VOICE CLIMATE IN ORGANIZATIONS: A GROUP-LEVEL EXAMINATION OF ANTECEDENTS AND PERFORMANCE OUTCOMES

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Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
July, 2009

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ACKNOWLEDGMENTS

There are many people to whom I owe a tremendous amount of gratitude for their support. First and foremost, I must thank my wife, Kathie, for her love and support not only throughout the doctoral program but also through our life together. When I came to you with the crazy idea of going back to school to pursue a doctorate, you never once doubted the wisdom of the decision. You simply supported me and were there every time I needed you. You always have been. Thank you and I love you. To my sons, Colby and Kaden, I am so proud to be your dad. Though you likely won't remember much of this process, I hope you know that I couldn't have made it through it without our trips to the 'duck pond' or our weekly runs for slushes. I love you both more than I can adequately express. To my parents, Jim and Tonda Frazier, who have always supported me in everything I have ever done. Thank you both so much. I love you.

I would like to thank Dr. Matt Bowler for his assistance throughout this dissertation process. I wouldn't have made it through without your insight, guidance, and occasional assurances that everything will be fine. I also want to thank my entire dissertation committee, Ken Eastman, Craig Wallace, and Todd Arnold, for their assistance on this project. Last, but certainly not least, I would like to thank my friends and colleagues Joel Bolton, Aaron Hill, Paul Johnson, and Jason Ridge, for being my doctoral support system throughout this program. Thank you for letting my family be a part of each of your families.

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CHAPTER ONE

INTRODUCTION

Background

For time and the world do not stand still. Change is the law of life. And those who look only to the past or the present are certain to miss the future. – John F. Kennedy

As the quote suggests, change is inevitable and those who do not keep up with these changes get left behind. This can be seen across all aspects of life and the workplace is no exception. Traditional views of work performance are changing as a result of changes to the environments in which organizations function (Ilgen & Pulakos, 1999). These changes in work performance are the result of many issues such as global competition, rapid rates of innovation, and organizational downsizing (Frese & Fay, 2001; Ilgen & Pulakos, 1999). In response to these changes, organizations must be able to anticipate changes and adapt quickly to the rapid changes that do take place (Whiting, Podsakoff, & Pierce, 2008). Change is not isolated to the organizational level. It has impacted employees, as well. As a result, the duties employees perform within the scope of their job are being expanded and researchers have suggested that it is now very difficult to assign specific duties and responsibilities to a single employee (Ilgen & Pulakos, 1999). Employees who hope to thrive in the ever evolving workplace must be more flexible, active, and involved in their work. The previous discussion suggests that

in order for organizations to thrive and for employees to maintain their viability in their work roles, both must be more adaptive and active in response to their environments. Indeed, Crant (2000) suggested that "as work becomes more dynamic and decentralized, proactive behavior and initiative become even more critical determinants of organizational success" (p. 435). In order to remain competitive, employers and employees alike are required to take a more active role in their respective environments (Frese & Fay, 2001).

Given the dynamic nature of today's workplace, it is no surprise that the study of organizational citizenship behaviors (OCB) continues to be a thriving field of research (LePine, Erez, & Johnson, 2002; Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Organizational citizenship behaviors were initially defined as individual behavior that is discretionary in nature and that promotes the effective functioning of the organization (Organ, 1988). A refinement of the construct resulted in a definition of OCB as behaviors that contribute "to the maintenance and enhancement of the social and psychological context that supports task performance" (Organ, 1997, p. 91). In other words, OCB is employee behavior beyond traditional job performance that leads to benefits for the organization. As evidence of the growing interest in the study of OCB, Podsakoff et al. (2000) reported that published studies increased nearly ten-fold from the years 1993 to 1998 as compared to the previous six-year period. The study of OCB has also expanded into other disciplines, such as marketing, hospital administration, international management, economics, leadership, and others. These examples illustrate that the study of citizenship behaviors has increased considerably since its introduction and has shown to be relevant in a vast array of domains.

This study, recognizing the ever changing environment of the workplace, focuses on a particular type of citizenship behavior: voice behavior. Voice behavior is defined as "promotive behavior that emphasizes expression of constructive challenge intended to improve rather than to merely criticize. Voice is making innovative suggestions for change and recommending modifications to standard procedures even when others disagree" (Van Dyne & LePine, 1998, p. 109). The current conceptualization of voice behavior has its roots in the political philosophy literature (Van Dyne, Graham, & Dienesch, 1994). Drawing from this literature, Van Dyne and colleagues suggested that one facet of citizenship behavior was organizational participation, which consisted of staying informed of organizational issues and involved in the governance of the organization. The original label for voice behavior was "advocacy participation", which consisted of behavior that was innovative, maintained high standards, challenged others, and made suggestions for constructive change. These were the behaviors "typical of an internal change agent" (p. 783, Van Dyne et al., 1994).

As the history of voice behavior indicates, it is behavior that is aimed at change and being actively involved in organizational issues. In a constantly changing workplace, engaging in this change-oriented behavior is beneficial to individuals, work groups, and organizations (Erez, LePine, & Elms, 2002; Van Dyne & LePine, 1998; Whiting et al., 2008). Research on voice behavior has shown that voice behaviors do lead to improved work outcomes at both the group and individual levels of analysis. In a longitudinal study of working adults, Van Dyne and LePine (1998) found that both peer and supervisor ratings of voice behaviors were positively related to supervisor rated performance six months later. Though the authors were hesitant to link voice behaviors

to positive outcomes for the organization, the generally positive relationship between voice behaviors and individual performance was an initial step in linking voice behavior to improved organizational outcomes. Whiting et al. (2008) further examined the relationship between voice behavior and performance appraisal in an experimental setting. The authors found that voice behaviors were causal determinants of appraisal decisions. This is important because it shows that voice behaviors are predictive of subsequent performance, confirming previous findings (i.e., Van Dyne & LePine, 1998). The positive relationship between voice behaviors and performance has been shown to extend to teams, as well. In a quasi-experiment, Erez et al. (2002) found that group voice behavior was positively related to team performance. Thus, the empirical evidence suggests that voice behavior, both for groups and individuals, has a positive impact on performance outcomes.

These results suggest that voice behavior is relevant in a dynamic work environment because it challenges the status quo and is aimed at improving the existing procedures or making suggestions for new modes of operation. As such, voice behavior has the potential to facilitate the kind of adaptability necessary to survive in a dynamic environment (Whiting et al., 2008). Given this generally positive relationship between voice behaviors and performance, it is surprising that no previous research has examined the mechanisms by which organizations may be able to foster a climate that encourages voice behaviors. Drawing from the climate literature, this study aims to address this gap in the literature by examining voice climate and both the antecedents and consequences associated with such a climate. Schneider (1990) defined a climate as the shared perceptions of employees concerning practices, procedures and behaviors that are

supported in a setting. Therefore, voice climate is defined as *the shared perceptions in a work group of the extent to which the group is encouraged to speak out and challenge the status quo in the work group*. This research effort investigates the organizational influences that may foster or hinder the development of voice climate in work groups in an effort to further advance the study of voice behaviors in organizations. Specifically, this study is designed to identify antecedents, both organizational and supervisory, that influence voice climates in work groups. Additionally, this study will examine performance outcomes of a voice climate in work groups, along with co-worker influences on the relationship between voice climate and performance outcomes.

Theoretical Basis for the Current Study

Social information processing (SIP) theory states that attitudes and behavior at work are the result of information available in the social environment of the workplace (Salancik & Pfeffer, 1978). In contrast with many needs-satisfaction models of motivation, SIP theory recognizes context and consequences of past actions and the effects these elements have on the formation of attitudes and behavior. One of the key assumptions of SIP theory is that humans are adaptive organisms and as such, adapt their attitudes, beliefs, and behaviors based on the informational and social environment. Additionally, Salancik and Pfeffer state that by examining the environment in which people operate, researchers are able to learn a great deal about behavior.

The relationship between SIP theory and the development of voice climate is a natural fit because of the underlying social influence of the climate concept. In fact, Salancik and Pfeffer discussed the application of SIP theory to the climate literature explicitly. They recognized that climate could indeed be an influence on attitudes and

behavior and that this influence would be "a function of the unanimity of the shared beliefs" (p. 240: Salancik & Pfeffer, 1978). This statement corresponds with the definition of climate as proposed by Schneider and colleagues. Schneider's (1990) definition of climate includes the concept of shared perceptions among employees and the social element of climate development. These shared perceptions among employees are the result of interactions of the employees in an organization and the interactions among employees of an organization influence the unanimity of these perceptions. Schneider (1983) further discussed the emergence of climate and suggested that climates are products of social interactions and are advanced and grown through these social interactions. The social nature of the climate literature and SIP theory suggests that social interactions among employees influence attitudes, perceptions and behavior in the workplace. Therefore, SIP theory provides the theoretical underpinnings of the current study and provides theoretical guidance for the research questions that will be examined in this research effort.

Research Questions

This study will answer three main research questions. First, what are the sources of influence within an organization that foster and/or hinder the development of a voice climate in work groups? Second, beyond group voice behavior, what are the other benefits that accrue to organizations who establish a voice climate in work groups? And finally, what are the specific antecedents to the formation of a voice climate in work groups? By answering these questions, this study is designed in an effort to provide insight into the factors within an organization that may influence the formation of voice climate. And given the potential advantages that may be afforded organizations as a

result of voice behavior in employees, identifying the factors that may influence the development of a climate for voice seems warranted.

The first research question concerns the identification of influences within an organization on the development of voice climate and the potential influence of a voice climate on group outcomes. The work of Salancik and Pfeffer (1978), in their development of SIP theory, clearly recognizes the multidimensional nature of the employee's social environment and the multiple influences that help shape that environment. As a result of the complexities present in an employee's social environment, SIP theory would suggest that employees look to various sources from which to gather information about acceptable perceptions or behaviors. Indeed, SIP theory argues that workplace characteristics are not given but socially constructed (Salancik & Pfeffer, 1978) and that multiple sources are likely to influence employee perceptions and behaviors (Miller & Monge, 1985). Therefore, research based on SIP theory should consider multiple sources and their influence on employee perceptions and behaviors in the workplace (Blau & Katerberg, 1982; Miller & Monge, 1985). This study, in an effort to identify both antecedents and consequences of voice climate, will consider three distinct sources of social information in the theoretical model: the employing organization, the employee's direct supervisor, and fellow group members.

The second research question is concerned with identifying the consequences of voice climate. The climate literature provides a taxonomy in which to classify climates in organizations. This taxonomy classifies climates as either foundation climate or specific climates (Schneider, White, & Paul, 1998). Foundation climates refer to the contextual factors that sustain work behavior and provide the foundation for specific

climates via resources, training, and assistance required to perform effectively. Specific climates, on the other hand, are shared perceptions that are specific to a given area of interest. Specific climates are climates 'for something' (Schneider, Bowen, Ehrhart, & Holcombe, 2000). In this study, voice climate is cast as a specific climate because it is a climate that encourages voice behavior. In other words, it is a climate for voice. It is expected that voice climate will have a positive relationship with group voice behavior because the specific climate should be more strongly related to the specific outcome (Wallace, Popp, & Mondore, 2006). Voice behaviors have been shown to be positively related to performance for individuals and groups (i.e., Erez et al., 2002; Van Dyne & LePine, 1998). Therefore, it is expected that the utility of a voice climate in work groups will extend to other important outcomes for the organization. This study will attempt to examine this issue.

The third research question addresses the identification of antecedents to voice climate. In order for voice climate research to be beneficial and informative for organizations, antecedents that influence the formation of such a climate must also be identified. Practically speaking, if organizations are interested in fostering a voice climate within their work groups, they would be interested in exactly *how* voice climate can be fostered. This study will attempt to address that issue. Drawing again from the foundation climate – specific climate taxonomy, foundation climates refer to the contextual factors that sustain work behaviors (Schneider et al., 1998). They provide the foundation for specific climates by the way of support (i.e., resources, training) required for effective performance. This support, whether it be physical resources or meeting the emotional needs of employees, is crucial to effective functioning in an organization

(Hochwarter, Witt, Treadway, & Ferris, 2006). This study casts involvement climate as a foundation climate, which then influences voice climate, cast as the specific climate.

This study extends the extant literatures on both citizenship behaviors and climate in three ways. First, this study examines a less researched type of OCB: voice behavior. Van Dyne, Cummings and McLean-Parks (1995) introduced a two dimensional typology within which to classify citizenship behaviors. The first is the dimension of affiliative/challenging. Affiliative behaviors are those that are aimed at solidifying and/or preserving relationships in the workplace. On the other hand, challenging behaviors are those that have the potential to upset personal relationships with others. The second dimension consists of promotive behaviors. Promotive behaviors are those that are intended to promote or encourage something to happen in the workplace. Among the promotive dimension, affiliative and promotive behaviors are those that are designed to improve organizational efficiency by maintaining and enhancing existing work relationships (Van Dyne et al., 1995). Examples of these behaviors are helping behavior and compliance because they are enacted to keep the peace and maintain the work environment (Choi, 2007). It has been suggested that a vast majority of studies investigating citizenship behavior in the workplace fall within this affiliative/promotive category (Choi, 2007; Moon, Van Dyne, & Wrobel, 2005; Whiting et al., 2008). This is because citizenship behaviors are defined as those behaviors that maintain and enhance the psychological context of the workplace (Organ, 1997). As a result, much research has been conducted on behaviors that fall into the affiliative category.

Far less has been conducted on behaviors that fall into the challenging/promotive category (Bettencourt, 2004; Choi, 2007; Moon et al., 2005). Because challenging

behaviors have the potential to upset personal relationships (Van Dyne et al., 1995), they may not be seen as behavior that enhances the workplace. Researchers are, however, beginning to recognize the value of studying these behaviors. Though challenging behaviors do have the potential to upset personal relationships, they are also aimed at improving existing work practices in an effort to promote organizational effectiveness. The dynamic environments in which many organizations function require that these organizations have the ability to adapt and change quickly in order to survive (Whiting et al., 2008). As a result, recent calls have been made to examine the influence of behaviors that challenge the status quo in an effort to improve the situation at work (Moon et al., 2005). This study is an attempt to answer this call and advance our understanding of voice behaviors.

Second, this study introduces the concept of voice climate and the potential of voice climate to impact not only group voice behaviors but other group outcomes, such as group performance. By introducing and examining voice climate and its consequences, this study attempts to contribute to the current knowledge on voice behaviors and the additional benefits that may accrue to organizations that encourage its employees to engage in voice behaviors. Finally, this study will attempt to provide an initial understanding of the antecedents that influence the formation of a voice climate in work groups. Prior research in the climate literature has suggested that organizations that provide the support necessary for effective organizational performance reap the benefits via the influence on more specific climates. This study attempts to support and extend this line of research by examining antecedents to the formation of voice climate, which is cast as a specific climate in this study.

Study Setting

To study the organizational outcomes associated with voice climate in work groups, along with the antecedents to the formation of voice climate, managers and employees were surveyed at a large building facilities and maintenance organization located in the Midwestern United States. The employees of this organization are repair generalists whose job responsibilities involve solving a variety of building problems. The organization consists of approximately 500 full-time employees. Given that this is a group level study, individual responses were aggregated to the group level for data analysis. The final sample consisted of 54 work groups that report to unique group leaders.

Format of this Study

Chapter II consists of a review of prior research on voice behaviors, the presentation of the theoretical model for the current study, the theoretical foundation of the current study, and the development of the specific hypotheses. Chapter III consists of a detailed discussion of the research sample and methodology utilized in this study. Included in the methodology are the operationalization of the variables collected for this study, the specific instruments used for each variable, and a detailed discussion of the data analysis methods that will be utilized. Chapter IV presents the results of the study, including factors analyses, data aggregation, and hypothesis testing. Finally, Chapter V contains the discussion of the studies results, strengths and limitation, practical implications, and suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW, HYPOTHESES, AND THEORETICAL MODEL

Study Overview

The increased interest in the concept of the 'active employee' has occurred as organizations shift away from the hierarchical structures and workers who function independently of each other in the workplace (Frese & Fay, 2001). Because of the interdependent nature of jobs in today's workplace, employers are searching for employees that are able to be more proactive, think critically, and work cooperatively (Choi, 2007; Ilgen & Pulakos, 1999). Another line of research that continues to receive considerable attention, and that is influenced by the interdependence of today's workplace, is work groups. Work groups enable organizations to respond to the demands of the dynamic markets by drawing upon the skills, expertise, and experience of the group's members. This allows for more rapid and flexible responses to the threats and opportunities of the organization (Kozlowski & Bell, 2003).

The interdependent nature of work and the continued interest in work groups has led to a proliferation of studies that examine work behaviors that are affiliative in nature (e.g. helping behaviors). Affiliative behaviors are those that are aimed at maintaining existing work relationships (Van Dyne et al., 1995). However, there has been a recent recognition of the need to examine work behaviors that are challenging in nature, as well (Bettencourt, 2004; Choi, 2007; Whiting et al., 2008). The dynamic environments in

which organizations function require that employees be willing to challenge the way things are currently done. The improved processes that emerge from these challenging behaviors may enable organizations to remain viable over the long term (Whiting et al., 2008). Challenging behaviors are aimed at improving the situation but differ from affiliative behaviors in that they have the potential to upset work relationships because of their challenging nature (Van Dyne et al., 1995). Though researchers are beginning to recognize the benefit of challenging behaviors, the examination of these behaviors in organizations has received limited attention in the literature (Moon et al., 2005).

This study answers recent calls by researchers to examine challenging behaviors by focusing on group voice behavior, a form of challenging behavior. Voice behavior is defined as *speaking up to challenge the status quo with the intent of improving the current situation* (Van Dyne & LePine, 1998). Voice behavior falls in the challenging/promotive dimension as advanced by Van Dyne et al. (1995). Voice behavior is challenging in that it challenges the current ways of operation but it is also promotive because the behavior is an attempt to improve the current situation in the workplace. This study is designed to study voice behavior at the group level of analysis. *Group voice behavior*, therefore, refers to the performance of voice behaviors by the work group as a whole. The study of voice behavior in the workplace is important because it may facilitate adaptability and change required to compete in dynamic environments (Whiting et al., 2008). The study of group voice behavior is also necessary because of the continued importance of work groups in organizations and the benefits that may accrue for the group and organization as a result of group voice behavior.

Given the increasing recognition of the importance of voice behavior on the long-term viability of organizations, research efforts should be aimed at identifying the antecedents to such behaviors. As group voice behavior takes on more importance in organizations, the identification of variables that influence the performance of these behaviors becomes important, as well (Parker, Williams, & Turner, 2006). One such antecedent that is introduced in this research effort is the construct of voice climate. *Voice climate is the shared perceptions among group members that they are encouraged to engage in voice behaviors*. As organizations and researchers begin to recognize the long-term benefits of group voice behavior, it would appear to be both necessary and desirable to examine the ways in which a climate for voice is both fostered and hindered, as well as the outcomes associated with voice climate. Drawing on recommendations from the climate literature, voice climate is introduced because the outcome of interest in this study is group voice behavior, as advanced by Van Dyne & LePine (1998). Schneider (1975) suggested that the criterion of interest should determine the climate variables to be studied. Furthermore, Schneider et al. (2000) stated that the climate variable for a given study should be tied directly to the outcome of interest. Otherwise, the relationship between the climate variable and the outcome variable would likely be quite modest. The work of Schneider and colleagues provides a strong theoretical case for the introduction of the voice climate construct in this study.

Though group voice behavior is one of the outcomes of interest in this study, the introduction of voice climate is a key contribution of the current study. Because voice climate has not been studied in previous research efforts, this study aims to examine both antecedents and consequences of voice climate, as well as moderating variables that may

influence the promotion or hindrance of voice climate in organizations. Before discussing voice climate, this chapter first discusses social information processing theory (Salancik & Pfeffer, 1978), which serves as the theoretical foundation for this study. The chapter then reviews the literature for voice behavior, discusses similar constructs to voice behavior, and presents the rationale for focusing on voice behavior as an outcome variable. Voice climate, cast as an antecedent to group voice behavior and group performance, is then discussed. This is a new construct to the climate and citizenship behavior literature and the theoretical rationale is presented for its introduction. Finally, the theoretical model is presented, along with a review of the literature for the antecedents and consequences of voice climate and the specific hypotheses.

Social Information Processing Theory

Social information processing (SIP) theory was introduced as a response to many of the needs-satisfaction models that dominated the literature on job attitudes and performance prior to the introduction of SIP theory (Salancik & Pfeffer, 1978). Broadly speaking, Salancik and Pfeffer (1977) believed that most needs-satisfaction models generally relied too greatly on the assumption of stability of both individual needs and the characteristics of most jobs. Job attitudes and motivation, according to these models, resulted when there was a correspondence between the needs of individuals and the characteristics of the job. Further, it was posited that needs-satisfaction models ignored context in the shaping of attitudes in the workplace. In response to these models, SIP theory was introduced as an alternative mechanism by which to explain attitudes and behavior in organizations.

SIP theory states that attitudes and behavior at work are the result of information available in the social environment of the workplace (Salancik & Pfeffer, 1978). Further, SIP theory is based on the fundamental assumption that individuals adapt their perceptions, attitudes, and behavior based on that information. Salancik and Pfeffer posited that this assumption of adaptability "leads inexorably to the conclusion that one can learn most about individual behavior by studying the informational and social environment within which that behavior occurs and to which it adapts" (p. 226). SIP theory recognizes that perceptions, attitudes and future behavior are determined by two main factors: the social context in which work occurs and the consequences of past actions.

The first factor identified by SIP theory as an influence on perceptions, attitudes, and behavior is the social context in which work occurs. Because of its social foundation, SIP theory is consistent with many previous views that environments and contexts are created through social processes (e.g. Berger & Luckmann, 1967). The social environment provides cues that are used by individuals to interpret events (Salancik & Pfeffer, 1978). Within this social context, perceptions are influenced both directly and indirectly from a number of sources. The most relevant sources of influence for the purposes of the current study are coworkers, direct supervisors, and organizational policies and practices.

Coworkers and direct supervisors can directly influence perceptions because employees often rely on these proximal sources for information about appropriate perceptions and standards of behavior. For example, a new employee is likely to take cues from fellow employees and supervisors in determining which norms and standards

are acceptable in the new workplace because the interactions with these sources are much more frequent (Miller & Jablin, 1991). The second source of influence within the social context is the dimensions of the workplace that are made salient to the employee. The social environment has the ability to focus an employee's attentional processes on particular dimensions of work and subsequently affects the salience of those dimensions in the employees mind. As employees communicate with coworkers and supervisors, dimensions of the workplace become more salient to the employees. For example, it may be called to worker's attention that the company's revenues are suffering due to a decrease in sales volume. Or, employees may discuss their manager's inability to make decisions on tough issues. As these specific dimensions of work, sales volume or managerial ineffectiveness, are discussed among coworkers, they are made more salient in the minds of the employees. This increased salience causes employees to focus their attention on those dimensions of work.

The second factor identified by SIP theory as an influence on perceptions, attitudes, and behavior is the consequences of past behaviors and how these behaviors are attributed to the social environment (Salancik & Pfeffer, 1978). According to SIP theory, individuals attempt to rationalize their past behaviors by referring to features of the environment that support those behaviors. This rationalization on the part of employees is an attempt to give reasons for the behavior. Salancik and Pfeffer described this as 'acceptable justification'. The acceptable justification for behaviors means that the action is deemed as being reasonable and legitimate, given the context in which the action took place. In other words, the rationalization and justification of past actions shape the

potential for that same action to occur in the future. If the action is deemed to be rational and justified given the context, then it is more likely to occur again.

Salancik and Pfeffer (1978) discussed the multidimensional components of an individual's job and the uncertainty that an employee may experience as a result of this complexity. Therefore, as discussed previously, employees look to multiple sources from which to gather information. Given SIP theory's emphasis on the social environment and the influence of the environment on employee perceptions and behaviors, research based on this theoretical foundation should consider these sources from which employees gather social information (Miller & Jablin, 1991; Miller & Monge, 1985). Given that the participants of this study are front line employees of an organization, it is believed that the three most salient sources of information will be organizational policies and practices, direct supervisors and co-workers. This study, in an effort to examine both antecedents and consequences of voice climate, examines the influence of these sources of social information on the shared perceptions of group members and subsequent group behavior.

Before moving on to the theoretical model and the specific constructs included in this study, a review of voice behaviors is presented, along with an introduction to the voice climate construct.

Voice Behavior

Early conceptualizations of voice can be traced to the work of Hirschman and his work on exit, voice and loyalty. Hirschman (1970) described voice as "any attempt at all to change rather than to escape from an objectionable state of affairs" (p. 30). This early treatment of the voice construct centered on the actions of individuals in work organizations who were *dissatisfied* and wanted to improve the current situation. Indeed,

these early research efforts demonstrated that dissatisfaction led to attempts to improve the situation (Farrell, 1983; Rusbult, Farrell, Rogers, & Mainous, 1988; Withey & Cooper, 1989).

Unlike these early efforts that cast voice as an action taken to correct a problem or dissatisfaction in the workplace, the current conceptualization casts voice behavior as a type of citizenship behavior. Initial research used the label of "advocacy participation" to describe voice behavior (Van Dyne et al., 1994). Advocacy participation was seen as "behaviors targeted at other members of an organization and reflecting a willingness to be controversial" (p. 780, Van Dyne et al., 1994). This conceptualization of voice behavior was advanced by classifying it as proactive, challenging, and focused on encouraging or promoting change (Van Dyne et al., 1995). Additionally, it was proposed that satisfied workers would be more likely to engage in such behaviors, which is in contrast to earlier views of voice (i.e., Hirschman, 1970).

The work of Van Dyne and colleagues laid the foundation for this line of research but Van Dyne and LePine (1998) are credited with the current conceptualization of voice behavior. As discussed previously, they defined voice behavior as "promotive behavior that emphasizes expression of constructive challenge intended to improve rather than to merely criticize" (p. 109). Similar to other forms of citizenship behavior, voice behavior is not required as part of the job. Two other key points of the definition is that voice behavior is challenging and promotive (Van Dyne et al., 1995). Voice behavior is promotive in that it is expressed with the intent of improving a situation but also challenging, in that it has the potential to upset personal relationships because it challenges the status quo (LePine & Van Dyne, 1998).

Van Dyne and LePine (1998) conducted a study to address both construct validity and predictive validity of voice behavior. The authors gathered self, peer, and supervisor ratings of employee voice behavior to assess construct validity. Their results provided support for the validity of voice behavior by demonstrating that supervisor-rated voice behavior predicted supervisor-rated performance beyond the control variables and in-role behavior. The additional variance explained in the performance measure suggested that voice behavior provided predictive validity in desired organizational outcomes. Therefore, voice behavior has been shown to be a valid construct. Since these initial tests of validity, subsequent research has identified both antecedents and consequences of voice behavior.

The focus outcome of interest for this study is group voice behavior. Voice behavior is defined by Van Dyne and LePine (1998) as promotive behavior that emphasizes challenging the status quo in an effort to improve the current situation. Therefore, only studies that examined voice behavior are included in the literature review for antecedents and consequences. However, many similar constructs have been introduced and are discussed in more detail in a following section. It should be noted that the three broad categories listed below for antecedents to voice behavior are consistent with many of the similar constructs in the literature. It should also be noted that only one previous study has examined voice behavior at the group level (Erez et al., 2002). Therefore, the review of antecedents and consequences presented below are primarily at the individual level of analysis.

Antecedents of Voice Behavior

The majority of studies examining voice behavior have cast it as an outcome variable. Therefore, a variety of antecedents have been proposed and empirically tested. The antecedents that have been examined can be broadly cast into three main categories: cognitive states, contextual influences and leader influences. The following sections review the antecedents to voice behavior from the three categories of antecedents.

Cognitive states have been cast as an antecedent in a number of empirical studies on voice behavior. One of the first studies to examine the influence of cognitive states on voice behavior showed that satisfaction with group membership predicted voice behavior (LePine & Van Dyne, 1998). Unlike previous conceptualizations of voice as a response to dissatisfaction, this finding suggested that satisfied workers were more likely to engage in voice behaviors. Fuller, Marler, and Hester (2006) found that felt responsibility for constructive change was positively related to voice behaviors. This finding is consistent with the assertion that organizations are more likely to benefit from voice behaviors by encouraging involvement in organizational issues. Psychological safety has been found to mediate the relationship between leader qualities and voice behaviors (Detert & Burris, 2007). Though psychological safety was not cast as a climate variable, this finding suggests that the challenging nature of voice behavior may inhibit some employees from engaging in such behavior. Therefore, organizations may be able to increase the prevalence of voice behaviors by creating a climate that encourages employees to perform voice behaviors.

O'Driscoll, Pierce, and Coughlin (2006) reported that organization-based psychological ownership was positively related to self-rated voice behavior. In addition, psychological ownership mediated the relationship between work environment structure

and voice behavior (O'Driscoll et al., 2006). Graham and Van Dyne (2006) found that experienced significance of work and justice beliefs were predictive of voice behavior. These findings support the view that employees who feel a sense of ownership, significance, and meaning to their work are more likely to perform voice behaviors. These constructs are similar to employee involvement and suggest that organizations can encourage employees to engage in voice behavior by getting employees involved and active in the organization. Fuller et al. (2006) tested voice behavior as an outcome of the group engagement model (Tyler & Blader, 2003) and found that organizational identification was positively related to the performance of voice behaviors. Additionally, Joireman, Kamdar, Daniels, & Duell (2006) reported that employees with a long-term time horizon with their organization were more likely to perform various forms of OCB, including voice behavior. These two findings suggest that employees who plan to stay with their organization long-term and who identify with their organization are interested in improving the current situation by speaking up and challenging the current ways of operation.

The second category of antecedents that will be reviewed are contextual influences. LePine and Van Dyne (1998) and Islam and Zyphur (2005) both reported that small groups were more likely to engage in voice behaviors. De Dreu and Van Vianen (2001) found a similar result on team size, reporting that members of larger teams are less likely to participate in voice behaviors. Self-managed groups are also more likely to perform voice behaviors (LePine & Van Dyne, 1998). In the only study to examine group voice behaviors, Erez et al. (2002) found that work teams characterized by rotated leadership and peer evaluations were more likely to perform group voice behaviors. The

findings that group characteristics influence the performance of voice behaviors suggest that group-specific dynamics contribute to the willingness of fellow group members to engage in such behaviors. These past examples of group characteristics on individual voice behavior provide evidence to support the assertion that the quality of relationships within the group has an influence on voice behavior in organizations. In an effort to extend these findings to the group level, this study will examine the influence of team member exchange on the relationship between voice climate and both group voice behaviors and group performance.

Finally, leaders have been shown to influence the performance of voice behaviors, as well. Detert & Burris (2007) found that general manager openness and transformational leadership predicted the performance of voice behaviors. Further, these authors suggested that organizations can create a climate that would encourage the performance of such behaviors, though they did not test this proposition. Burris, Detert, and Chiaburu (2008) found that leader-member exchange was positively related to voice behaviors, while abusive supervision was negatively related to voice behaviors. These results show that leader behaviors do have the ability to influence subordinate willingness to perform voice behavior.

Taken together, these previous findings lend support to the assertion that employee cognitive states, workplace context, and leadership behaviors can influence the performance of voice behaviors. The findings discussed suggest that the performance of voice behaviors can be shaped by the context of the workplace at the individual level. This study will build on this research by extending the influence of work context on group level outcomes. Overall, past findings indicate that organizational efforts and

leadership behaviors can influence the performance of group voice behaviors by shaping the context of the workplace. Given the potential benefits of encouraging employees to engage in voice behaviors, understanding the role of these contextual influences on group perceptions becomes important for organizational researchers.

Consequences of Voice Behavior

A literature review of the consequences to voice behavior revealed very few studies that have examined voice behavior as an antecedent to outcomes of interest. Van Dyne and LePine (1998) examined the predictive validity of voice behavior in a longitudinal study and found that voice behavior at time 1 predicted supervisor rated performance at time 2, six months later. Seibert, Kraimer, and Crant (2001) cast voice behavior as an antecedent to salary progression, promotions in the past, and career satisfaction. They found that voice behaviors had a negative relationship with salary progression and past promotions, while voice behavior was not significantly related to career satisfaction. This suggests that voice behavior may have a negative impact on one's career; a finding that was counterintuitive to expected results. A potential explanation for these findings was offered by Whiting et al. (2008). Citing only one previous study examining the predictive validity of voice behavior on job performance (i.e., Van Dyne & LePine, 1998), these authors conducted a lab study to examine the extent to which voice behavior predicted performance appraisals. They found that voice behavior did positively predict performance appraisals. They also found that voice behaviors by participants who received higher ratings on either helping behavior or task performance were given more weight than participants rated low on helping or task performance. This suggests that the value assigned to voice behaviors may be contingent

upon the contributions an employee is perceived to make via helping behaviors or task performance. High performers who make constructive suggestions may find that those suggestions are taken more seriously. This may partially explain the findings by Seibert et al. (2001) that voice behaviors hindered one's career progression. It is possible that performance level moderates the relationship between voice behavior and career progression.

At the group level, Erez et al. (2002) examined group voice among undergraduate teams and found that group voice predicted group performance, replicating the positive link between voice behavior and performance previously reported at the individual level. These studies suggest that voice behaviors are predictive of important outcomes in organizations, both at the group and individual level. Therefore, identifying the mechanisms by which group voice behaviors are encouraged is desirable for future research efforts. This study attempts to build on these studies by identifying both proximal and distal antecedents to group voice behaviors.

The previous sections demonstrate the range of antecedents and consequences of voice behavior. Constructs similar to voice behavior have been introduced, as well. The next section discusses similar constructs and the justification for focusing on voice behaviors in this study.

Similar Constructs to Voice Behavior

The dimensionality of citizenship behaviors is an issue still being debated in the literature. A result of this lack of consensus on the dimensionality of OCB has been the introduction of similar and overlapping constructs. For example, Podsakoff et al. (2000) reviewed the OCB literature and identified 30 potentially different forms of citizenship

behaviors. LePine et al. (2002) identified 40 different measures of behaviors that were labeled OCB or something similar (i.e., contextual performance). The literature review conducted for this study identified four other behavioral constructs that are similar to voice behavior. These constructs are as follows: creativity (Amabile, 1988; Zhou & George, 2001), taking charge (Morrison & Phelps, 1999), innovative behavior (Scott & Bruce, 1994), and change-oriented OCB (Bettencourt, 2004; Choi, 2007). Each of these constructs, and their similarity and distinctions from voice behavior, are discussed below.

Creativity is defined as the generation of novel or potentially useful ideas (Amabile, 1988; Woodman, Sawyer, and Griffin, 1993; Zhou & George, 2001). Zhou and George (2001) further suggested that in order for an idea to be considered creative, the idea must be both novel and useful. The authors cast creativity as a form of voice behavior. While the two constructs are similar in nature in that both are focused on change, the creativity construct is concerned with novelty and usefulness of ideas, whereas voice behavior focuses more on involvement in group issues and speaking one's mind on issues that affect the group. Additionally, the creativity measure used by Zhou and George (2001) included items capturing innovation, from Scott and Bruce (1994), and created items that focused on new and creative idea generation.

Innovative behavior (Scott & Bruce, 1994) is another construct similar to voice behavior. Innovation is concerned with the production and implementation of useful ideas. Additionally, innovation is a multi-stage construct in which idea generation is only one stage in the innovation process. Innovative behavior is also concerned with seeking supporters of the idea and with the production of a prototype of the idea that can be potentially mass produced or institutionalized (Kanter, 1988; Scott & Bruce, 1994). Both

innovative behavior and voice behavior are challenging of the status quo but innovative behavior concerns the creation of new and novel ideas that might be implemented in the organization. Voice behavior is focused more on issues facing the group, which may or may not be concerned with the generation of new ways of doing things. Alternatively stated, voice behavior may involve innovative idea generation but is not necessarily so.

A third concept that is similar to voice behavior is that of change-oriented OCB (Bettencourt, 2004; Choi, 2007). Bettencourt (2004) defined change-oriented OCB as "constructive, extra-role efforts by individual retail boundary-spanning employees to identify and implement organizationally functional changes with respect to work methods, policies, and procedures within the context of their job" (p. 165). Drawing on the work of LePine and Van Dyne (2001), change-oriented OCB is focused on bringing about change and may potentially upset the status quo (Bettencourt, 2004; Choi, 2007). The conceptual background and construct definition of change-oriented OCB draws heavily from the voice behavior literature.

The operationalization of change-oriented OCB, however, is where change-oriented OCB differs from the conceptual underpinnings of voice behavior. Voice behavior is concerned with staying informed on relevant issues and speaking out on these issues while change-oriented OCB are concerned with change *and* the implementation of this change. For example, Bettencourt (2004) measured change-oriented OCB with a scale designed by Morrison and Phelps (1999). The construct measured by the scale, called 'taking charge', will be discussed in the next section. Choi (2007) measured change-oriented OCB with a scale that combined two items from Scott and Bruce's (1994) innovative behavior measure and two items from Morrison and Phelps' (1999)

taking change measure. The Choi (2007) measure of change-oriented OCB is particularly distinct from voice behavior in that it combined items from scales reported to measure two distinct constructs. While an analysis of the factor structure of Choi's change-oriented OCB scale was not reported, it is a possibility that the construct was multidimensional given the items utilized to measure the construct.

Among the related constructs found in the literature review, Morrison and Phelps' (1999) 'taking charge' construct is the most similar to voice behavior as utilized in this study. Morrison and Phelps defined taking charge as "voluntary and constructive efforts, by individual employees, to effect organizationally functional change with respect to how work is executed within the contexts of their jobs, work units, or organizations" (p. 403). Both voice behavior and taking charge are focused on change and challenging the status quo. They are both also focused on improving the current situation. However, there is a key difference between the two constructs. Taking charge is focused on both the suggestion *and* implementation of changes while voice behavior is focused on the suggestions, communication and involvement of group members. For instance, an example of voice behavior would be communicating with co-workers about issues facing the group or encouraging other group members to get involved. Taking charge, on the other hand, refers to the extent to which a group member attempts to change the policies or procedures of the group or organization. Morrison and Phelps (1999) focused the construct not only on suggestions of change but also on the extent to which the group member actively works to initiate and implement changes, eliminate unnecessary procedures, and introduce new technologies. So, while the two construct are similar,

taking charge is a broader concept than voice behavior because of its emphasis on both suggestions and implementation of changes.

The previous sections highlight the similarities and distinctions between voice behavior and other similar behavioral constructs. This current study utilizes voice behavior over other similar constructs for three main reasons. First, not all organizations require or encourage its employees to be innovative or creative. In fact, it could be argued that these types of behaviors may be restricted by the types of jobs one holds within an organization. Voice behavior, on the other hand, is concerned with being involved and informed on relevant issues affecting the work group and also the communication of these issues among co-workers in a group (LePine & Van Dyne, 1998). These types of behaviors would appear to be more universal to employees across various levels of the organization.

Second, several of the constructs focus on the *implementation* of changes to existing practices. The extent to which employees are able to influence the implementation of changes is likely going to vary from organization to organization. Further, the implementation of new ideas or changes to current practices or policies often requires interventions of management or other organizational leaders. Though there are certainly exceptions, it would seem rare that the implementation of changes be initiated by front-line employees in an organization. Voice behavior, on the other hand, is more likely to occur at all levels of the organization because it concerns employees being informed, involved in work-related issues, and communicating these issues to others in the group.

Finally, voice behavior has an established scale that has been empirically validated. As previously discussed, some constructs, such as change-oriented OCB, were measured using scales that combined items from other measures or with a scale designed to capture another construct already in the literature. The construct of group voice behavior is less susceptible to such validity concerns since the voice behavior scale has been validated in previous research (e.g., Van Dyne & LePine, 1998).

The challenging nature of the above constructs is an indication of the extent to which job performance has evolved in recent years (Ilgen & Pulakos, 1999; LePine et al., 2002). Because of the advantages that could be afforded organizations that encourage such behaviors, organizations may find that encouraging groups to engage in these behaviors lead to desirable outcomes (Whiting et al., 2008). As previously discussed, group voice behavior is the specific focus of this study and one research question revolves around ways in which organizations may create a climate that encourages voice behavior. According to the literature review for this study, no past studies have examined the construct of voice climate. However, there is considerable theoretical and empirical evidence that suggests that organizations may be able to foster a voice climate by influencing the social environment in which employees function.

Voice Climate

Salancik and Pfeffer (1978) discussed the application of SIP theory to the climate literature explicitly. They recognized that climates in organizations could influence employee perceptions, attitudes, and behavior and that this influence would be "a function of the unanimity of the shared beliefs" (p. 240). The propositions advanced by SIP theory correspond with the definition of organizational climates as proposed by

Schneider and colleagues. Schneider's (1990) definition of climate includes the concept of shared perceptions among employees and the social element of climate development. These shared perceptions among employees are the result of interactions of the employees in an organization. Schneider (1983) further discussed the emergence of climate and suggested that climates are products of social interactions and are advanced and grown through these social interactions. And, much like SIP theory, the climate literature recognizes individual's adaptability to the context or climate of their workplace (Schneider, 1975). The social nature of both SIP theory and the climate literatures suggest that SIP theory provides a guide for studying voice climate.

In his seminal piece on organizational climates, Schneider (1975) discussed the types of climates in organizations and stated that multiple climates exist in organizations. Given the multitude of climates that simultaneously exist in organizations, one may be unclear which climates are relevant for a given study. Schneider (1975) suggested that the climates of interest for a particular research effort will be determined by the purpose of the study. In other words, the climates to be studied are dependent on the criterion of interest; the climate should be regarded as a specific construct with a specific referent. It should be a climate 'for something' (Schneider, 1975; Schneider et al., 1998). Schneider et al. (2000) built on this by stating that "unless the climate that is conceptualized and measured is tied to the specific something of interest, the relationship between the climate measure and random available criteria of interest will be modest at best" (p. 26). Therefore, according to Schneider and colleagues, the introduction of voice climate is warranted since group voice behavior is the focus criteria of this study.

The traditional views of work performance have been challenged by the changing nature of organizations (Ilgen & Pulakos, 1999). While certainly not an exhaustive list, two main contributors to these changes to the work performance concept are technological advances (Patrickson, 1987) and corporate restructurings that require employees to learn new skills to remain competitive in the workforce (Pulakos, Arad, Donovan, & Plamondon, 2000). The ever changing nature of today's workplace has led to the expectations that today's workers will be more adaptable, flexible, and able to contribute to the overall effectiveness of the organization (Pulakos et al., 2000). This proactive approach to work performance is why voice behavior is relevant for today's workforce. Recall that voice behaviors are promotive and challenging expressions intended to improve the current situation (Van Dyne & LePine, 1998). Employees who engage in voice behaviors may do so because they feel the need to stay informed on issues and involved in organizational governance (Van Dyne et al., 1994). Additionally, Whiting et al. (2008) stated that "organizations must adapt and change quickly in order to survive and voice behavior, which challenges the status quo and seek constructive change, should facilitate the type of change and adaptability required in such dynamic work environments" (p. 128). To summarize, the study of group voice behavior is important for both the group and the organization. For the group, voice behavior entails staying informed and involved on relevant issues, which may lead to improved group performance (Van Dyne & LePine, 1998; Whiting et al., 2008). For organizations, creating and fostering a climate that encourages voice behavior may create more adaptable and dynamic work groups, which would presumably lead to improved outcomes for the organization (Whiting et al., 2008).

It is posited here that expanding the nomological network of antecedents to voice behavior, including voice climate, will be beneficial to the voice literature. The operationalization of the voice climate construct will contribute to the voice literature in three ways. First, as recommended by Schneider and colleagues, climate research should be conducted in such a way that the climate variables are climates for something (i.e. safety or service). The climates that should be studied are determined by the criterion of interest. Since voice behaviors are the main criterion of interest for this study, voice climate is the appropriate climate variable to examine in this study (Schneider, 1975).

Second, in their review of the OCB literature, LePine et al. (2002) found more than 40 measures of behavior referred to as OCB-like constructs, such as voice behavior. This has created a wealth of measures from which to choose when conducting research. However, the majority of these measures were created without providing evidence of adequate construct validity (LePine et al., 2002). Further, Moon et al. (2005) discussed the propensity of researchers to "lump a sample of items together and call them 'general OCB'" (p. 14). This lumping of items together to form measures, along with the lack of construct validity, continues to be a problem in this line of research. To combat this problem, LePine et al. (2002) suggested that at the very least, researchers should be specific in the facet of OCB being examined and ensure that the measurement of the construct is consistent with the construct definition. The operationalization of voice climate addresses the specificity issue and also the construct validity concerns expressed in recent reviews (LePine et al., 2002; Moon et al., 2005). By focusing specifically on group voice behavior and voice climate, the facet of OCB is clearly defined for this study. Also, the voice behavior scale has been shown to be reliable and possess construct

validity (Van Dyne & LePine, 1998). By being specific with constructs and using a reliable and valid measure of that construct, this study will address the concerns expressed in recent reviews of the citizenship behavior literature.

The third contribution that this study makes to the OCB literature, with its introduction of voice climate, is an examination of the less researched types of OCB. Moon et al. (2005) reviewed 20 years of research between the years 1983 and 2003 and found that change-oriented and proactive behaviors have received considerably less empirical research. Voice behavior falls within this category of behavior because voice behavior it is organization-focused, proactive, change-oriented and promotive (Van Dyne & LePine, 1998). Moon et al. (2005) further suggested that additional research be conducted that examines both antecedents and consequences of these less researched types of OCB, such as voice behavior.

The previous discussion argued that there is considerable support for the introduction of voice climate to the climate and voice literatures. Therefore, the construct of voice climate must be defined for this study. Recall that Schneider (1990) defined climate as "the shared perceptions among employees concerning the practices, procedures and kinds of behavior that get rewarded and supported in a particular setting" (p. 384). And since many climates can exist within a particular organization, one must be very specific with the construct and referent of the climate and the climate variables that necessitate study are determined by the criterion of interest, which is voice behavior. Therefore, voice climate will be defined as "the shared perceptions among group members of the extent to which employees are encouraged to challenge the status quo in

an effort to improve their situation". This definition provides a specific construct (voice) and a specific referent (group), as suggested by Schneider (1975, 1990).

The Theoretical Model

Figure 2-1 presents the theoretical model for this study. These relationships will be examined based on SIP theory and several assumptions from the climate literature. First, it is assumed that climates are socially constructed elements present in organizations. Second, the study operates under the assumption that multiple climates exist within an organization (Schneider et al., 1998). As can be seen in the theoretical model, this study tests a group-level model examining the antecedents and consequences of voice climate. Given that voice climate is a new construct being introduced in this study, it is important to examine antecedents, consequences, and potential moderating influences that may foster and/or hinder the relationships between voice climate and other constructs of interest. Consistent with SIP theory, two distinct sources of social information are included as variables in this study as antecedents to voice climate: group perceptions of involvement climate and group perceptions of supervisor undermining.

This study will contribute to our knowledge of climates in organizations by examining the direct relationship between involvement climate and voice climate, along with the moderating role of group perceptions of supervisor undermining. This study is also designed to study how voice climate influences group voice behavior and group performance. Additionally, TMX is presented as a moderator to the voice climate – outcome relationships.

Involvement Climate

Social information processing theory suggests that employee perceptions are influenced by the social environment within which work takes place. According to Salancik and Pfeffer (1978), the social environment subsequently influences employee perceptions in two distinct ways. First, it provides direct construction of the perceptions that are socially acceptable. Second, it focuses an employee's attention on certain information, making that information more salient to the employees. Additionally, the social environment provides expectations about employee behavior and the consequences of such behavior. Though SIP theory is based on individual perceptions, the theoretical rationale can be extended to the shared perceptions of employees.

Interactions between the group members inform each member about appropriate perceptions toward certain behaviors (Zalesny & Ford, 1990). The shared perceptions among employees are shaped by the norms of behavior presented by their work environment (Wallace et al., 2006). In this way, the broader social environment of the workplace, and the shared perceptions formed about the environment, may influence more specific shared perceptions among group members. Alternatively stated, interactions within the social environment of the workplace can provide information that shapes the shared perceptions of a work group as they pertain to more specific behavioral norms.

SIP theory would suggest that organizational policies and practices will have both direct and indirect influence on the social environment, which in turn impacts employee perceptions and behaviors (Zalesny & Ford, 1990). For example, organizational efforts to get employees more involved in their work will influence employee perceptions of the behaviors that are acceptable as a result of these involvement efforts. Indeed, research on

involvement climate supports the assertions of SIP theory that the social environment influence employee perceptions and behaviors.

Employee involvement occurs when employees throughout the organization have the power to act and make decisions, have the information and knowledge needed to make those decisions, and are rewarded for making decisions (Lawler, 1996). Research on employee involvement has occurred primarily at the organization level (e.g. Huselid, 1995; Lawler, Mohrman, & Ledford, 1995) and at the individual level (Vandenberg, Richardson, & Eastman, 1999). The outcomes of these employee involvement studies have primarily focused on organizational performance (e.g.., financial indices), absenteeism, and turnover (Richardson & Vandenberg, 2005). Overall, the findings of this line of research support the link from employee involvement to organizational effectiveness.

The conceptualization of employee involvement utilized in this study is based on the work of Lawler (Lawler, 1996; Lawler et al., 1995). This conceptualization of employee involvement has been at the foundation of much of the involvement work conducted on strategic HRM and high performance work practices (McMahan, Bell, & Virick, 1998; Ostroff & Bowen, 2000). Lawler's work presents a fairly comprehensive approach to employee involvement, which makes it salient for a broad range of empirical research (Richardson & Vandenberg, 2005). According to Lawler's (1996) conceptualization, there are four dimensions of employee involvement: power, information, knowledge, and rewards. *Power* refers to the decision making process and the power employees are given to act and make decisions about all aspects of work. *Information* refers to the types of communications given to employees about business

results and goals. *Rewards* are a critical component in that they should be tied to performance outcomes. Finally, employee should be given *knowledge* of their work and this knowledge should be continually developed through training and development. Employee involvement researchers have argued that all four attributes are necessary to achieve high employee involvement (Lawler, 1996; MacDuffie, 1995). Lawler (1986) highlighted this view:

> *Power without knowledge, information, and rewards is likely to lead to poor decisions. Information and knowledge without power leads to frustration because people cannot use their expertise. Rewards for organizational performance without power, knowledge, and information lead to frustration and lack of motivation because people cannot influence the rewards. Information, knowledge, and power without rewards for organizational performance are dangerous because nothing will ensure that people will exercise their power in ways that will contribute to organizational effectiveness. (p. 42)*

As this passage highlights, the attributes of employee involvement are mutually reinforcing and should not be considered in isolation (Vandenberg et al., 1999).

Though research has generally supported the positive outcomes associated with employee involvement, the four attributes have primarily been considered only at the organization level (Richardson & Vandenberg, 2005) or by relying on a single respondent to describe involvement efforts (Riordan, Vandenberg, & Richardson, 2005). Richardson and Vandenberg (2005) recently suggested that such practices may mask group-level

phenomenon that are influenced by employee involvement. Drawing on previous work on climates in HR research (e.g. Bowen & Ostroff, 2004; Ostroff & Bowen, 2000), Richardson and Vandenberg (2005) recently introduced the concept of involvement climate. The authors defined an involvement climate as a climate in which "employees within a work unit collectively perceive that they have the four involvement attributes" (p. 563).

The case of a climate of employee involvement is bolstered when one considers the intent of involvement initiatives: to push the attributes of employee involvement down to lower-level employees. Past research has often relied on single respondents to report on the employee involvement efforts in organizations or by merely examining the presence or absence of such programs (Riordan et al., 2005). These methods have been criticized for not truly capturing the effectiveness of involvement practices (Gerhart, Wright, McMahan, & Snell, 2000). Additionally, relying on these methods of reporting on involvement initiatives in organizations virtually ignores the extent to which employees are involved (Riordan et al., 2005). By examining the shared perceptions among employees of their involvement, recent research efforts have been able to capture the extent to which employees share the perceptions that these involvement initiatives actually impact their work group. In other words, involvement climate does not simply capture one individual's perceptions of the presence of the four attributes of employee involvement, but captures the synergistic nature of employee involvement through the perceptions that the work group's involvement efforts have become standard across employees (Richardson & Vandenberg, 2005).

Research on involvement climate is relatively new. In fact, only three prior studies have examined involvement climate as an aggregated group level variable (i.e., Richardson & Vandenberg, 2005; Riordan et al., 2005; Vandenberg et al., 1999). Two of these studies examined both antecedents and consequences of an involvement climate. Vandenberg et al. (1999) found that high involvement business practices were a function of an array of business practices that foster such a climate (e.g. incentive practices, direction setting). Richardson and Vandenberg (2005) found that unit employee perceptions of transformational leadership positively related to involvement climate. Both of these findings provide valuable insight into the antecedents of an involvement climate and ways in which organizations may be able to foster such a climate.

A number of outcomes have also been examined for involvement climate. Vandenberg et al. (1999) found that involvement practices had a direct influence on organizational effectiveness, as measured by ROE and overall turnover. Additionally, the authors found that involvement was positively related to employee morale. Richardson et al. (2005) examined the influence of involvement climate on group level ratings of OCB, group level absenteeism and group level turnover. They found that involvement climate was positively related to group OCB and negatively related to group absenteeism. Finally, Riordan et al. (2005) reported a positive relationship between involvement climate and return on assets and two other organizational effectiveness outcome variables. They also found that involvement climate was positively related to organizational commitment and job satisfaction, while negatively related to turnover. All of these results empirically support the assertion that employee involvement leads to improved outcomes for both the employee and the organizations that employ them.

This study will contribute to the current knowledge of work climates by casting voice climate as a consequence of involvement climate. Recent research in the climate literature has provided a taxonomy for climate variables. For example, climate researchers have suggested that climate variables be classified as either foundation climates or specific climates (e.g. Schneider et al., 2000; Wallace et al., 2006). Foundation climates refer to shared perceptions for larger environments and specific climates refer to climates that are more specific to a particular area of interest (Schneider et al., 2000). Wallace et al. (2006) advanced the notion of examining the relationship between climate variables and suggested that researchers may benefit by incorporating both foundation and specific climate variables in climate research. Schneider et al. (2000) stated that "specific strategic climates are unlikely to achieve the intended outcomes unless they are built on a strong foundation" (p. 34). It is feasible that foundation climates may influence behavior directly but are more likely to indirectly influence behavior through their influence on specific climates (Wallace et al., 2006).

Following this line of research, it is posited that involvement climate will influence voice climate. Recall that foundation climates refer to larger, encompassing environments (Wallace et al., 2006) and contextual factors that sustain work behaviors (Schneider et al., 1998). Foundation climates provide the foundations that support more specific climates (Schneider et al., 2000). Involvement climate refers to shared perceptions among a work unit of the extent to which they perceive that they have power, information, rewards and knowledge; the four attributes of employee involvement (Richardson & Vandenberg, 2005). Involvement climate perceptions represent a contextual variable; a more encompassing environment created in an organization. These

shared perceptions of employee involvement create a foundation that is expected to influence the formation of more specific climates.

Voice climate, on the other hand, is cast as a specific climate in this study because it is a climate 'for something'. Specific climates are shared perceptions that are specific to a given area of interest (Wallace et al., 2006). Climate research deals with the appropriate behaviors that are expected or encouraged in an organization. Examples include safety climate (Zohar, 2000) and customer service climate (Schneider et al., 1998). Typically, the behavior of interest in climate research is the behavior that is relevant to the climate being studied (Ambrose & Schminke, 2007). The behavior of interest in the theoretical model for this study is group voice behavior. This study is being conducted partly to identify the antecedents to group voice behavior and voice climate is cast as a proximal antecedent to voice behavior. Voice climate is the shared perceptions among group members of the extent to which voice behavior is rewarded and supported in the workplace. And since this specific behavior is our focus, voice climate fits the description of specific climate as advanced by Schneider and colleagues.

Involvement climate as an Antecedent to Voice Climate

An involvement climate encompasses the shared perceptions of employees of the extent to which they perceive a high involvement workplace (Vandenberg et al., 1999). These perceptions are driven by the efforts of the organization to foster employee involvement (Richardson & Vandenberg, 2005). From the organizations perspective, these efforts are attempts to influence the social environment of the workplace such that employees feel more involved in their work. Additionally, these efforts aim to have an influence on individual, group, and organizational performance (Benson, Young, &

Lawler, 2006). As employees share the perceptions that they are highly involved in their work, this should also influence the perceptions of the behaviors that are acceptable as a means to achieve improved performance, such as group voice behaviors.

Voice behavior has been shown to impact both individual (Van Dyne & LePine, 1998; Whiting et al., 2008) and group performance (Erez et al., 2002). Groups that are involved in their work are more likely to perceive that they are capable of engaging in behaviors that challenge the current ways of operation. Recall that involvement is comprised of four attributes: power, information, rewards, and knowledge. Groups with *power* are able to act and make decisions about their work (Richardson & Vandenberg, 2005). This includes having authority over the way the job is done, having freedom over the way the job is done, and being an active participant in the day-to-day activities of the organization (Vandenberg et al., 1999). Group members who perceive that they have the authority and freedom to determine the way things are done are also more likely to challenge the current way of operation. Involvement also is determined by the *information* that group members are given by the organization about goals and performance. This includes the organization communicating changes to policies that impact employees and also communicating to employees how their individual and group performance impacts organizational performance. As group members perceive that they have the information necessary to make decisions about work activities, they will also presumably understand how their behavior impacts work outcomes (Riordan et al., 2005). This information will impact the perceptions of the acceptable behaviors and how those behaviors impact the group and organization. Employees who feel informed are more

likely to perceive that they are encouraged to speak up about work policies and challenge the status quo.

Involved employees also perceive that they will be *rewarded* for their performance. This facet of involvement entails linking promotions and/or salary increases to how well an employee performs his/her job (Vandenberg et al., 1999). As group members perceive that their behaviors are linked to performance and that performance will be rewarded, they are more likely to engage in the behaviors that lead to rewards. Past research has shown that voice behaviors do have an influence on group performance ratings (Erez et al., 2002). As group members perceive that they will be rewarded for engaging in voice behaviors, this fosters perceptions among group members that they are encouraged to engage in voice behavior. Finally, group members with job related *knowledge* are more involved in their work. Job knowledge entails the training programs that are available to employees to assist them in being better performers (Vandenberg et al., 1999). Training is a key ingredient for involvement because it gives group members the knowledge and skills necessary to perform their jobs at a high level (Riordan et al., 2005). As group members feel they possess the knowledge and training to do their jobs and the skills necessary to be successful, this will also impact the behaviors in which they engage to demonstrate their knowledge and skills. One way group members may do that is to make suggestions about how the job may be done more efficiently or effectively. Groups with the training and skills understand how their job impacts group performance and are more likely to question the processes by which the job is done and make suggestions for improvements. Taken together, a highly involved

employee is more likely to be actively involved in his/her job and perceive that he/she is encouraged to engage in challenging behaviors like voice behavior.

The influence of foundation climates on more specific climates may come in the form of ambient stimuli, as well (Wallace et al., 2006). Ambient stimuli are in the background of the workplace but they cue group members to behaviors that are acceptable or unacceptable (Hackman, 1992). Foundation climates, such as involvement climate, may influence norms of appropriate behavior that are reinforced and in the more specific climates (Wallace et al., 2006), such as a climate for voice. The influence of foundation climates on more specific climates is supports the propositions of SIP theory. Salancik and Pfeffer (1978) stated that the social context provides norms and expectations that influence the rationalization and justifications that employees make about the behaviors that are acceptable. As such, foundation climates are larger, more encompassing climates that contain contextual factors that influence perceptions of acceptable behavior (Schneider et al., 1998). Involvement climate is expected to influence the more specific shared perceptions of the extent to which voice is encouraged in the work group. Employee involvement initiatives are broad efforts by the organization to get the employees involved by giving them the power needed to make decisions, giving them the information and knowledge necessary to use the power effectively, and then rewarding the employees for doing so (Richardson & Vandenberg, 2005). This more encompassing involvement climate is likely to influence more specific shared perceptions, such as perceptions of behaviors that are acceptable as part of employee involvement. Given the potential importance of voice behaviors in

organizations, group members may find that being involved also entails challenging the status quo and trying to improve the situation. Thus, the following is hypothesized:

Hypothesis 1: Involvement climate is positively related to voice climate.

Supervisor Undermining in the Workplace

As mentioned previously, SIP theory suggests that there are multiple social influences that impact employee behavior in the workplace (Salancik & Pfeffer, 1978; Zalesny & Ford, 1990). Salancik and Pfeffer (1978) stated that the "characteristics of the job or task, such as style of supervisor or conditions of the workplace, are not given but constructed. Indeed, an important area of investigation is to discover just how individuals come to perceive their work environment" (p. 229). This statement suggests that the social environment of the workplace is influenced by the organization, supervisors, and co-workers. The supervisor of a work group has substantial impact on the social environment because members of the work group are nested within their group leader. A work group and the behavior of its members are uniquely influenced by the behavior of the supervisor of the group.

Because of the frequent interactions between the group members and their supervisor, the past behavior of the supervisor will be salient as group members' process information in the workplace (Zalesny & Ford, 1990). Indeed, Salancik and Pfeffer (1978) highlighted the information salience issue by stating that past behaviors are made salient during information processing and both social norms and expectations of acceptable behavior influence what is considered a legitimate explanation for past behavior. Perceived supervisor behavior, therefore, has the capacity to either foster or hinder subsequent employee perceptions that could lead to beneficial outcomes for the

organization. This study, therefore, examines supervisor undermining as behavior that could potentially thwart efforts that might benefit the organization. The next sections first discuss social undermining and then present empirical research on supervisor undermining.

A great deal of empirical attention has been paid to social relationships and their influence on a number of outcomes in the workplace (Baron, 1996). The majority of studies that examine the influence of social interactions have predominantly assumed that the greater the number of social interactions, the greater the social support for an individual. However, Rook (1984; 1992) was one of the first researchers to suggest that social interactions may also involve disputes, embarrassment, and other negative outcomes. In other words, social interactions have a negative side. Applying this line of thinking to the workplace, Duffy, Ganster, and Pagon (2002) developed the concept of social undermining at work.

The first works on social undermining were based on earlier calls by Rook (1984) to focus greater attention on the potential downsides of social interactions. Rook referred to these interactions as negative social exchanges, problematic social ties, and negative social interactions. Since Rook's call to focus on problematic interactions, a number of alternative labels have been introduced for these types of relationships. Examples of such labels are social conflict (Abbey, Abramis, & Caplan, 1985), social rejection (Hircsh & Rapkin, 1986), and hindrance behaviors (Ruehlman & Wolchik, 1988). Vinokur and van Ryn (1993) drew on these earlier works in developing their definition of the social undermining construct.

Vinokur and van Ryn (1993) defined social undermining as "behaviors directed toward the target person that display (a) negative affect (anger or dislike), (b) negative evaluation of the person in terms of his or her attributes, actions, and efforts (criticism), and (c) behaviors that make difficult or hinder the attainment of instrumental goals" (p. 350). They also discussed the expected relationship of social undermining with social support. Despite the fact that the two constructs were substantially negatively correlated, the authors suggested that the two were potentially unique constructs rather than the polar opposites of a continuum. They also hypothesized that social undermining would have a stronger impact on mental health and well-being than social support, a position supported by substantial empirical evidence (Taylor, 1991). Vinokur and van Ryn (1993) found support for the hypothesis that social undermining would have a stronger impact on the outcome variables than social support. This finding provided initial support for the importance of studying social undermining in interactions among people.

Duffy et al. (2002) extended the concept of social undermining to the workplace, further refining the construct. They defined social undermining at work as "behavior intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation" (p. 332). The authors specifically elaborated on two specific elements of this definition. First, behavior cannot be undermining if it is not *perceived* as intentionally designed to hinder the target. Second, social undermining has a gradual weakening effect, as opposed to a high magnitude act like a physical attack. These two elements are very important in differentiating social undermining from many other similar constructs in the negative social interaction domain.

Social undermining can take a number of forms and also varies in the way that it affects the relationship. Duffy et al. (2002) discussed two dimensions that highlight the forms that undermining can take: direct-withholding and verbal-physical. Undermining may take the form of direct actions such as belittling another person. This form hinders someone as a result of a direct action. Undermining can also take the form of withholding information from a co-worker. This is not a direct action but is intended to hinder someone else. The second dimension is the verbal-physical dimension. Verbal undermining behaviors may include making negative comments or giving someone the 'silent treatment'. Physical undermining may consist of refusing to give a co-worker crucial resources that might aid the co-worker do his/her job.

Duffy et al. (2002) also detailed that similarities and differences between social undermining and other similar constructs. Much like Vinokur and van Ryn (1993), Duffy and colleagues cast social undermining as a distinct construct from social support rather than polar opposites of the same continuum. Social support is positive behaviors that are carried out with the intent to foster personal relationships. Social undermining, on the other hand, is actions taken that minimize the ability to form positive relationships, be successful, or maintain a positive reputation. The key to differentiating the two is that social undermining entails intentionally hindering another person over a period of time. However, low social support has no requirement to hinder another person. An individual in the workplace may offer little social support but also have no intention of hindering the other person. Social undermining has the perceived *intent* of hindering another person in the workplace. There has also been considerable empirical evidence that demonstrates

the distinctiveness of the two constructs (Finch, Okun, Barrera, Zautra, & Reich, 1989; Lakey, Tardiff, & Drew, 1994; Vinokur & van Ryn, 1993).

Duffy et al. (2002) also differentiated social undermining from antisocial behavior. Using a framework advanced by O'Leary-Kelly, Duffy, and Griffin (2000), Duffy et al. (2002) delineated the differences and similarities between social undermining and both employee deviance behavior and workplace aggression. Employee deviance violates norms and has the potential to threaten both the organization and its members (Robinson & Bennett, 1995). Though deviance and social undermining share a degree of conceptual space, they are differentiated in that deviance has the potential to harm both individuals and the organization (e.g., theft). Additionally, deviance encompasses a broader range of behaviors, such as physical violence. Social undermining, on the other hand, is never directed at the organization (Duffy et al., 2002) and does not include such behaviors as physical assault. Aggressive behaviors in the workplace are efforts by individuals to harm others or to harm the organization for which one works (Neuman & Baron, 1997). Similar to deviance, aggression is a broader construct than undermining and includes such behaviors as homicide, theft, and defacing property (Duffy et al., 2002). Additionally, aggressive behaviors are often overt and have an immediate impact. Social undermining, to the contrary, has a much more gradual effect and takes place over a period of time. Therefore, the impact of such behaviors is not often noticeable in the short-term.

Research on social undermining has also examined undermining from two different sources: coworkers and supervisors (Duffy et al., 2002; Duffy, Ganster, Shaw, Johnson, & Pagon, 2006). While both referents as sources of undermining have

influenced both attitudes and outcomes (e.g., Duffy et al., 2002; Duffy et al., 2006), this study will focus on supervisor social undermining. Supervisor social undermining is a construct of interest in this study for two reasons. First, SIP theory suggests that employee attitudes, perceptions and behaviors are shaped by the social context of the workplace (Salancik & Pfeffer, 1978). The social context of the workplace is shaped by the organization itself, coworkers, and leaders in the organization. By examining the role of supervisor undermining in this study, all three key components of the social environment are represented in the theoretical model of this study. Second, social undermining and related supervisor behaviors (e.g. abusive supervision) affects 13.6% of U.S. workers (Schat, Frone, & Kelloway, 2006). Additionally, this type of behavior costs U.S. corporations an estimated $23.8 billion in lost productivity, health care costs, and absenteeism (Tepper, Duffy, Henle, & Lambert, 2006). Supervisor social undermining, and related behaviors, are a significant problem in the workplace and are worthy of further examination (Tepper, 2007).

Supervisor social undermining has been examined at both the individual and group level of analysis. Duffy et al. (2002) found that supervisor undermining negatively predicted subordinate self-efficacy and organizational commitment. They also reported that supervisor undermining positively predicted counterproductive behaviors (passive and active) and increased health complaints on the part of subordinates. Duffy et al. (2006) also found that individual level supervisor undermining was negatively predictive of job satisfaction. Supervisor undermining was also positively predictive of intention to quit and depression. These studies were the first to study supervisor undermining and the

results provided empirical evidence of the costly influence of such behaviors in the workplace.

At the group level, supervisor undermining has been shown to have a unique influence on outcome variables, even in the presence of individual perceptions of supervisor undermining. For example, Duffy et al. (2006) found that group level supervisor undermining negatively predicted individual level job satisfaction. This suggests that group perceptions of supervisor undermining has an impact on individual employee attitudes and this study will build on these findings by examining how supervisor undermining will influence the relationship between involvement climate and voice climate. No research to date has examined the influence of group-level perceptions of supervisor undermining on group level relationships. The theoretical foundation for these expected relationships are discussed in the next section.

The Moderating Influence of Supervisor Undermining

Recall that social undermining is defined as behavior intended to hinder the ability to establish and maintain relationships, achieve work-related success, and gain a favorable reputation (Duffy et al., 2002). Supervisor undermining is behavior on the part of the supervisor that is *perceived* by the group to hinder the group's ability to be successful. The key here are the perceptions of the group members and whether they perceive that the supervisor's behaviors are intended to hinder the group and its ability to succeed. Supervisors are subject to norms of behavior, as are the group members themselves. Drawing from SIP theory, as group members' process social information about the past behaviors of the supervisor, group member perceptions of their own future behavior will certainly be influenced the supervisor's past behaviors and the norms

established as a result of the supervisor's behavior. If the group members perceive that the supervisor intends to hinder the group member's ability to succeed, then supervisor undermining perceptions among the group will be higher.

Involvement climate is hypothesized to have a positive relationship with voice climate. Supervisor undermining is expected to influence this relationship such that the relationship between involvement climate and voice climate is stronger when group perceptions of supervisor undermining is low. As the group perceives that they are highly involved, they are more likely to perceive that they are encouraged to engage in voice behaviors. Supervisor undermining is intended to hinder interpersonal relationships, work-related success, and reputation. If group members perceive that their supervisor is less likely to engage in behaviors that hinder the group's ability to be successful, this will strengthen the relationship between involvement climate and voice climate. In other words, if group member are highly involved and the threat of supervisor undermining is low, they should feel more encouraged to challenge the status quo and try to improve the situation. On the other hand, if a supervisor is perceived to engage in higher levels of undermining, this will hinder relationship between involvement climate and voice climate. Even if the group members perceive that they are encouraged to engage in voice behaviors through involvement efforts on behalf of the organization, past undermining behaviors on the part of the supervisor may indicate to the group members that the supervisor is attempting to hinder the group member's success and relationships, resulting in a weaker relationship between involvement climate and voice climate. Therefore, the following is hypothesized:

Hypothesis 2: The relationship between involvement climate and voice climate is moderated by group perceptions of supervisor undermining such that the relationship is stronger when group-level supervisor undermining is lower and weaker when group-level supervisor undermining is higher.

The Influence of Voice Climate on Outcome Variables

The work of Salancik and Pfeffer (1978) in the development of SIP theory has placed an emphasis on the social environment and its influence on employee perceptions, attitudes, and behavior. Drawing from SIP theory, it is expected that voice climate will have a positive relationship with group voice behavior. Because employees look to their environment for behavioral cues, a climate that encourages the performance of voice behaviors will likely lead to increased voice behaviors among employees. Within the foundation climate – specific climate taxonomy, the norms of behavior within a work group are solidified in the specific climate (Wallace et al., 2006). This climate creates an environment in the workplace in which voice behaviors are both acceptable behaviors within the group and encouraged among the group members. As perceptions among group members are fostered that voice behavior is encouraged, group members will be more likely to perform voice behaviors, leading to an increase in group voice behaviors. Also, consistent with the climate literature in which climates should be 'for something' (Schneider, 1975; Schneider et al., 1998), a specific climate like voice climate is expected to have a positive relationship with the outcome variable of interest, which is group voice behavior.

Additionally, it is expected that voice climate will be positively related to group performance. The ever changing environment in which organizations function has led to

increased pressure on employees to be more proactive in their work roles (Ilgen & Pulakos, 1999). Voice behavior is a proactive behavior that may assist organizations in their efforts to adapt to their environments (Whiting et al., 2008). Voice behavior, at the individual level, has been shown to positively impact performance ratings (Van Dyne & LePine, 1998; Whiting et al., 2008). Additionally, Erez et al. (2002) found that group voice behavior was positively related to group performance. These results show that voice behaviors at the individual and group level have a positive influence on both individual and group performance.

Given the positive link between voice behaviors and performance, it seems logical that encouraging a climate for voice would benefit organizations. As a voice climate is fostered, SIP theory suggests that this climate would influence employee behavior. One way in which group members may respond to such voice climate is through improved overall group performance. Because a voice climate encourages group members to challenge the status quo in an effort to improve the situation, this type of adaptable environment may influence employee commitment to the organization (Whiting et al., 2008). As employees perceive that they are encouraged to challenge the status quo and to improve the situation, this should motivate employees to work harder. If the shared perceptions are that the group is encouraged to take a more proactive role via voice climate, this is expected to translate to improved group performance. Additionally, because voice behaviors include making suggestions on how to improve the situation by improving the group's effectiveness and efficiency, over the long term the willingness of employees to make suggestions for improvement should lead to improved policies and

procedures that enable the group to perform at a higher level. Therefore, the following are hypothesized:

Hypothesis 3: Voice climate is positively related to group voice behavior.

Hypothesis 4: Voice climate is positively related to group performance.

The Mediating Role of Voice Climate

Social information processing theory highlights the impact of the workplace social environment on employee behaviors. Coworkers directly impact the perceptions of employees in the workplace and provide cues as to the behaviors that are acceptable in the workplace. The complex nature of the workplace often requires that employees rely on these social interactions to interpret the multiple stimuli that are presented to employees. Additionally, SIP theory suggests that the others in the organization not only focus one's attention on various dimensions of the workplace but also help provide constructed meanings to events in the workplace (Salancik & Pfeffer, 1978). The meaning assigned to various events that occur in an organization impact employee perceptions and the subsequent behaviors that are deemed acceptable in a given situation.

Lawler (1996) suggested that involvement climates should not only influence employee performance levels but should also impact the ability of employees to view themselves as a means by which to positively influence organizational effectiveness. Alternatively stated, the purpose of employee involvement is to "influence employees to collectively think beyond their role prescriptions so that they are focused on improving processes and creating better products/services" (p., 569; Richardson & Vandenberg, 2005). Indeed, past empirical efforts have hypothesized and found that involvement climate impacts manager ratings of group OCB (Richardson & Vandenberg, 2005; Tsui,

Pearce, Porter, & Tripoli, 1997). This finding is consistent with SIP theory in that involvement climate should impact employee behavior by providing cues as to appropriate behaviors as a result of involvement efforts. As employees perceive that they have the power, information, and knowledge to do their jobs and that they will be rewarded for their efforts, this should lead to improved individual performance levels. Collectively, these individual performance levels will impact the overall group performance. In other words, involvement climate is expected to have a positive relationship with group performance.

An involvement climate is beneficial to organizations because it encourages employees to think beyond their job descriptions and improve the processes within the organization (Richardson & Vandenberg, 2005). One way that organizational processes can be improved is through voice behaviors. Because voice behaviors are aimed at improving the situation and a stated outcome of employee involvement is employees actively seeking to improve current processes, an involved employee should be more likely to perform such behaviors. SIP theory posits that the social environment determines subsequent employee behavior by fostering the norms of appropriate behavior. Therefore, it is expected that involvement climate will be positively related group voice behavior.

Involvement climate is cast as a foundation climate in this study; a more encompassing climate created by the organization. As stated previously, it is hypothesized that that involvement climate will create a foundation that will foster the more specific shared perceptions of voice climate. Voice climate is a specific climate in that it is a climate 'for something' (Schneider et al., 2000). Schneider and Bowen (1993)

suggested that specific climates would be more strongly related to organizational outcomes than foundation climates. While involvement climate has been shown to positively predict important organizational outcomes, voice climate is expected to be a stronger predictor of the outcomes in this study. Therefore, it is posited that voice climate will mediate the positive relationships between involvement climate and both organization outcomes in this study.

Hypothesis 5: Involvement climate is positively related to group voice behavior.

Hypothesis 6: Involvement climate is positively related to group performance.

Hypothesis 7: Voice climate mediates the relationship between involvement climate and group voice behavior.

Hypothesis 8: Voice climate mediates the relationship between involvement climate and group performance.

Team-Member Exchange

Social information processing theory places a particular emphasis on the role of coworkers in the shaping of the attitudes, perceptions, and behaviors of members of a work group. Salancik and Pfeffer (1978) stated that "the new employee will rely less on managers than on fellow employees for information about norms and standards of behavior, including impressions of the workplace, the organization, and the specific job" (p. 228). They further state that the coworkers of an employee will make certain dimensions of the workplace more salient through the interactions of the group members. In other words, a group member is more likely to rely on co-workers in forming perceptions on issues such as behavioral expectations or the various dimensions of the workplace.

The previous discussion highlighted the influence of co-workers on group member perceptions according to SIP theory. Salancik and Pfeffer (1978) clearly suggest that the relationships an employee forms with members of his/her workgroup will have an influence on the attitudes, perceptions, and behaviors of the employee. Indeed, group members are nested within work groups and are necessarily influenced by the dynamics of the relationships between fellow employees in the work group (Hackman, 1992). SIP theory suggests that the influence of coworkers be examined in studying employee perceptions in the workplace. One such construct that captures the exchange nature of groups in the workplace is team-member exchange.

Team-member exchange quality was introduced by Seers (1989) as a complementary construct to leader-member exchange (LMX) quality (Graen & Cashman, 1975). Seers (1989) drew from social exchange theory and role theory and suggested that supervisors and peers were the focal organizational members with whom employees interacted. Seers noted that considerable research had been conducted to examine the influence of the supervisor in the work setting but research had largely ignored the influence of peers at work. So, team-member exchange (TMX) quality was introduced to account for the relationship between employees and their work group. Seers discussed the TMX construct and noted that "the construct of team-member exchange quality (TMX) is proposed as a way to assess the reciprocity between a member and the peer group. It should measure the member's perception of his or her willingness to assist other members, to share ideas and feedback and in turn, how readily information, help, and recognition are received from other members" (p. 119).

In developing the construct, Seers attempted to differentiate TMX from other similar constructs in the literature, particularly LMX and cohesiveness. TMX and LMX are similar in that they both ask individuals to describe the reciprocal quality of an exchange relationship (Seers, 1989). While TMX was introduced as a complementary construct to LMX, it is also distinct in that the referent is the work group as opposed to the supervisor. Additionally, TMX is not a dyadic construct like LMX. Rather, TMX involves an employee's relationship with the entire work group with which he or she is identified as a member. Empirical results supported the distinct nature of the two constructs ($r = .42$). In distinguishing the constructs of cohesiveness and TMX, Seers suggested that cohesiveness involved perceptions of the group as a whole while TMX involved perceptions of one's role within the work group. Across two studies, the correlations between cohesiveness and TMX were .42 (Seers, 1989) and .44 (Seers, Petty, & Cashman, 1995), providing initial empirical support for the distinctiveness of the two constructs.

Despite the recognition that the relationship an employee has with his/her work group as an influenced on important work outcomes, surprisingly little research has been conducted on TMX (Cole, Schaninger, & Harris, 2002). The research that has been conducted, however, has shown that TMX does have unique influence on work outcomes. Seers (1989) found that TMX predicted variance in job attitudes (i.e., work satisfaction, co-worker satisfaction) beyond LMX. Additionally, Seers reported that TMX predicted supervisor rated performance. This study was the first to examine TMX and showed that TMX was able to predict variance in important outcomes beyond established measures and also that TMX predicted performance, an important outcome in

organizational research. Seers et al. (1995) continued the development of TMX in a quasi-experiment among an industrial plant's employees. They found that changes in departmental TMX levels resulted in gains in departmental production efficiency.

Since the initial empirical studies by Seers and colleagues, other studies have examined the role of TMX in organizational research. Liden, Wayne, and Sparrowe (2000) suggested that interpersonal relationships at work would impact empowerment in employees, which would influence work outcomes. The authors found that empowerment fully mediated the relationship between TMX and work satisfaction. Additionally, they reported that empowerment partially mediated the relationships between TMX and both organizational commitment and job performance. This study's results show that TMX not only directly influences outcomes but also has an influence on employee cognitive states such as empowerment. Lam (2003) found that TMX predicted both job satisfaction and organizational commitment among a sample of Hong Kong workers. These results showed additional evidence that interpersonal relationships between employees may be important in a variety of cultures. Finally, Jordan, Feild, and Armenakis (2002) showed that team level TMX predicted team performance, confirming the group level findings of Seers (1989). This finding suggests that high levels of TMX among all group members results in positive outcomes for the group as a whole.

These results not only validate the TMX construct but they also show that interactions among group members have an influence on perceptions, attitudes and behaviors in the workplace, supporting the importance of the interpersonal relationships between group members in future empirical efforts. The current effort will contribute to these findings by examining the moderating influence of TMX on the relationship

between voice climate and the relevant performance outcomes. The theoretical basis of this expected relationship is discussed in the next section.

The Moderating Role of TMX

TMX refers to the reciprocal nature of relationships between work group members and the willingness of those members to assist others, share ideas, and recognize the efforts of others (Seers, 1989). Groups characterized by high quality TMX will exhibit greater levels of trust, respect, and cooperation among group members (Scott & Bruce, 1994). TMX also results in the sharing of valuable information, support, and resources among group members (Erdogan, Sparrowe, Liden, & Dunegan, 2004). Finally, TMX is also likely to strengthen group norms for engaging in behaviors that benefit the effectiveness of the group (Organ, Podsakoff, & MacKenzie, 2006).

The characteristics of groups that exhibit high quality TMX suggest that high quality TMX relationships in work groups will lead to desirable outcomes for the work group. It also suggests that TMX will influence behaviors of the members in a work group. Recall that voice climate is the extent to which group members perceive that they are encouraged to engage in voice behaviors. It is believed that voice climate will have positive relationships with both group voice behavior and group performance. It is also posited here that the perceived quality of TMX between members in a workgroup will have an influence on the relationship between voice climate and the outcome variables. Organizations attempting to create a voice climate will likely make every effort to create this climate across the entire organization and within each group. Employees may perceive that they are encouraged to speak up and challenge the status quo in an effort to

improve work conditions. These perceptions, as discussed previously, are influenced by both the organization and group supervisors. .

However, the dynamics within a work group among the group members will certainly influence important work outcomes and relationships. Voice behaviors are challenging behaviors in that they have the potential to upset personal relationships. Given this challenging nature, group members are more likely to engage in voice behaviors if there is trust, respect and cooperation among group members. Recall that voice climate is the shared perceptions of the extent to which group members perceive that they are encouraged to engage in voice behaviors. Groups characterized by high TMX will likely strengthen the relationship between voice climate and group voice behavior. These groups are trusting, supportive, and cooperative and this will further influence the relationship between voice climate and group voice behavior because there is no fear of retribution or negative consequences for challenging the status quo in the form of voice behaviors. Therefore, the relationship between voice climate and group voice behavior will be stronger for high TMX groups because of the high quality exchanges that are present within these groups.

On the other hand, groups characterized by lower quality TMX do not have the trust, respect and cooperation among its members. These groups do not perceive that a reciprocal relationship exists among group members and these groups are also seen as less effective by the group members (Tse, Dasborough, & Ashkanasy, 2008). As a result, there may be more fear of retribution or negative consequences for speaking up and challenging the current ways of doing things through voice behaviors. So, while employees perceive that they are encouraged to engage in voice behaviors from other

organizational influences, the low perceptions of TMX within the work group may hinder the relationship between voice climate and group voice behavior. If group members do not feel a sense of trust and respect between them, the influence of voice climate on the performance of voice behaviors will be weaker than in groups characterized by high perceptions of TMX.

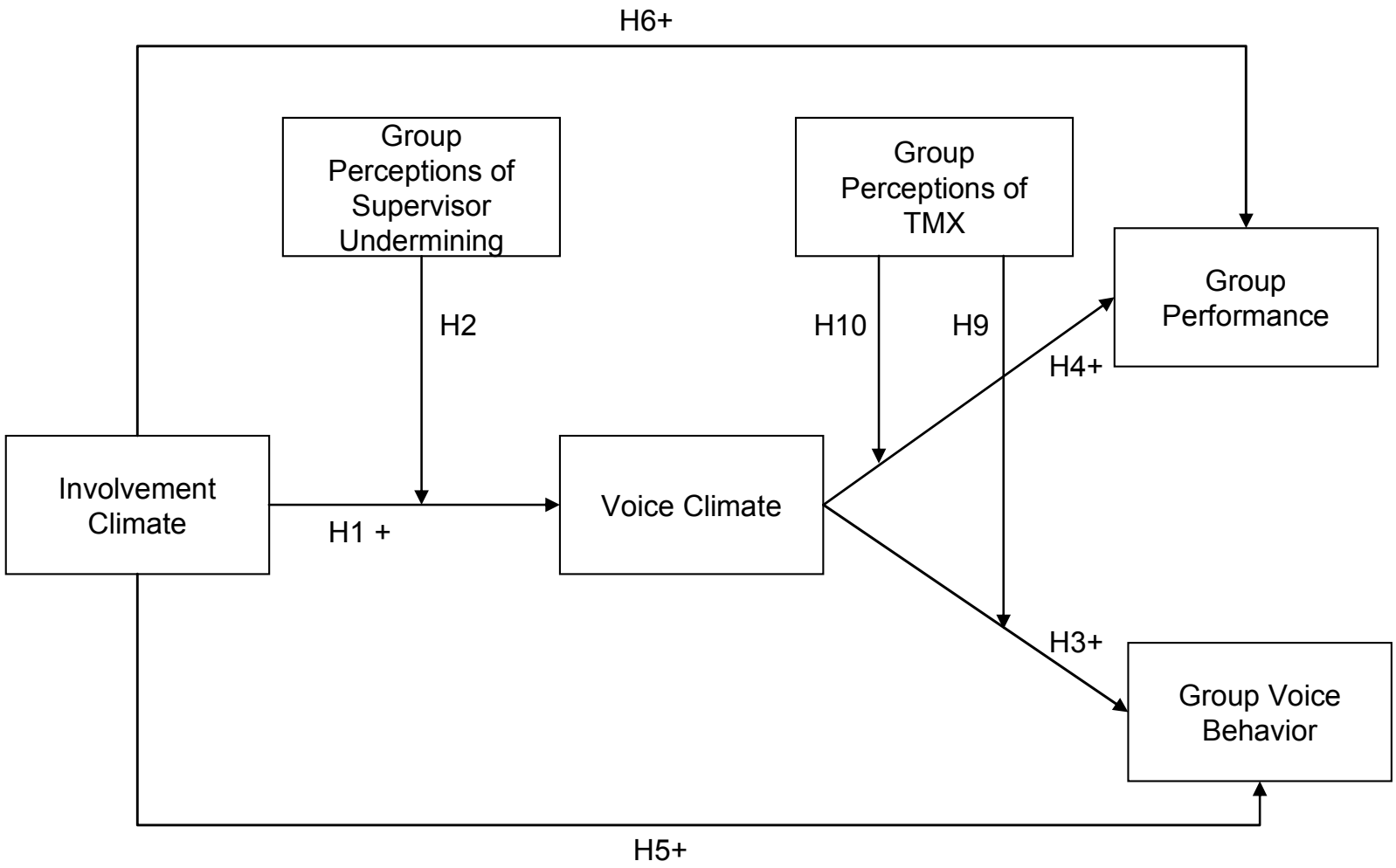
Voice climate is also hypothesized to be positively related in group performance. Given the potential for voice behaviors to improve performance (Van Dyne & LePine, 1998; Whiting et al., 2008), a climate that encourages voice behavior is also expected to have a positive relationship with group performance. However, similar to the discussion presented on the relationship between voice climate and group voice behavior, it is hypothesized that TMX will impact the relationship between voice climate and group performance. As the group members perceive that their group is characterized by high quality exchange relationship among the group members and a climate for voice is present, group performance should increase. These groups also are perceived by the group members to be more effective (Tse et al., 2008). This is because the groups' members are more willing to speak out without concern of retaliation for engaging in challenging behaviors. Over the long term, a climate for voice should lead to improved processes as a result of past voice behaviors, resulting in overall better group performance (Whiting et al., 2008). However, if the group members perceive that the group is characterized by low levels of trust and cooperation, the relationship between voice climate and group performance will be weaker. Though a voice climate may be present, the low quality of the exchange relationships among group members will result in lower group performance because the members are not willing to challenge the status

quo in an effort to improve group effectiveness. Given the preceding discussions, the following is hypothesized:

Hypothesis 9: The relationship between voice climate and group voice behavior is moderated by TMX such that the relationship is stronger when TMX quality is higher and weaker when TMX quality is lower.

Hypothesis 10: The relationship between voice climate and group performance is moderated by TMX such that the relationship is stronger when TMX quality is higher and weaker when TMX quality is lower.

Figure 2-1: Theoretical Model



CHAPTER THREE

METHODS

Participants

Employees and supervisors from a large building facilities and maintenance organization located in the Midwestern United States agreed to participate in the current research effort in exchange for summary results of the study. This sample is appropriate for the present study for two reasons. First, the groups in the organization perform an array of daily job responsibilities, from janitorial services to designing blueprints for new construction. Though the sample consists of employees of one organization, the diversity of job responsibilities allows the testing of the hypothesized relationships across groups of varying complexity and responsibility. Second, management of the organization is interested in encouraging a more active role among employees. The results of this study will inform top management of the extent to which employees in the organization are currently encouraged to speak up and make constructive suggestions for improvement.

The sample consisted of 374 individuals (65.2% male, 31.6% female, 12 not reported) subdivided into 54 work groups. Following the work of George (1990), work groups are defined as employees who are members of a work unit that report to a common supervisor. Work group sizes ranged from 2-32 with an average group size of 6.93 (SD = 5.85) employees per group. The average age of the sample was 42.5 (SD = 14.1, 10 not reported). The sample was 85% Caucasian, 2.1% African-American, 1.3%

Hispanic-American, .5% Asian-American, and 8.8% Other-American (8 not reported). The average tenure in their current work group was 7.81 years (SD = 5.32).

Design, Measures, and Procedures

Design and Procedures

This research effort was broken down into three data collection periods. At time 1, all employees completed measures of employee involvement climate and supervisor undermining. The second data collection period commenced approximately four weeks later and consisted of having all employees' complete measures of voice climate and team-member exchange. There are three main reasons for the 4-week time lag between the two employee data collections. First, the temporal spacing of the surveys is an attempt to limit the potential influence of common method bias. The variables in the first two data collections are derived from the same source, the employees. It has been recommended that temporal separation of same source data will mitigate the influence of common method bias (Podsakoff, MacKenzie, & Podsakoff, 2003; Spector, 2006). The time lag reduces the saliency of contextual influences that may bias responses and also reduces the respondent's motivation to use prior responses to answer subsequent questions (Podsakoff et al., 2003). Second, social information processing theory suggests that the work environment influences employee perceptions and behavior as interactions occur within the environment. The theoretical model of the study casts involvement climate, along with the moderating role of supervisor undermining, as antecedents to the formation of voice climate. To be consistent with the theoretical model of the study, it was necessary to collect the antecedents first and then collect voice climate. Third, there are potential disadvantages to implementing a time lag in study designs. The time lag

could allow for contaminating variables to influence the relationships of interest and respondent attrition could become an issue if the lag is inordinately long (Podsakoff et al., 2003). In discussions with management of the organization and after reviewing the literature on common method bias, it was determined that the four week time lag was adequate enough to examine the theoretical relationships but not long enough to be particularly concerned with the disadvantages of time lags in study design.

The final phase of data collection consisted of gaining ratings of group performance and group voice behavior. Ratings of group performance and group voice behavior were provided by the supervisor of each group and also by that supervisor's manager. Each supervisor and next-level manager was asked to rate the group as a whole, as opposed to individual members of the group. The fact that the ratings of performance are being collected from two supervisors helps address the common method concerns for performance (Spector, 2006). These ratings are being collected from different sources than the first two data collections and at different times. This method of data collection has been recommended to address concerns of common method bias. However, the theoretical model suggests that voice climate will influence subsequent group voice behavior and group performance. Therefore, these ratings conducted by supervisors occurred approximately 2 to 3 weeks after the second data collection from all employees. This is consistent with SIP theory in that the work environment has an influence on work group behavior. By collecting the performance outcomes after the measures of voice climate, this allows for the examination of the influence of voice climate on performance as predicted by SIP theory.

Measures

Employee Involvement Climate

The 18-item measure from Riordan et al. (2005) was used to assess employee involvement climate. Responses for all items were made on a five-point scale, ranging from 1 = *strongly disagree*, to 5 = *strongly agree.* Three items assessed the power dimension, including "my work unit has sufficient authority to fulfill its job responsibilities". Six items assessed the information dimension, including "company goals and objectives are clearly communicated to employees". The knowledge dimension was assessed with four items, including "members of my work unit receive sufficient job related training". Finally, five items assessed the rewards dimension, including "there is a strong link between how well the members of my work unit perform their jobs and the likelihood of receiving a raise in pay/salary". Consistent with previous research, employee involvement climate was created by averaging all 18 items of the involvement climate scale (Richardson & Vandenberg, 2005; Riordan et al., 2005). Additionally, employee involvement climate was created using the referent shift approach as advanced by Chan (1998). As such, the group is the referent in the employee involvement climate items. The 18-item measure of involvement climate yielded acceptable internal consistency ($\alpha = .91$).

Supervisor Undermining Behavior

The 13-item measure of supervisor undermining developed by Duffy et al. (2002) was used in this study. Group members were asked to rate how frequently they encountered undermining behavior from their supervisor in the last month. The responses were made on a six-item scale with 1 = *never*, 2 = *once or twice*, 3 = *about once a week*, 4 = *several times a week*, 5 = *almost every day*, 6 = *everyday*. A sample

item includes “How often has your supervisor intentionally hurt your feelings?” Supervisor undermining behavior was created using the direct consensus approach (Chan, 1998), which is consistent with past undermining research. The 13-items measure of supervisor undermining yielded acceptable internal consistency (α = .94).

Voice Climate

Voice climate was measured with a 6-item scale adapted from Van Dyne and LePine (1998). This scale has been utilized primarily at the individual level in past research and was adapted for this study to the group level with the group as the referent (Chan, 1998) and to capture the climate perceptions of group members. Responses were made on a seven-point scale anchored by 1 = *strongly disagree* and 7 = *strongly agree.* A sample item from this scale is “The employees in my work group are encouraged to develop and make recommendations concerning issues that affect the group”. The 6-items measure of voice climate used in this study yielded an acceptable internal consistency (α = .93).

Team-Member Exchange Quality

Team-member exchange was measured with a 10-item scale developed by Seers et al. (1995). Responses to the items used a seven-point scale, ranging from 1 = *strongly disagree*, to 7 = *strongly agree*. A sample item from this scale includes “I communicate openly with other members of my work group about what I expect from them”. Ford and Seers (2006) aggregated TMX to the group level by averaging the individual responses within the group to create a group score. Further, the authors suggested that group TMX would be considered an additive model (Chan, 1998) in that group members are not likely to demonstrate agreement. Because TMX represents the individual perceptions of

the exchange relationship between group members, agreement would not necessarily be expected. Therefore, TMX was considered an additive model for this study, as well. The 10-item measure of team-member exchange was found to have acceptable internal consistency ($\alpha = .85$).

Group Voice Behavior

Group voice behavior was assessed by group supervisors and the supervisor's manager. Group voice behavior was measured using the 6-item scale adapted from Van Dyne and LePine (1998). The two authority referents rated the extent to which the group as a whole performs voice behaviors. Responses were made on a seven-point scale anchored by 1 = *strongly disagree* and 7 = *strongly agree.* A sample item from this scale for the supervisor is "The employees of the work group I supervise develop and make recommendations concerning issues that affect the group". A sample item for the next level managers is "This supervisor's work group develops and makes recommendations concerning issues that affect the work group". The 6-item measure of group voice behavior demonstrated acceptable internal consistency ($\alpha = .93$).

Group Performance

Group performance was measured by a 7-item scale adapted from Williams and Anderson (1991). Responses were made on a five-point scale ranging from 1 = s*trongly disagree* to 5 = s*trongly agree.* Similar to group voice behavior, the supervisor and their manager was asked to rate performance of the group as a whole. A sample item from the scale is "The work group I supervise performs tasks that are expected of it" for the supervisor and "This work group performs tasks that are expected of it" for the next level

managers. The 7-item measure of group performance demonstrated acceptable internal consistency ($\alpha = .84$).

Control Variables

Past research in group level studies have controlled for characteristics of the group that may influence the findings of a study (e.g., Wallace et al., 2006). In an effort to be consistent with past group level research, and to control for the potential influence of these group characteristics on the findings of this study, tenure and group size will be included as control variables. Past research on voice behavior has suggested that age, gender, and education may influence one's performance of voice behaviors (Van Dyne & LePine, 1998). These variables were considered as controls in this study, as well. Finally, leader-member exchange (LMX) was included as a control variable in this study. It has been suggested that the quality of the relationship between supervisors and their subordinates is an issue for OCB research (Bommer, Dierdorff, & Rubin, 2007). The LMX-7 scale was used to assess LMX (Scandura & Graen, 1984). The 7-item measure of leader-member exchange was found to have acceptable internal consistency ($\alpha = .93$).

Data Analysis

Psychometric Properties of the Scales

Prior to hypothesis testing, the psychometric properties of all measures were evaluated in an effort to ensure internal consistency. It is desirable to have internal consistency of greater than .70 (Cortina, 1993). Additionally, the factor structures of involvement climate and voice climate was conducted via confirmatory factor analysis. Using LISREL, the factor structures were confirmed by first assessing whether each scale item has a significant factor loading according to the proposed factor structures. Also,

the fit of the model will be assessed via RMSEA, SRMR, and CFI. It is desirable for RMSEA to be close to .06, to have a SRMR value close to .08, and a CFI at or above .90 (Hu & Bentler, 1999).

Data Aggregation

In order to justify the aggregation of data, researchers must show that there is sufficient within group homogeneity and that there is sufficient dissimilarity between groups. Within group homogeneity can be exhibited by calculating $r_{wg(j)}$ (James, Demaree, & Wolfe, 1984). If the $r_{wg(j)}$ value is greater than .70, this shows that there is sufficient within group agreement. Additionally, Bryk and Raudenbush (1992) developed two indices to show reliability of the group responses: ICC (1) and ICC (2). ICC (1) is the amount of variance in the variable of interest that can be attributed to group membership. ICC (2) can be viewed as the reliability of the means and the value of ICC (2) should be above .70 (Bliese, 2000). These statistical techniques were utilized to examine the viability of aggregation for involvement climate, voice climate and supervisor undermining behavior. Between-group heterogeneity was also assessed via an ANOVA test. In this test, the independent variable will be the group and the dependent variable is the variable of interest. As an example in this study, voice climate would be the dependent variable in the ANOVA and group will be the independent variable. If the ANOVA is significant, then there are differences across groups and this will assist in justification of date aggregation. Again, this was conducted for involvement climate, voice climate, and supervisor undermining.

Hypothesis Testing

OLS regression was utilized to test all of the hypotheses in this study. Hypotheses 1, 3, 4, 5, and 6 examine main effects of variables in the study. Hypotheses 2, 9 and 10 suggest moderating roles of variables in the study. These hypotheses were tested and interpreted utilizing the method outlined by Aiken and West (1991). Hypothesis 2 states that supervisor undermining will moderate the relationship between involvement climate and voice climate. This hypothesis will be tested using the following equation:

(1) $Voice\ Climate = \beta_0 + \beta_1 Involvement\ climate + \beta_2 Supervisor\ Undermining + \beta_3 Involvement\ climate * Supervisor\ Undermining + e$

Hypotheses 9 and 10 test the moderating role of team-member exchange (TMX) on the relationships between voice climate and both outcome variables. Those hypotheses will be tested using the following equations:

(2) $Group\ Voice\ Behavior = \beta_0 + \beta_1 Voice\ climate + \beta_2 TMX + \beta_3 Voice\ climate * TMX + e$

(3) $Group\ Performance = \beta_0 + \beta_1 Voice\ climate + \beta_2 TMX + \beta_3 Voice\ climate * TMX + e$

The data for the variables tested in these moderation hypotheses were grand mean centered prior to creating the interaction terms to help control for any effects due to multicollinearity between the predictors and the interaction term (see Aiken & West, 1991). The interaction term is simply the product of the first two predictors in each of equations 1 through 3. Assuming the interaction term is significant in the regression equation, the unstandardized regression coefficients are then examined. To further examine the interaction, particular values of supervisor undermining (for equation 1) and

TMX (for equations 2 and 3) will be chosen, along with values of X, and the interaction will be plotted. The simple slopes will be examined to determine if they are different from zero (Aiken & West, 1991).

Hypotheses 7 and 8 examine the mediating role of voice climate on the relationships between involvement climate and both outcome variables. Tests of mediation were conducted using procedures recommended by Shrout and Bolger (2002). The first step of the mediation process is to show that a distal construct (involvement climate) is related to the outcome variables (group voice behavior and group performance). The second step in mediation testing is that the distal antecedent is significantly related to the mediator (voice climate). The third step is that the mediator is significantly related to the outcomes. And finally, the fourth step results in full mediation if the distal antecedent is no longer significantly related to the outcome variables in the presence of the mediating variable. If both the distal construct and the mediator significantly related to the outcome variable, partial mediation can be claimed. The indirect effects will also be assessed using Sobel's (1982) test. This test assesses the magnitude and significance of the indirect effects.

CHAPTER FOUR

RESULTS

The results section is presented in three parts. First, the psychometrics section presents the results of a number of confirmatory factor analyses that were conducted on the measures utilized in this study. The second section will discuss aggregation issues and the justification for aggregation for the group-level variables in the study. The third section will include the results of the hypothesis testing. All descriptive data and zero-order correlations can be found in Table 1 (p. 101).

Two points need to be addressed before further discussing the results of this study. First, the performance variables in this study, group voice behavior and group performance, were collected from group supervisors and from the immediate manager of each groups supervisor (labeled "2nd level" in Table 1). An examination of the correlations show that the ratings collected from the second-level supervisors were not significantly correlated with the ratings provided the direct supervisors. Bommer et al. (2007) recently utilized second level manager ratings and in their study, the second level manager had daily interactions and contact with the employees who they were rating. In follow-up discussions with management of the organization in which the data was collected for this study, this is not the case. Though the second level managers certainly do interact with groups below them, it was not necessarily daily contact. Additionally, group members typically communicate work-related issues with their direct supervisors,

who then communicate with the next level manager. Since voice behavior is a key outcome of this study and involves speaking up to improve work conditions and communication between participants and their second-level managers was not common, it was determined that the second level ratings were not appropriate for inclusion in the hypothesis testing. Therefore, they are excluded from the analyses that are presented below.

Second, an examination of the correlations revealed that one of the control variables, leader-member exchange (LMX), was highly correlated with two of the independent variables in this study, involvement climate (r = .66) and supervisor undermining (r = -.64). To examine the distinctiveness of the measures, several confirmatory factor analyses were conducted. The following cutoff values proposed by Hu and Bentler (1999) were used to assess the fit of the models: CFI > .95, RMSEA < .06, and SRMR < .08. A single factor model was tested in which involvement climate, supervisor undermining and LMX all loaded onto a single factor. The results show that the data did not fit the model well: χ^2 = 4546.10 (df = 665), CFI = .85, RMSEA = .20, and SRMR = .14. The next model tested allowed LMX and involvement climate to load onto a single factor while supervisor undermining loading onto a separate factor (two-factor model). The results show that the data did fit the model better than the single factor model but still did not fit the data well: χ^2 = 2752.84 (df = 664), CFI = .92, RMSEA = .13, and SRMR = .09. Another two-factor model was tested in which LMX and supervisor undermining loaded onto one factor while involvement climate loaded onto another factor. The results show that this model also did not fit the data well: χ^2 = 2804.12 (df = 655), CFI = .92, RMSEA = .13, and SRMR = .11. Finally, a three-factor

model was tested in which LMX, involvement climate, and supervisor undermining loaded onto separate factors. The results show that this model fit the data well: χ^2 = 1453.19 (df = 650), CFI = .97, RMSEA = .06, and SRMR = .06. This supports the distinctiveness of the three measures.

Because of the high correlations between LMX and the independent variables, multicollinearity might become a concern if LMX were included as a control variable in the regression equations. However, model specification concerns necessitate that much thought be put into simply removing variables simply to avoid multicollinearity issues (Pedhazur & Schmelkin, 1991). Model specification involves determining which variables should be included or excluded from a regression equation. In this case, the relationships of interest are to examine the influence of involvement climate and supervisor undermining on the development of a voice climate. LMX captures the quality of the exchange relationship between leaders and subordinates. Supervisor undermining also captures the relationship quality between leaders and subordinates, much like LMX. Theoretically, the two constructs are similar in their capturing of relationship quality with supervisors, though in opposite directions. Empirically, the high correlation bears out this theoretical similarity. Since the two constructs capture relationship quality and supervisor undermining is the construct of interest in the current study, it was decided that LMX would be omitted from the regression analyses presented later in this chapter.

Psychometrics

Involvement Climate

Using Lisrel 8.72 (Joreskog & Sorbom, 1996), the factor structure of involvement climate was tested in a confirmatory factor analysis (CFA). The cutoffs suggested by Hu and Bentler (1999) were again used to assess model fit for all CFA's. Three factor structures were tested for involvement climate. The first model was a single factor structure with all 18 items loading onto a single involvement climate factor. The single factor model showed moderate fit to the data: $\chi^2 = 650.28$ (df = 135), CFI = .93, RMSEA = .11, and SRMR = .07. The second test was a four factor structure with the 18 items specified to load onto the four involvement climate factors: power, information, rewards, and knowledge. The four factor structure fit the data well: $\chi^2 = 362.18$ (df = 129), CFI = .96, RMSEA = .07, and SRMR = .05. The third factor structure tested was a second-order model with the 18 items again loading onto their respective factors of involvement climate. The first-order factors were in turn specified to load onto a second-order factor of involvement climate. The second-order factor also fit the data well: $\chi^2 = 363.7$ (df = 131), CFI = .96, RMSEA = .07, and SRMR = .05. Additionally, the four loadings of the first-order factors onto the second-order factor were all significant and above .80. Compared to the four factor model, the second-order model was more parsimonious and the change in χ^2 was not significant between the two models ($\Delta\chi^2 = 1.52$, df = 2). Therefore, the second-order model was retained for hypothesis testing.

Voice Climate

Though the voice climate scale was an adaptation of an already validated scale (Van Dyne & LePine, 1998), an exploratory factor analysis was conducted to examine the factor structure of the measure. Initially, a principal components analysis was run on the data. Eigenvalues greater than 1 and scree plot were used to determine the factor

structure and a clear one-factor solution best captured the data. Using a varimax rotation, a one-factor solution was again the best fit to the data. All loadings were above .80. A confirmatory factor analysis was run to again test the factor structure of the voice climate measure. The single factor model fit the model well: $\chi^2 = 60.85$ (df = 9), CFI = .98, RMSEA = .09, and SRMR = .03. All loadings were significant and above .80.

As an additional test of the distinctiveness of the voice climate construct, two confirmatory factor analyses were conducted. First, a model was run in which the items measuring involvement climate and voice climate were specified to load onto a single climate factor. This single factor model did not fit the model well: $\chi^2 = 2058.07$ (df = 252), CFI = .85, RMSEA = .19, and SRMR = .12. The second model allowed the involvement climate and voice climate items to load onto their respective factors, resulting in a five-factor model. This five-factor model fit the data well: $\chi^2 = 557.82$ (df = 242), CFI = .97, RMSEA = .06, and SRMR = .05. An examination of the phi matrix showed that the relationship between voice climate and the facets of involvement climate ranged from .36 to .50. These results support the distinctiveness of the voice climate construct.

Group Performance Variables

The factor structure of the two performance facets were again assessed via confirmatory factor analysis. The one-factor model of performance did not fit the data well: $\chi^2 = 1319.43$ (df = 65), CFI = .81, RMSEA = .25, and SRMR = .12. The two-factor model of performance fit the data much better: $\chi^2 = 853.87$ (df = 64), CFI = .90, RMSEA = .13, and SRMR = .08. Though the RMSEA is a little higher than desired, the two-factor model still fit the data much better than the one-factor model. Additionally, the

chi-square difference test supports the two-factor model of performance over the one factor model ($\Delta \chi^2 = 465.56$, 1 df). All loadings of the individual items were significant on their respective performance factor.

Full Measurement Model

In order to assess the factor structure of the entire measurement model, a final confirmatory factor analysis was run in which each of the items was allowed to load onto their respective factors for all study variables. The full measurement model fit the data well: $\chi^2 = 3998.75$ (df = 1674), CFI = .92, RMSEA = .06, and SRMR = .07. In addition, each of the items loaded significantly onto their respective factors.

Aggregation of Climate Variables

Consistent with the data aggregation plan presented previously, it is necessary to demonstrate that the climate variables (i.e., involvement climate, voice climate, and supervisor undermining) are justified to be aggregated to the group level.

Involvement Climate

Using a null distribution, the average $r_{wg(j)}$ for involvement climate was .96 (range: .87 - .99, SD = .03). ICCs were computed using the formula reported by Bliese (2000) and by running an ANOVA test with involvement climate as the dependent variable and group ID as the independent variable. The formula for ICC(1) = MSB – MSW/[MSB + (k – 1) * MSW] and the formula for ICC(2) = MSB – MSW/MSB[1]. The ICCs for involvement climate were: ICC(1) = .18, ICC(2) = .60; $F_{53, 320} = 2.53$, $p < .01$. These results generally support the aggregation of involvement climate to the group level. While the ICC(2) value is below the recommended .70 cutoff, the variable was

[1] MSB = Mean square between groups; MSW = Mean square within groups; k = average number of group members.

operationalized as a group variable and all other aggregation statistics support aggregation. Additionally, the lower ICC(2) for the climate variables in this study may be the result of smaller group sizes (Klein & Kozlowski, 2000). Therefore, involvement climate is aggregated for hypothesis testing.

Voice Climate

Using a null distribution, the average $r_{wg(j)}$ for voice climate was .80 (range: .59 - .97, SD = .11). Though a small number of groups did not agree, as evidenced by $r_{wg(j)}$ below the recommended .70, the mean value suggests that on average the groups did agree. The ICCs for voice climate were: ICC(1) = .21, ICC(2) = .75; $F_{53, 320} = 4.15$, $p < .01$. These results support the aggregation of voice climate to the group level.

Supervisor Undermining

Using a null distribution, the average $r_{wg(j)}$ for supervisor undermining was .97 (range: .67 - .99, SD = .06). The ICCs for supervisor undermining were: ICC(1) = .22, ICC(2) = .66; $F_{53, 320} = 2.94$, $p < .01$. These results generally support the aggregation of supervisor undermining to the group level. Again, while the ICC(2) value is below the recommended .70 cutoff, the variable was operationalized as a group variable and all other aggregation statistics support aggregation. Therefore, supervisor undermining is aggregated for hypothesis testing.

Hypothesis Testing

An examination of the correlations on Table 1 shows support for many of the hypotheses that were presented. The correlation between involvement climate and voice climate ($r = .55$, $p < .01$) provides initial support for hypothesis 1. Hypothesis 3 predicted a positive relationship between voice climate and group voice behavior, while

hypothesis 4 predicted a positive relationship between voice climate and group performance. Correlations show initial support as the bivariate relationship between voice climate and both group voice behavior ($r = .30$, $p < .05$) and group performance ($r = .35$, $p < .01$) are significant. Initial support was also found for hypothesis 6 as the correlation between involvement climate and group performance was significant ($r = .36$, $p < .01$). Hypothesis 5, which predicted a positive relationship between involvement climate and group voice behavior, was not supported as the correlation between involvement climate and group voice behavior was not significant. However, these bivariate relationships do not shed much light on these relationships when other variables are included in the hypothesis tests. In addition, hypotheses in this study predict moderation and mediation and these cannot be examined via correlations. Therefore, it is desirable to test the hypothesized relationships with the other relevant variables in the model.

Hypothesis 1 predicted that involvement climate would be positively related to voice climate. To test this hypothesis, the control variables were added into the regression equation in step one and then involvement climate was added into the equation in step 2. Table 2 shows the results of this hypothesis test. As can be seen in Table 2, hypothesis 1 was supported as involvement climate was a significant predictor of voice climate ($\beta = 1.33$, $p < .01$; $\Delta R^2 = .25$). This finding suggests that groups who perceive that they are involved in their work also perceive that they are encouraged to speak up at work.

Table 2

Hierarchical Regression of Voice Climate on Involvement Climate

Variable	B	SE	*df*	t-test	p-value	F	sig.	R^2
Step 1								
constant	5.01	0.99	48	5.07	0.00	2.02	0.09	0.09
Age	-0.04*	0.02		-2.12	0.04			
Gender	-0.20	0.41		-0.48	0.63			
Education	0.17	0.21		0.82	0.41			
Tenure	0.09**	0.03		2.91	0.01			
Group Size	0.02	0.02		0.69	0.50			
Step 2								
constant	-0.40	1.48	47	-0.27	0.79	5.63	0.00	0.34
Age	-0.01	0.02		-0.66	0.52			
Gender	-0.33	0.34		-0.95	0.35			
Education	0.27	0.18		1.54	0.13			
Tenure	0.05	0.03		1.92	0.06			
Group Size	0.00	0.02		-0.03	0.98			
Involvement Climate	1.33**	0.30		4.44	0.00			

Note: Beta coefficients are unstandardized

* p < .05, ** p < .01

Hypothesis 2 predicted that the relationship between involvement climate and voice climate would be moderated such that the relationship would be stronger when supervisor undermining was lower. Before testing this hypothesis, the data for involvement climate and supervisor undermining were grand-mean centered. An interaction term was then created by multiplying the grand-mean centered variables of involvement climate and supervisor undermining. This is done in an effort to help control for possible multicollinearity between the predictors and the interaction term (Aiken & West, 1991). To test the hypothesis, the mean-centered values of involvement climate and supervisor undermining were entered into the regression equation in step one and the interaction between involvement climate and supervisor undermining was entered in step 2. As can be seen in Table 3, hypothesis 2 was supported in that the interaction between involvement climate and supervisor undermining was significant ($\beta = -1.37$, $p < .05$; $\Delta R^2 = .06$). Included on Table 3 with the results are the variance inflation factors

(VIF) for this analysis. Cohen, Cohen, West, and Aiken (2003) suggest that VIF values of greater than 10 may indicate the presence of multicollinearity. If VIF values exceed 10, researchers may omit one of the highly correlated variables, combine the two highly correlated variables into one, or use an alternative data analysis technique, such as ridge regression (Pedhazur & Schmelkin, 1991). The results here show that VIF values do not exceed 3.11, which is well below the recommended cutoff values in the literature, suggesting that variance inflation is not a factor.

Table 3

Hierarchical Regression Results for Hypothesis 2

Variable	B	SE	*df*	t-test	p-value	VIF	F	sig.	R^2
Step 1									
constant	4.16	0.93	46	4.47	0.00		4.89	0.01	0.34
Age	-0.02	0.02		-0.89	0.38	2.78			
Gender	-0.31	0.35		-0.90	0.37	1.12			
Education	0.23	0.19		1.25	0.22	1.21			
Tenure	0.06*	0.03		2.09	0.04	2.52			
Group Size	0.00	0.02		-0.03	0.98	1.16			
Involvement Climate	1.14**	0.38		3.00	0.00	1.92			
Supervisor Undermining	-0.24	0.29		-0.84	0.41	1.66			
Step 2									
constant	3.72	0.91	45	4.09	0.00		5.33	0.00	0.40
Age	-0.01	0.02		-0.73	0.47	2.80			
Gender	-0.45	0.34		-1.33	0.19	1.16			
Education	0.30	0.18		1.67	0.10	1.25			
Tenure	0.06*	0.03		2.19	0.03	2.52			
Group Size	0.00	0.02		0.13	0.89	1.16			
Involvement Climate	1.08**	0.36		2.96	0.01	1.93			
Supervisor Undermining	-0.84*	0.38		-2.20	0.03	3.11			
Involvement X Undermining	-1.37*	0.60		-2.29	0.02	2.46			

Note: Beta coefficients are unstandardized

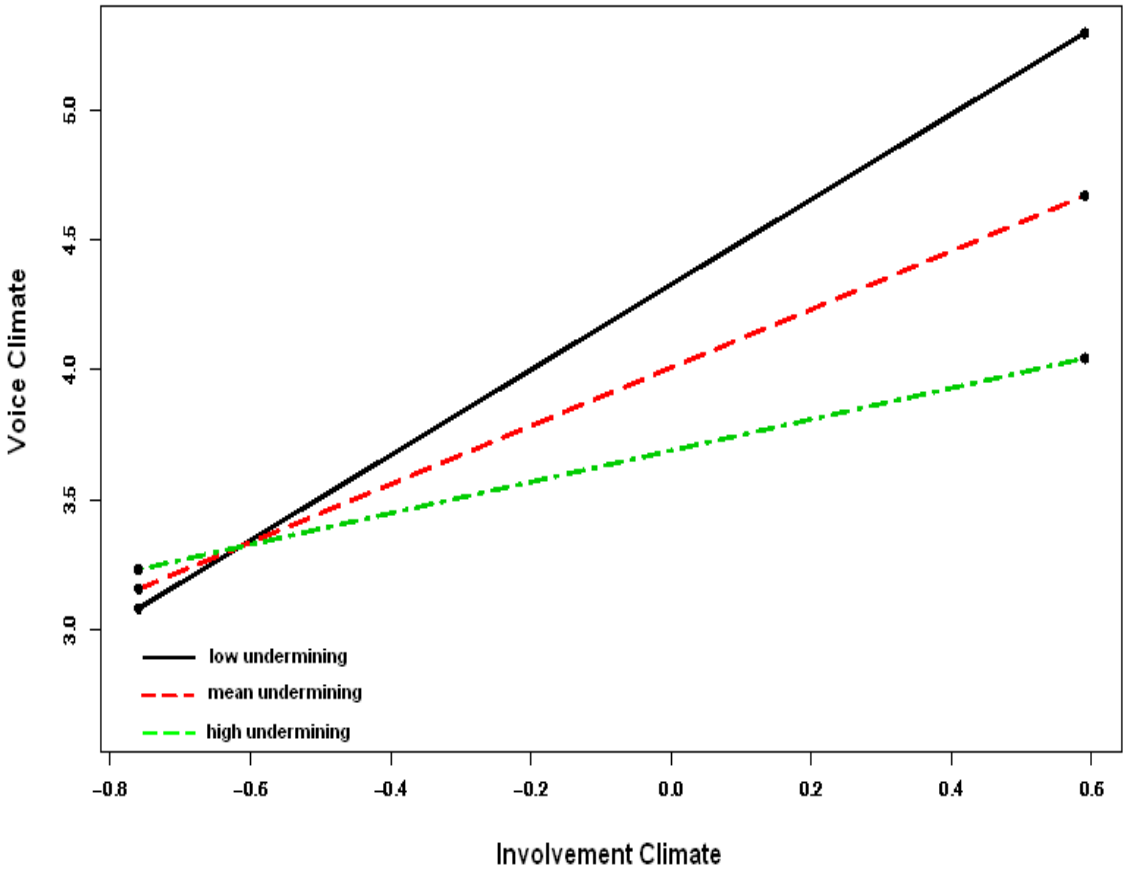
* p < .05, ** p < .01

The interactions in this study were examined using methods presented by Preacher, Curran, & Bauer (2006). This process requires that the simple slopes be examined for significance (Aiken & West, 1991) and that the interaction effects be plotted. In addition, confidence bands are computed to determine the range of values in which the observed interaction effects are significant. Confidence intervals provide

valuable information that can be used as a supplement to traditional null hypothesis testing (Preacher et al., 2006).

To examine the simple slopes, three points of supervisor undermining (i.e., the moderator) were chosen for plotting. For this study, the mean of the centered supervisor undermining construct was chosen, as were points at 1 SD above and below the mean. As supervisor undermining increases, the slope relating voice climate to involvement climate becomes less positive. The simple slope was 1.68 at -1 SD ($t = 3.88$; $p < .01$), 1.08 at the mean of supervisor undermining ($t = 2.95$; $p < .01$), and 0.47 at +1 SD ($t = 1.01$; $p = .32$). These results show that the simple slope was not significant at +1 SD but was significant at the mean and -1 SD. Figure 4-1 presents a graphical depiction of the interaction effect.

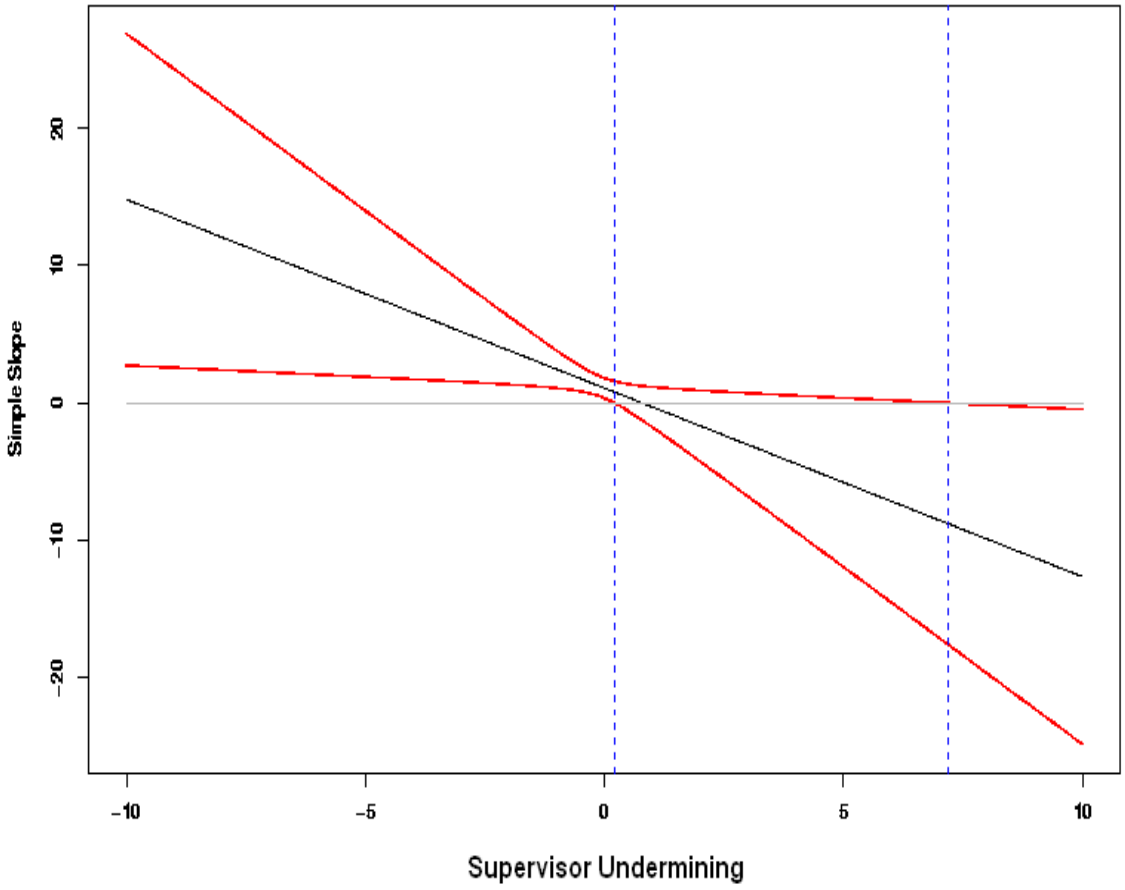
Figure 4-1: Plot of interaction between involvement climate and supervisor undermining



The advantage of the procedure presented by Preacher et al. (2006) is that confidence intervals are calculated to supplement the simple slopes testing. The confidence bands give us the range of values of supervisor undermining for which the simple slopes are statistically significant. The region of significance for the moderator supervisor undermining ranged from 0.21 to 7.17 and any given simple slope *outside* this range is statistically significant (Preacher et al., 2006). The values for the centered supervisor undermining variable ranged from -0.40 to 2.25. Approximately 81% of the centered supervisor undermining variable fell below 0.21. This suggests that as values of supervisor undermining reach higher observed levels in this sample, the effect of

involvement climate on voice climate is not significant. Figure 4-2 presents the plot of the confidence bands.

Figure 4-2: Plot illustrating confidence bands for sample values of supervisor undermining



Overall, these results suggest that the relationship between involvement climate and voice climate is moderated by supervisor undermining and this moderation effect is significant for the majority of the observed values of supervisor undermining.

Hypotheses 3 predicted that voice climate would be positively related to group voice behavior. Table 4 presents the regression results testing hypothesis 3. To test the hypothesis, the control variables were added in step 1 and voice climate was added in step 2. The relationship between voice climate and group voice behavior is positive and

significant, supporting hypothesis 3 ($\beta = .38$, $p < .05$; $\Delta R^2 = .10$). However, the overall regression equation was not significant ($F = 2.01$, $p = .08$). As a result, the correlations between group voice behavior and the control variables were examined to determine if one or more control variables could be removed due to a weak relationship with the outcome variable, group voice behavior. It was discovered that education ($r = .03$, $p = .81$) had a very weak relationship with group voice behavior. This suggests that this control variable would have no spurious impact on the relationships of interest. Therefore, it was removed from the regression equation in the subsequent analysis and any further analysis in which voice behavior was the outcome. Table 5 shows the results of this analysis. Again, the relationship between voice climate and group voice behavior is positive and significant, supporting hypothesis 3 ($\beta = .38$, $p < .05$; $\Delta R^2 = .10$). This finding suggests that groups whose members perceive that they are encouraged to speak up and challenge the status quo are more likely to engage in such behaviors.

Table 4

Hierarchical Regression Results for Hypothesis 3

Variable	B	SE	*df*	t-test	p-value	F	sig.	R^2
Step 1								
constant	4.30	1.07	48	4.02	0.00	0.96	0.45	0.00
Age	0.02	0.02		0.87	0.39			
Gender	0.74	0.44		1.69	0.10			
Education	-0.02	0.23		-0.07	0.94			
Tenure	0.01	0.03		0.28	0.78			
Group Size	-0.03	0.02		-1.14	0.26			
Step 2								
constant	2.38	1.25	47	1.90	0.06	2.01	0.08	0.10
Age	0.04	0.02		1.64	0.10			
Gender	0.82	0.42		1.97	0.06			
Education	-0.08	0.22		-0.38	0.70			
Tenure	-0.03	0.04		-0.73	0.47			
Group Size	-0.03	0.02		-1.46	0.15			
Voice Climate	0.38**	0.15		2.59	0.01			

Note: Beta coefficients are unstandardized

* $p < .05$, ** $p < .01$

Table 5

Hierarchical Regression Results for Hypothesis 3 less education

Variable	B	SE	*df*	t-test	p-value	F	sig.	R^2
Step 1								
constant	4.24	0.75	49	5.67	0.00	1.22	0.32	0.02
Age	0.02	0.02		0.90	0.37			
Gender	0.74	0.43		1.72	0.09			
Tenure	0.01	0.03		0.28	0.78			
Group Size	-0.03	0.02		-1.17	0.05			
Step 2								
constant	2.14	1.08	48	1.99	0.05	2.43	0.05	0.12
Age	0.04	0.02		1.70	0.10			
Gender	0.80	0.41		1.95	0.06			
Tenure	-0.03	0.04		-0.76	0.45			
Group Size	-0.03	0.02		-1.42	0.16			
Voice Climate	0.38*	0.15		2.59	0.01			

Note: Beta coefficients are unstandardized

* p < .05, ** p < .01

Hypothesis 4 predicted a positive relationship between voice climate and group performance. Table 6 shows the results of the hierarchical regression to test hypothesis 6. As indicated on Table 6, hypothesis 4 was supported as voice climate was positively related to group performance ($\beta = .26$, $p < .01$; $\Delta R^2 = .19$). This finding suggests that groups who perceive that they are encouraged to speak up at work are more likely to be better performing groups.

Table 6

Hierarchical Regression Results for Hypothesis 4

Variable	B	SE	*df*	t-test	p-value	F	sig.	R^2
Step 1								
constant	3.94	0.57	48	6.95	0.00	1.12	0.36	0.01
Age	0.01	0.01		0.76	0.45			
Gender	0.33	0.23		1.41	0.16			
Education	-0.03	0.12		-0.25	0.81			
Tenure	-0.01	0.02		-0.38	0.70			
Group Size	-0.03*	0.01		-2.04	0.05			
Step 2								
constant	2.62	0.63	47	4.16	0.00	3.23	0.01	0.20
Age	0.02	0.01		1.84	0.07			
Gender	0.38	0.21		1.82	0.08			
Education	-0.08	0.11		-0.69	0.49			
Tenure	-0.03	0.02		-1.76	0.08			
Group Size	-0.03**	0.01		-2.61	0.01			
Voice Climate	0.26**	0.08		3.53	0.00			

Note: Beta coefficients are unstandardized

* p < .05, ** p < .01

Hypothesis 5 predicted that involvement climate would be positively related to group voice behavior. Table 7 shows the regression results for testing hypothesis 5. The control variables were again entered in step 1 and involvement climate was entered in the regression equation in step 2. As can be seen on Table 7, hypothesis 5 was not supported as involvement climate was not a significant predictor of group voice behavior ($\beta = .60$, $p = .12$). This suggests that group perceptions of employee involvement do not influence overall performance of voice behavior by the group.

Table 7
Hierarchical Regression Results for Hypothesis 5

Variable	B	SE	*df*	t-test	p-value	F	sig.	R^2
Step 1								
constant	4.24	0.75	49	5.67	0.00	1.22	0.32	0.02
Age	0.02	0.02		0.90	0.37			
Gender	0.74	0.43		1.72	0.09			
Tenure	0.01	0.03		0.28	0.78			
Group Size	-0.03	0.02		-1.17	0.25			
Step 2								
constant	1.96	1.59	48	1.24	0.22	1.53	0.20	0.05
Age	0.03	0.02		1.44	0.16			
Gender	0.69	0.42		1.64	0.11			
Tenure	-0.01	0.04		-0.20	0.84			
Group Size	-0.03	0.02		-1.51	0.14			
Involvement Climate	0.60	0.37		1.62	0.11			

Note: Beta coefficients are unstandardized
* $p < .05$, ** $p < .01$

Hypothesis 6 predicted that involvement climate would be positively related to group performance. The regression results are presented on Table 8. These results support hypothesis 6 as involvement climate is a significant predictor of group performance ($\beta = .67$, $p < .01$; $\Delta R^2 = .21$). This finding suggests that group perceptions of employee involvement do lead to higher levels of group performance

Table 8

Hierarchical Regression Results for Hypothesis 6

Variable	B	SE	*df*	t-test	p-value	F	sig.	R^2
Step 1								
constant	3.94	0.57	48	6.95	0.00	1.12	0.36	0.01
Age	0.01	0.01		0.76	0.45			
Gender	0.33	0.23		1.41	0.16			
Education	-0.03	0.12		-0.25	0.81			
Tenure	-0.01	0.02		-0.38	0.70			
Group Size	-0.03*	0.01		-2.03	0.05			
Step 2								
constant	1.21	0.89	47	1.36	0.18	3.49	0.01	0.22
Age	0.02*	0.01		2.19	0.03			
Gender	0.26	0.21		1.27	0.21			
Education	0.02	0.11		0.21	0.84			
Tenure	-0.03	0.02		-1.54	0.13			
Group Size	-0.03**	0.01		-2.95	0.01			
Involvement Climate	0.67**	0.18		3.73	0.00			

Note: Beta coefficients are unstandardized

* p < .05, ** p < .01

Hypothesis 7 predicted that voice climate mediates the relationship between involvement climate and group voice behavior. Table 9 presents the regression results for hypothesis 7. To test the hypothesis, the procedures recommended by Shrout and Bolger (2002) were used to assess the mediation hypotheses. The first step in traditional mediation analysis is to establish a significant relationship between the outcome variable and the distal antecedent (Baron & Kenny, 1986). However, many researchers have questioned the necessity of this step in mediation analysis (Kenny, Kashy, & Bolger, 1998; Shrout & Bolger, 2002) and have suggested that this first step is not rigidly required to show mediation. As was found in the testing of hypothesis 5, involvement climate is not a significant predictor of group voice behavior. The testing of mediation continued, however, since the procedures recommended by Shrout and Bolger (2002) allow for the relaxing of the first step of traditional mediation analysis. Step two requires that distal antecedent be significantly related to the mediator. As was shown in the testing of hypothesis 1, involvement climate is related to voice climate. Step three of

mediation requires that the mediator be significantly related to the outcome variable. In this case, voice climate is significantly related to group voice behavior, as shown in the testing of hypothesis 3.

Finally, the fourth step suggests that for full mediation to exist, the relationship between the distal antecedent and the outcome variable must be null in the presence of the mediator. Voice climate is also positively related to group voice behavior ($\beta = .34$, $p = .05$) when added into the regression. These results provide support for the fourth step of mediation. Overall, the results presented in Table 9 provide initial support for the mediation hypothesis. Though involvement climate was not significantly related to group voice behavior ($\beta = .60$, $p = .11$) in the regression, the beta coefficient and p-value for involvement climate were reduced when voice climate was added to the regression equation ($\beta = .17$, $p = .70$), indicating a mediation effect at $p < .10$.

To assess the magnitude of indirect effects, Sobel's (1982) test was used. The Sobel test is used to test the magnitude and the significance of the indirect effects by taking the parameter estimates from the distal antecedent (involvement climate) and the mediator (voice climate) multiplied by the parameter estimates from the mediator to the outcome variable (group voice behavior). The indirect effects of involvement climate were marginally significant ($1.33 \times .38 = .51$; Sobel = 1.83, $p = .07$). These results provide marginal support for hypothesis 7 and suggest that the effects of involvement climate on group voice behavior are transmitted via voice climate.

Table 9

Hierarchical Regression Results for Hypothesis 7

Variable	B	SE	*df*	t-test	p-value	F	sig.	R^2
Step 1								
constant	4.24	0.75	49	5.67	0.00	1.22	0.32	0.02
Age	0.02	0.02		0.90	0.37			
Gender	0.74†	0.43		1.72	0.09			
Tenure	0.01	0.03		0.28	0.78			
Group Size	-0.03	0.02		-1.17	0.25			
Step 2								
constant	1.96	1.58	48	1.24	0.22	1.53	0.19	0.05
Age	0.03	0.02		1.44	0.15			
Gender	0.69	0.42		1.64	0.11			
Tenure	-0.01	0.04		-0.20	0.84			
Group Size	-0.03	0.02		-1.51	0.14			
Involvement Climate	0.60	0.37		1.62	0.11			
Step 3								
constant	1.71	1.55	47	1.11	0.28	2.01	.08†	0.10
Age	0.04†	0.02		1.73	0.09			
Gender	0.78†	0.41		1.88	0.07			
Tenure	-0.03	0.04		-0.78	0.44			
Group Size	-0.03	0.02		-1.46	0.15			
Involvement Climate	0.17	0.42		0.39	0.70			
Voice Climate	0.34*	0.17		1.99	0.05			

Note: Beta coefficients are unstandardized

† = $p < .10$, * $p < .05$, ** $p < .01$

Hypothesis 8 predicted that voice climate mediates the relationship between involvement climate and group performance. Again, the procedures recommended by Shrout and Bolger (2002) were used to test this hypothesis. The first step is to establish a significant relationship between involvement climate and group performance. As was established in the testing of hypothesis 6, involvement climate is significantly related to group performance. The second step requires that involvement climate be significantly related to voice climate. This is the case, as is shown in the testing of hypothesis 1. The third step requires that the mediator be significantly related to the outcome of group performance. Voice climate is significantly related to group performance, as can be seen on hypothesis 4. The fourth step requires that both the mediator and the distal antecedent be included in the regression equation. The results of this test are presented in Table 10.

Hypothesis 8 is not supported using the cutoff value of $p < .05$. However, there is

partial support for the mediation hypothesis when using the liberal cutoff value of $p < .10$. When voice climate is added to the regression equation, the beta value for involvement climate is slightly reduced ($\beta = .46$, $p < .05$), though involvement climate is still significantly related to group performance. Voice climate is positively related to group performance ($\beta = .16$, $p < .10$) when added into step 3 of the regression equation. The Sobel (1982) test was again used to assess the magnitude of the indirect effects for hypothesis 8. The indirect effects of involvement climate were significant (1.33 x .26 = .35; Sobel = 2.62, $p < .01$). These results provide marginal support for the mediation hypothesis as voice climate partially mediates the relationship between involvement climate and group performance at $p < .10$.

Table 10

Hierarchical Regression Results for Hypothesis 8

Variable	B	SE	*df*	t-test	p-value	F	sig.	R^2
Step 1								
constant	3.94	0.57	48	6.95	0.00	1.11	0.36	0.01
Age	0.01	0.01		0.76	0.45			
Gender	0.33	0.23		1.41	0.16			
Education	-0.03	0.12		-0.25	0.81			
Tenure	-0.01	0.02		-0.38	0.70			
Group Size	-0.03*	0.01		-2.04	0.05			
Step 2								
constant	1.21	0.89	47	1.36	0.18	3.49	0.01	0.22
Age	0.02*	0.01		2.19	0.03			
Gender	0.26	0.21		1.27	0.21			
Education	0.02	0.11		0.21	0.84			
Tenure	-0.03	0.02		-1.54	0.13			
Group Size	-0.03**	0.01		-2.95	0.01			
Involvement Climate	0.67**	0.18		3.73	0.00			
Step 3								
constant	1.27	0.87	46	1.47	0.15	3.67	0.01	0.26
Age	0.03*	0.01		2.42	0.02			
Gender	0.32	0.20		1.55	0.13			
Education	-0.02	0.11		-0.21	0.84			
Tenure	-0.04*	0.02		-2.03	0.05			
Group Size	-0.03**	0.01		-3.02	0.01			
Involvement Climate	0.46*	0.21		2.18	0.03			
Voice Climate	0.16†	0.09		1.89	0.07			

Note: Beta coefficients are unstandardized

† = $p < .10$, * $p < .05$, ** $p < .01$

Hypothesis 9 predicted that the relationship between voice climate and group voice behavior would be moderated by team-member exchange (TMX) such that the relationship would be stronger when TMX is higher. Prior to creating the interaction term between voice climate and TMX, both terms were grand mean centered (Aiken & West, 1991). The results of the testing of this hypothesis are presented in Table 11. Hypothesis 9 was not supported as the interaction term, when added to the regression equation, was not significant ($\beta = -.39$, $p = .20$). This finding suggests that positive exchange relationships between work group members do not influence the relationship between voice climate and the group's performance of voice behaviors.

Table 11

Hierarchical Regression Results for Hypothesis 9

Variable	B	SE	*df*	t-test	p-value	VIF	F	sig.	R^2
Step 1									
constant	3.82	0.73	47	5.25	0.00		2.17	0.06	0.12
Age	0.03	0.02		1.61	0.12	2.35			
Gender	0.91*	0.42		2.14	0.04	1.18			
Tenure	-0.02	0.04		-0.55	0.59	2.49			
Group Size	-0.03	0.02		-1.37	0.18	1.07			
Voice Climate	0.31*	0.16		2.02	0.05	1.41			
TMX	0.27	0.29		0.96	0.34	1.28			
Step 2									
constant	4.09	0.75	46	5.45	0.00		2.13	0.06	0.13
Age	0.03	0.02		1.25	0.22	2.50			
Gender	1.01*	0.43		2.37	0.02	1.22			
Tenure	-0.01	0.04		-0.32	0.75	2.57			
Group Size	-0.03	0.02		-1.50	0.14	1.08			
Voice Climate	0.33*	0.16		2.06	0.05	1.41			
TMX	0.25	0.28		0.90	0.38	1.28			
Voice climate x TMX	-0.39	0.30		-1.31	0.20	1.18			

Note: Beta coefficients are unstandardized

* $p < .05$, ** $p < .01$

Hypothesis 10 predicted that the relationship between voice climate and group performance would be moderated by TMX such that the relationship would be stronger when TMX is higher and weaker when TMX is lower. Table 12 presents the results for the testing of this hypothesis.

Table 12

Hierarchical Regression Results for Hypothesis 10

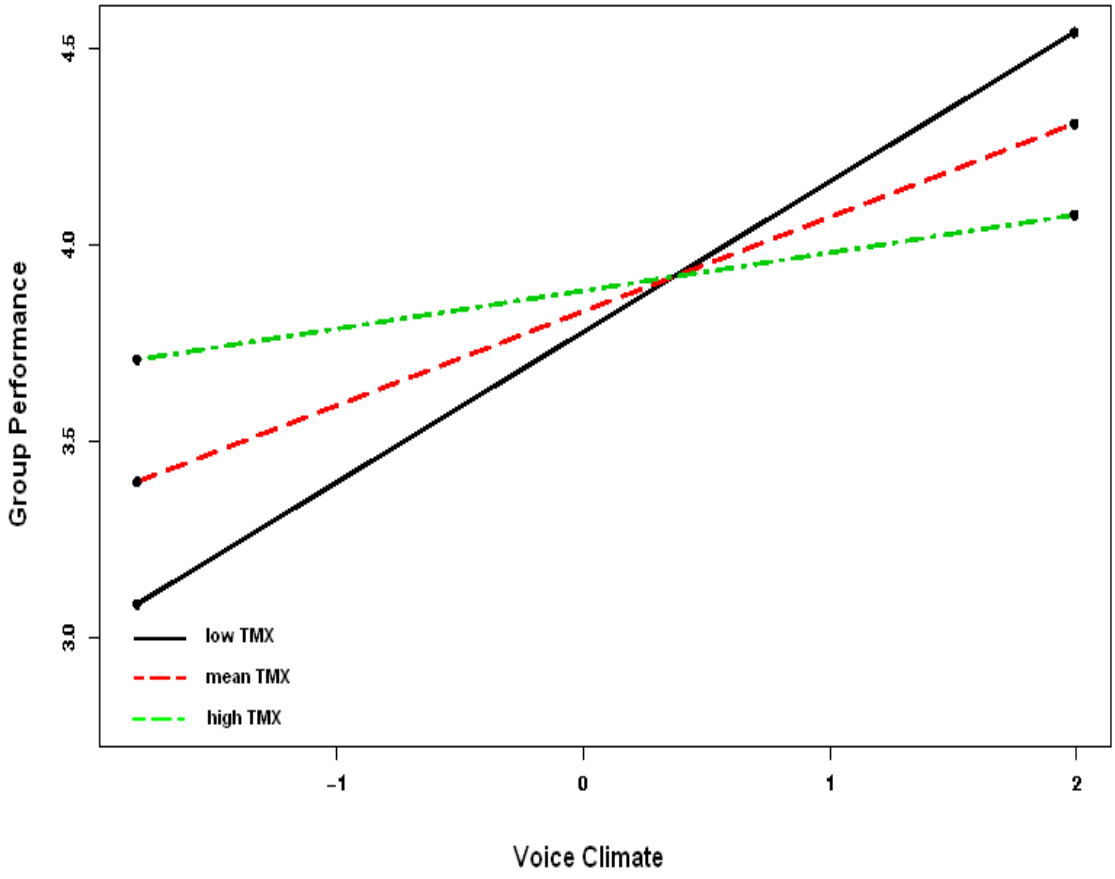
Variable	B	SE	*df*	t-test	p-value	VIF	F	sig.	R^2
Step 1									
constant	3.75	0.52	46	7.28	0.00		2.89	0.02	0.20
Age	0.02	0.01		1.76	0.08	2.36			
Gender	0.43	0.22		1.99	0.06	1.19			
Education	-0.06	0.11		-0.55	0.59	2.50			
Tenure	-0.03	0.02		-1.54	0.13	1.13			
Group Size	-0.03*	0.01		-2.52	0.02	1.45			
Voice Climate	0.23**	0.08		2.84	0.01	1.31			
TMX	0.14	0.15		0.93	0.40	1.15			
Step 2									
constant	3.93	0.51	45	7.76	0.00		3.20	0.01	0.25
Age	0.01	0.01		1.28	0.21	2.51			
Gender	0.51*	0.21		2.41	0.02	1.24			
Education	-0.05	0.11		-0.48	0.63	2.57			
Tenure	-0.02	0.02		-1.22	0.23	1.15			
Group Size	-0.03**	0.01		-2.77	0.01	1.45			
Voice Climate	0.24**	0.08		2.99	0.01	1.31			
TMX	0.12	0.14		0.87	0.38	1.15			
Voice climate x TMX	-0.30*	0.15		-2.02	0.05	1.18			

Note: Beta coefficients are unstandardized

* $p < .05$, ** $p < .01$

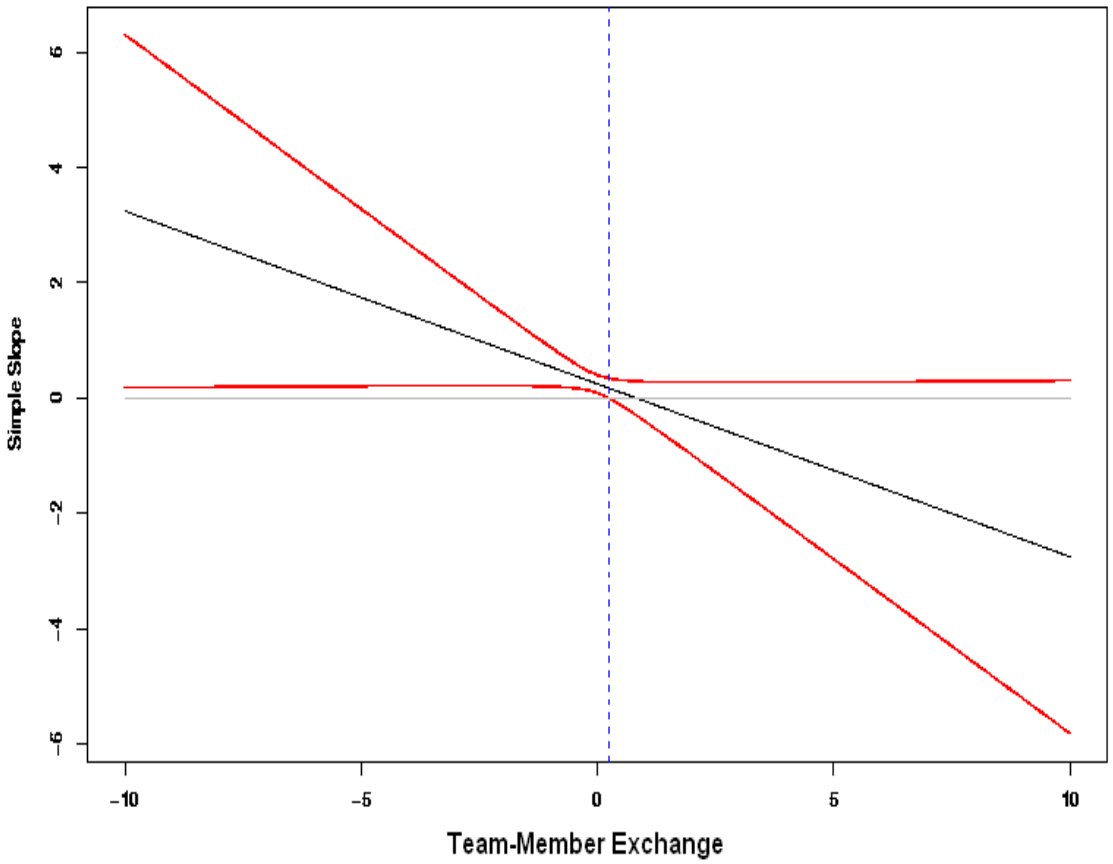
The interaction term entered into the regression equation was significant ($\beta = -.30$, $p = .05$). To probe the interaction effect, the methods recommended by Preacher et al. (2006) were again used. As discussed previously, three points of TMX were chosen (-1 SD, mean, +1 SD) to test the simple slopes and also to plot the interaction. As TMX increases, the slope relating voice climate to group performance becomes less positive. The simple slope was 0.38 at -1 SD ($t = 3.65$; $p < .01$), 0.24 at the mean value of TMX ($t = 3.10$; $p < .01$), and 0.10 at +1 SD ($t = .92$; $p = .36$). These results show that the simple slope was significant at -1 SD and at the mean but not significant at +1 SD. Figure 4-3 presents the plot of the interaction effect.

Figure 4-3: Plot of interaction between voice climate and team-member exchange



The procedures presented by Preacher et al. (2006) were again used to calculate the confidence intervals to supplement the simple slopes testing. The region of significance for the moderator, TMX, ranged from -42.36 to 0.23. The simple slopes *inside* this range of values of TMX are significant. The values of TMX range from -1.32 to 1.43 an approximately 72% of the values of TMX were below 0.23. This suggests that the effects of voice climate on group performance are significant for only values of TMX below 0.23. Figure 4-4 shows the plot of the confidence bands.

Figure 4-4: Plot illustrating confidence bands for sample values of team-member exchange



The results show that hypothesis 10 was **not** supported. The relationship between voice climate and group performance is stronger when TMX is *low* and weaker when TMX is *high*, which is the opposite of what was hypothesized. These results suggest that groups with high voice climate and low perceptions of TMX are more likely to be better performers.

Table 1

Correlations among all variables

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	42.47	14.12	---													
2. Gender	0.31	0.31	-.25	---												
3. Education	2.87	0.60	-.15	.14	---											
4. Tenure	7.81	5.32	.70**	-.23	-.02	---										
5. Group Size	6.93	5.85	.16	.08	-.24	.01	---									
6. Voice Climate	4.51	0.90	-.01	-.06	.14	.27*	.00	.93								
7. Involvement Climate	3.23	0.37	-.22	.12	-.08	.02	.14	.55**	.91							
8. Supervisor Undermining	1.40	0.45	.04	-.06	-.12	.10	-.09	-.35**	-.53**	.94						
9. Leader - Member Exchange	3.65	0.65	-.16	.17	.14	-.05	-.12	.58**	.66**	-.64**	.93					
10. Team-Member Exchange	5.17	0.48	-.03	-.26	-.10	-.03	-.05	.35**	.42**	-.16	.34*	.85				
11. Group Voice Behavior	5.15	0.93	.13	.17	.03	.12	-.11	.30*	.17	-.27*	.30*	.17	.93			
12. Group Performance	4.09	0.50	.01	.15	.04	-.02	-.25	.35**	.36**	-.39**	.38**	.23	.59**	.84		
13. Group Voice Behavior - 2nd level	4.98	1.17	-.15	.22	-.09	-.06	.26	.08	.36**	-.23	.20	.20	.12	.15	.97	
14. Group Performance - 2nd level	4.11	0.63	-.12	-.08	-.22	-.05	.39**	.09	.42**	-.30*	.17	.21	-.13	-.03	.70**	.91

N = 54 for all variables except 2nd level performance ratings

N = 52 for 2nd level performance ratings

* p < .05 level, **p<.01 level

Table 13

Hypotheses Tested and Results

Hypothesis	Hypothesis Support	
	Correlation	Regression
Hypothesis 1: Involvement climate is positively related to voice climate	Supported	Supported
Hypothesis 2: The relationship between involvement climate and voice climate is moderated by group perceptions of supervisor undermining such that the relationship is stronger when group-level supervisor undermining is lower and weaker when group-level supervisor undermining is higher	N/A	Supported
Hypothesis 3: Voice climate is positively related to group voice behavior	Supported	Supported
Hypothesis 4: Voice climate is positively related to group performance	Supported	Supported
Hypothesis 5: Involvement climate is positively related to group voice behavior	Not Supported	Not Supported
Hypothesis 6: Involvement climate is positively related to group performance	Supported	Supported
Hypothesis 7: Voice climate mediates the relationship between involvement climate and group voice behavior	N/A	Not Supported
Hypothesis 8: Voice climate mediates the relationship between involvement climate and group performance	N/A	Not Supported
Hypothesis 9: The relationship between voice climate and group voice behavior is moderated by TMX such that the relationship is stronger when TMX quality is higher and weaker when TMX quality is lower	N/A	Not Supported
Hypothesis 10: The relationship between voice climate and group performance is moderated by TMX such that the relationship is stronger when TMX quality is higher and weaker when TMX quality is lower	N/A	Not Supported

CHAPTER FIVE

DISCUSSION, PRACTICAL IMPLICATIONS, AND CONCLUSION

This study was designed to examine the group-level antecedents and outcomes associated with a voice climate. Of particular importance, it was expected that voice climate would have an impact on group voice behavior and group performance. Support was found for the hypothesized relationships between voice climate and both of these outcomes. These findings suggest that voice climate has an influence on important group-level outcomes and organizations which encourage a voice climate may benefit as a result.

This chapter interprets the results of the current study and to present a discussion of the findings, as well as practical implications of the results to the management field. This is followed with a discussion of the strengths and limitations of the study, along with suggestions for future research efforts.

Discussion

Voice behaviors have been shown to have a positive relationship with both group and individual level performance (Erez et al., 2002; Van Dyne & LePine, 1998; Whiting et al., 2008). In recognition of the changing nature of today's workplace and the performance expectations of employees, the challenging and promotive nature of voice behaviors, along with the positive outcomes associated with such behaviors, suggest that

more research is necessary to examine the factors that influence the performance of such behaviors. One such factor that is introduced here is the construct of voice climate. This study examined group-level antecedents and outcomes associated with a voice climate in work organizations. As will be discussed in the following pages, many of the hypotheses in this study found support. These results are consistent with SIP theory because employee perceptions and behaviors were influenced by organizational involvement efforts and perceptions of supervisor behavior. Additionally, the results demonstrate that foundation climates (i.e., involvement climate) do influence more specific climates (i.e., voice climate), which is consistent with the foundation climate – specific climate taxonomy presented by Schneider and colleagues (i.e., Schneider et al., 2000).

The first hypothesis examined the relationship between involvement climate and voice climate. Involvement climate was posited to serve as a foundation climate and as an antecedent to voice climate, which is cast as a specific climate. Recall that involvement climate is comprised of four dimensions: power, information, rewards, and knowledge (Lawler, 1996). Employee involvement initiatives on the part of the organization are aimed at providing employees with the power to make decisions, the information and knowledge necessary to make these decisions and rewards for doing so. These broad efforts by organizations are likely to influence more specific shared perceptions of appropriate behaviors. Indeed, the results showed that involvement climate had a positive and significant relationship with voice climate. This finding indicates that as members of workgroups perceive that they are more involved in their work, whether it is by having power to make decisions or the training necessary to do their jobs, they are also more likely to perceive that they are encouraged to speak up and

challenge the status quo in the form of voice behaviors. Therefore, if organizations are interested in fostering a climate in which voice behaviors are encouraged, the findings of this study indicate that organizational efforts to improve perceptions of employee involvement would be one possible starting point.

Previous work on voice behaviors has shown that leaders can have a direct influence on the employee voice behaviors. Detert & Burris (2007) found that transformational leaders positively impacted voice behaviors, while Burris, Detert, & Chiaburu (2008) recently found that abusive supervision is negatively related to voice behaviors. An examination of the bivariate relationships from this study confirmed these findings in that group perceptions of supervisor undermining were negatively related to group voice behaviors. However, of interest here is the extent to which supervisor undermining might influence the relationship between involvement climate and voice climate. It was hypothesized that group perceptions of supervisor undermining would moderate the relationship between involvement climate and voice climate.

The findings show that the positive relationship between involvement climate and voice climate is influenced by supervisor undermining such that it is stronger when supervisor undermining is low and weaker when supervisor undermining is high. As employees perceive that their organization has made efforts to get them more involved in their work and that their supervisor is not likely to undermine them, the resulting voice climate perceptions will be higher. Conversely, perceptions of involvement, in combination with a supervisor who is perceived to engage in undermining behaviors, will result in lower perceptions of voice climate. This suggests that supervisors who engage in undermining behaviors are likely to hinder employee perceptions of the extent to

which they are encouraged to speak up, even if involvement perceptions are high. These results highlight the impact that supervisors have on employee perceptions in the workplace. Even if the organization invests in efforts to get employee involved in their work, supervisor behaviors have the ability to either strengthen the effects of these involvement efforts or hinder the effects. This is an important finding for the voice literature because the majority of studies have examined the direct influence of leader behaviors on employee voice behaviors (Burris et al., 2008). The results of this study show that supervisor behaviors have an influence on the work environment beyond the direct effects shown in past research.

It was also the intent of this research effort to examine the outcomes associated with a voice climate. Past research has shown that voice *behaviors* lead to improved performance for individuals (Van Dyne & LePine, 1998; Whiting et al., 2008) and groups (Erez et al., 2002) but no research has examined how a *climate* for voice might influence performance outcomes for work groups. In this study, voice climate is conceptualized as a specific climate, meaning that it is a climate 'for something' (Schneider, 1975; Schneider et al., 1998). Because voice climate is the extent to which employees perceive that they are encouraged to speak up and challenge the status quo, it was hypothesized that voice climate would be positively related to voice behaviors. As expected, this relationship was confirmed in the results of this study. This finding suggests that employees who perceive that they are encouraged to speak up and make suggestions are more likely to do so in the form of voice behaviors.

The positive relationship between voice climate and group voice behaviors is not surprising given that voice climate is a climate for voice behavior. However, in order for

voice climate to inform the climate and voice behavior literatures, it would be desirable if the construct predicted other important group outcomes, such as group performance. The results of this study showed that voice climate perceptions were positively related to group performance. This finding demonstrates the potential for voice climate to impact outcomes of interest to organizations beyond voice behaviors. This is important because if organizations foster a voice climate in their work groups, they likely want to see that this climate impacts the overall effectiveness via performance gains. This finding provides initial evidence that encourage a voice climate does indeed impact group effectiveness.

The positive relationship found between voice climate and group performance might be explained in two ways. First, SIP theory would suggest that the work environment influences subsequent behaviors of employees (Salancik & Pfeffer, 1978). It may be that employees who perceive that they are encouraged to speak up and make suggestions for improvement are more motivated and as a result, the improved motivation of the work group members collectively leads to improved group performance. Second, it may be that a voice climate leads to more voice behaviors, as found in this study. Over time, these suggestions for improvement are implemented and the resulting practices in the work group lead to increased group effectiveness and improved performance of the group. Future research is encouraged to examine these possibilities.

A surprising result of this study was the lack of significant relationship between involvement climate and group voice behaviors. Richardson and Vandenberg (2005) suggested that the purpose of involvement efforts was to encourage employees to think

outside their role prescriptions and focus on improving current processes. They found that involvement climate did have a positive and significant relationship with group OCB. However, the data collected in that study was cross sectional. There was approximately six weeks between the collection of involvement climate and the collection of the group voice behavior ratings in this study. Perhaps over time, the effects of involvement climate on group voice behavior are transmitted via other more specific climates such as voice climate. These results provide marginal support for this possibility as voice climate did mediate the relationship between involvement climate and group voice behaviors as there were no direct effects of involvement climate to group voice behavior but there was support for the indirect effects. Though the mediation hypothesis for this relationship was not fully supported, the findings suggest that involvement efforts on the part of organizations provide the foundation on which more specific shared perceptions of voice climate develop, which then influence group voice behaviors. Future research is encouraged on the relationship between involvement climate and voice behaviors. Perhaps particular facets of employee involvement influence voice behaviors directly. For example, employees who perceive that they have the power to make decisions may also be more likely to speak up. The composite involvement climate was of interest here but future research could examine the relationship between the four facets of involvement climate and voice behaviors.

It was also hypothesized that voice climate would mediate the relationship between involvement climate and group performance. The results did not fully support this hypothesis, though there was marginal support for partial mediation. This finding suggests that while some of the effects of involvement climate are transmitted via the

more specific voice climate, there are direct effects, as well. As such, it was also hypothesized that involvement climate would be positively related to group performance. SIP theory suggests that the work environment impacts employee behavior (Salancik & Pfeffer, 1978). Additionally, Lawler (1996) suggested that involvement efforts would lead to improved performance in the workplace. As employees feel that they have power, information, rewards, and knowledge, this will impact each individual's performance in the workgroup. The aggregate of these performance increases will result in increased overall group performance. As hypothesized, involvement climate was positively related to group performance. This finding is encouraging because it demonstrates that efforts to involve employees in their work has a positive impact on overall group performance.

SIP theory suggests that interactions with co-workers impact subsequent employee perceptions and behaviors in the workplace (Salancik & Pfeffer, 1978). Seers (1989) noted the importance of the interactions with coworkers in developing the team-member exchange (TMX) construct. Consistent with SIP theory, it was hypothesized that the quality of the exchange relationship formed among coworkers would influence specific relationships. It was first hypothesized that TMX would moderate the relationship between voice climate and group voice behaviors. Support was not found for this hypothesis. The lack of support for the moderating role of TMX on the voice climate – group voice behavior relationship suggests that the quality of the exchange relationships between group members in this sample do not interact with voice climate to predict the performance of voice behaviors by the groups. This is surprising since it has been suggested that high quality exchange relationships with coworkers will lead to the performance of citizenship behaviors (e.g., Cole et al., 2002). Perhaps the channels of

communication in these work groups allow for employees to express their voice in such a way that fellow group members are not privy to this expression of voice. If, on the other hand, engaging in voice behaviors was done in a public or open forum within the workplace, then the quality of exchange relationships with coworkers might be more salient to group members in deciding to engage in such behaviors.

Team-member exchange was also hypothesized to moderate the relationship between voice climate and group performance such that the relationship is stronger when TMX is higher. This hypothesis was also not supported. In fact, the opposite effect was found in that high levels of voice climate, along with lower levels of TMX, led to higher group performance ratings (see Figure 4-3). This finding is puzzling. TMX represents the development of high quality exchange relationships in which group members are willing to assist others, share ideas and feedback, while expecting the same from others (Seers, 1989). Additionally, TMX has been shown to be positively related to both individual performance (Liden et al., 2000; Seers, 1989) and team performance (Jordan et al., 2002). If employees perceive that they are encouraged to engage in voice behaviors and that they have high quality relationships with their coworkers, then it seems that these conditions would encourage the exchange of information and resources, thus leading to improved work processes and group performance.

A possible explanation for this finding is that individuals in work groups with lower perceptions of the quality of the exchanges within the work group, coupled with a high voice climate, are individually more likely to engage in voice behaviors. Over time, the expression of voice leads to improved processes and improved group performance. Recall that voice behaviors are challenging in nature and have the potential to upset

personal relationships (Van Dyne & LePine, 1998). The challenging nature of expressing one's voice may lead to fewer employees willing to engage in such behaviors because they do not want to upset coworkers. However, if voice climate perceptions are high and the quality of the relationships with coworkers are perceived to be lower, the concern for upsetting relationships is lessened and individual employees may engage in more voice behaviors. This ultimately leads to improved performance over the long term. Though this is a bit counterintuitive and this chain of events was not tested in this study, it is a possibility given the findings presented here. Future research is encouraged to explore this interesting possibility.

Practical Implications

The voice behavior literature has provided support for the assertion that voice behaviors do lead to improved performance in organizations. As such, it might be beneficial for organizations to encourage their employees to make suggestions and take a more proactive view of their work roles. The results of this study provide several practical implications. Perhaps most importantly, the results of this study suggest that work groups who perceive that they are encouraged to speak up and make suggestions are rated as better performing groups by their supervisors. Organizations and supervisors should encourage their employees to make suggestions and challenge the current processes within the work group. This is an actionable item that can be implemented by managers across all levels of the organization. For example, managers could hold regular meetings aimed at fostering the promotion of new ideas and suggestions for improvement to existing policies and procedures.

The results suggest that group members who share perceptions of high involvement in their work are more likely to share perceptions that they are encouraged to engage in voice behaviors. Recall that Lawler's (1996) work was based on the notion that highly involved employees perceive high levels of the four components of involvement: power, information, rewards, and knowledge. The aggregate of these four comprise involvement climate perceptions as utilized in this study. Organizations can encourage their employees to speak up at work by first getting their employees more involved in their work via these four components of involvement. For example, organizations can provide continued education opportunities to their employees in an effort to impact the knowledge the employees possess. As the employees feel they are adequately trained in their jobs, they are likely to have the knowledge necessary to diagnose areas of the group functioning that could use improvement. Also, giving employees' power in the decision making process or passing along relevant business information is likely to improve the employee perceptions of involvement and create a climate of "speaking up" at work. Organizations could provide regularly scheduled updates on important business happenings and how this impacts the employees work lives. Providing this linkage between employee job responsibilities and the associated outcomes may help the employees identify new methods of operation or ways to enhance current operations.

The results suggest that supervisor behaviors have the ability to hinder the efforts of the organization to encourage employees to speak up at work. Given the advantages that have been associated with employees who engage in voice behaviors, efforts should be made by both the organization and its supervisors to encourage such behaviors. From

the organizations perspective, the importance of the supervisor – subordinate relationship and the impact this relationship has on employee perceptions and performance should be a point of focus in professional development efforts aimed at supervisors. For example, a component of new supervisor training in an organization could focus on acceptable behaviors of supervisors and both the positive and negative outcomes associated with this important relationship. Another possibility would be to implement a 360-degree performance evaluation system in which employees are able to provide feedback to supervisors about the supervisor's job performance. From the supervisor's perspective, these results show that their actions and behaviors may have long lasting consequences for their work group. Supervisors should be aware of their impact on the environment in which their employees function and continue to develop their managerial skills in an effort to have a positive impact on the workplace.

Limitations and Strengths

As with any study, there are limitations that must be acknowledged. While the ratings of performance were collected approximately two weeks after the second data collection, this time frame limits the causal inferences that can be made about the results of this study. The lag in time, and the fact that supervisors completed performance measures, help address common method variance concerns (Podsakoff et al., 2003) between the predictors and the outcomes but replication of these findings in a longitudinal study would be recommended for future research.

On a related note, the current setting also limits the causal inferences that can be drawn from the results. This was a field study, which does not allow for manipulation of the predictors utilized in the theoretical model. Experimental replications of the findings

presented here would increase the ability to make causal inferences. However, as discussed in the strengths, the temporal separation of data collections was an effort to minimize this limitation.

Another limitation is that the first round of data consisted of collecting involvement climate and supervisor undermining, which were hypothesized to interact to influence voice climate. It is possible that common method variance is present as a result of these two variables being collected at the same time. Stronger inferences could have been drawn had there been a time lag between involvement climate and supervisor undermining. The same holds true for voice climate and team-member exchange during the second data collection period. However, confirmatory factor analyses conducted on the data supported the discriminant validity of the measures collected during the same time periods. Multicollinearity is another potential issue that could result from common method variance but VIF levels did not indicate that this was an issue with the current data.

There are potential power issues with the current study. There are only fifty-four work groups who participated in this study, possibly resulting in lower power than necessary to find some of the hypothesized effects. Specifically, the mediation hypotheses of this study were only significant at $p < .10$. It would be desirable to have a larger number of work groups to test the mediating role of voice climate on the involvement climate – group outcomes relationships.

Finally, the current study relied on a single organization from which to collect the data. Generalizing from the results should be cautioned until future research can replicate the findings in other settings. Though the organization that participated had a wide range

of job types, the majority of the positions held are manufacturing or blue collar type jobs. It might be interesting to examine these relationships in an organization that consists of mostly white collar jobs. Also, the majority of the participants (85%) were caucasian. It is possible that there are ethnic differences in willingness to speak up at work and challenge the process. Past research on voice behavior has not shown that these demographics significantly influence voice behavior. LePine and Van Dyne (1998) found that job status was not a significant predictor of voice when entered into the regression equation with other control variables. A recent study by Detert and Burris (2007) found that ethnicity did not have a significant influence on voice. So, while generalizability of the results here is cautioned, past research on voice behavior provides some confidence in generalizability across these demographic groups.

This study has several notable strengths. The first strength is the introduction of the construct of voice climate. Voice behaviors have been shown to lead to improved performance at both the group and individual levels. The interest in voice behaviors has grown in recent years and as such, more research is necessary to examine the antecedents to voice behaviors. In addition, as employees are expected to become more proactive within their work roles, voice behaviors are one way for employees to embrace this proactivity. Drawing from the foundation climate – specific climate taxonomy, this study introduces voice climate as specific climate, or a climate for something. In this case, voice climate is a climate for voice behaviors. This study has shown that voice climate is note only positively related to group voice behaviors but also to group performance. This positive relationship between voice climate and group performance shows that there are

other important outcomes associated with a voice climate and this is a promising start for this new construct.

The second strength of this study is the time lags that were part of the study's design. This is a strength both theoretically and empirically. According to SIP theory, the work environment has an influence on subsequent employee perceptions and behavior (Salancik & Pfeffer, 1978). By collecting employee perceptions of organizational involvement efforts and supervisor behaviors at "time one" of this study and voice climate perceptions at "time two", the temporal precedence of the work environment and its influence on subsequent perceptions and behaviors suggested by SIP theory is designed into the study so that the design in consistent with the theoretical model presented in this study. Empirically, the time lags designed into this study between "time one" and "time two" also help address concerns of common method variance by reducing the possibility of biased responses and by making past responses less salient (Podsakoff et al., 2003).

The third strength of this study is the ratings of performance from supervisors in the organization. The collection of performance data from a source other than the participants of the study is a strength because the supervisors that work directly with the participants can best speak to the performance level of those employees. Also, the collection of performance from supervisors provides another source of data for the study, which addresses the issue of common method variance (Podsakoff et al., 2003). These ratings were also collected approximately two weeks after the second data collection from employees. The time lag is a strength in that temporal precedence (Cook &

Campbell, 1983) was established between voice climate and the outcomes hypothesized to be associated with a voice climate.

Future Research

The findings and limitations of this study present a number of future research directions. Future research should also attempt to identify other group-level outcomes related to a voice climate. The results of the current study are encouraging in that voice climate was positively related to group voice behavior and group performance. Voice climate may be related to other performance outcomes for work groups. For example, a climate that encourages employees to speak up may lead to improved safety policies and procedures, thus reducing group accident rates. It also may be that a climate in which employees are encouraged to speak up leads to improved group satisfaction or reduced group turnover. Research designs that examine these group-related outcomes are encouraged for future studies.

One area of research that is clearly needed is a further examination of the relationship between team-member exchange, voice climate, and performance outcomes. Theory and past empirical studies (e.g. Liden et al., 2000) would suggest that perceptions of voice climate and high quality exchange relationships with coworkers would lead to improved outcomes for the group. This was not the case in the current study. This may be an idiosyncratic function of this sample or the nature of the work done in the participating organization. Or, it may be that the relationship between voice climate and the exchange relationships among co-workers is more complex than originally theorized. Future research should further examine this counterintuitive finding and the relationship among these constructs.

Another possible research avenue in the future would be to examine the impact of voice climate on individual outcomes. The current study was conducted at the group level and a multilevel study that looks at how voice climate predicts individual performance levels would increase the validity of the voice climate construct. Based on the findings of this study, one might expect that a voice climate would have a positive impact on individual performance and individual voice behaviors. However, are there other performance outcomes of interest that might be positively impacted by voice climate? Future research could adopt of role-based view of performance (Welbourne, Johnson, & Erez, 1998) and examine outcomes such as innovation or customer service performance.

Future research is suggested that examines potential moderating influences on the voice climate – voice behavior relationship. Recent research has examined the influence of prosocial motivation on the performance of citizenship behaviors. Prosocial motivation is defined as "a momentary focus on the goal of protecting and promoting the welfare of other people" (p. 49; Grant, 2008). Grant and Mayer (in press) recently found that prosocial motives significantly predicted voice behaviors. While it is expected that voice climate will influence individual voice behaviors, this relationship may be strengthened by high prosocial motives on the part of the individual.

Future research could examine the mediating role of motivational constructs in the relationship between voice climate and individual performance outcomes. Empowerment has been shown to play a mediating role between the work environment and work outcomes (Spreitzer, 1995). Perhaps as employees are encouraged to speak up and challenge the status quo, they feel more empowered, thus leading to improved

performance levels. Also, research on regulatory focus in the workplace has shown that improved performance outcomes are associated with both promotion and prevention focus (e.g., Higgins, 1997; Wallace, Johnson, & Frazier, in press). Future research could examine the mediating role of regulatory focus on the voice climate – performance outcomes relationship. Does voice climate have differential relationships with promotion focus and prevention focus? Future research is encouraged to answer this question.

It is also recommended that future research examine other antecedents to the formation of a voice climate. In this research effort, involvement climate was shown to influence voice climate but perhaps there are other foundation climates that will foster the development of a voice climate. Wallace et al. (2006) found that the foundation climates of organizational support and management-employee relations influenced the more specific safety climate. It is possible that shared perceptions of organizational support would influence the shared perceptions of the extent to which employees perceive they are encouraged to speak up at work.

Conclusion

Research on voice behaviors has flourished in recent years and this research has been shown that there are many positive outcomes associated these behaviors. Prior to this study no research had examined the mechanisms by which organizations encourage employees to engage in such behaviors or the outcomes associated with a these employee perceptions. Therefore, the purpose of the current study was to introduce the construct of voice climate, the antecedents to such a climate, and the outcomes associated with voice climate. While it would be expected that voice climate would impact group voice behaviors, perhaps the most important finding of the current study is that voice climate

also has a positive impact on group performance. This is important because it shows that while voice behaviors are challenging and have the potential to upset work relationships, fostering a climate for such behaviors has positive consequences for work groups and ultimately, the organization. Consistent with SIP theory, an examination of antecedents of voice climate show that both organizational involvement initiatives and supervisor actions will impact the extent to which employees share the perception that they are encouraged to speak up at work. This further highlights the importance of the work environment and its influence on employee perceptions in the workplace.

There is much work to be done on voice climate and as indicated in the future research discussion, there are many possibilities. The results of this study show promise for voice climate research. It is hoped that this study is just a first step and that our understanding of the outcomes, antecedents, and boundary conditions associated with voice climate are further extrapolated in future studies

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APPENDIX A: STUDY MEASURES

Employee Involvement Climate (Riordan, Vandenberg, & Richardson, 2005)

SECTION 1: The following sets of statements refer to **your work group.** Read the statement and indicate the extent to which you agree or disagree that this statement reflects how your **work group** perceives its work. Please circle only one number for each statement.

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
My work group has sufficient authority to fulfill its job responsibilities.	1	2	3	4	5
Company goals and objectives are clearly communicated to my work group.	1	2	3	4	5
Most of the time, my work group receives sufficient notice of changes affecting the group.	1	2	3	4	5
My work group is satisfied with the amount of recognition we receive when we do a good job.	1	2	3	4	5
The channels for employee communication with top management are effective.	1	2	3	4	5
Generally, my work group feels this company rewards employees who make an extra effort.	1	2	3	4	5
My work group receives sufficient training to do our jobs.	1	2	3	4	5
Top management is adequately informed of the important issues that affect my work group.	1	2	3	4	5
There is a strong link between how well my work group performs its jobs and the likelihood of receiving a raise in pay/salary.	1	2	3	4	5
Education and training are integral parts of my employer's culture.	1	2	3	4	5
My work group has enough input in deciding how we do our jobs.	1	2	3	4	5
Company policies and procedures are clearly communicated to my work group.	1	2	3	4	5
If my work group performs well, we are more likely to be promoted.	1	2	3	4	5
My work group has sufficient/adequate job-related training.	1	2	3	4	5
My work group has enough freedom over how we do our jobs.	1	2	3	4	5
My work group often has to rely on the grapevine to get job-related information.	1	2	3	4	5
There is a strong link between how well my work group performs its jobs and the likelihood of receiving high performance appraisal ratings.	1	2	3	4	5
If my work group felt we needed more job-related training, our employer would provide it.	1	2	3	4	5

Supervisor Undermining (Duffy, Ganster, & Pagon, 2002)

SECTION 2: The following sets of statements refer to **your direct supervisor.** Read the statement and indicate the extent to which your supervisor has engaged in the following behaviors. Please circle only one number for each statement.

How often has your supervisor intentionally……	Never	Once or Twice	About Once a Week	Several Times a Week	Almost Everyday	Everyday
Hurt your feelings?	1	2	3	4	5	6
Put you down when you questioned work procedures?	1	2	3	4	5	6
Undermined your effort to be successful on the job?	1	2	3	4	5	6
Let you know they did not like you or something about you?	1	2	3	4	5	6
Talked bad about you behind your back?	1	2	3	4	5	6
Insulted you?	1	2	3	4	5	6
Belittled you or your ideas?	1	2	3	4	5	6
Spread rumors about you?	1	2	3	4	5	6
Made you feel incompetent?	1	2	3	4	5	6
Delayed work to make you look bad or slow you down?	1	2	3	4	5	6
Talked down to you?	1	2	3	4	5	6
Gave you the silent treatment?	1	2	3	4	5	6
Did not defend you when people spoke poorly of you?	1	2	3	4	5	6

Voice climate (adapted from Van Dyne & LePine, 1998)

SECTION 1: Below are a number of statements that may describe **your work group**. Using the response scale below, please indicate the extent to which you agree with each statement about **your work group**. Please circle only one number for each statement.

	Strongly Disagree			Neither agree or disagree			Strongly Agree
The employees in my work group are encouraged to develop and make recommendations concerning issues that affect the group.	1	2	3	4	5	6	7
The employees in my work group are encouraged to speak up and get others involved in issues that affect the group.	1	2	3	4	5	6	7
The employees in my work group are encouraged to communicate opinions about work issues with others in the group even if that opinion is different and others in the group disagree.	1	2	3	4	5	6	7
The employees in my work group are encouraged to keep well informed about issues where our opinions might be useful to the group.	1	2	3	4	5	6	7
The employees in my work group are encouraged to get involved in issues that affect the quality of work life here at work.	1	2	3	4	5	6	7
The employees in my work group are encouraged to speak up with new ideas or changes in procedures.	1	2	3	4	5	6	7

Team-Member Exchange (Seers, Petty, & Cashman, 1995)

SECTION 2: Below are a number of statements that may describe your relationship with other members of your work group. Using the response scale below, please indicate the extent to which you agree with the statement about **your relationships with other work group members.**

	Strongly Disagree			Neither agree or disagree			Strongly Agree
I often make suggestions about better work methods to other team members.	1	2	3	4	5	6	7
Other members of my team usually let me know when I do something that makes their jobs easier (or harder).	1	2	3	4	5	6	7
Other members of my team help finish work that was assigned to me.	1	2	3	4	5	6	7
Other members of my team understand my problems and needs.	1	2	3	4	5	6	7
I am flexible about switching job responsibilities to make things easier for other team members.	1	2	3	4	5	6	7
Other members of my team often ask me to help out.	1	2	3	4	5	6	7
I often volunteer my efforts to help others on my team.	1	2	3	4	5	6	7
I am willing to help finish work that has been assigned to other team members.	1	2	3	4	5	6	7
Other members of my team recognize my potential.	1	2	3	4	5	6	7
I often let other team members know when they have done something that makes my job easier (or harder).	1	2	3	4	5	6	7

Group Voice Behavior (Van Dyne & LePine, 1998)

Performance Evaluations cont.: Below are several statements about the **work group that you supervise** with which you may agree or disagree. Using the response scale below, indicate your agreement or disagreement with each item by circling the appropriate number on the scale.

	Strongly Disagree			Neither Agree or Disagree			Strongly Agree
The employees of the work group I supervise develop and make recommendations concerning issues that affect the work group.	1	2	3	4	5	6	7
The employees of the work group I supervise speak up and get involved in issues that affect the group.	1	2	3	4	5	6	7
The employees of the work group I supervise communicate opinions about work issues with others in the group even if that opinion is different and others in the group disagree.	1	2	3	4	5	6	7
The employees of the work group I supervise keep well informed about issues where their opinion might be useful to this work group.	1	2	3	4	5	6	7
The employees of the work group I supervise get involved in issues that affect the quality of work life here in the work group	1	2	3	4	5	6	7
The employees of the work group I supervise speak up with ideas for new projects or changes in procedures	1	2	3	4	5	6	7

Group Performance (Williams & Anderson, 1991)

Performance Evaluations: Below are several statements about the **work group** that you supervise with which you may agree or disagree. Using the response scale below, indicate your agreement or disagreement with each item by circling the appropriate number on the scale

	Strongly Disgree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
The members of the work group I supervise adequately complete assigned duties.	1	2	3	4	5
The members of the work group I supervise fulfill responsibilities specified in job description.	1	2	3	4	5
The members of the work group I supervise perform tasks that are expected of them.	1	2	3	4	5
The members of the work group I supervise meet formal performance requirements of the job.	1	2	3	4	5
The members of the work group I supervise engage in activities that will directly affect their performance evaluations	1	2	3	4	5
The members of the work group I supervise neglect parts of the jobs they are required to perform.	1	2	3	4	5
The members of the work group I supervise fail to perform essential duties.	1	2	3	4	5

APPENDIX B: ORIGINAL IRB APPROVAL

Oklahoma State University Institutional Review Board

Date:	Monday, May 05, 2008
IRB Application No	BU086
Proposal Title:	Collective Regulatory Focus, Justice Climate and Employee Voice Behavior: A Multilevel Examination
Reviewed and Processed as:	Expedited

Status Recommended by Reviewer(s): Approved Protocol Expires: 5/4/2009

Principal Investigator(s):

Michael Lance Frazier
320 Spears School of Busine
Stillwater, OK 74078

Mark Gavin
320 Business
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,

Shelia Kennison, Chair
Institutional Review Board

APPENDIX C: MODIFICATION OF IRB TO CHANGE DISSERTATION ADVISOR AND PROJECT TITLE

Oklahoma State University Institutional Review Board

Date:	Wednesday, July 02, 2008	Protocol Expires: 5/4/2009
IRB Number:	BU086	
Proposal Title:	Voice Climate in Organizations: A Group Level Examination of Antecedents and Consequences	
Reviewed and Processed as:	Expedited **Modification**	

Status Recommended by Reviewers: **Approved**

Principal Investigator(s):

Michael Lance Frazier 320 Spears School of Stillwater, OK 74078	Matt Bowler 305A North Hall Tulsa, OK 74016

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office MUST be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

Signature: 

Shelia Kennison, Chair, OSU Institutional Review Board

Wednesday, July 02, 2008
Date

VITA

Michael Lance Frazier

Candidate for Degree of

Doctor of Philosophy

Dissertation: VOICE CLIMATE IN ORGANIZATIONS: A GROUP-LEVEL EXAMINATION OF ANTECEDENTS AND PERFORMANCE OUTCOMES

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PUBLICATIONS

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Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: VOICE CLIMATE IN ORGANIZATIONS: A GROUP-LEVEL EXAMINATION OF ANTECEDENTS AND PERFORMANCE OUTCOMES

Pages in Study: 144 Candidate for the Degree of Doctor of Philosophy

Major Field: Management

Scope and Method of Study: The purpose of this study was to examine the antecedents and performance outcomes associated with voice climate. Specifically, involvement climate was cast as an antecedent to voice climate, while supervisor undermining was hypothesized to moderate the involvement climate – voice climate relationship. Voice climate was then hypothesized to influence both group voice behavior and group performance. The participants in this study were 374 employees and supervisors from a large building facilities and maintenance organization located in the Midwestern United States.

Findings and Conclusions: Results indicated that involvement climate did influence voice climate. Additionally, the involvement climate – voice climate relationship was moderated by supervisor undermining such that the relationship was stronger when supervisor undermining was low. Voice climate was found to have a positive and significant relationship with group voice behavior and group performance. Overall, these results indicate that voice climate in work groups impacts important work outcomes and that the organization and supervisors can influence the development of a voice climate. Practical implications and suggestions for future research are also discussed.

ADVISER'S APPROVAL: Dr. Kenneth Eastman