see or interact with him/her)	Little knowledge (e.g., I occasionally see and/or interact with him/her)	Some knowledge (e.g., I see and/or interact with him/her several times per week)	Good knowledge (e.g., I see and/or interact with him/her multiple times per day)	Excellent knowledge (e.g., I see and/or interact with him/her almost all day, everyday)
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					
<NAME>					

Page 4.

How much do you agree or disagree that each of your direct reports, listed below, takes part in activities that are outside their formal, core job tasks (e.g., those captured in job descriptions, [performance guidelines], etc.), but that are good for [Initech] overall?

Examples of these activities could be helping coworkers solve problems, voicing creative suggestions, attending events that help build the [Initech] community, being playful with ideas and interactions, supporting coworkers' efforts to maintain healthy lifestyles, etc.)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Prefer Not to Answer
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							
<NAME>							

Page 5.

Thank you very much! You have finished the survey. Your answers will be submitted by clicking the "submit" button below. If you want to go back to the survey or change your responses, please click the "previous" button. Your answers will not be counted if you do not press the "submit" button.

Raffle Opportunity!
To thank you for your time, everyone who submits a survey will be entered into a raffle to win one of five $100 Amazom.com gift cards. If you would prefer not to be included in the raffle, please select the button below.

I do not want to be included in the raffle.

Comments? Please feel free to leave any comments below, or email <Initech employee name> with questions not answered in the FAQ.

APPENDIX K
Study 2 Materials: Survey Invitation Email for Work Group Members

Hi <Name>,

[Initech's] unique culture is part of what makes this such an amazing place to work. For the first time, [our Human Resources Department] is working on a project that scientifically studies an important part of our culture... going above and beyond to help others and contribute to [Initech]. I'm writing to encourage you to participate in this project.

Your work group is one of the few randomly selected to represent your function and region in this project. We're asking for a few minutes of your time to complete a survey about the many activities that occur at work.

Why participate?

- As one of only a few [Initech employees] selected (across job types, levels, and tenure), you represent a key group of people at [Initech]. Without your input we run the risk of having a non-representative sample and missing important insights.
- You don't need to prepare anything before taking the survey and won't need to do anything afterwards. Your responses will remain completely confidential - no individual information will ever be reported.
- And, everyone who participates will have the option of entering a raffle to win a $100 Amazon.com gift card!

Ready to begin? Click here to take the survey. It should take around 15 to 20 minutes and must be completed by **Friday, July 31**. Note: This link was built just for you, so please don't forward the link to other [Initech employees].

Questions? Check out the FAQs, or email <contact name & email address>

Thanks,
<VP's Name>

APPENDIX L
Study 2 Materials: Survey Invitation Email for Work Group Managers

Hi <Name>,

[Initech's] unique culture is part of what makes this such an amazing place to work. For the first time, [our Human Resources Department] is working on a project that scientifically studies an important part of our culture: going above and beyond to help others and contribute to [Initech].

Your work group (i.e., the [Initech employees] who report to you) was one of the few randomly selected to represent your function and region in this project. They were sent an invitation to complete a brief survey about the activities they've observed among their colleagues. Should they choose to help us out, the survey will take no more than 15 to 20 minutes to complete.

We are also interested in your feedback about these things. Please click here to take 5-10 minutes to complete a survey by <DATE>. (Your survey has fewer questions than the survey for your directs.) We would greatly appreciate your insights. Note: This link was built just for you, so please don't forward the link to other [Initech employees].

Why participate? As one of only a few people managers selected (across job types, levels, and tenure), you represent a key group of people at [Initech]. Without your input we run the risk of having a non-representative sample and missing important insights. You don't need to prepare anything before taking the survey and won't need to do anything afterwards. Your responses will remain completely confidential - no individual information will ever be reported, and your insights will only be used for the purposes of this project. And, everyone who participates will have the option of entering a raffle to win a $100 Amazon.com gift card.

Questions? Please see the FAQs or contact <contact name & email address>.

Thanks,
<VP's Name>

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