2014

Project Managers' Use of Lateral Influence Tactics to Achieve Team Commitment

Rochelle Evangeline Cook
North Carolina Agricultural and Technical State University

Project Managers' Use of Lateral Influence Tactics to Achieve Team Commitment in New Product Development Environments as Perceived by New Product Development Team Members

Rochelle Evangeline Cook

North Carolina A&T State University

A dissertation submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department: Leadership Studies

Major Professor: Daniel M. Miller, Ph.D.

Greensboro, North Carolina

2014

The Graduate School
North Carolina Agricultural and Technical State University

This is to certify that the Doctoral Dissertation of

Rochelle Evangeline Cook

has met the dissertation requirements of
North Carolina Agricultural and Technical State University

Greensboro, North Carolina
2014

Approved by:

Daniel M. Miller, Ph. D. Major Professor	Ceola Ross Baber, Ph.D. Committee Member
Thaddeus McEwen, Ph.D. Committee Member	Ellen Van Velsor, Ph.D. Committee Member
Comfort O. Okpala, Ph.D. Department Chair	Eui Park, Ph.D. Committee Member

Sanjiv Sarin, Ph.D.
Dean, The Graduate School

Biographical Sketch

Rochelle Evangeline Cook is a native of Sylacauga, Alabama. Education has been part of her social identity since childhood, as her parents placed high priority on principles such as preparation, work ethic, and goal achievement. One of the key mantras instilled in her early in life was *if you want something, you must work for it*.

Rochelle has over 17 years of experience in the manufacturing sector as a contributor and team leader in quality, industrial engineering, and project management roles. She is active in the Central North Carolina Chapter of the American Society for Quality, where she is an instructor for certification refresher courses. She also serves as Executive Vice-President for the Piedmont Triad Chapter of the Project Management Institute. Rochelle has volunteered as a fund raiser and mentor for Team in Training. Finally, she is a member of Mount Zion Baptist Church of Greensboro, Inc. where she volunteers in the Music ministry.

Rochelle believes that leadership should first, inspire then ignite an engaging fire that is visible, contagious, and beneficial. She is passionate about motivating people to perform at their highest level. Therefore, she mentors/advises students enrolled in the MA and MBA programs at Wake Forest University. She is a member of Phi Kappa Phi Honor Society and the Academy of Management. Lastly, Rochelle received the outstanding scholar's award from the Department of Leadership Studies in 2014.

Rochelle has a Bachelor of Science in Textile Management & Technology from Auburn University and a Master of Science in engineering degree from North Carolina State University. She is a certified Quality Engineer, Six Sigma Black Belt, and Project Management Professional (PMP®). Her hobbies include long distance running, traveling, and singing.

Dedication

This work is dedicated to my parents, Mary S. Cook and the late William H. Cook, Sr. My parents always took education seriously, as they saw it as a privilege and a path to a better life. I am honored to have taken this journey as a testament to their belief that hard work, faith, and perseverance pays off. I also dedicate this work to my uncle the late Rev. Arvin L. Sexton, Sr., whose love of education and passion for dialogue and action inspired me as a child to pursue greatness in any endeavor that I attempt.

Acknowledgments

I am so happy to have reached this milestone in my educational career. Many folks have challenged, encouraged, and prayed for me along the way. Specifically, Calvin Riley of Nehemiah, The Leadership Company, thank you for all of those meetings at Starbucks where you gave me professional and Godly advice about my career goals and aspirations. To the late Don Hill who declared to me that *I am a leader* and challenged me to *plan my work and work my plan*. Pastor Emeritus Bishop George W. Brooks, thank you for being a consistent model of leadership. Team three (you know who you are), thank you for inspiring me. My colleagues and professors in the Leadership Studies Program, thank you for challenging and rejuvenating my way of thinking. I appreciate my dissertation committee for their knowledge, expertise, and careful advisement throughout this journey. Finally, my committee chair, Dan Miller, Ph.D., your genuine concern for my success has been instrumental in getting me to this point.

Table of Contents

List of Figures

List of Tables

Abstract

Building on transformational leadership theory, 43 individuals from various new product development (NPD) teams were studied to understand the relationship between the project managers' use of lateral influence tactics and team commitment as perceived by new product development team members. An explanatory correlational study was conducted to examine these relationships. Data were collected via questionnaire about each NPD team member's view of the project manager's use of lateral influence tactics and the NPD team member's perception of team commitment. Perceptions of procedural justice were also tested for mediation. The study found that there is a moderate positive relationship between each independent variable and the dependent variable. However, one of the hypotheses for mediation was not supported. Overall, the results reflect a positive association between the NPD team member's perception of the project manager's use of influence tactics and his/her psychological attachment to the new product development workgroup. This study contributes to the literature by examining the strength of lateral influence tactics when applied to teams to gain interpersonal outcomes in new product development environments. Also, this study expands the body of research because it measures the thoughts and attitudes of the NPD team members as a result of the project manager's initiation of these influence tactics.

CHAPTER 1

Introduction

The aim of this research topic—project managers' use of lateral influence tactics to achieve team commitment in new product development (NPD) environments as perceived by new product development team members—is to fill gaps in recent literature by examining how an individual who lacks formal authority uses informal bases of power as demonstrated in lateral influence tactics to achieve intermediate outcomes from a collective group of individuals in a diverse social setting. This study also expands the body of research by quantifying this relationship from the lens of the NPD team member.

This was accomplished by analyzing how the NPD team member's thoughts about the project manager's use of two constructs of lateral influence behaviors relate to her/his commitment to the NPD team. The NPD team member's perception of procedural justice was measured to understand how it further explains the relationships between the independent variables and the dependent variable. The results demonstrate how affective outcomes like team commitment shape the NPD team environment based on how the NPD team member sees the project manager.

Context of the Study

Over the past 30 years, globalization has accelerated the pace of product conception, design, and launch in new product development (NPD) environments. Globalization, or the transfer of products, goods, and services across national borders, deepens the desire to be first to transform ideas into end use products within a timeframe that is competitive (Anderson, Cavanaugh, Lee, & the Institute for Policy Studies, 2005; Capar & Kotabe, 2003). This

phenomenon is reflected by a broader customer base, target markets, and multinational competitors.

First, globalization enables larger target markets. In the context of new product development, Ozer and Cebeci (2010) state that companies included in their study launch new products in multiple countries to increase sales and visibility. This is achieved through exporting new products, increasing the supply chain, and engaging in foreign investment alliances (Anderson et al., 2005). However, 50% of new products that are launched fail (Rogers, Ghauri, & Pawar, 2005). Therefore, the ability to offset losses experienced in one market by the success of others is attractive to multinational corporations.

With expanded markets, globalization also exposes companies to a wide range of customers. A company that successfully introduces new products into the global market reflects the ability to identify the changing needs of its customers. When those needs are translated into technical requirements, they become tangible solutions (Ozer & Cebeci, 2010; Wortman et al., 2007). Moreover, information technology enables efficient data collection, which facilitates knowledge creation and sharing (Rogers et al., 2005).

While globalization has accelerated the pace of NPD by using information power to penetrate diverse markets, there are also pitfalls. First, interaction with various cultures is instrumental in understanding customer expectations. For example, the computer firm referenced in Ozer and Cebeci's (2010) study had to consider how technical features in their product satisfied eastern and western ways of thinking. Products that are designed for international markets are subject to multiple iterations before the final product is released. Translating customer wants into applicable designs are essential in launching products that are accepted by customers (Ozer & Cebeci, 2010).

Second, multinational companies that can deliver the same product faster and cheaper threaten the overall success of their competitors. In Ozer and Cebeci's (2010) study, the participant sample also included a manufacturing company that leveraged its supply chain influence as a strategy. Other companies in the study used value stream management and job rotation to counter their competitors in the race to be first with their new products.

The speed to market approach practiced by global industries has exposed the need for the collaborative efforts of new product development teams (Dionne, Yammarino, Atwater, & Spangler, 2004; Ozer & Cebeci, 2010; Rogers et al., 2005; Sarin & O'Connor, 2009). Moreover, NPD teams are cross-functional and have a significant impact on successful new product development programs. Lastly, Ozer and Cebeci (2010) found that the effectiveness of these teams impacts financial success.

Holland, Gaston, and Gomes (2000) define cross-functional NPD teams as a group of individuals who possess different skills, cognition, and professional backgrounds. This interdependent work group is expected to create products, goods, and services that revolutionize how humans live (Holland et al., 2000; Sarin & O'Connor, 2009). This is achieved through the coordination of the team members' functional roles. Leading projects linked to this strategy is equally significant, and project managers contribute to this effort (Project Management Institute [PMI], 2008).

Project managers accomplish organizational objectives through the effective use of human capital (Bushardt, Glascoff, Doty, & Fannie, 2010; Söderlund, 2004). Similarly, Gaddis (1959) suggests that the critical tool for project managers is "the brainpower of men who are professional specialists in diverse areas" (p. 89). Moreover, project managers who can manage the complexity, diversity, and differences of a project team create an environment that facilitates

creative thinking, open communication, and shared decision-making (Burke et al., 2006; Holland et al., 2000). As a result, perceptions of procedural justice, or thoughts about the relative fairness of the work environment, emerge (Akgün, Keskin, & Byrne, 2010).

Procedural justice is significant because as an individual experiences his/her differences being applied in the NPD process, his/her thoughts about the team changes (Kearney & Gebert, 2009). As s/he interacts with the NPD team, those thoughts evolve into a collective perception about the work environment (Cropanzano, Li, & Benson, 2011). The project manager has an opportunity to shape those thoughts by initiating behaviors that impact the psychological nature first (Sarin & O'Connor, 2009).

Statement of the Problem

While the literature is clear in describing the importance of robust cross-functional NPD teams and project management leadership, there are some gaps. First, the project manager often lacks formal authority but is ultimately responsible for the project outcome (Bushardt et al., 2010). Factors that contribute to this gap include NPD structures and NPD team processes.

The NPD team may consist of individuals from research & development (R&D), marketing, procurement, and other functional areas (Jassawalla & Sashittal, 2000). This matrix structure is expected to transform ideas into solutions. However, the project manager's role is that of a peer. In other words, the team members report to someone other than him/her (Enns, Huff, & Huggins, 2003; Enns & McFarlin, 2005). The scope of the project manager's authority is limited to the successful completion of the project (Bushardt et al., 2010; Liu & Fang, 2006). The functional and cognitive diversity of the project team is critical to achieving success. As a result, decision-making is shared (Jensen, 2007).

Overlapping goals, competing priorities, and divided team member loyalties can eclipse the egalitarian efforts of the team leader (Holland et al., 2000). If the project leader lacks the knowledge, expertise, and interpersonal skills to counter behaviors that threaten the success of the project, s/he may resort to organizational politics to get things done (Atuahene-Gima & DeLuca, 2008). Moreover, the authors suggest that project managers who lack formal authority tend to "engage in political lobbying for support and resources" (p. 666). For example, in Atuahene-Gima and DeLuca's (2008) study, personal stake in the project outcome contributes to the project leader's use of political tactics.

Secondly, previous studies state that the project manager generally has limited control over the resources required to complete projects (Liu & Fang, 2006; Thamhain & Gemmill, 1974; Yukl, Seifert, & Chavez, 2008). Holland et al. (2000) suggest that each team member is assigned by his/her functional manager. Rizova (2006) states that a project that doesn't capture the interest of senior management is at risk for failure. Also, Sarin and McDermott (2003) state that senior project leaders have a significant effect on team outcomes due to their ability to obtain resources from their upper management colleagues. However, Atuahene-Gima and DeLuca (2008) reported that a key driver of the project leader's campaigning for external support was R&D's perceived dominance in the NPD process.

Consequently, the project manager's absence of formal authority can affect the team members' perception of him/her (Holland et al., 2000; Thamhain & Gemmill, 1974). Moreover, weak working relationships between the project leader and the team makes the implicit association between lack of authority and the ability to lead successful projects more saliently (Bushardt et al., 2010; Liu & Fang, 2006).

Third, NPD literature suggests that in spite of the cross-functional structure and global opportunities, most new product development projects fail, and poor project leadership is a contributing factor (Jassawalla & Sashittal, 2000; Sarin & McDermott, 2003; Sarin & O'Connor, 2009). Furthermore, there is a gap between the standardization of tools and techniques and the development of behavioral characteristics required for successful performance (Mengel & Thomas, 2008). This is significant because NPD project failures result in loss of productivity, competitive edge, and market position (Rhaiem, 2012; Rizova, 2006; Rogers et al., 2005).

The pervasiveness of globalization requires organizations to identify the changing needs of customers and design them into their products (Ozer & Cebeci, 2010). Organizations are also challenged to figure out how to best position its NPD teams to accomplish this (Rizova, 2006). Therefore, Sarin and O'Connor (2009) suggest that appointing project managers who can facilitate an environment of knowledge sharing and creative problem solving is paramount. This can be achieved through effective communication techniques.

Barczak and Wilemon (1991) used the term *boundary spanning*, which implies that the project leader should process and disseminate information to the team so that ambiguity evolves into knowledge that emerges into a successful product. In other words, the project leader who demonstrates effective communication bridges the gap between front-end project uncertainties and the delivery of customer expectations. Disproportionate communication between the project manager and the team can contribute to poor project leadership (Barczak & Wilemon, 1991). For instance, a finding from Barczak and Wilemon's (1991) study was that the least successful project leaders interact less with customers. Consequently, they fail to communicate customer needs to the team. This is critical because the customer is a core information source for NPD projects (Rhaiem, 2012). If the product design fails to reflect customer requirements, multiple

iterations, re-tooling, and other delays will result (Jassawalla & Sashittal, 2000; Wortman et al., 2007).

Barczak and Wilemon (1991) also found that the least successful project leaders in their sample communicate less with the engineering function than the most successful project leaders. In the context of this study, *success* was measured by technical means such as to what extent was the project on schedule, within budget, yielded a profit, and was a commercial success. Similarly, Atuahene-Gima and De Luca (2008) reported that the perceived dominance of R&D is a driver of the project manager's use of political tactics. These communication patterns put the NPD project at risk (Barczak & Wilemon, 1991; Rizova, 2006).

Ernst and Chrobot-Mason (2011) suggest that project leaders should clarify and confirm the team's mission so that each individual understands her/his contribution to the project. They characterize this act as *buffering* or boundary work that defines the scope and identity of the team. When the team member understands how her/his contribution aligns with the mission, they should be more resistant to external forces that hinder participation. In case of communicating in cross-functional NPD team environments, buffering should also affect how the project manager interacts with the team members assigned to carry out the project. Moreover, s/he should anticipate opportunities and challenges that can lead to behaviors that threaten the psychological safety of its members. As a result, the project manager should communicate across and within the boundaries because s/he understands the interdependencies that drive the project's outcomes.

R&D contributes to the design and development of the product and has expert power (Liu & Fang, 2006; Thamhain & Gemmill, 1974). Team members implicitly associate R&D's specialized skills with independence and respond with low participation (Jassawalla & Sashittal,

2000). Therefore, Sarin and O'Connor (2009) posit that it is critical for the project manager to act as the *social architect* by forging an attitude of interdependence and shared decision making among the team members.

For example, Jassawalla and Sashittal (2000) interviewed a project leader who reflected about how he responded to the perceived dominance of R&D when a design engineer expressed that he didn't need to review his prototype with the team because the design requirements were satisfied. The team leader's response was "Has the manufacturing guy reviewed that? What does he think of it?" (p. 38).

Finally, the desire for NPD teams to produce profitable results has outpaced the need to understand how they can be more effective (Kearney & Gebert, 2009). The top three NPD performance metrics include on-time delivery, frequency of customer complaints, and actual costs versus budget (Rogers et al., 2005). Findings from Rogers et al. (2005) state that the majority of the participants thought that their firms would benefit from "more performance measures in design and development with only 21 percent believing that all of the performance measures used in their company were understood" (p. 81).

Knowing when to abandon a project is just as important as leading one to a successful product launch (Rhaiem, 2012). Furthermore, a core requirement of the NPD process is to transform the "fuzzy front end NPD activities" (Ozer & Cebeci, 2010, p. 168) into a unique, tangible product on time and within budget while meeting customer requirements (PMI, 2008). Rhaiem's (2012) explanatory study of manufacturing firms suggests that the probability of project success decreases with "the escalation of commitment" (p. 114) from the project leader.

Escalation of commitment is a concept that describes the project leader's relentless quest to pursue or continue a NPD project in spite of the high risk and low feasibility that exists

(Rhaiem, 2012). Project managers who lack the ability to anticipate and adequately respond to NPD related risks threaten the company's bottom line results and stifle creativity among the team members who are instrumental in achieving the goals.

Findings from these studies suggest an uneven focus in the literature concerning the behavioral aspects of project managers and the effects of transforming unknowns into solutions in diverse social settings like NPD (Söderlund, 2004). The ability to identify and select leader behaviors that promote knowledge sharing and creativity impacts the organization's ability to maintain an innovative and competitive edge (Anderson et al., 2005; Capar & Kotabe, 2003; Ozer & Cebeci, 2010; Rogers et al., 2005). Therefore, understanding how certain leader behaviors contribute to or hinder NPD team processes is needed. One way to deepen understanding is to examine this through the effective use of lateral influence tactics.

Lateral implies peer to peer (Enns et al., 2003; Enns & McFarlin, 2005; Falbe & Yukl, 1992; Yukl et al., 2008). The project decisions are shared and there is the absence of a leader-subordinate relationship (Jensen, 2007). Lee and Sweeney (2001) define influence as ways to convince the targets (the team members) to agree to suggestions, ideas, or requests. Charbonneau (2004) describes influence as actions taken to change the beliefs and behaviors of others.

Since projects are unique, complex, and time based (PMI, 2008), the situation dictates which tactic is best (Falbe & Yukl, 1992; Yukl, Falbe, & Youn, 1993; Yukl et al., 2008). Scales used to measure these tactics have been developed, tested, and validated over the past 40 years. Yukl et al. (2008) describe 11 tactics that are technical, interpersonal, and political in nature.

For example, the *ingratiation* tactic is demonstrated by flattery and compliments that convince the target to agree to and/or carry out a request (Nguyen, Seers, & Hartman, 2008).

Examples of ingratiation include statements such as *this task requires your years of experience* or *you can do this task with your eyes closed*. The *rational persuasion* tactic reflects the use of data to explain why a suggestion should be considered (Charbonneau, 2004; Yukl et al., 1993, 2008). Statistics from customer satisfaction surveys, company records, or other substantial information are used by agents to reflect the relevance of a request.

A combination of rational (logic and information) and soft (interpersonal) tactics has been found to be most effective for getting a response and/or attitude change from the target (Charbonneau, 2004; Jensen, 2007; Lee & Sweeney, 2001; Yukl et al., 1993, 2008). Although project management literature states that political tactics are used least by project managers, conflict and power struggles in cross-functional work environments do call for these tactics (Atuahene-Gima & De Luca, 2008; Lee & Sweeney, 2001; Sotiriou & Wittmer, 2001). However, the choice of tactics (soft, rational, or political) has implications for the team members' perception of procedural justice. For example, the project manager in Jassawalla and Sashittal's (2000) study responded to the perceived dominance of R&D by asking whether the design was shared with manufacturing. This is in contrast to using upward appeals tactics in Atuahene-Gima and DeLuca's (2008) study.

A project manager who lacks positional power but is responsible for the project's outcomes also has an opportunity to initiate behaviors that have positive effects on the individual's perceptions about the team. Tactics that yield team commitment, or a psychological attachment to members of the unit, are critical to successful team outcomes (Bishop, Scott, Goldsby, & Cropanzano, 2005; Brockman, Rawlston, Jones, & Halstead, 2010; Burke et al., 2006). Schaubroeck, Cha, and Lam (2007) state that team potency, or an individual's belief about the team's capability, is a driver of success because it assures the team member that his/her

contributions are adequate to achieve team outcomes. Akgün et al. (2010) suggest that project managers who influence a perception of a fair team environment have a positive effect on team commitment. This can be a challenge in a cross-functional environment due to the lack of interpersonal relationships between departments (Kearney & Gebert, 2009). Moreover, the absence of a collective identity results in behaviors such as poor decision-making, withholding information, and working in silos which threatens creativity, innovative ideas, and ultimately, project success (Holland et al., 2000; Solansky, 2011).

There is plentiful literature about commitment, but it primarily refers to commitment to a task (Cropanzano et al., 2011). Gattiker and Carter (2010) state that the target's effort and persistence reflect task commitment. Also, the Chang, Sheu, Klein, and Jiang (2010) study reported that the intentional efforts of the user reflect task commitment and mediate project success. While task commitment impacts project success, it fails to measure the individual's psychological attachment to the team.

Problem Summary

There are several studies that focus on NPD projects, but they fail to measure how leader behaviors such as lateral influence tactics impact the effectiveness of NPD teams (Capar & Kotabe, 2003; Ozer & Cebeci, 2010; Rogers et al., 2005). Recent studies about project managers focus on their technical, planning, and action-oriented roles (Söderlund, 2004). However, the relationship between project managers' use of informal power bases (lateral influence tactics) to achieve intermediate outcomes (team commitment) in cross-functional NPD settings remains unclear. Therefore, the aim of this study is to fill a void in recent literature by demonstrating how individual team members perceive project managers' behaviors affect his/her psychological attachment to the team of which s/he is a part.

Transformational Leadership

The societal significance of diverse NPD teams and the complexities of applying lateral influence tactics to achieve team commitment are magnified through transformational leadership theory. This theory is ideal because it undergirds the need for project managers to effectively recognize differences and identify strengths while logically articulating goals. Finally, leader behaviors that reflect images of empathy and consideration for the disproportionate but essential duties of cross-functional teams are reflected through the lens of this theory.

Downton is credited (as cited in Northouse, 2007) with having introduced the term *transformational leadership*, but James McGregor Burns's 1978 book, *Leadership,* propelled it to prominence. Transformational leadership is defined as "a process whereby a person engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower" (Northouse, 2007, p. 176). The overall intent of this theory is to exact a visible change in one's attitude, beliefs, and/or actions through the interaction of another.

Similarly, House (as cited in Northouse, 2007) introduced the concepts of charismatic leadership in 1976. This theory is characterized by the ability of the leader to accomplish amazing and arduous feats that ordinarily seem impossible. According to Ciulla (2003) and Northouse (2007), a leader's charisma is validated by his/her followers when their behavior mirrors the same approach that is promoted by the leader.

By the mid-1980s, Bass refined the transformational leadership theory by placing more emphasis on the followers' needs. Transformational leadership manifests when the follower recognizes the value of the challenge, request, or task (Northouse, 2007). Also, his/her personal goals are replaced with organization or team objectives (Warrick, 2011). As a result, four constructs of transformational leadership emerge: (a) idealized influence or charisma, (b)

inspirational motivation, (c) intellectual stimulation, and (d) individualized consideration (Charbonneau, 2004; Dionne et al., 2004; Warrick, 2011).

Transformational leadership is reflected in behaviors that inspire followers to forego self-interests and pursue collective goals (Schaubroeck et al., 2007). As a result, perceptions of their own limitations were replaced with positive thoughts about the team. The four transformational leadership constructs magnify the need to explain the relationship between the project manager's use of lateral influence tactics and the team's emotional response.

First, idealized influence reflects the leader's ability to gain the follower's confidence in the midst of uncertainty. When leaders effectively communicate the vision, followers respond with trust and respect (Warrick, 2011). The project manager lacks formal authority over the team. Therefore, it is important for him/her to communicate the vision and mission in a way that influences the individual to enlist his/her commitment to the team before the NPD process begins.

Each individual has an identity through his/her respective functional area (Solansky, 2011). Also, due to the NPD process, the degree of involvement from each function will vary (Jassawalla & Sashittal, 2000; Sarin & O'Connor, 2009). Therefore, it is important that the leader sets the tone for the work environment so that the team is excited, enthusiastic, and engaged about working together during the life of the project.

Individualized consideration is another transformational leadership behavior that enables the team leader to align his/her interaction within the context and needs of its followers. As a result, the team members feel that they are learning and growing (Warrick, 2011). For example, the project manager in Jassawalla and Sashittal's (2000) case study focused on the lack of cross-functional collaboration from the design engineer instead of his technical expertise. By asking

the design engineer if he reviewed the prototype with manufacturing, the project manager is expressing an interest in his interpersonal development (Jassawalla & Sashittal, 2000). This is in contrast to the team leader attributing the use of political tactics to R&D's perceived department power (Atuahene-Gima & DeLuca, 2008). As a result, initiating individualized consideration addresses an area that the design engineer needs to work on—team collaboration.

Creativity, innovation, and diversity are inherent in cross-functional new product development team environments (Dionne et al., 2004; Holland et al., 2000). Different concepts are formed during ideation and knowledge creation activities (Ozer & Cebeci, 2010). Disagreements also occur (Holland et al., 2000).

Project managers lack positional power and may have limited knowledge of the issues being discussed. Resorting to political tactics may get results, but alienate the team (Atuahene-Gima & DeLuca, 2008). Moreover, leaders should insert behaviors that protect the team from unnecessary bickering and turf wars (Jassawalla & Sashittal, 2000). Since egalitarianism is pervasive in NPD environments, the project manager has to balance tactical and interpersonal behaviors to influence a healthy team environment.

Intellectual stimulation is a transformational leadership behavior that aims to influence the team to view ideas from different perspectives and enables them to express their views without fear of retaliation. This is especially critical for NPD teams. Conflict is a necessary work challenge (Lee & Sweeney, 2001; Lines, 2007). Leader behaviors that influence open communication so that creativity, conflict resolution, and sense making occur are needed (Dionne et al., 2004). Moreover, team responses driven by intellectual stimulation counters divisive emotional responses such as group think, which is described by Brockman et al. (2010) as agreeing with group members to avoid conflict.

The time that is dedicated to NPD activities is usually in addition to the team's routine functional roles (Holland et al., 2000). Therefore, the team member should be able to connect the needs of the project to something that s/he values. Inspirational motivation is a transformational leadership construct that is characterized by the leader who challenges followers to achieve superordinate goals by "making meaning to what needs to be done" (Charbonneau, 2004, p. 567) through stories, image driven slogans, and other artifacts. Inspirational motivation is achieved when "important purposes are expressed in simple ways" (Warrick, 2011, p. 12) and the team expresses motivation and enthusiasm.

The project manager in Jassawalla and Sashittal's (2000) study recalled that one of the challenges of meeting a customer's deadline was the gap between the time information was available and the time it was published. The project manager met this challenge by giving the team members two-way radios. This device symbolized a bridge between the goal and "real time information exchange" (p. 40). People could perform their respective roles without having to track down a team member if there was a problem. Everyone was connected and thus motivated to meet the goal (and they did).

Purpose Statement

The literature is limited in explaining the relationship between the project manager's use of lateral influence tactics and the individual's psychological attachment to the team. There is also a need to understand what leader behaviors are most effective in reinforcing team commitment among cross-functional NPD team members. Therefore, the purpose of this explanatory correlational study is to explain the relationship between the NPD team member's perception of the project managers' use of lateral influence tactics and team commitment in new

product development environments. Perceptions of procedural justice will also be tested for mediation.

Two constructs of lateral influence tactics—inspirational appeals and rational persuasion-will serve as stand-alone independent variables. Moreover, 43 individuals who are or have been members of NPD teams from various American industries will respond to questions regarding his/her perceptions of the project manager's use of these lateral influence tactics and his/her team commitment (dependent variable) through an online questionnaire. Finally, a third variable, perceptions of procedural justice, is tested as a mediating variable.

The variables selected for this study connect to the problem and purpose statements because they demonstrate the individual team member's perceptions of the group in which s/he participates as a result of the interaction of the project manager. This interaction is demonstrated through the initiation of inspirational appeals and rational persuasion. These lateral influence tactics should be framed with a sociological focus so that they have a positive effect in the cross-functional NPD environment and reflect the project manager's power (Arslan, 2001; Grant & Hoffman, 2011; Sarin & O'Connor, 2009).

Hypotheses

The following hypotheses will be tested:

H1: There is a positive relationship between the NPD team member's perception of the project manager's use of inspirational appeals and team commitment.

In other words, this hypothesis will be tested to understand to what degree the NPD team member relates the project manager's use of inspirational appeals to his thoughts about the team with whom s/he works. As the project manager initiates motivational speeches, team meetings,

and symbolic gestures, does the NPD team members' loyalty and sense of belonging to the group increase as well?

H2: There is a positive relationship between the NPD team members' perception of the project manager's use of rational persuasion and team commitment.

This hypothesis statement was measured to understand how the project manager's use of logic and data exact a change in the NPD team member's attitude about the workgroup. For instance, does an increase in shared decision making relate to the team member's confidence in her/his NPD project colleagues?

H3a: Perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of inspirational appeals and team commitment.

This hypothesis measured to what extent the relationship between inspirational appeals and team commitment was further explained by perceptions of procedural justice. As the project manager anticipates differences that exist between NPD team members, the hypothesis suggests that initiating inspirational appeal tactics should facilitate thoughts of uniformity among the diverse members of the group which in turn relates to an emotional connection to the team. This counters perceptions of dominance from the group (Atuahene-Gima & DeLuca, 2008; Jassawalla & Sashittal, 2000).

H3b: Perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of rational persuasion and team commitment.

Using objectivity to convince individuals to agree to a suggestion yields perceptions of transparency, fairness, and psychological safety (Dionne et al., 2004; Sarin & O'Connor, 2009).

This hypothesis statement was tested to determine whether to reject the notion that NPD team members who perceive that the project manager fosters a work environment of information sharing, critical, thinking, and conflict resolution tend to feel free to express their differences and have confidence that team members will be held to the same expectations although their contributions are different.

Positivist Worldview

This study takes on a positivist worldview (Denzin & Lincoln, 2011; O'Leary, 2004). Overall, a societal issue is thought to be solvable through empirical study using methods that yield verifiable and generalizable results. In the case of this study, globalization has influenced the growth of new product development projects over the past three decades. Project managers are deployed to lead these efforts, but over half of new products launched fail (Rogers et al., 2005).

The objective of a positivist worldview is to produce knowledge independent of the researcher's beliefs (O'Leary, 2004). The purpose of this study was to understand the relationship between the independent variables and the dependent variable. The issue being solved was also hypothesis driven. Methodology was highly detailed and aligned with the aim of the study. Positivists generally want their findings to be generalizable to a population (beyond the sample being tested). Finally, findings were quantitative. In the case of this study, tests for statistical significance produced the results.

Significance of Study

The majority of the studies from team, innovation, and project management literature focus on using lateral influence tactics for goal achievement. This study attempts to contribute to the literature by using an existing phenomenon—cross-functional NPD teams—to examine the

relationship between lateral influence tactics applied by an agent who lacks formal authority and the transformed thoughts of individuals from self to the collective work group. This study also demonstrates how informal bases of power integrated with applicable leader behaviors such as lateral influence tactics achieve affective outcomes from followers.

The study also advances the project management profession by broadening its scope to include considering the attitudes of team members as part of the strategy for goal achievement. As a result, models that show how task and person related behaviors drive team commitment can facilitate training and professional development efforts. Conceptual frameworks from the team member's perspective may also be generated.

Finally, findings from this study will help maintain project management as an academic discipline. There is an opportunity to translate the theoretical components of project management into active, tangible fields of study that reflect its global and contextual nature. Organizations will be influenced to apply findings through the institutionalization of practices that promote collective behaviors among cross-functional teams.

Delimitations

The proposed study has the following delimitations. First, the population was limited to NPD team members, which limits the generalizability of the study. Second, project managers were excluded from this study. Third, since each person was asked to reflect on a project team s/he was assigned to in the past year, the responses refer to different NPD project experiences and different project managers/leaders. Finally, questionnaires were administered electronically. Therefore, the opportunity to gain deeper meaning of the quantitative data through semi-structured interviews is excluded from this study.

Definition of Terms

The following definitions reflect key terms that are used throughout the study:

Influence—authority assumed illegitimately, but is based on knowledge, expertise, and/or relationships (Cleland, 1967).

Inspirational appeals—one of 11 influence tactics that is demonstrated when the person initiating the influence enlists the support of another by appealing to his/her values and beliefs (Charbonneau, 2004; Yukl et al., 2008).

Lateral influence tactics—behaviors exerted by the agent in the absence of formal authority with the aim of convincing others to agree to ideas, suggestions, or requests (Charbonneau, 2004; Enns et al., 2003; Enns & McFarlin, 2005; Falbe & Yukl, 1992; Yukl et al., 2008).

New Product Development (NPD) team—a work group that is comprised of individuals drawn from a variety of functional, knowledge based, and skill salient specialties within the organization and is expected to take a product from conceptualization to commercialization (Sarin & O'Connor, 2009).

Perceptions of procedural justice—thoughts about the relative fairness of the work environment (Akgün et al., 2010; Cropanzano et al., 2011).

Project—a unique endeavor undertaken with a prescribed budget for a specific timeframe targeting specific goals and objectives (Gaddis, 1959; PMI, 2008; Söderlund, 2004).

Project manager (PM)—the individual selected to lead the activities of the project from initial to final phase; team leader and project champion are used interchangeably with this term for this study (Holland et al., 2000; Lee & Sweeney, 2001; PMI, 2008).

Rational persuasion—one of 11 influence tactics that is characterized by the use of logic, data, or information to show the relevance of an idea, suggestion, or request (Charbonneau, 2004; Yukl et al., 2008).

Team Commitment—psychological attachment to the work group which supersedes self-interests (Brockman et al., 2010; Pearce & Herbik, 2004).

Organization of This Dissertation

This dissertation consists of five chapters. First, Chapter 1 established the rationale for the study and its significance to the body of research. Chapter 2 contains a comprehensive literature review which details the patterns and gaps that exist in current studies. It is from the literature review that the theoretical framework, research sub-questions, and hypotheses emerge. Chapter 3 describes the methodology whereby the hypotheses are tested. Data collection methods, survey instruments, and research design are discussed as well. Chapter 4 contains a description of the study's results. Finally, Chapter 5 discusses implications for policy, research, and practice.

CHAPTER 2

Literature Review

How does a project manager initiate influence tactics that produce affective outcomes among a heterogeneous work group? The purpose of this explanatory correlational study was to examine the relationship between the NPD team member's perception of the project managers' use of lateral influence tactics and team commitment in new product development environments. The next step was to review recent literature to assess what has been reported concerning the project managers' use of lateral influence tactics to achieve intermediate outcomes in new product development (NPD) team environments. This was accomplished by analyzing the following literature strands: (a) leader behaviors, (b) lateral influence tactics, (c) NPD team environment, and (d) team commitment. Patterns and gaps were noted. Finally, the theoretical framework that undergirds this study was summarized.

Leader Behaviors

A project is a temporary, unique endeavor with specific deliverables that determine its success (PMI, 2008). Project managers are expected to lead this effort from the initial phase to final product launch (Dionne et al., 2004). In the NPD context, this is accomplished through individuals from diverse cognitive and functional specialties within the organization (Sarin & O'Connor, 2009).

There is a significant difference between NPD project expectations and project results (Rizova, 2006; Rogers et al., 2005). Many studies have focused on NPD project performance, but few explain how the project leader contributes (Dionne et al., 2004). The project manager should bridge the gap between goal setting and goal achievement by initiating certain leader behaviors (Sarin & McDermott, 2003; Sarin & O'Connor, 2009). The following studies suggest

that leader behaviors that reflect self-awareness, power, functional relationships with the team, and effective communication skills impact outcomes that contribute to NPD project success.

Person and action oriented. Burke et al. (2006) conducted a meta-analysis to determine the relationships that task- and person-focused leader behaviors contribute to team productivity and effectiveness. Task-focused implies getting the job done through exchange tactics, task simplification, and negotiating resources (Burke et al., 2006). For instance, awarding tangible items (promotions, commendations, etc.) in exchange for accomplishments reflects task-focused behaviors. Also, getting external support to expedite results is another reflection of task-focused behavior.

Person-focused behaviors include actions that generate a creative exchange of ideas, information, and resources, while foregoing self-interests, to achieve change. Moreover, the leader creates conditions that make the work environment conducive for individual differences to emerge into team processes such as knowledge sharing, conflict resolution, and problem solving. For example, framing problems as questions is an example of person-focused behavior, as it facilitates team based activities such as brainstorming (Burke et al., 2006).

The meta-analysis revealed that person-oriented leadership behaviors accounted for 13% of the ". . . variance in perceived team effectiveness" (p. 299) and 8% of the variance in productivity versus 11% and 4%, respectively, for task-focused behaviors. High team interdependencies contributed as a key driver for these results. However, the meta-analysis focused on behavioral based team outcomes.

There is little research that explains why or how project leader behaviors contribute to inconsistent project success (Rogers et al., 2005). Sarin and O'Connor (2009) apply path-goal theory to the study of cross-functional teams to explain the relationship between certain team

leader behaviors and NPD team behaviors. This mixed methods study used interviews and surveys to measure the effects of a project leader's egalitarian, empathic, and technical behaviors on certain team behaviors.

The study reported that the leader's participative and goal initiation behaviors have a positive effect on open communication and creative problem solving. In contrast, imposing process structure, position power, and leader consideration has an insignificant effect on NPD team behaviors. These findings align with Burke et al. (2006) because behaviors that change the perspectives of the team are reflected in how they exchange thoughts, ideas, and information. While Sarin and O'Connor (2009) describe the project manager's role as a source of influence for the NPD social landscape, to what degree does team commitment activate the leader's ability to orchestrate collectivist NPD team behavior?

An earlier study by Sarin and McDermott (2003) had similar findings with one exception: there is a positive relationship between the team leader's position/title and team learning, or the effective processing and use of information needed to achieve goals. Moreover, the authors state that team leaders should be in a senior role in order to impact positive team outcomes. This is attributed to established relationships with senior management counterparts. These findings contradict the societal issue of organizations migrating toward the use of work groups and cross-functional teams to keep up with the demands of globalization (Dionne et al., 2004; Grant & Hoffman, 2011; Rizova, 2006).

At the core of leadership is the ability to exert influence that changes the attitudes and behaviors of followers so that objectives are met (Northouse, 2007). How does the project manager get results if s/he lacks formal authority? Moreover, how does the project manager facilitate the differences that are inherent in NPD teams? Leaders who use communication

patterns to promote effective knowledge creation and knowledge sharing distinguish well-functioning teams from dysfunctional teams (Barczak & Wilemon, 1991).

Barczak and Wilemon (1991) explored operating and innovating NPD leaders' communication patterns to understand what issues leaders communicate about and with whom they communicate most. Operating NPD leaders work on routine initiatives such as product enhancement, improvement, or refreshing. Innovative projects represent those initiatives that are new to the world, new to the market, and involve more complexity. Another way to frame the two is that leaders of operating NPD projects aim to solve technical problems; innovating NPD project team leaders focus on creating technical solutions (Barczak & Wilemon, 1991).

NPD team leaders from the electronics industry were asked to reflect on their latest NPD project by responding to open-ended questions. Responses were assigned a success rating and the respondents were categorized as either least successful or most successful leaders. The results revealed that successful operating NPD leaders discuss technical issues and scheduling more with the team than their less successful counterparts. The team members with whom they interact most are management, vendors, purchasing, and engineering. This is significant because each function is able to contribute different aspects of the design (cost, materials, specifications, etc.) which aids in problem solving (Barczak & Wilemon, 1991).

The most successful innovating leaders discuss customer needs primarily with the team. They also interact with customers most. However, they communicate less with manufacturing. This finding magnifies one of the problem statements: According to Rizova (2006) and Rogers et al. (2005), five out of ten projects launched fail. While the product has the customer's requirements integrated in the design, it also has to be built by manufacturing. Moreover, flaws

in the design are typically discovered when they get to the manufacturing process (Wortman et al., 2007).

This study also reflects the need for NPD project leaders to forge an environment of creativity and shared decision making (Burke et al., 2006; Jassawalla & Sashittal, 2000). Effective communication patterns facilitate this need by aligning the goals of the project with the social needs of the team. Effective communication also complements deficits leaders may have in formal authority and subject matter expertise (Barczak & Wilemon, 1991; Liu & Fang, 2006).

Bases of power. Achievement and power are necessary for leadership (Arslan, 2001). Using one over the other has contextual and behavioral implications. Different bases of power exist, and the situation drives the leader's selection. Resources connected to the project respond to the environment and actions exerted by its leader (Liu & Fang, 2006).

Arslan (2001) interviewed a stratified random sample of 64 Irish, 48 British, and 21 Turkish participants to understand attitudes about power and achievement orientation and its ethical implications. The results showed that Irish and Turkish managers have higher achievement orientation (high tolerance level, empathic, intuitive decision making) and the English culture exhibits more power orientation (individualistic, optimistic, change oriented). This is significant because it reflects that leadership is a function of the leader, followers, and the situation. Furthermore, "personality and environment are embedded in leadership" (p. 340). This study has strong implications when the situation involves a project manager leading global initiatives and/or diverse teams (Kearney & Gebert, 2009). There is an opportunity to understand how the values and beliefs align with the goals of the project, and to what extent those beliefs affect the type of power that is used to influence project success.

Liu and Fang (2006) constructed a behavioral based model to demonstrate the impact of managing the complexities among various bases of power. The authors sent 800 questionnaires to construction/engineering project teams throughout China. The findings indicate that the use of referent power and the deficit in expert power influences the behavior of the project manager through power sharing. As a result, team members are empowered to make decisions, which improves performance. Moreover, power sharing is a contextual behavior. Therefore, the use of power is aligned with the situation.

The Arslan (2001) and Liu and Fang (2006) studies are significant because each frames how sociological structures are used to achieve technical project outcomes. Also, the inherent characteristics of the project manager and the team environment drive which bases of power are used to get things done. An adequate balance of self-perception (how much power do I need), diagnosis (how much power do I have), mobilization (how can the power deficit be narrowed/ maneuvered), and deployment (power sharing) is vital to achieve project success (Liu & Fang, 2006). These studies magnify the problem statement: Project managers who lack positional power use informal ways to effectively influence others' behavior (Arslan, 2001).

NPD literature suggests that organizations expect project leaders to be social pacesetters for cross-functional teams so that they deliver new products faster, better, and cheaper (Jassawalla & Sashittal, 2000; Rogers et al., 2005; Sarin & McDermott, 2003; Sarin & O'Connor, 2009). Project success begins with the leader transforming his/her thinking prior to initiating behaviors. In other words, project managers should observe the situation, anticipate complexity, and form a strategy prior to initiating behaviors that influences team responses (Liu & Fang, 2006). Jassawalla and Sashittal's (2000) qualitative study sought to measure the

effectiveness of team leaders based on how environmental factors are perceived, analyzed, and approached.

Leaders were interviewed to capture how s/he conceptualized ideal leader behaviors for successful team outcomes. Each person shared experiences about the various political, technical, and interpersonal situations s/he encountered during the NPD process. Themes emerged which include (a) leveraging on relationships with upper management to achieve team commitment, (b) behaving as a facilitator instead of a savior, (c) unleashing information power through coaching techniques, and (d) integrating human interaction with the project tasks.

This study represents the project leader's assessment of the power bases that s/he brings to the situation. Leader behaviors are conceptualized before they are executed (Jassawalla & Sashittal, 2000). Similar to Liu and Fang (2006), the project manager responds to the team processes based on who is involved, the risks that are known, and the relationships that exist between the team and him/her.

Grant and Hoffman (2011) took a societal issue—the flattening of organizations from top down to lateral work groups—to pose the question: How can role expansion be a proactive way to influence peers to commit to projects? This article presents a descriptive and prescriptive analysis of agents' attempts to persuade targets to expand their roles. Through social exchange theory, this dyadic study showed that both the sender's delivery and what is most important to the receiver of the influence behavior affects the decision that follows. Moreover, it is important to distinguish between cognitive and rational systems and align them with intrinsic and extrinsic values, as they will require different tactics (Enns & McFarlin, 2005; Jassawalla & Sashittal, 2000).

Therefore, Grant and Hoffman's (2011) analysis is summed up this way: If the goal of influence is to alter the psychological state and behaviors of the targets, then the tactics need to align with the targets' values and reflect the agent's power (Arslan, 2001). This is critical for project managers' effective use of influential tactics because s/he lacks formal authority over the receiver, the request may be outside of the receiver's routine tasks, and his/her contribution is critical to project success. However, this study focused on task commitment.

Studies aimed at adjusting leader behaviors to achieve ends reflect the plethora of literature that measures the effect of team outcomes from the perspective of the leader (Jassawalla & Sashittal, 2000). However, many projects fail, and leader behaviors that contribute to it need to be identified (Rizova, 2006; Rogers et al., 2005). Also, team members' response has a significant impact before the project outcomes manifest. Therefore, it is critical that the team has internalized agreement to the tasks and to each other (Holland et al., 2000). Because the project manager lacks positional power, informal ways to achieve results are needed. Thus, lateral influence tactics are used.

Lateral Influence Tactics

Influence tactics are defined as ". . . expressions of a general strategy . . . by which people persuade others to follow their advice, accept their suggestions, or comply with their orders" (Lee & Sweeney, 2001, p. 17). Lateral implies a peer-to-peer relationship between an agent and a target. The agent is the one exerting influence, while the target is the person being influenced (Atuahene-Gima & De Luca, 2008). Success of lateral influence tactics depends on whether the thoughts and actions of the target change (Charbonneau, 2004; Lines, 2007).

In the context of NPD, the project leader lacks formal authority over the team but is responsible for the project outcome (Bushardt et al., 2010). The NPD process involves cross-

functional groups of individuals who transform ideas into products, goods, and services. The NPD process consists of conception, design selection, prototype development, testing, and new product launch (Holland et al., 2000; Ozer & Cebeci, 2010).

Ozer and Cebeci (2010) suggest that having a detailed NPD process is "one of the most critical success factors in NPD" (p. 171). Therefore, the team leader initiates lateral influence tactics to inspire, empower, and motivate individuals to contribute to team tasks needed to fulfill the requirements of the NPD project through these processes.

Kipnis and Schmidt (1985) consolidated influence tactics into three groups: hard, soft, and rational persuasion (as cited in Falbe & Yukl, 1992). Hard (also known as political) tactics imply behaviors that aim to get targets to comply with requests by asserting one's authority, title, or position. Coalition and upward appeal are examples of political tactics (Atuahene-Gima & De Luca, 2008; Atuahene-Gima & Li, 2000).

Soft tactics involve managing the power gap through shared decision making and forging relationships to get things done (Liu & Fang, 2006). Some examples include ingratiation, consultation, and personal appeals tactics (Falbe & Yukl, 1992; Yukl & Falbe, 1990; Yukl et al., 1993, 2008). Finally, rational persuasion involves using verifiable data to convince the target to agree to the agent's requests or suggestions.

Overall, existing literature findings explain the relationships between different influence tactics and performance outcomes. The findings also reflect how opportunities and limitations in project and team environments drive the leader's selection of tactics (Atuahene-Gima & Li, 2000; Charbonneau, 2004; Gattiker & Carter, 2010; Lines, 2007).

Soft tactics and rational persuasion. Project management literature reports that consultation and rational persuasion is used most often to influence peers (Charbonneau, 2004;

Lee & Sweeney, 2001). Rational persuasion involves the use of logic and facts to explain why a request or suggestion should be considered. Consultation involves asking for participation to generate ideas and solutions (Yukl & Falbe, 1990; Yukl et al., 1993, 2008). These tactics are driven by perceptions of job challenge and expertise (Lines, 2007; Sotiriou & Wittmer, 2001).

Sotiriou and Wittmer's (2001) examination of 22 project managers and 66 support associates from cross-functional areas show that project managers who focus on work challenge and show expertise are perceived as leaders, as it was ranked the most important influential factor. Moreover, self-aware project managers influence team members to believe in their leadership due to their management of the power gap, or the project manager's ability to achieve the objectives of the project despite his/her lack of formal authority (Liu & Fang, 2006). However, whether any of the companies studied were from the new product development sector is unknown.

Lines's (2007) study states that expert power has a significant effect in change implementation projects. Challenging goals drive team participation, which facilitates an environment for group decision making (Jensen, 2007). These findings align with Sotiriou and Wittmer's (2001) argument: Influence tactics can be effective in the absence of formal power. Also, Liu and Fang (2006) suggest that when expert power is aligned with the objectives of the project, it is effective even in the absence of positional power.

These findings are significant because the project manager is perceived as an expert in problem solving when s/he is able to explain how to best apply the teams' skills and ideas to goals. Moreover, performance factors are the primary focus for applying these tactics (Lee & Sweeney, 2001; Lines, 2007; Sotiriou & Wittmer, 2001; Yukl & Michel, 2006). Therefore, the

team is more likely to oblige when there is tangible information to support the request (Charbonneau, 2004; Holland et al., 2000; Lines, 2007).

Nguyen et al. (2008) reported that altruism, or sacrificing one's own motives for the benefit of others, is positively related to ingratiation tactics. Ingratiation involves the use of flattery and admiration with the motive of getting the target to fulfill the request (Yukl & Falbe, 1990; Yukl et al., 2008). They also state that ingratiation tactics are more favorable than self-promotion, and has a moderate effect on perceived feelings of liking from peers in work teams.

While Nguyen et al. (2008) suggest that ingratiation is the most ideal influence behavior, four of the seven research hypotheses were unsupported and two were partially supported. This aligns with Sarin and O'Connor's (2009) report that consideration has a weak effect on team responses. Organizational citizenship behavior is referenced, but a theoretical foundation is undeclared. Finally, the participants are limited to students who assume the "role of a consulting firm" (p. 154).

Hard (political) tactics. Project management literature states that political tactics are used least (Lee & Sweeney, 2001; Sotiriou & Wittmer, 2001). However, studies from NPD literature show different results. For instance, Atuahene-Gima and De Luca (2008) suggest that R&D's department power is positively related to upward appeal influence tactics. Upward appeal implies attempts to persuade the peer by stating that the request was approved by upper management (Atuahene-Gima & De Luca, 2008). Also, Marketing's information power is positively related to coalition strategy, or getting others to help in persuading peers to comply. Finally, personal stake in performance outcomes is a key driver of these political tactics.

The findings from Atuahene-Gima and De Luca (2008) are significant because the choice of political tactics is explained as a reflection of a team leader who is perceived as weak and

ineffective. In other words, information power alone is inadequate to influence peers especially in a work environment where the R&D department is assumed to be the dominant subgroup (Jassawalla & Sashittal, 2000). Due to the disproportionate power bases among team members, the NPD process breeds political behavior (Atuahene-Gima & Li, 2000).

NPD studies report that 50% of new products released into the market fail (Rizova, 2006; Rogers et al., 2005). What portion of that statistic can be explained by marketing's role in the NPD cross-functional team? Atuahene-Gima and Li (2000) sought to understand marketing's use of lateral influence behavior toward its research and development peers. On-site interviews were conducted with 114 Chinese firms from various industries.

Persistent pressure is the most widely used and the most effective influence tactic. However, regression analysis revealed that persistent pressure has the most impact during the implementation stage. Legalistic plea and request are used least and is most effective at the implementation stage. In contrast, coalition and information exchange are more effective at the initiation stage (Atuahene-Gima & Li, 2000).

These findings align with Enns and McFarlin's (2005) explanation for executives' tactics being driven by one's routine tasks. Similarly, marketing's role is more salient at product launch and promotion, which is a part of the implementation phase (Atuahene-Gima & Li, 2000). The study is also conducted in a high power distance, collectivist environment (Kearney & Gebert, 2009).

There is a difference in the choice of tactics between project management and new product development studies (Atuahene-Gima & De Luca, 2008; Lee & Sweeney, 2001; Sotiriou & Wittmer, 2001). Innovation projects involve the uncertainty and complexity of creating solutions for human use (Barczak & Wilemon, 1991; Jassawalla & Sashittal, 2000; Ozer &

Cebeci, 2010; Rizova, 2006). Project management literature predominantly involves routine projects (PMI, 2008; Söderlund, 2004).

Lateral influence tactics and executives. How similar are the lateral influence behaviors of individuals who work at the executive level of management? Influence tactics are also used to convince fellow executives to agree to strategic proposals and recommendations. The information technology sector is specialized in that other functions may misunderstand its significance in an organization's quest to compete and survive globally (Enns et al., 2003). Therefore, the Chief Information Officer (CIO) needs to exert influence behaviors that will win support and resources for information system projects from his/her peers.

Enns et al. (2003) conducted a qualitative dominant study to understand the relationship between CIO influence behaviors and the following influence outcomes: (a) commitment, (b) compliance, and (c) resistance. CIO-peer pairs were interviewed prior to the model being tested. Follow up interviews were conducted after the data were collected.

Enns et al. (2003) found that the use of rational persuasion and personal appeal was most likely to result in commitment. However, as the use of exchange behavior (promising to give something in return if the target agrees to the request) increased, so did resistance. Also, the relationship between consultation tactics and influence outcomes was found to be insignificant.

These findings are salient because they reinforce Gresov and Stephens's (1993) notion that the choice of lateral influence tactics is context dependent (as cited in Atuahene-Gima & Li, 2000). Logical explanations (rational persuasion) are supported in an upper management environment, but seeking target participation (consultation) rarely happens. This is in contrast to project management and NPD environments, where interdependency is necessary for success and drives participation (Holland et al., 2000).

Similar to NPD, executives aren't exempt from using cross-functional teams to accomplish objectives (Enns et al., 2003; Enns & McFarlin, 2003, 2005). As companies migrate from vertical to lateral structures, peer support is more salient for survival. Enns and McFarlin (2003) sought to understand which lateral influence tactics are used most and what contextual factors inspired the choice of tactics. Executives from the human resource, finance, information systems, marketing, and operations functions completed questionnaires during a training workshop.

The results revealed that rational persuasion is the influence tactic used most often. Legitimating, personal appeals, and exchange tactics are used least. Moreover, the finance department's choice of tactics differs from the other departments. For example, this functional group uses "teleconferences and informal small group contexts in other functional categories significantly less when influencing peers" (Enns & McFarlin, 2003, p. 133). In contrast, the human resource subgroup uses collaborative acts such as pilots, consulting services, and role modeling to influence peers. These differences are attributed to their daily roles and responsibilities.

Initiating influence behaviors requires the leader to assess the situation and select the tactics most likely to achieve the desired results while considering the interpersonal ties s/he has with the targets (Liu & Fang, 2006; Jassawalla & Sashittal, 2000). The purpose of the Enns and McFarlin (2005) study is to understand how executives determine which influence tactic will maximize the opportunity of gaining support of their ideas from peers. Predominantly male executives from different areas of expertise participated in focused interviews. The interviews chronicled the pattern of the conversation to understand the impact that certain influence tactics had on the target's response. Termed by the authors as *influence episodes*, the face-to-face

conversations ended with either full support of the idea or conditional support (will support if certain changes are made).

Target assessment greatly affected the executive's preparation and delivery of the influence episode. For example, thoughts such as *what resources can this person provide should s/he offer support* were considered. Conversely, if the assessment revealed that the target is in a position to reject the request, preparation activities were adjusted.

In addition, perceptions of the target drove the selection of influence tactics. If the target executive is likely to reject the idea, the inspirational appeals tactic (behaviors that appeal to the target's values) is an ideal choice versus rational persuasion (Yukl et al., 2008). However, there was no significant relationship between a person's propensity to block an idea and the choice of tactics. In other words, applying inspirational appeals won't necessarily cause an executive who would otherwise reject the idea to support it.

These studies magnify the gaps that exist in the literature regarding the role of project managers. Leading cross-functional teams is a responsibility that reaches beyond managing schedules, resources, and budgets (PMI, 2008). Knowing the process is different from knowing the team (Sarin & O'Connor, 2009). Therefore, project managers should engage in a process of tuning in (understanding the perceptions of the team members toward the leader and the project), selection (identifying the leader behaviors that align with the perceptions), and execution of the applicable influence tactic (Enns & McFarlin, 2005; Jassawalla & Sashittal, 2000; Liu & Fang, 2006).

NPD Team Environment

The NPD team environment consists of a cross-functional group of individuals with distinct functions such as marketing, R&D, engineering, and manufacturing (Jassawalla &

Sashittal, 2000; Ozer & Cebeci, 2010). This degree of heterogeneity produces mutual attraction, interdependence, and work challenge (Dionne et al., 2004; Rogers et al., 2005; Sarin & O'Connor, 2009). It also generates different ways of thinking (Holland et al., 2000).

The gaps between goal assignment and goal attainment include the team member's implicit assumptions about the work environment and divided loyalties between the team and his/her respective department (Holland et al., 2000; Jassawalla & Sashittal, 2000). The findings from the following studies magnify the opportunities and threats that are embedded in NPD team perceptions of procedural justice and diversity. Moreover, the findings frame how the project manager is instrumental in influencing both.

Procedural justice. Differences yield unequal distributions of power. As a result, perceptions of procedural justice, or fairness of project-related decisions emerge (Akgün et al., 2010). Furthermore, these perceptions extend to the project manager, or the extent to which the team feels s/he will fairly facilitate NPD team activities.

Akgün et al. (2010) connected the elements of a typical NPD team environment to the constructs of Leventhal's (1980) procedural justice climate theory. Questionnaires were given to 83 NPD teams to explain what precedes and follows the team's thoughts about the relative fairness of their work environment.

There was a positive relationship between four of the five antecedent constructs and the procedural justice climate. In addition, there was a positive relationship between the consequential constructs (team learning and speed to market) and procedural justice climate. The consequences were also drivers of the relationship between procedural justice climate and new product success (Akgün et al., 2010).

This study is significant because one of the characteristics of NPD teams is that people from different functional areas contribute to the process (Holland et al., 2000; Ozer & Cebeci, 2010). Moreover, the population in this study worked for Turkish-based firms but used Western management practices. With these differences, thoughts concerning whether project decisions are made fairly have an effect on how the team members feel about each other. There is also an opportunity for the project leader to facilitate an environment that will impact perceptions of procedural justice, especially in an organization that operates and competes globally (Kearney & Gebert, 2009).

Vigoda and Cohen's (2002) longitudinal study reports a positive relationship between influence methods used by employees and their perception of organizational politics. Moreover, the degree to which employees perceive that their work environment is just and fair is driven by the gap between their workplace experience and their workplace expectations. This aligns with Atuahene-Gima and De Luca's (2008) study, which states that the use of political tactics is explained by perceptions of power.

Cropanzano et al. (2011) introduced a teamwork process model that explained how individuals shape perceptions of fairness as demonstrated by his/her interaction with team members. The goal of this quantitative study was to integrate collective perceptions of justice with the teamwork process. All of the hypotheses were supported which showed that peer justice is a strong determinant of team behavior.

The results of the Cropanzano et al. (2011) study is significant because it makes the ability of project managers to discern, detect, and respond to team behaviors that reflect various degrees of peer justice more salient (Barczak & Wilemon, 1991; Sarin & McDermott, 2003; Sarin & O'Connor, 2009). For example, a team that consistently arrives at consensus when

decisions are made can be interpreted by the project manager as team cohesion when it is actually group think (Brockman et al., 2010; Holland et al., 2000). Team cohesion is demonstrated by interpersonal behaviors such as information sharing and open communication (Dionne et al., 2004; Kearney & Gebert, 2009). Group think, or foregoing one's own thoughts to agree with team members, yields behaviors such as withholding information, ideas, and/or creativity (Holland et al., 2000; Solansky, 2011).

Diversity. Overall, the NPD environment reflects a diverse group of individuals who contribute to a collective effort to improve, innovate, and create products, goods, and services for global consumption (Ozer & Cebeci, 2010). Kearney and Gebert (2009) conducted a quantitative study on 62 team leaders and 339 team members to examine the relationship between transformational leadership behaviors and demographic diversity. Findings from the 27 nationalities surveyed showed a positive relationship between transformational leadership and team performance with regard to nationality and education when transformational leadership is high. These results were attributed to task elaboration, or the integration of ideas, knowledge, and insights.

The findings also revealed that team identification is a key driver to task elaboration. Moreover, a positive relationship exists between high team identification and performance results. Collective team identity, or emotional attachment to team membership, is strengthened when transformational leadership is high.

This study exposes how leaders encourage logical and novel thinking from team members. Task elaboration provides an opportunity for differences to merge. In addition, leaders can use critical thinking to reframe behaviors that hinder team performance (Brockman et al., 2010; Holland et al., 2000).

As a result, individuals are psychologically connected to the team because they experience their differences applied collectively to solutions. However, the leader has to see the positive and negative implications of diversity and initiate applicable behaviors that bring out the best in the team (Jassawalla & Sashittal, 2000; Liu & Fang, 2006).

More studies are needed that examine the NPD project manager's role in driving the team's perception of the fairness of the work environment. Heterogeneity is a central part of NPD team processes (Jassawalla & Sashittal, 2000). Understanding how the leader influences this work environment is critical to NPD project success (Holland et al., 2000).

Influence outcomes are measured by the degree of emotional attachment and alignment of values. They are also expressed in the activities associated with getting subordinates to perform immediate requests (Grant & Hoffman, 2011). In addition, individuals who perceive that they are valued and work in an environment where their input is considered respond with team commitment: a psychological connection to members of the group of which they are a part (Akgün et al., 2010; Brockman et al., 2010; Pearce & Herbik, 2004).

Team Commitment

Team commitment is an internalized, emotional attitude that drives action (Chang et al., 2010). Dayan (2010) defines team commitment as a state of "being bound emotionally or intellectually to a course of action and to each other during the NPD process" (p. 97). Charbonneau (2004) states that when the target "internally agrees with the request and is enthusiastic about it, then the target is committed" (p. 566). This study focuses on the emotional attachment that the NPD team member has for the workgroup. Team literature suggests that team commitment is affected by leader behavior, alignment of the targets' values with the

demands of the project, and perceptions of collectivism (Falbe & Yukl, 1992; Mathieu, Maynard, Rapp, & Gilson, 2008).

Pearce and Herbik (2004) found that leader behavior, team commitment, and perceived team support has significant effects on team citizenship behavior (TCB). Leader behaviors that reflect encouragement create internalized feelings of support. When an individual feels he/she has support, individual discretionary behavior is expressed toward the team.

Similarly, findings from Schaubroeck et al. (2007) found that "transformational leadership behaviors were associated with superior team performance in both Hong Kong and the United States" (p. 1027). The key driver for this relationship is team potency, or generalized beliefs about the capabilities of the team. This study is significant because it shows that transformational leadership behaviors have an effect on groups that are of two different cultures. Moreover, leader behaviors that are collectivist in nature have a moderating effect on team performance. Therefore, leaders should understand, promote, and support collectivist practices and integrate them in team processes (Holland et al., 2000).

Oke, Idiagbon-Oke, and Walumba (2008) sought to explain how different bases of power are used to strengthen ties between innovation horizontal networks. Horizontal networks involve ". . . relationships among actual or potential competitors and service providers . . ." (p. 571). This is facilitated by a broker or project champion. Findings suggest that perceived personal and position power are positively related to strength of ties. Moreover, the brokers' use of these power bases is driven by the interpersonal cohesiveness between network members. However, the study focused on inter-company cohesion versus intra-company. Also, power was exercised on behalf of the organization versus a peer-to-peer format. Finally, brokers were selected by network members.

Rational persuasion, inspirational appeals, and consultation have positive effects on commitment in Gattiker and Carter's (2010) study. These findings align with other studies: The effective use of influence tactics can achieve the objectives of a project in the absence of position power. However, commitment refers to a psychological attachment to the goals of the project in this study. In addition, the scales for intra-organizational theory that were validated in the 1990s "do not meet most contemporary standards" (Gattiker & Carter, 2010, p. 81).

Brockman et al. (2010) conducted an exploratory study that featured a dozen companies that framed interpersonal cohesion through clan (teamwork, loyalty, and tradition) and collectivist (group attachment) perspectives. These findings suggest that team cohesion should be approached with a collectivist lens, as team harmony can also yield congruence of values and stifle creativity (Brockman et al., 2010; Holland et al., 2000).

Transformational Leadership

The relationship between the project managers' use of lateral influence tactics and team commitment was explained through the transformational leadership framework. This theory is characterized by leader behaviors that influence the follower to achieve superordinate goals on behalf of the group (Ciulla, 2003; Kearney & Gebert, 2009). In the context of achieving commitment in a NPD environment, the underlying goal for project managers is to shift the teams' psychological focus from individual self-interest to the well-being of the team. Followers respond to transformational leadership behaviors through collective enthusiasm, confidence, and critical thinking (Dionne et al., 2004). The tenets of transformational leadership are idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation (Burke et al., 2006; Charbonneau, 2004; Dionne et al., 2004; Northouse, 2007).

Significance of the problem. Idealized influence is a behavior that aims to appeal to the targets' beliefs by communicating goals in ways that make him/her feel glad to be associated with the project leader. A second transformational leadership behavior is inspirational motivation, or behaviors that frame the goals of the project in ways that align with the teams' values that reinforce motivation and confidence (Charbonneau, 2004; Northouse, 2007). However, there are concerns about whether the project manager is able to integrate team member differences so that each feels connected to the NPD team (Jassawalla & Sashittal, 2000; Kearney & Gebert, 2009). This leads to the third transformational leadership behavior, individualized consideration.

Individualized consideration occurs when the leader acknowledges the individual's unique skills and abilities (Charbonneau, 2004). Communication techniques such as active listening, feedback sessions, and delegation of tasks are initiated by the leader for the sake of providing support (Northouse, 2007). In addition, this behavior influences positive perceptions about whether the work environment is fair and just (Atuahene-Gima & De Luca, 2008; Cropanzano et al., 2011; Vigoda & Cohen, 2002).

These three transformational leadership behaviors—idealized influence, inspirational motivation, and individualized consideration—align with inspirational appeals tactics, or behaviors that cater to the targets' values, beliefs, and aspirations (Yukl et al., 2008). The project manager's ability to recognize functional differences reflects empathy and concern for the NPD team member. Also, his/her ability to align the NPD goal with the team members' values and departmental differences yields enthusiasm and a willingness to work with the team (Northouse, 2007).

Project managers that inspire team members in the midst of complexity and ambiguity are perceived as leaders (Lee & Sweeney, 2001; Lines, 2007; Warrick, 2011). Also, when values and ideals are articulated in ways with which the team member identifies, a commonality of purpose is exposed. Moreover, if the critical requirements of the project connect with the individuals' abilities, confidence about the team spreads (Schaubroeck et al., 2007). It is from these findings that the first hypothesis is formed.

H1: There is a positive relationship between the NPD team member's perception of the project manager's use of inspirational appeals and team commitment.

A challenge for NPD team leaders is to balance creativity with sense making (Dionne et al., 2004). Intellectual stimulation is a transformational leadership behavior that promotes an environment conducive for novel and rational thinking (Charbonneau, 2004). As a result, problems can be reframed in ways that result in logical solutions or the emergence of new ideas (Northouse, 2007). Also, people who hold different points of view are able to participate (Kearney & Gebert, 2009; Schaubroeck et al., 2007). The project manager who can see benefits and risks of team diversity and initiate applicable behaviors is effective in influencing an environment of team commitment (Jassawalla & Sashittal, 2000). Moreover, leaders who demonstrate this behavior show that individual differences can be transformed into catalysts for creativity (Holland et al., 2000).

Intellectual stimulation is aligned with rational persuasion tactics, or logical arguments that show the feasibility and/or relevance of ideas or suggestions (Yukl et al., 2008). A project manager who promotes sense making among individuals with different ways of thinking is perceived to have a level of expertise (Lee & Sweeney, 2001; Sotiriou & Wittmer, 2001). In

addition, his/her ability to stimulate critical thinking provides an opportunity for open communication and healthy conflict resolution among team members (Northouse, 2007).

When the NPD team member understands how functional differences can bring out the best in each person, his/her attitude towards the team changes (Kearney & Gebert, 2009; Sarin & O'Connor, 2009). When the team is close knit, differences are perceived as opportunities rather than threats (Cropanzano et al., 2011). Therefore, a second hypothesis is in order.

H2: There is a positive relationship between the NPD team member's perception of the project manager's use of rational persuasion and team commitment.

Differences are beneficial to the success of the NPD process (Dionne et al., 2004; Holland et al., 2000; Jassawalla & Sashittal, 2000). The implicit thoughts that an individual has about the fairness of the work environment drive affective outcomes such as team commitment (Akgün et al., 2010; Brockman et al., 2010; Pearce & Herbik, 2004). Therefore, the attitude that individuals bring to the NPD team environment impacts the type of influence tactics that are initiated by the project manager (Burke et al., 2006; Sarin & McDermott, 2003; Sarin & O'Connor, 2009). Therefore, the following hypotheses are posed:

H3a: Perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of inspirational appeals and team commitment.

H3b: Perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of rational persuasion and team commitment.

The constructs of the independent variable, lateral influence tactics, are rational persuasion and inspirational appeals. A third variable, perceptions of procedural justice, was

tested as a mediating variable. The purpose of this explanatory correlational study was to understand the relationships between the NPD team member's perceptions of these tactics and the dependent variable, team commitment. It is also necessary to understand how perceptions of procedural justice drive these relationships.

Previous studies state that consultation, collaboration, rational persuasion, and inspirational appeals are the most widely-used tactics and have a significant impact on team commitment (Gattiker & Carter, 2010; Lee & Sweeney, 2001; Sotiriou & Wittmer, 2001). However, only two of these tactics were measured. Consultation and collaboration are outside are outside of the scope of this study.

Consultation tactics include soliciting suggestions for improvement or help in planning an activity (Charbonneau, 2004; Yukl & Michel, 2006; Yukl et al., 2008). In the NPD context, one of the biggest challenges is harnessing ideas for concept, design, and development from a cross-functional group (Holland et al., 2000). The project managers' focus is to make sure that the work environment is conducive for the team to transform ideas into innovative products and services. As the NPD team leader, this is one of his/her primary goals (Holland et al., 2000; Jassawalla & Sashittal, 2000; Sarin & O'Connor, 2009).

Also, collaboration involves offering to assist the team in carrying out a task so that it is a joint effort. This is out of context for this study because the project manager is facilitating the process instead of performing the tasks (Charbonneau, 2004; Jassawalla & Sashittal, 2000). Furthermore, he/she may lack the skill or expertise needed to initiate collaboration (Liu & Fang, 2006).

Finally, hard (political) tactics was omitted from the study. While NPD literature reports that team leaders use organizational politics when seeking support from peers, the choice of

these tactics is for individualistic reasons (Atuahene-Gima & De Luca, 2008; Atuahene-Gima & Li, 2000). This study seeks to understand the relationship between lateral influence tactics and team commitment.

Summary of Literature Review

In summary, the cross-functional NPD team environment consists of diverse skills, thought processes, and departments (Holland et al., 2000). However, the pervasiveness of globalization over the past three decades has intensified the need to transform knowledge into innovative solutions (Dionne et al., 2004; Ozer & Cebeci, 2010). The top down structure of decision making is inadequate to maintain the first to market demands (Grant & Hoffman, 2011). Therefore, project managers who lack formal authority are leading these projects (Bushardt et al., 2010).

Informal power bases are used to influence the team to achieve the goals. Moreover, project management literature is clear regarding which tactics are used most to influence the team to meet the goals of the project (Charbonneau, 2004; Lee & Sweeney, 2001; Sotiriou & Wittmer, 2001). However, in the NPD context, there is an uneven focus as to how the individual's emotional attachment to the team contributes to the end results. In addition, the disproportionate focus on marketing and engineering functions frames political battles between project leaders and the team (Atuahene-Gima & De Luca, 2008; Atuahene-Gima & Li, 2000). Moreover, the effectiveness of the tactics is largely based on data taken from the team leader's point of view (Barczak & Wilemon, 1991; Jassawalla & Sashittal, 2000). Finally, task commitment has been studied significantly more than team commitment (Chang et al., 2010; Cropanzano et al., 2011; Gattiker & Carter, 2010).

Therefore, the purpose of this explanatory correlational study was to examine the relationship between the leader's initiation of two lateral influence tactics (inspirational appeals and rational persuasion) and team commitment as perceived by the NPD team member. This study addresses the gaps in the literature by measuring the team member's perception of the project leader and her/his emotional attachment to the interests of the team that precedes the tangible results. Also, procedural justice is tested to understand to what extent an individual's perception about the fairness of the work environment drives these relationships.

CHAPTER 3

Methodology

The purpose of this explanatory correlational study was to understand the relationship between two independent variables—rational persuasion and inspirational appeals—and the dependent variable, team commitment, as perceived by the NPD team member. An additional variable, perceptions of procedural justice was tested to determine if it mediates the relationship between the independent variables and the dependent variable. Using transformational leadership theory, the following hypotheses were tested:

H1: There is a positive relationship between the NPD team member's perception of the project manager's use of inspirational appeals and team commitment.

H2: There is a positive relationship between the NPD team member's perception of the project manager's use of rational persuasion and team commitment.

H3a: Perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of inspirational appeals and team commitment.

H3b: Perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of rational persuasion and team commitment.

Since the objective of the study was to examine relationships among the variables, an explanatory correlational design was undertaken. Creswell (2008) states that this design implies finding out to what extent a change in one variable results in a change in another (co-variation).

Correlational Design

A correlation is "a statistical test to determine the consistency or pattern for two (or more) variables or two sets of data to vary consistently" (Creswell, 2008, p. 356). Moreover, applying this design addressed the hypotheses by showing which variables show a significant amount of variance on the dependent variable, team commitment. SPSS® software was used to perform these tests.

How was each of the variables measured to address the hypotheses? H1 states that there is a positive relationship between the NPD team member's perception of the project managers' use of inspirational appeals and team commitment. H2 states that there is a positive relationship between the NPD team member's perception of the project managers' use of rational persuasion and team commitment. The statistical test used to quantify these relationships was the correlation coefficient.

Clark-Carter (2010) and Creswell (2008) state that the correlation coefficient is expressed as the covariance between two variables divided by the product of the standard deviations of the two variables. In the context of this study, the correlation coefficient was calculated for the relationship between (a) inspirational appeals and team commitment, and (b) rational persuasion and team commitment.

The correlation coefficient is noted by the symbol *r*. It is also known as *Pearson's product moment correlation coefficient* (Creswell, 2008). The formula was introduced by Karl Pearson in 1895. In 1897, his student "developed solutions for correlating two, three, and four variables" (Creswell, 2008, p. 357). Finally, in 1907, Spearman developed a formula that allowed correlations to be calculated using data that lacked normality. This statistic is used today and has increased its utility with the advancement of technology (Clark-Carter, 2010).

The null hypothesis is that there is no relationship between the variables based on the value of the sample correlation coefficient *r*. The alternative hypothesis tested in this study was whether a relationship exists between the independent variable(s) and the dependent variable.

H3a states that perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of inspirational appeals and team commitment. H3b states that perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of rational persuasion and team commitment. In other words, another variable, perceptions of procedural justice, is hypothesized to drive the relationships between the independent variables and the dependent variable (Clark-Carter, 2010). Thus, testing for mediation implies determining whether the relationship between two variables can be explained "via their relationship with a third variable" (Clarke-Carter, 2010, p. 333).

Baron and Kenny's (1986) method for mediation testing incorporated the Pearson correlation coefficient and multiple regression analysis. The analysis was broken down into two phases. Phase one involved significance testing of each individual relationship. Basically, each must correlate significantly at the 95% confidence level. Pearson's correlation coefficient was used.

In the case of Hypothesis 3a, there should be a significant relationship between inspirational appeals and perceptions of procedural justice (X1→Z1), and a significant relationship between perceptions of procedural justice and team commitment (Z1→Y1). Lastly, there should be a significant relationship between inspirational appeals and team commitment (X1→Y1).

Similarly for Hypothesis 3b, there should be a significant relationship between rational persuasion and perceptions of procedural justice (X2→Z1), and a significant relationship between perceptions of procedural justice and team commitment (Z1→Y1). Lastly, there should be a significant relationship between rational persuasion and team commitment (X2→Y1).

If that criterion is satisfied, a multiple regression (phase two) will be conducted. Multiple regression analysis is applied when there is one dependent variable and multiple independent variables (Clark-Carter, 2010; Wortman et al., 2007). Baron and Kenny (1986) suggest that phase two requires showing that when the dependent variable (Y1) is regressed on the hypothesized mediating variable (Z1) and the independent variable simultaneously, the relationship between the independent and dependent variable is considerably reduced to the point of non-significance.

Thus, for Hypothesis 3a, inspirational appeals and perceptions of procedural justice were simultaneously used to predict the dependent variable, team commitment. As a result, a larger amount of the variation in team commitment should be explained. In order for Hypothesis 3a to be supported, the relationship between inspirational appeals and team commitment should be greatly reduced and non-significant when perceptions of procedural justice are added (Bennett, 2000; Clark-Carter, 2010).

The same applies for Hypothesis H3b: Rational persuasion and perceptions of procedural justice were simultaneously used to predict the dependent variable, team commitment. As a result, a larger amount of the variation in team commitment should be explained. In order for Hypothesis H3b to be supported, the relationship between inspirational appeals and team commitment should be greatly reduced and non-significant when perceptions of procedural justice are added (Bennett, 2000; Clark-Carter, 2010).

A summary of the tests for mediation is located in Table 1. A model of the hypotheses is shown in Figure 1.

Table 1

Summary of Tests for Mediation for Hypothesis Test H3a and H3b

Measure	Statistical Test	Hypothesis supported if:
Phase One		
H3a:		
Relationship between X1 & Y1	Pearson's correlation coefficient (r)	$p < .05$
Relationship between X1 & Z1	Pearson's correlation coefficient (r)	$p < .05$
Relationship between Z1 & Y1	Pearson's correlation coefficient (r)	$p < .05$
H3b:		
Relationship between X2 & Y1	Pearson's correlation coefficient (r)	$p < .05$
Relationship between X2 & Z1	Pearson's correlation coefficient (r)	$p < .05$
Relationship between Z1 & Y1	Pearson's correlation coefficient (r)	$p < .05$
Phase Two		
H3a:		
Use X1 to predict Y1	Linear Regression	$p < .05$ (X1→Y1)
Use X1 and Z1 simultaneously to predict Y1	Multiple Regression	$p \geq .05$ (X1→ Y1)
H3b:		
Use X2 to predict Y1	Linear Regression	$p < .05$ (X2→Y1)
Use X2 and Z1 simultaneously to predict Y1	Multiple Regression	$p \geq .05$ (X2→ Y1)

Note. X1 = inspirational appeals; X2 = rational persuasion; Z1 = perceptions of procedural justice; Y1 = team commitment; SD = standard deviation; $p < .05$ indicates statistical significance at the 95% confidence level; $p \geq .05$ indicates statistical non-significance at the 95% confidence level.

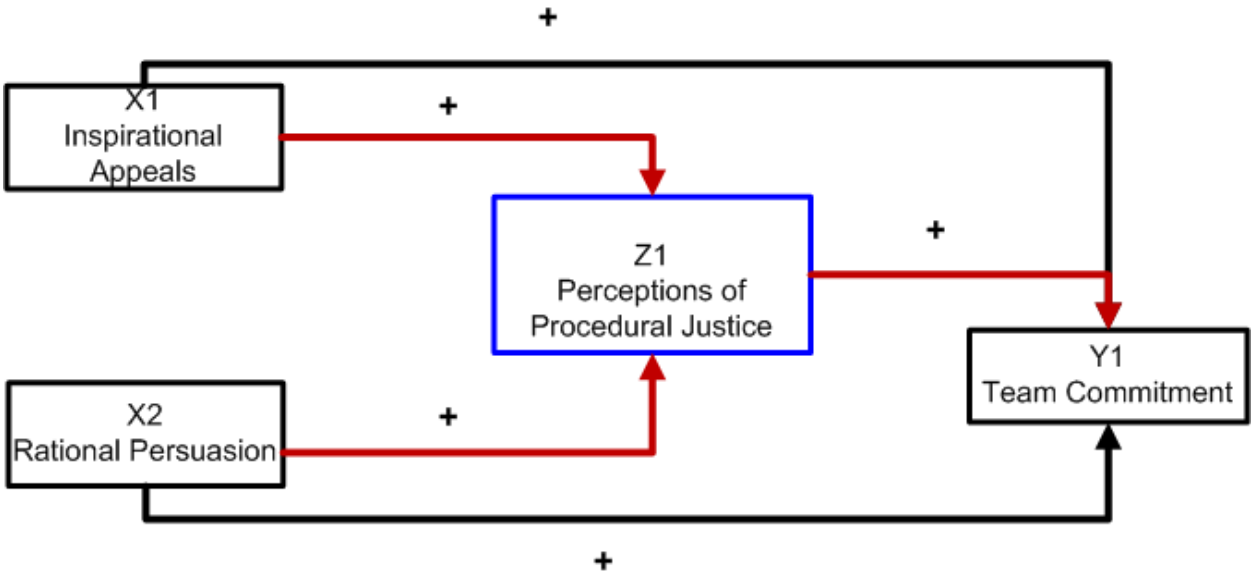

Figure 1. Cook's model of hypotheses. This figure provides a static view of the hypothesis statements that were tested.

Study Methodology

The study was carried out this way: (a) participant selection, (b) sampling, (c) variables measured, (d) instruments for data collection, and (e) data collection. Finally, data analysis instrumental in the Results and Discussions chapters was summarized. Validity risks and strategies to counter them were integrated into the methodology (Creswell, 2009; O'Leary, 2004).

Participant selection. The unit of analysis for this study was individuals who are or have been NPD core team members in the past year. This is the primary criteria for participation. Core team member implies participation in all phases of the NPD project processes (Holland et al., 2000). Since the NPD team was made up of a cross-functional group of individuals, characteristics about the population are a critical part of the selection process. Therefore, the participants also represented various departments and functions such as marketing, engineering, procurement, design, and development (Jassawalla & Sashittal, 2000).

Moreover, the NPD process in which they were engaged consisted of predetermined phases in which the diverse group participated (Wortman et al., 2007). Therefore, the inherent NPD team structure threatens the study's internal validity (Creswell, 2009).

Threats to internal validity result from attempts to make correct "inferences from the data about the population in an experiment" (Creswell, 2009, p. 162). Due to the structured nature of NPD, participants may be predisposed to certain perceptions and/or behaviors, which can affect the credibility of the results. In addition, team members may also be or have been project managers. This puts the study at risk for unwitting bias, or selecting participants who are perceived to provide information that is being sought in the study (O'Leary, 2004).

To address these risks, the participants were selected from multiple industries. Past studies reflect participants who were primarily from technological genres (Ozer & Cebeci, 2010; Rhaiem, 2012; Sarin & McDermott, 2003; Sarin & O'Connor, 2009). Therefore, individuals from private and/or publicly held corporations in the United States were solicited. Industry categories included automotive, manufacturing, healthcare, and information technology. Other sectors may also be included. Finally, another requirement for participation was that the project on which the team member is reflecting is one where s/he is/was a team member only.

Sampling strategy. The sampling strategy was that of a convenience sample (Clark-Carter, 2010). Convenience sampling includes "selecting a sample in a manner that is convenient for the researcher" (O'Leary, 2004, p. 111). The researcher used online search engines such as Google® to identify companies in the U.S. who have R&D, design, and other NPD related departments. Keywords such as *innovation, design, development,* and *new product development* were used. I also attended conferences and other public gatherings and met

potential participants since the term "implies this involves sampling those people one happens to meet" (Clark-Carter, 2010, p. 156).

Sample size. Since the hypotheses are directional, one-tailed probabilities for *r* was compared to the calculated *r* to test for significance. Typically hypotheses are tested at a 95% confidence level. Clark-Carter (2010) recommends a sample size of 70 participants when analyzing the data using the correlation coefficient. This estimate is also based on a power of .8 (chance of avoiding Type II error), and a medium effect size, or "amount of variance in one variable that can be explained by the variance in another" (p. 293). Due to risks associated with a convenience sample, a target sample size of 100 participants was attempted.

Risks to the study's credibility occurred with this type of sampling (O'Leary, 2004). Specifically non-response bias, or refusal to participate, had a significant effect. From October 2013 to August 2014, the researcher contacted 252 individuals from organizations via email, on-line contact forms, and/or telephone. Approximately 52% resulted in non-response.

Attempts were made to address the non-response. First, individuals were contacted along with follow up. Individuals who agreed to participate filled out the survey within an average of two weeks. Those who failed to respond 30 days after initial contact were sent a reminder email or call. This process was repeated after 60 and 90 days. One individual called the researcher back and advised her to stop leaving messages. Others eventually returned the researcher's calls or emails and formally refused participation. Once 90 days had elapsed, the researcher documented the failed to response(s) on a spreadsheet. This information was instrumental for describing limitations in Chapter 5. See Table 2 for more detail.

Second, I changed my focus from large corporations to small and medium enterprises (SMEs). I reached out to this group because I perceived that companies in this category were

more likely to be privately held entities and thus had less stringent policies regarding participation in studies such as this.

Table 2

Frequency of Responses to Requests for Participation and Reasons for Refusal to Participate

Response	*n*	%
Response to Request for Participation		
Non-response	131	52
No	63	25
Yes	58	23
Total	252	100
Reasons for Non-participation		
No reason	32	51
Against policy	9	14
Don't meet criteria	6	10
Need a name	4	6
Must mail survey	4	6
Conflict of interest	3	5
Don't have NPD	1	2
Other	4	6
Total	63	100

Note. $N = 252$ individuals contacted; 58 individuals agreed to participate; 63 individuals refused participation

Third, after attending a product development workshop, I discovered that individuals from the software development industry fit my unit of analysis. Many were privately held start up enterprises that developed software for larger corporations and were located in the western United States, which gave me more flexibility in contacting them. Angelist.com™ was an on-line search engine that helped me locate potential participants from the software development industry.

Clark-Carter (2010) states that non-response bias also threatens representativeness due to a reduced sample size. Individuals from 18 companies participated in my study. The sample size was 58 (43 valid responses for each variable tested). According to Creswell (2008), 43 valid responses are adequate for an explanatory correlational design. However, there are risks.

First, Schonbrodt and Perugini (2013) state that a small sample size increases the risk for Type II error, or stating that there is no significant correlation between two variables when there actually is. This aligns with the central limit theorem that states that the sample average tends to approach a normal distribution as the sample size (*n*) increases (Israel, 1992; Wortman et al., 2007).

Second, the margin of error is narrower as a result of the sample size. This increases the risk of Type I error, or stating there is a significant correlation between two variables when there is not (Bisbe, Coenders, Saris, & Batista-Foguet, 2006). Bartlett, Kotrlik, and Higgins (2001) suggest that the *acceptable margin of error* or the amount of risk deemed acceptable for scale data is ±3%. This translates into the confidence interval or the range that the true mean derived from the Likert scale scores should fall. For this study, the margin of error was computed to be 3% times five (the number of possible Likert scale ratings), or ±.15. Based on the sample size calculation for continuous data (Israel, 1992; Wortman et al., 2007), the margin of error for a valid sample size of 43 was ±.075. Consequently, the results of this study reflect a 95% confidence interval, .63 power, and a medium effect size (Clark-Carter, 2010; Morgan, Leech, Gloeckner, & Barrett, 2013).

Variables to measure. Creswell (2009) emphasizes the importance of establishing validity so that one can make sense of the data. It is imperative to make sound statements about the results generated from instruments and "convince readers of the findings" (p. 235). In

particular, threats to construct validity generally occur as a result of using "inadequate definitions and measures of variables" (p. 164). These risks were taken into consideration as the variables were defined.

There are two independent variables that are hypothesized to "cause influence or affect" (Creswell, 2009, p. 50), the dependent variable. The first independent variable, inspirational appeals, is defined by Yukl et al. (2008) as appealing to the target's values and beliefs in order to gain commitment. This is significant because influence tactics that connect to what is important to an individual set the tone for a cohesive work environment (Barczak & Wilemon, 1991; Sarin & McDermott, 2003; Sarin & O'Connor, 2009). This is even more salient when ambiguity and complexity exist (Lee & Sweeney, 2001; Lines, 2007; Warrick, 2011).

The second independent variable, rational persuasion, is the application of logic, sense making, and opportunities for problem solving to achieve agreement to a request (Yukl et al., 2008). This variable is significant for NPD teams due to its cross-functional nature and diverse skills, backgrounds, and ways of thinking (Holland et al., 2000). Moreover, effective use of this tactic influences the team to see the feasibility of the request and how it contributes to team processes.

When influence tactics are adequately applied to the differences that accompany NPD initiatives, affective team outcomes emerge (Chang et al., 2010; Charbonneau, 2004; Dayan, 2010). The single dependent variable in this study is team commitment, which is the psychological attachment to the work group (Brockman et al., 2010; Pearce & Herbik, 2004). The dependent variable is described by Creswell (2009) as "the outcome or results of the influence of the independent variables" (p. 50).

The cross-functional nature of NPD and the disproportionate skill sets that exist make one's perceptions of fairness of the work environment more apparent (Atuahene-Gima & De Luca, 2008; Cropanzano et al., 2011; Vigoda & Cohen, 2002). Therefore, the variable that is inferred to mediate the relationship between the independent variables and the dependent variable is perceptions of procedural justice. Vigoda and Cohen (2002) frame procedural justice as the difference between one's perception of work group fairness and his/her actual work group experience. Mediation implies that a third variable intervenes between the independent and dependent variable. The overarching goal is to explain the psychological implications of the response variable (Baron & Kenny, 1986, Bennett, 2000).

Instruments for data collection. In order to understand the relationship between the independent variables (inspirational appeals and rational persuasion) and team commitment and how perceptions of procedural justice mediate these relationships, each team member was asked to recall the most recent NPD project in which they participated. To test the hypotheses, multi-item scales were used to measure the constructs. Their respective reliability and validity scores were also summarized.

First, the Influence Behavior Questionnaire (IBQ) was used to measure the independent variables of inspirational appeals and rational persuasion (Yukl et al., 2008). This instrument was "developed for the target" (p. 610), or the person being influenced. S/he rates how often the agent (the person exerting influence) uses different behaviors that reflect influence tactics. Yukl developed the IBQ, which began with six tactics and was revised to include five more. The items in the IBQ are randomly ordered and evenly distributed.

Two scales (four items each) captured the team member's reflection of the project manager's use of these tactics. Statements such as *talks about ideals and values when proposing*

a new activity or change and *uses facts and logic to make a persuasive case for a request or proposal* are included. The responses were measured on a 5-point Likert scale ranging from 1 (*I can't remember him/her ever using this tactic with me*) to 5 (*s/he uses this tactic very often with me*).

Studies conducted by Yukl et al. (2008) show a scale reliability of .84 for rational persuasion and .88 for inspirational appeals. Therefore, the scales are adequate for use in this study. The internal consistency, or the degree of inter-correlation among the items in the scale, exceeds the .70 benchmark (.80). This scale is located in Appendix B.

The Organizational Commitment Questionnaire (OCQ) was used to measure team commitment. This instrument was developed by Porter and others in 1974 (as cited in Bozeman & Perrewe, 2001). This self-report scale measured the individual's psychological "identification with and involvement in a particular organization" (Lam, 1998, p. 787) or team. The first eight items of the OCQ were used as they reflect psychological attachment to the team (Bishop, Scott, & Burroughs, 2000).

The OCQ scale was modified to refer to the team instead of the organization (Bishop et al., 2000; Bozeman & Perrewe, 2001). Past studies have shown that this instrument is robust enough to measure commitment from entities other than organizations (Bishop et al., 2005; Pearce & Herbik, 2004). Moreover, findings have shown that organizational and team commitment can be distinguished from each other. The Cronbach's alpha value (.89) is acceptable.

Responses were collected using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Examples of statements that appeared on the questionnaire include: *I find*

that my values and the team's values are very similar and *I am proud to tell others that I am part of this team*. Items three and seven are reverse coded. The OCQ is located in Appendix C.

Third, the Procedural Justice Climate Scale "modified from Baker, Hunt, and Andrews" (Akgün et al., 2010, p. 1110) measured the team member's perception of fairness in the work environment. The questions were designed for the participant to reflect on the behaviors of the project manager/leader and how they affect his/her feelings toward the fairness of the work environment. The data collected from this scale provided information needed to quantify the mediating effects of perceptions of procedural justice.

The composite reliability of the scale (.89) is acceptable. Reliability implies that the scale used to measure perceptions of procedural justice will "generate consistent findings" (O'Leary, 2004, p. 60). Finally, inter-rater agreement, or (r_{wg}), is .90. This exceeds the .60 benchmark.

Six items were used to measure each individual's perception. Responses were collected using a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Examples of statements that appeared on the questionnaire include: *To make project-related decisions, our manager collects accurate and complete information* or *team members are allowed to challenge or appeal project-related decisions made by our managers*. These items are located in Appendix D.

Permission to use the Influence Behavior Questionnaire (IBQ) has been secured from Dr. Gary Yukl. The Organizational Commitment Questionnaire (OCQ) is public domain (R. Mowday, personal communication, November 1, 2012). Lastly, permission to use the Procedural Justice Climate Scale has been granted. Documentation can be found in Appendices E–G.

Data collection process. Data collection involves activities that are conducted to preserve and protect the integrity of the research and the participants. The process steps are as follows: (a) IRB approval, (b) obtain permission and consent, (c) pilot, and (d) data collection.

As a prerequisite for conducting research, approval was secured from the Institutional Review Board (IRB) of North Carolina A&T State University. Human contact is prohibited until documented approval is granted (C. Collins, personal communication, November 1, 2012). Approval was granted on October 3, 2013.

Participation was solicited by contacting the company's Human resource representative via phone or email. If no Human Resources contact was available, the appropriate authority was contacted and/or the email was forwarded to the appropriate authority (i.e., legal, business partner, CIO, etc.).

There were instances when the participants had questions about the expectations. Communication occurred via email and/or phone. I also sent participants an electronic stamped copy of the survey questions for their review. Others requested a copy of the link so that they could have the questionnaire reviewed by their legal team or department head. A consent information form was sent to the potential participants electronically or they were informed that the consent form was the first page in the electronic survey. Lastly, some of the companies requested a summary of the study upon successful completion. A copy of the consent form is located in Appendix H and the script for email and person to person correspondence is located in Appendix I.

Prior to data collection, it is important to make sure that the forms and processes for data collection are adequate. However, since the Instruments used in the study were already established and had been tested multiple times for validity, a pilot run was omitted. However,

when I obtained 32 responses, I examined the data for its usefulness. Since there were 26 valid responses, only descriptive and frequency statistics could be performed. While there are recent studies that had a sample size this small (Bisbe et al., 2006; Larson, 2004), an increased sample size was needed to increase credibility and representativeness.

Finally, data were obtained from respondents by means of structured questionnaires. The questionnaire contained 22 items. Each of the items was Likert based with a 5-point scale. Additional questions regarding demographic information such as age, race, gender, education, job function, and number of team members were collected. The unit of analysis generalized in this study was individuals who are or have been NPD team members in the past year. The demographic survey is located in Appendix J.

The purpose of this study was to understand the relationships between the variables at one point in time. Therefore, questionnaires were administered in one sitting. Questionnaires were distributed and collected online via Survey Monkey®. Collecting data electronically was the most economical and least labor intensive method. The data were downloaded to SPSS® software. A soft copy of the data was saved on a flash drive.

Data Analysis

Data were downloaded into SPSS® software. The scale items were renamed to distinguish between the research instrument and item. The variables being tested were assigned by computing the average of the total scale item responses. Responses to items from the three survey instruments were measured on a 5-point Likert scale ranging from 1 to 5. Therefore, they were assigned as scale data (Morgan et al., 2013).

I also checked the measures (ordinal, nominal, or scale) for accuracy. Only valid studies were used to analyze the results. Valid responses imply that all of the items in the survey were filled out by the participant (Morgan et al., 2013).

All demographic measurements were labeled nominal. Order doesn't matter with nominal data (Morgan et al., 2013). For example, new product development or engineering is not a higher job function category than manufacturing.

Descriptive statistics were summarized about each variable tested. Morgan et al. (2013) suggest that the data should be analyzed to understand the average, variation, and overall distribution. Frequency statistics about the sample were also reported. Specifically, the response rate and reasons for refusal to participate were reported. See Table 2.

Frequencies analysis was also run to make sure items were coded properly. For example, the researcher reviewed the Organizational Commitment Questionnaire (OCQ) scale items from Mowday, Steers, and Porter (as cited in Bozeman & Perrewe, 2001) and discovered that items three and seven were reverse-scored. In other words, the Likert scale for these two items ranged from {1 = *strongly agree* . . . 5 = *strongly disagree*}. As a result, these two items were recoded.

Next, reliability was determined prior to testing the hypotheses. Reliability refers to internal consistency of measurement as demonstrated in a composite or average of the scale data (Morgan et al., 2013). Cronbach's alpha was used to report internal consistency reliability. The rule of thumb is that the Cronbach's Alpha should be .70 or greater.

Finally, the hypothesis statements were tested. Since the purpose of the study was to understand the relationships between the independent variables and the dependent variable using a correlational design, Pearson's correlation coefficient was used (Morgan et al., 2013). In the context of this study, the correlation coefficient was calculated for the relationships between

inspirational appeals (X1) and team commitment (Y1), and rational persuasion (X2) and team commitment (Y1). The alternative hypothesis is that there is a positive correlation between the variables. Since the hypotheses are directional, one-tailed probabilities for *r* were compared to the calculated *r* to test for significance at a 95% confidence level. A correlation matrix displayed the correlation coefficient values.

Baron and Kenny's (1986) method for mediation testing incorporates the Pearson correlation coefficient and multiple regression analysis to test Hypotheses 3A and 3B (Bennett, 2000). Tests for mediation seek to determine if the predominant relationship between the independent variable and the dependent variable can be explained by a third variable. Hypothesis 3a included three relationship paths: X1 → Y1, X1→Z1, and Z1→Y1. Hypothesis 3b also included three relationship paths: X2 → Y1, X2→Z1, and Z1→Y1.

The first step of mediation was to demonstrate that each of the paths is statistically significant at the 95% confidence level. This was determined by calculating the Pearson correlation coefficient between each variable (Baron & Kenny, 1986). The second step for mediation involved regression analysis where the independent variable was used to predict the dependent variable, followed by the independent variable and the mediating variable used at the same time to predict the dependent variable (Y1). This was conducted for both hypotheses.

Summary

In summary, the purpose of this explanatory correlational study was to understand the relationships between two constructs of lateral influence tactics (inspirational appeals and rational persuasion) and team commitment as perceived by NPD team members. A third variable, perceptions of procedural justice, was also tested as a mediator of these relationships. A valid sample of 43 individual responses was collected through an online survey using

approved, reliable instruments. The expected margin of error and statistical risks associated with the small sample size was also taken into account. Next, the results from the data analysis will be reported.

CHAPTER 4

Results

This chapter reports the results of this explanatory correlational study. The results will reveal the relationship between inspirational appeals and team commitment, the relationship between rational persuasion and team commitment, and whether perceptions of procedural justice mediate these relationships.

Therefore, the data analysis is divided into the following sections. First, descriptive statistics about the variables is reported. Next, the sample from which the results were derived is summarized. The reliability of the scale items is verified. Lastly, the hypothesis test results and their meaning are reported.

Descriptive Statistics

Descriptive statistics were summarized about each variable being tested. The average of the first independent variable, inspirational appeals (X1), revealed that the NPD team member perceived that the project manager seldom/occasionally used behaviors that appealed to what was important to him/her ($M = 2.65$, $SD = .914$). In other words, the NPD team member perceived that the project manager rarely connected the project tasks to something that s/he valued.

The second independent variable, rational persuasion (X2), showed that the NPD team member thought that the project manager occasionally/moderately often used explanatory means to convince the NPD team member to agree to a suggestion ($M = 3.74$, $SD = .774$). In other words, the individual perceived that sometimes the project manager provided substantial reasons why s/he should agree to an idea or request (Charbonneau, 2004).

The results from the dependent variable, team commitment (Y1), revealed that respondents agreed that they felt pride, enthusiasm, and loyalty toward the team of which they were a part (*M* = *3*.74, *SD* = .595). Lastly, responses to the hypothesized mediating variable, perceptions of procedural justice (Z1), showed that NPD team members agreed that the NPD environment made them feel included in the work environment and that they could participate and interact in the activities related to the project (*M* = 3.80, *SD* = .661). See Table 3.

Table 3

Descriptive Statistics of Variables Measured

Variable	*M*	*SD*
Independent		
X1: Inspirational Appeals	2.65	.914
X2: Rational Persuasion	3.74	.774
Dependent		
Y1: Team Commitment	3.74	.595
Mediating		
Z1: Perceptions of Procedural Justice	3.80	.661

Notes. Valid *N* (listwise) = 43
Coding for X2 Rational Persuasion {1 = I can't remember him/her ever using this tactic with me . . . 5 = He/she uses this tactic very often with me}
Coding for X1, Y1, and Z1 {1 = Strongly disagree . . . 5 = Strongly agree}
Meaning for variables:
X1: Inspirational Appeals = One of the constructs of influence tactics that is demonstrated when the person initiating influence gets the support of another by appealing to his/her values and beliefs
X2: Rational Persuasion = One of the constructs of influence tactics influence tactics that is described by the use of logic, data, or information to show the relevance of an idea, suggestion, or request
Z1: Perceptions of Procedural Justice = Thoughts about the relative fairness of the work environment
Y1: Team Commitment = Psychological attachment to the work group which supersedes self-interests

Frequency Statistics

Consequently, the descriptive statistics for the Inspirational Appeals, Rational Persuasion, Team Commitment, and Perceptions of Procedural Justice variable scores were derived from the individual participant responses. Frequency of participant responses about each variable came

from multiple items from the following Instruments: Influence Behavior Questionnaire, Organizational Commitment Questionnaire, and Procedural Justice Climate Scale. See Appendix L.

Participants represented five different industries that have new product development teams of which each has participated as a team member. Most of the participants indicated that they worked in the manufacturing (42%) sectors. The majority of the respondents were Caucasian (72%) males (53%). See Table 4.

Table 4

Frequency of Demographic Information

Response	*N*	%
Gender (Valid *n* = 47)		
Female	22	46.8
Male	25	53.2
Total	47	100.0
Race (Valid *n* = 47)		
Asian/Pacific Islander	4	8.5
Black or African American	7	14.9
Hispanic American	2	4.3
White/Caucasian	34	72.3
Total	47	100.0
Industry (Valid *n* = 36)		
Manufacturing	15	41.7
Medical	10	27.8
Information Tech	8	22.2

Table 4

(Cont.)

Response	*N*	%
Industry (Valid *n* = 36)		
Financial	2	5.6
Apparel	1	2.8
Total	36	100.0

Sample

Of the 252 individuals contacted, 58 participated in the study for a response rate of 23%. As a result of the small sample size, risks of Type II error (β = .37) increased. Also, the margin of error is smaller (±.075 versus ±.15).

Scale Reliability

Reliability was analyzed prior to hypothesis tests to provide "evidence of reliability" (Morgan et al., 2013, p. 111). The Cronbach's alpha values from the Influence Behavior Questionnaire (IBQ) and Procedural Justice Climate scale (PJC) scale items were above .70. In other words, scale items used to measure inspirational appeals, rational persuasion (.813), and perceptions of procedural justice (.858) appeared to measure what it was intended to measure. However, the eight items from the instrument that measured team commitment was .601.

Morgan et al. (2013) suggest that when these anomalies occur, to do the following: (a) ensure that the data aligns with the level of measurement selected, and (b) ensure that the data are coded correctly to ensure reliable results. Finally, check the SPSS analysis to determine whether deleting a scale item would increase the Cronbach's alpha value.

Items three and seven were reverse coded, but the recodes were reflected in the reliability analysis. Deleting scale item three would change the Cronbach's alpha score to .684. Removing scale item seven further increased Cronbach's alpha to .756. Therefore, scale items three and seven were omitted from the statistical analysis. See Table 5.

Table 5

Scale Reliability Results

Instrument/Scale	Scale Item#	Cronbach's alpha
IBQ	1 – 8	.826
PJC	1-6	.856
OCQ	1, 2, 4–6, 8	.756

Notes. Valid $n = 43$
Coding for Instrument/Scale: IBQ = Influence Behavior Questionnaire; PJC = Procedural justice climate scale; OCQ = Organization Commitment Questionnaire
Scale items three and seven were omitted from the reliability analysis
Item three states "I feel very little loyalty to this team."
Item seven states "I could just as well be working for a different team as long as the type of work was similar."

Hypothesis Tests

H1 was tested to determine if there was a relationship between the NPD team member's perception of the project managers' use of inspirational appeals (X1) and team commitment (Y1). The results showed a significant, moderate positive association between inspirational appeals and team commitment (r (44) = .42, p = .002). This indicates that as the NPD team member's perception of the project manager's use of inspirational appeals increase, s/he also tends to demonstrate an increase in team commitment (Morgan et al., 2013). Therefore, H1 was supported. See Table 6.

H2 also revealed a significant, moderate positive association between the NPD team member's perception of the project managers' use of rational persuasion and team commitment (r (44) = .40, p = .004). An increase in the NPD team member's thoughts about the project

manager using rational persuasion tends to result in an increase in team commitment. H2 was supported.

Table 6

Correlation Matrix of Independent Variables with Dependent Variable

Independent Variable	Y1 Team Commitment
X1 Inspirational Appeals	.419**
X2 Rational Persuasion	.398**
Z1 Perceptions of Procedural Justice	.425**

Notes.
*Correlation is significant at the 0.05 level (1-tailed).
**Correlation is significant at the 0.01 level (1-tailed).
Valid *n* (listwise) = 44
Coding for Variables:
X1: Inspirational Appeals = One of the constructs of influence tactics that is demonstrated when the person initiating influence gets the support of another by appealing to his/her values and beliefs
X2: Rational Persuasion = One of the constructs of influence tactics influence tactics that is described by the use of logic, data, or information to show the relevance of an idea, suggestion, or request
Perceptions of Procedural Justice = Thoughts about the relative fairness of the work environment
Team Commitment = Psychological attachment to the work group which supersedes self-interests

H3a and H3b were tested as well. Tests for mediation were summarized in two phases. The inter-correlation matrix revealed that the association between inspirational appeals (X1) and perceptions of procedural justice (Z1) was non-significant at the 95% confidence level (r (44) = .14, p = .190). In contrast, there was a statistically significant association between X1 and Y1 (r (44) = .42, p = .002). Since the relationship between X1 and Z1 was non-significant, phase two testing was not completed for Hypothesis 3a (Baron & Kenny, 1986).

As for Hypothesis 3b, phase one test for mediation was satisfied, as it revealed that rational persuasion (X2) and perceptions of procedural justice (Z1) were correlated at the 95% level of significance (r (44) = .34, p = .013). Similarly, X2 and Y1 were significantly correlated at the 99% confidence level (r (44) = .40, p = .004). There also was a significant association

between perceptions of procedural justice and team commitment at the 99% confidence level (r (44) = .43, p = .002). See Table 7.

Table 7

Test for Mediation Phase One: Inter-correlation Matrix

	X1	X2	Z1	Y1
X1 Inspirational Appeals		.582**	.136	.419**
X2 Rational Persuasion			.335*	.398**
Z1 Perceptions of Procedural Justice				.425**
Y1 Team Commitment				

Notes.
*Correlation is significant at the 0.05 level (1-tailed).
**Correlation is significant at the 0.01 level (1-tailed).
Valid *N* (listwise) = 44

Phase two of the mediation test was also satisfied. Phase two involved a regression analysis which resulted in two models. Model one showed that 14% of the variance in the variable of team commitment was attributed to rational persuasion. A combination of rational persuasion and perceptions of procedural justice contributed to 22% of the variance in team commitment. Both variables combined significantly predicted the model (F (2, 42) = 7.073, p = 002). See Table 8.

Consequently, regression model two revealed that a unit increase in rational persuasion was associated with a .282 increase in team commitment, controlling for all other variables in the model. Finally, a unit increase in perceptions of procedural justice was associated with a .331 increase in team commitment, controlling for all other variables in the model. To satisfy the condition for mediation, the regression analysis revealed that the relationship between rational persuasion and team commitment, displayed as significant in the first model, became non-

significant when perceptions of procedural justice was added to the model (t (42) = 1.99, p = .053).

Table 8

Test for Mediation Phase Two: Multiple Regression Analysis for Hypothesis H3b

Model	Variable	B	SEB	β	t	p
1	X2	.291	.104	.393	2.802	.008
	Constant	2.634	.397		6.642	<.001
2	X2	.208	.105	.282	1.990	.053
	Z1	.289	.124	.331	2.340	.024
	Constant	1.840	.508		3.623	<.001

Notes. Valid n = 44
Model 1: R = .393; *Adj* R^2 = .135; F (1, 43) = 7.854, p = .008
Model 2: R = .502; *Adj* R^2 = .216; F (2, 42) = 7.073, p = .002

In other words, increased thoughts about the project manager's use of rational persuasion tactics tend to lead to more thoughts about procedural justice, which tends to further translate to increased team commitment (Baron & Kenney, 1986; Bennett, 2000). This is expressed in thoughts of team potency, confidence, and motivation (Dayan, 2010; Schaubroeck et al., 2007).

Since one of the conditions of mediation was not was not satisfied (X1→Z1), Hypothesis 3a was not supported. However, both conditions of Hypothesis 3b were satisfied. Therefore, Hypothesis 3b was supported.

Summary

The results of the model of the hypotheses indicate that H1 and H2 were supported. An increase in the NPD team member's perception that the project manager uses inspirational appeals (X1) and rational persuasion (X2) tends to be associated with an increase in team commitment (Y1). However, perceptions of procedural justice didn't mediate the relationship

between inspirational appeals and team commitment. In contrast, perceptions of procedural justice did mediate the relationship between rational persuasion and team commitment.

Chapter 5 discusses the theoretical significance of the overall study. Limitations will be discussed. Finally, implications for future practice, research, and policy will be summarized.

CHAPTER 5

Discussion and Future Research

The aim of this study was to understand the relationship between two variables as perceived by individuals from new product development (NPD) teams. Forty-three individuals reflected on her/his perception of the project manager's use of inspirational appeals, rational persuasion, and procedural justice and how it made her/him feel about the team in which s/he participated.

Moreover, the findings showed that NPD team members who perceived that the project manager used inspirational appeals and rational persuasion tend to show an increase in team commitment. Perceptions of procedural justice further explained the correlation between rational persuasion and team commitment. These findings are salient for future research because the two constructs of influence tactics were embedded in transformational leadership behaviors (Charbonneau, 2004; Northouse, 2007).

This discussion will be structured in five segments: First, the hypothesis statements and findings will be reviewed. Next, the findings will be compared to recent studies. Third, implications for future research, practice, and policy will be discussed. Strengths and limitations will be covered. Finally, closing comments will be given.

Discussion of Results

Hypothesis H1. There is a positive relationship between the NPD team member's perception of the project manager's use of inspirational appeals and team commitment, so H1 was supported. The result is interpreted this way: When the NPD team member understands that the project manager aligns recommendations with something in which s/he believes, s/he tends to respond with team commitment as demonstrated in her/his emotions and/or attitudes toward the

team with whom s/he works (Charbonneau, 2004, Northouse, 2007). The findings from this hypothesis may also suggest that project managers who lack formal authority make the use of social structures such as inspirational appeals tactics in cross-functional NPD team environments more salient.

For example, many studies focus on the technical contributions of project managers. Few examine how their interactions with team members contribute (Kearney & Gebert, 2009; Sarin & O'Connor, 2009). In addition, the cross-functional NPD team consists of individuals from different departments who are assigned to work on this effort for a definite time period. They may or may not have a working relationship outside of the NPD project. In addition, the project manager may lack technical knowledge of the subject matter involved and barely knows the team that s/he will be leading.

The results from this hypothesis magnify the interpersonal aspects of the inspirational appeals tactic. In particular, it can be assumed that the use of inspirational appeals helps project managers address barriers such as these and shape how NPD team members feel about each other. This may be accomplished through (a) declaring *who the NPD team member is* in this NPD project, (b) setting the tone for extracting contributions from her/him, and (c) demonstrating how each team member is uniquely fitted to the idea, suggestion, and/or request (Ernst & Chrobot-Mason, 2011; Jassawalla & Sashittal, 2000; Sarin & O'Connor, 2009).

First, one of the tenets of boundary spanning leadership (Barczak & Wilemon, 1991; Ernst & Chrobot-Mason, 2011) is to communicate in such a way that team members understand what their roles and responsibilities are. This applies to the NPD environment since the project is temporary, unique, and results-oriented. Communication deficits between the project manager and the team can lead to feelings of disconnect from the individual team member (Atuahene-

Gima & DeLuca, 2008; Holland et al., 2000). The positive relationship between the project managers' perceived use of inspirational appeals tactics and the NPD team member's commitment suggests that the project manager who maintains an environment where clarity and direction exist in the midst of uncertainty also understands what is required of the team. As a result, the team member feels that s/he has emotional support and is excited to be a part of the team as a result of the project manager's use of this tactic.

For example, posting/displaying a responsibility matrix (RACI) in the NPD team meeting room symbolizes acknowledgement of the project tasks and the team members' roles in accomplishing them (Wortman et al., 2007). This action also magnifies the purpose of inspirational appeals tactics—to target one's values when soliciting a request. As the NPD team member understands who s/he is in the context of the request, s/he is more likely to oblige because s/he understands where s/he fits in the team.

As a result, team members feel consistency in purpose, scope, and direction (Northouse, 2007; Warrick, 2011). This counters thoughts of perceived dominance from certain functional groups, lack of communication, and thinking in silos (Atuahene-Gima & DeLuca, 2008).

Second, team members need a reason to work together (Wortman et al., 2007). The steady growth of NPD across the globe has increased the visibility of cross-functional teams (Ozer & Cebeci, 2010). Global market competition and the changing needs of customers require more cross-functional engagement among NPD team members. Meanwhile, many project managers who lead these teams have a peer-to-peer relationship with them.

Deficits in interpersonal relationships between the project manager and the team member can hinder NPD processes especially if there are functions within the group who traditionally have a strong influence on the NPD team (Atuahene-Gima & Li, 2000; Atuahene-Gima &

DeLuca, 2008; Jassawalla & Sashittal, 2000). Therefore, initiating artifacts, processes, and symbols can create space for NPD team members to identify with the group. For example, requesting a design review prior to prototype release demonstrates that each function associated with the prototype has a degree of ownership and can experience how interdependencies of her/his respective role affect NPD project outcomes.

Lastly, political tactics are often used to protect one's personal stake in the project (Atuahene-Gima & DeLuca, 2008). The project manager lacks formal authority, but inspirational appeals tactics can be used to provide feedback to the individual who may impose behaviors that can alienate team members. Therefore, the results from H1 show that connecting a request to the NPD member's ideals and values motivates her/him to perform beyond self-interests.

As the individual understands the level of risk involved if fellow team members are excluded, the desire to do what is necessary on behalf of the team increases. Finally, as the team member perceives that the project manager understands how s/he uniquely contributes to the NPD project, team citizenship behavior replaces negative attitudes (Atuahene-Gima & DeLuca, 2008; Jassawalla & Sashittal, 2000; Pearce & Herbik, 2004).

Hypothesis H2. There is a positive relationship between the NPD team member's perception of the project manager's use of rational persuasion and team commitment. H2 was supported as well. The NPD team member who thinks that the project manager is using reliable data to support a suggestion tends to demonstrate positive attitudes about the team's ability to participate (Northouse, 2007; Schaubroeck et al., 2007).

The team member also feels connected to the team despite her/his functional role. Consequently, s/he expresses a willingness to do what is necessary on behalf of the team. This is

significant because the results suggest that structural elements embedded in rational persuasion tactics can bridge the gap between the perceived power deficit of the project manager and the cognitive and functional differences among NPD team members.

Therefore, one might think that the project manager's use of rational persuasion shifts the NPD team member's focus away from formal titles and differences. Instead, the team member focuses on applying differences to the NPD process as a result of the project manager's perceived use of rational persuasion tactics. Therefore, thoughts about the team are more egalitarian and collectivist in nature as a result of the project manager's perceived use of this tactic.

For example, one might argue that if the project manager recommends that the team delay prototype testing, her/his ability to articulate reasons and show verifiable data reflects the project manager's leadership ability (Charbonneau, 2004; Holland et al., 2000; Lines, 2007). The positive relationship between rational persuasion and team commitment reflects that the more NPD team members believe that the project manager's reasons/requests can be substantiated, the more they tend to support them. In other words, the team member's thoughts are less about which team member benefits most from the recommendation and more about how the team can find ways to shorten the delay or work around it.

Shared decision making is pervasive in situations where lateral influence tactics are used to get things done (Jensen, 2007). Project managers who use objectivity and fact finding to undergird the decision making process are perceived to be experienced and knowledgeable. Moreover, work challenge drives the NPD team to participate (Lee & Sweeney, 2001; Lines, 2007).

For example, if the team reaches an impasse about which design option to select, the project manager who uses decision making tools to select the ideal option ignites feelings of connection (from the individual) to the team. The results reflect that when the project manager includes team members in a situation such as this, they tend to respond with a willingness to address the disagreements. Also, the results of this study show that rational persuasion tactics executed in a way that makes the team member feel that s/he can support, challenge, and/or contribute to ideas tend to increase team commitment (Lee & Sweeney, 2001; Lines, 2007). Moreover, when the project manager applies scoring and voting techniques that result in a decision, confidence in the team's ability is strengthened.

Rational persuasion is the most widely-used tactic because it normalizes decision making when the information is clear, relevant to the situation, and involves the team members (Enns et al., 2003; Jensen, 2007; Lines, 2007; Sotiriou & Wittmer, 2001). Since the participants in this study hail from different functional areas, one may assume that they experience diversity in thoughts, skillsets, and values.

For example, idea generation involves contributions from different functions such as marketing and engineering. Innovation literature suggests that differences that are seen as threats tend to result in political tactics that can hinder team commitment (Atuahene-Gima & DeLuca, 2008; Schaubroeck et al., 2007). However, the results from this hypothesis reveal that the project manager who facilitates opportunities for the team to forge their differences into tangible products, goods, and services tend to make NPD team member's perceptions of department power less salient (Jassawalla & Sashittal, 2000). Therefore, the more the NPD team member experiences the project manager's egalitarian efforts through rational persuasion tactics, the more s/he tends to respond with positive thoughts about the team of which s/he is a part.

Hypothesis H3a. First, Hypothesis H3a states that perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of inspirational appeals and team commitment. This hypothesis was not supported.

The first condition requires that each individual correlation be statistically significant. There was a significant, moderate positive association between the NPD team member's perception of the project manager's use of inspirational appeals and team commitment. This aligns with Charbonneau's (2004) study which reveals a strong relationship between inspirational appeals and two transformational leadership behaviors—idealized influence (charisma) and inspirational motivation. Idealized influence reflects feelings of excitement and belonging in the midst of uncertainty. Also, team members feel enthusiasm because the tactic being initiated is linked to something in which they believe.

For instance, if one considers the possibility of a collective of individuals who may work for the same organization but know little about each other, it may be assumed that the team member sees the project manager as the one who sets the tone for why this group is tasked to work on this NPD project. Therefore, when the project manager shares how each team member is connected to the project's vision, s/he feels linked to the team even if they didn't know each other prior to the initiation of the project.

However, the relationship between the NPD team member's perception of the project manager's use of inspirational appeals and perceptions of procedural justice was non-significant. This finding is salient because it demonstrates that initiating inspirational appeals may shape one's thoughts about the team members, but the thoughts about the way things are done (i.e., decision making, conflict resolution, evaluating design options, etc.) remain unchanged.

Projects, including NPD, go through different phases—from initiating to launch (Wortman et al., 2007). What is interesting about this finding is that the participants may have different thoughts about the work environment at the initial moment when inspirational appeals tactics are initiated or when the tactic is used at different times in the project.

For example, at the beginning of a NPD project, uncertainty is high (Ozer & Cebeci, 2010). The project manager attempts to bring calm and order to the situation by making meaning of the *big picture*. As the project progresses, perhaps the pep talks given at the genesis of the project fail to materialize or are inadequate at points in the project where more clarity, information, and data are needed.

For instance, when the team is planning the prototype design, an increase in the use of inspirational appeals may be associated with a significant increase in perceptions of procedural justice. On the other hand, if the project manager applies the same tactic to request that the design be changed, more concrete information, such as a change request document, to get her/him to agree to the delay request may be expected (PMI, 2008).

In the context of this study, the project manager is perceived to shape the fairness of the work environment through her/his use of inspirational appeals tactics. Yet, s/he lacks formal authority. However, project managers who can maneuver the power gap tend to anticipate issues that affect thoughts about the workplace (Barczak & Wilemon, 1991; Liu & Fang, 2006; Sarin & McDermott, 2003; Sarin & O'Connor, 2009).

Studies suggest that the NPD team member's perceptions of procedural justice are measured by the difference between team members' expectations and what they actually encounter (Vigoda & Cohen, 2002). That is to say, the relationship between the NPD team member's perception of the project manager's use of inspirational appeals and procedural justice

may involve both factors—what they expect and what they actually get. Therefore, one may suggest that the participants in this study could have referred to two different incidents that occurred in the same project on which s/he reflected.

For example, the project manager declares that all team members will be informed about key milestones, and documents them on the project timeline. This may result in a significant positive relationship between what the individual perceives is important (being informed) and thoughts about the fairness of the NPD team workgroup. However, s/he also recalls an emergency meeting where the project manager informed the team that the design review occurred early and had been approved. Only the design engineer was privy to information and the timeline wasn't updated.

In summary, although the project manager may initiate a behavior that connects with something important to the team member, the increased thoughts about the relative fairness of the work environment, according to the results, appear to be due to chance. For example, the project manager can facilitate meetings where each team member has a chance to contribute ideas and concerns. However, if those ideas are rarely considered or excluded, the team member may feel that the workgroup practices are unfair or no different.

Hypothesis H3b. The hypothesis—perceptions of procedural justice mediate the relationship between the NPD team member's perception of the project managers' use of rational persuasion and team commitment—was supported. Let's examine each condition for mediation.

Step one of the test for mediation was satisfied because the inter-correlation coefficients were statistically significant. The results from step one revealed that when the NPD team member feels that the project manager provides clear reasons for suggestions, s/he tends to respond with positive thoughts about the team (Northouse, 2007; Schaubroeck et al., 2007). The

association between rational persuasion and perceptions of procedural justice were also statistically significant. When the project manager integrates ideation, creative thinking, and problem solving into the requests, the team member perceives that his/her differences are recognized and that information shared will be considered (Sarin & O'Connor, 2009; Vigoda & Cohen, 2002).

There was also a significant positive correlation between perceptions of procedural justice and team commitment. As positive thoughts about the work environment increase, so do the individual's thoughts of loyalty and concern about the team of which s/he is a part (Cropanzano et al., 2011; Kearney & Gebert, 2009).

One may expect the results from the first condition of the mediation test to be met because the project manager's use of information to get the team to agree to her/his requests can also be used as a means for participating in processes such as decision making. For example, if the project manager requests a design change, a detailed reason for the request helps the team member decide whether to agree to or challenge the request. Also, other functions can ask specific questions about how her/his functional area is impacted by the request.

Similarly, step two of the test for mediation was satisfied. When perceptions of procedural justice are added to the model, the relationship between rational persuasion and team commitment is decreased and is non-significant. That is to say, perceptions of procedural justice play a salient role in the relationship between the project manager's use of rational persuasion tactics and the team member's psychological attachment to the team (Baron & Kenny, 1986; Bennett, 2000).

For example, if the project manager requests that the prototype release date be delayed because raw material lead times threaten on-time delivery, the R&D department team member

who perceives that the project manager is fair in his decision making will likely listen to her/his reasons for the request. Moreover, if the reasons are justified, s/he may agree to the request. In addition, the procurement team member feels that the team is considering his functional area in the grand scheme of the NPD project. Consequently, one would suggest that both team members perceive that the project manager's suggestions and requests are initiated fairly. These perceptions are reinforced when data and logic undergird the requests.

The example in the previous paragraph suggests that diligence was done in requesting that the prototype release date be pushed back. On the other hand, the marketing team member may disagree, despite the information that was shared. S/he may recommend other ways to address the lead-time issue. For instance, expedited shipping and/or deploying more resources may eliminate the lead-time constraint. In addition, the finance team member may remind the team that expediting product or adding people to the effort will increase costs. As a result of this dialogue, the project manager's use of rational persuasion in a fair work environment can facilitate an opportunity for the team to weigh the benefits and risks of the options. The team member feels happy to be associated with the team because s/he can express her/his views without fear of being perceived as dominant, inexperienced, or insignificant.

Therefore, the results from H3b could also imply that when team members have a chance to voice their concern or support prior to a decision, thoughts about the fairness of the work environment increase. Adding objective, data-driven processes to facilitate decision making fosters an egalitarian work environment. As a result of the project manager's use of rational persuasion in a fair work setting, individuals feel that their intellectual and cognitive contributions can be applied to the team's overall success.

Lastly, the results from H3b suggest that not all suggestions made by the project manager are agreed upon. However, if the team member feels that the project manager initiates tactics that allow her/him to vet out concerns, s/he is more likely to believe that the work group has an equal chance of having ideas, opinions, and suggestions considered.

Theoretical significance. The results reported undergird the rationale for the study in the following ways. First, project managers are deployed to lead NPD projects as globalization continues to flourish. While many share a peer relationship with the NPD team, influence can exist in the absence of formal authority (Liu & Fang, 2006).

Secondly, perceptions about the project manager's use of lateral influence tactics to connect with the ideological, intellectual, and unique needs of a cross functional team are salient in NPD environments (Schaubroeck et al., 2007). Therefore, a heightened understanding of the project manager's use of inspirational appeals and rational persuasion tends to produce thoughts of concern for the well-being of the NPD team (Charbonneau, 2004; Northouse, 2007).

However, NPD team members are diverse in ways of thinking, skill sets, and functional roles. The environment has to be conducive for these tactics to further expand the thoughts and attitudes that the individual has about the NPD team (Akgün et al., 2010).

Relationship of the Findings to Prior Research

Results from this research parallel previous studies regarding the use of inspirational appeals, rational persuasion, perceptions of procedural justice, and team commitment. There were also some differences.

Similar to my research, the rationale for Gattiker and Carter's (2010) study was to address the problem that individuals responsible for leading initiatives often lack the formal authority to obtain team member commitment. Industries and functional areas in which the

participants worked were diverse as well. The data were collected via Survey Monkey®. The response rate was similar (21%). Lastly, the results showed that rational persuasion and inspirational appeals were positively associated with commitment. However, there were some contrasts to this study.

First, constructs of influence tactics in addition to inspirational appeals and rational persuasion were tested (coalition, consultation, and ingratiation). The dependent variable was the target's commitment to the project versus commitment to the team. Hierarchical regression was used to analyze Gattiker and Carter's (2010) data versus the Pearson correlation coefficient (*r*). Hierarchical regression enabled the authors to explain how much the control variables contributed to the variation in commitment in addition to the independent variables.

The valid sample size for Gattiker and Carter's study was 241. The target population for the study is the agent (the person initiating the influence) only. In contrast, the unit of analysis for this current study is the NPD team member, or the person being influenced. Of the 252 people solicited, 58 completed the questionnaire.

Overall, Gattiker and Carter's (2010) study magnifies the need to explain how the use of influence tactics produces tangible outcomes. My research topic aims to understand the team member's psychological attachment to the group (team commitment) as a result of influence tactics initiated by a project manager who has a peer relationship with the team (Northouse, 2007). Understanding how thoughts and attitudes about the team precede tangible outcomes is scant in recent literature. The intent of this study was to fill that gap.

Similarly, Enns et al.'s (2003) reported a positive relationship between rational persuasion and peer commitment. These results show that influencing peers is salient at all levels. The differences between Enn et al.'s study and this current study were that the

researchers used a mixed methods design, and chief information officers were the unit of analysis. Other constructs of influence were measured as independent variables and additional dependent variables were measured (peer compliance and peer resistance).

Charbonneau's (2004) study examined influence constructs that were suggested to generating target commitment—rational persuasion and inspirational appeals along with two other tactics. Regression analysis found that rational persuasion significantly predicted all four constructs of transformational leadership. Inspirational appeals contributed to the variation in individualized consideration and inspirational motivation.

This is similar to my study in that the parallels between constructs of lateral influence and transformational leadership led to Hypothesis statements H1 and H2. Also, the Influence Behavior Questionnaire (IBQ) was used to measure how the peers perceived the unit of analysis in the study. However, the dependent variable in my study was team commitment.

Implications for Future Practice, Research and Policy

The results of this study revealed that influence tactics initiated by the project manager are associated with the interpersonal outcomes that are reflected in team commitment as perceived by new product development team members. What can be done through practice, research, and policy to positively impact the new product development sector?

Implications for practice. NPD literature suggests that over 50% of projects launched fail (Rogers et al., 2005). Project leadership is a contributing factor to NPD success (Sarin & O'Connor, 2009). However, when expert power is aligned with the needs of the project, it is effective even in the absence of formal authority (Gattiker & Carter, 2010; Liu & Fang, 2006; Soitirou & Wittmer, 2001).

This study found that the association between the NPD team member's perception of the project manager's use of inspirational appeals and procedural justice was non-significant. However, only 43 valid responses were analyzed. Moreover, a project is temporary which implies that team members may not always work in the same environment or with the same people (PMI, 2008).

The study also found that the association between NPD team member's perception of the project manager's use of inspirational appeals and team commitment was statistically significant. This is salient because project managers who lack position power initially are perceived by team members weak (Atuahene-Gima & DeLuca). However, when socially relevant ways are used to align differences with the challenges of NPD projects, the team members feel glad to be associated with the team. Also the focus shifts away from perceived power gaps to the best interests of the team.

Lastly, there was a statistically significant association between the NPD team member's perception of rational persuasion and team commitment. The NPD environment is cross-functional and its team members think differently, and may not know each other prior to the project. Initial thoughts about the team may linger at the onset of the NPD project. The project manager's use of rational persuasion tends to increase confidence that the team member has about her/his NPD project colleagues because s/he understands why a decision was made as a result of the project manager's initiation of this tactic.

These findings carry the following implications. First, interpersonal training that focuses on coaching team members and project managers can facilitate the choice of tactics used by the project manager and the perceptions team members have about the work environment and each other. While skillsets and functional responsibilities are defined, they are used

disproportionately in the NPD process (Holland et al., 2000). This drives thoughts of dominance and unfairness from team members. In addition, project managers may resort to political tactics to address the issue (Atuahene-Gima & DeLuca, 2008). Understanding how the team member's functional roles are perceived will further drive understanding how s/he perceives the team member with whom s/he will be working.

Second, project managers should be challenged to work on projects of various complexities so that the technical aspects of project management are integrated with working through the sociological challenges often experienced with cross-functional NPD teams. Poor project leadership contributes to NPD project failures (Sarin & O'Connor, 2009). The project manager who can use inspirational appeals and rational persuasion effectively exacts feelings of support, direction, and identity from NPD team members. Work challenges can also be leveraged to promote alignment between the needs of the project and the emotional attachment shared among team members through the interaction of the project manager.

Finally, tools and techniques that are instrumental in the effective use of rational influence tactics are important. Tools such as brainstorming should be selected and initiated based on the situation, expected result, and impact it has on the team member's ability to relate the request to the interdependencies that exist among those that work with her/him. Moreover, these tools can be used in other environments (academia, non-profit, etc.) in addition to NPD and be just as effective.

Implications for research. There is a plethora of research that examines lateral influence tactics for tangible outcomes. There is also a need to understand how socially induced tactics invoke attitudinal changes among the diverse team members. For example, participants in

this study thought that the project manager seldom/occasionally used inspirational appeals tactics.

Most project management studies portray project managers as a technical resource—facilitate the *achievement of project goals within scope, on time, and within a budget while managing risks*. NPD literature, on the other hand, suggests that due to perceptions of weak position power, project managers resort to political tactics (Atuahene-Gima & DeLuca, 2008). Lastly, research that demonstrates how project managers' use of inspirational appeals tactics to achieve team commitment is limited.

A dyadic mixed methods study could shed more light about when, why, and how inspirational appeals has an impact on how NPD team members feel about the group. If the researcher has an understanding of the context that drives the use of these tactics, more explanations for the results can be given. Research questions that could inspire a study with team-project manager pairs include: "How does the use of inspirational appeals drive thoughts about the fairness of the work environment?"; "Does the project manager use a disproportionate amount of inspirational appeals tactics with one function versus another?" and "When in the NPD process are inspirational appeals tactics more effective and why?" Future research that focuses on project manager-team pairs will help the researcher understand key drivers for the project managers' selection of certain influence tactics.

Also, several studies report that rational persuasion tactics are used most, regardless of the unit of analysis (peer to peer, manager to subordinate, etc.). However, in the NPD context, most projects fail (Rogers et al., 2005). In addition, the regression analysis in this study revealed that 22% of the variation in team commitment was explained by rational persuasion and

perceptions of procedural justice. However, the sample size was less than desired (Clark-Carter, 2010; Larson, 2004).

Third, team commitment is attitudinal and precedes action, so it represents a portion of a larger focus in NPD environments (Chang et al., 2010). That is to suggest that NPD projects fail because more emphasis is placed on the task-focused behaviors of project managers versus person – focused ones (Sarin & O'Connor, 2009). Moreover, NPD team members have a disproportionate, but vital role in the NPD process, which is largely measured by task-based objectives such as profit, on time delivery, and customer satisfaction (Barczak & Wilemon, 1991; Kearney & Gebert, 2009; Ozer & Cebeci, 2010). Few studies measure how team members' interpersonal responses such as team commitment contribute to NPD outcomes.

More studies need to be conducted in the NPD context to understand what the major contributors to team commitment are. This study should be replicated at a sample size that represents a 95% confidence level, power of .8, and medium effect size. In addition, studies that explore when (in the NPD process) certain tactics are more effective than others would be beneficial to this body research.

Implications for policy. The study revealed that perceptions of procedural justice failed to mediate the relationship between inspirational appeals and team commitment. Project management traditionally focuses on a technically driven approach to get things done through people. Recent NPD studies expressed that perceptions of position power from the research and development function drives the use of political tactics from the project manager (Atuahene-Gima & DeLuca, 2008).

On the other hand, perceptions of procedural justice mediated the relationship between rational persuasion and team commitment. Substantial data, information, and logic initiated in a

work group perceived as fair and just reinforced the team member's sense of belonging and willingness to work on behalf of the team.

More project managers are leading NPD projects as a part of a larger strategy for organizations to compete and thrive globally. Many project managers have a peer relationship with the members of the team. The NPD environment is comprised of individuals with different functional and cognitive skills who are instrumental in transforming ideas into winning products. The project manager who is able to gain support for ideas through the initiation of lateral influence tactics can also bridge the gap between team member perceptions about each other and the work area.

Therefore, project managers should use these tactics with the intent of promoting thoughts of team identity, collectivism, and enthusiasm among the cross-functional NPD team. This is in addition to the performance measures that are described in the literature. For instance, performance appraisals should include indicators that reflect the extent to which a project manager's use of lateral influence tactics results in attributes that reflect team commitment from the project team members at certain points in the NPD project.

Also, assessments can be administered in parallel with stage gate reviews. The team members can express their thoughts about her/his emotional attachment to the team as a result of the project manager's use of lateral influence tactics. Thoughts about the work environment can be collected as well.

Organizations should consider the project manager's technical and interpersonal proficiencies when assigning her/him to NPD projects. This requires inter and intra-departmental interactions or other efforts that facilitate identifying project manager strengths and deficits that can contribute to how s/he is perceived by the NPD team. These opportunities

should be integrated in the organization's professional development plan for the project manager. Lastly, more emphasis on teamwork and team building should be incorporated in daily functions so that individuals are better equipped to engage in inter-dependent work environments such as new product development.

Strengths and Limitations of the Study

This study possessed some strengths that add to research, practice, and policy. First, the participants were from diverse functions and industries. Many recent studies regarding new product development focus primarily on research and development (R&D) and marketing functions (Atuahene-Gima & De Luca, 2008; Atuahene-Gima & Li, 2000). Individuals from other areas such as human resources, manufacturing, and statistics participated in the study. The gender gap was also narrow (53% male). Lastly, to my knowledge, studies that measure the relationship between constructs of lateral influence tactics and team commitment are limited.

However, globalization has driven organizations to commission project managers who lack formal authority to lead their peers in these NPD projects. Moreover, most new projects that are launched fail (Rizova, 2006; Rogers et al., 2005). While technical data is available to measure the NPD project, little is known about how the initiation of influence tactics from the project manager affects the team member's commitment to work group. This study quantified this relationship.

While the findings from the study offer opportunities for research, business, and academia, there were limitations. First, the valid sample size was small ($n = 43$) versus the target ($n = 100$). This reduced the acceptable margin of error from +/-.15 to +/-.075. In addition, the chances for Type I and II error were increased. This limits the credibility and representativeness of the study (O'Leary, 2004).

That is to say that although the findings suggest that Hypothesis H1, H2 and H3b were supported, the chance for Type I error—stating a significant difference exists when it doesn't—is greater. In contrast, H3a was not supported. The low sample size increases our risk for Type II error, or stating that the conditions for mediation were not satisfied, when in fact, they were.

The small sample size also affected other aspects of the study. For instance, the small sample size limited what could be reported. For this reason, demographic information collected was nominal (dichotomous and/or categorical). Statistical analysis about demographic information requires a relatively large sample size (Larson, 2004). Therefore, hierarchical regression analysis was omitted from this study.

A second limitation involves the choice of an explanatory correlational study. Data reporting was reduced to the results and its statistical and theoretical interpretations. Investigating the reasons for the results was restricted. For example, the overall average response to the inspirational appeals variable indicated that the team member perceived that the project manager seldom/occasionally used inspirational appeals compared to the other variables. However, the instrument advises the respondent to mark *1* if the item doesn't apply to them. Since the study is quantitative only, it was impossible to follow up with some of the participants and explore why the results for this variable were this way.

Finally, tests for moderation were excluded from the research design and methodology. The moderator indicates "when the relationship occurs between the independent and outcome variables" (Bennett, 2000, p. 417). Leaving the moderation test out of the research design limits the amount of information gained about the third variable (perceptions of procedural justice).

Conclusion

This explanatory correlational study found that there was a moderate, positive association between inspirational appeals and team commitment. Perceptions of procedural justice failed to mediate this relationship. There was also a moderate, positive association between rational persuasion and team commitment. However, perceptions of procedural justice further mediated this relationship. Previous studies show that rational persuasion and inspirational appeals is positively associated with transformational leadership constructs (Charbonneau, 2004). However, half of new products launched fail (Rizova, 2006; Rogers et al., 2005). There is an opportunity to address how other influence tactics relate to team commitment and how they further predict the variation in team commitment.

NPD team members perceived that the project manager rarely/occasionally used inspirational appeals. Also, perceptions of procedural justice didn't mediate the relationship. The study didn't indicate why the participants responded as they did. As globalization continues to affect how organizations compete, the ability of team members to harness their differences to deliver winning products, goods, and services is more salient. Studies that focus on the precursors and consequences of initiating influence tactics at certain points in the NPD process and under certain contexts can offer more information about why team members feel the way they do about each other as a result of the project manager's use of these tactics.

The purpose of this study was to understand the relationship between inspirational appeals and team commitment, rational persuasion and team commitment, and whether perceptions of procedural justice further understand these relationships. The majority of studies from team, innovation, and project management literatures focus on using lateral influence tactics for goal achievement. This study reinforces the need to understand how influence tactics

change attitudes and perceptions of the team members. Therefore, this study expands the body of research by examining the team member's thoughts about the project manager's use of lateral influence tactics and the emotional attachment s/he has for the NPD group.

References

Akgün, A., Keskin, H., & Byrne, J. (2010). Procedural justice climate in new product development teams: Antecedents and consequences. *Journal of Product Innovation Management, 27*(1), 1096–1111.

Anderson, S., Cavanaugh, J., Lee, T., & the Institute for Policy Studies. (2005). *Field guide to the global economy* (rev. ed.). New York, NY: The New Press.

Arslan, M. (2001). A cross-cultural comparison of achievement and power orientation as leadership dimensions in three European countries: Britain, Ireland and Turkey. *Business Ethics: A European Review, 10*(4), 340–345.

Atuahene-Gima, K., & De Luca, L. (2008). Marketing's lateral influence strategies and new product team comprehension in high-tech companies: A cross-national investigation. *Industrial Marketing Management*, *37*(1), 664–676.

Atuahene-Gima, K., & Li, H. (2000). Marketing's influence tactics in new product development: A study of high technology firms in China. *Journal of Product Innovation Management*, *17*(1), 451–470.

Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182.

Barczak, G., & Wilemon, D. (1991). Communications patterns of new product development team leaders. *IEEE Transactions on Engineering Management, 38*(2), 101–109.

Bartlett, J., Kotrlik, J., & Higgins, C. (2001). Organizational research: Determining appropriate sample size in survey research. *Information Technology, Learning, and Performance Journal, 19*(1), 43–50.

Bennett, J. (2000). Mediator and moderator variables in nursing research: Conceptual and statistical differences. *Research in Nursing & Health*, *23*(5), 415–420.

Bisbe, J., Coenders, G., Saris, W., & Batista-Foguet, J. (2006). Correcting measurement error bias in interaction models with small samples. *Metodoloski zvezki, 3*(2), 267–287.

Bishop, J., Scott, K., & Burroughs, R. (2000). A construct validity study of commitment and perceived support variables. *Group and Organization Management, 30*(2), 153–180.

Bishop, J., Scott, K., Goldsby, M., & Cropanzano, R. (2005). A construct validity study of commitment and perceived support variables. *Group and Organization Management, 30*(2), 153–180.

Bozeman, D., & Perrewe, P. (2001). The effect of item content overlap on organizational commitment questionnaire-turnover cognitions relationships. *Journal of Applied Psychology, 86*(1), 161–173.

Brockman, K., Rawlston, M., Jones, M., & Halstead, D. (2010). An exploratory model of interpersonal cohesiveness in new product development teams. *Journal of Product Innovation Management, 27*(1), 201–219.

Burke, C., Stagl, K., Klein, C., Goodwin, G., Salas, E., & Halpin, S. (2006). What type of leadership behaviors are in functional teams? A meta-analysis. *The Leadership Quarterly, 17*(1), 288–307.

Bushardt, S., Doty, H., Fannie, B., & Glascoff, D. (2010). Delegation, authority, and responsibility: A reconfiguration of an old paradigm. *Advances in Management, 3*(9), 9–12.

Capar, N., & Kotabe, M. (2003). The relationship between international diversification and performance in service firms. *Journal of International Business Studies, 34*(4), 345–353.

Chang, K., Sheu, T., Klein, G., & Jiang, J. (2010). User commitment and collaboration: motivational antecedents and project performance. *Information and Software Technology, 52*(1), 672–679. doi:10.1016/j.infsof.2010.02.003

Charbonneau, D. (2004). Influence tactics and perceptions of transformational leadership. *The Leadership & Organization Development Journal, 25*(7), 565–576.

Ciulla, J. (2003). *The ethics of leadership.* Belmont, CA: Wadsworth.

Clark-Carter, D. (2010). Analysis of relationships I: Correlation. In D. Clark-Carter (Ed.), *Quantitative psychological research: The complete student's companion* (3rd ed., pp. 284–333). East Sussex, England: Psychology Press.

Cleland, D. (1967). Understanding project authority: Concept changes manager's traditional role. *Business Horizons,* 63–70.

Creswell, J. (2008). Correlational designs. In J. Creswell (Ed.), *Educational research: Planning, conducting, and evaluating qualitative and quantitative research* (3rd ed., pp. 355–386). Upper Saddle River, NJ: Prentice Hall.

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage.

Cropanzano, R., Li, A., & Benson L. (2011). Peer justice and teamwork process. *Group & Organization Management, 36*(5), 567–596.

Dayan, M. (2010). Managerial trust and NPD team performance: Team commitment and longevity as mediators. *Journal of Business & Industrial Marketing, 25*(2), 94–105.

Denzin, N., & Lincoln, Y. (Eds.). (2011). *The Sage handbook of qualitative research.* Thousand Oaks, CA: Sage.

Dionne, S., Yammarino, F., Atwater, L., & Spangler, W. (2004). Transformational leadership and team performance. *Journal of Organizational Change Management, 17*(2), 177–193.

Enns, H., Huff, S., & Higgins, C. (2003). CIO lateral influence behaviors: Gaining peers' commitment to strategic information systems. *MIS Quarterly, 27*(1), 155–174.

Enns, H., & McFarlin, D. (2003). When executives influence peers: Does function matter? *Human Resource Management, 42*(2), 125–142. doi:10.1002/hrm.10072

Enns, H., & McFarlin, D. (2005). When executives successfully influence peers: The role of target assessment, preparation, and tactics. *Human Resource Management, 44*(3), 257–278. doi:10.1002/hrm.20070

Ernst, C., & Chrobot-Mason, D. (2011). Buffering: Creating safety. In C. Ernst & D. Chrobot-Mason (Eds.), *Boundary spanning leadership: Six factors for solving problems, driving innovation, and transforming organizations* (Chapter 4). New York, NY: McGraw-Hill.

Falbe, C., & Yukl, G. (1992). Consequences for managers of using single influence tactics and combination of tactics. *Academy of Management Journal, 35*(3), 638–652.

Gaddis, P. (1959). The project manager. *Harvard Business Review,* 89–97.

Gattiker, T., & Carter, C. (2010). Understanding project champions' ability to gain intra-organizational commitment for environmental projects. *Journal of Operations Management, 28*(1), 72–85. doi:10.1016/j.jom.2009.09.001

Grant, A., & Hoffman, D. (2011). Role expansion as a persuasion process: The interpersonal influence dynamics of role definition. *Organizational Psychology Review, 1*(1), 9–31.

Holland, S., Gaston, K., & Gomes, J. (2000). Critical success factors for cross-functional teamwork in new product development. *International Journal of Management Reviews, 2*(3), 231–259.

Israel, G. (1992). *Determining sample size.* University of Florida Cooperative Extension Service, 1–5.

Jassawalla, A., & Sashittal, H. (2000). Strategies of effective new product team leaders. *California Management Review, 42*(2), 34–51.

Jensen, J. (2007). Getting one's way in policy debates: Influence tactics used in group decision-making settings. *Public Administration Review,* 216–226.

Kearney, E., & Gebert, D. (2009). Managing diversity and enhancing team outcomes: The promise of transformational leadership. *Journal of Applied Psychology, 94*(1), 77–89.

Lam, S. (1998). Test-retest reliability of the organizational commitment questionnaire. *The Journal of Social Psychology, 138*(6), 787–788.

Larson, E. (2004). A tool to assess barriers to adherence to hand hygiene guideline. *Columbia University School of Nursing,* 48–51. doi:10.1016/j.ajic.2003.05.005

Lee, D., & Sweeney, P. (2001). An assessment of influence tactics used by project managers. *Engineering Management Journal, 13*(2), 16–24.

Lines, R. (2007). Using power to install strategy: The relationships between expert power, position power, influence tactics and implementation success. *Journal of Change Management*, *7*(2), 143–170.

Liu, A., & Fang, Z. (2006). A power-based leadership approach to project management. *Construction Management and Economics*, *24*(1), 497–507.

Mathieu, J., Maynard, M., Rapp, T., & Gilson, L. (2008). Team effectiveness 1997–2007: A review of recent advancements and a glimpse into the future. *Journal of Management, 34*(3), 410–476.

Mengel, T., & Thomas, J. (2008). Preparing project managers to deal with complexity—Advanced project management education. *International Journal of Project Management*, *26*(3), 304–315. doi:10.1016/j.ijproman.2008.01.001

Morgan, G., Leech, N., Gloeckner, G., & Barrett, K. (2013). *IBM SPSS for introductory statistics: Use and interpretation* (5th ed., pp. 1–53). New York, NY: Routledge Taylor & Francis Group.

Nguyen, N., Seers, A., & Hartman, N. (2008). Putting a good face on impression management: Team citizenship and team satisfaction. *Institute of Behavioral and Applied Management, 1*(1), 148–168.

Northouse, P. (2007). Transformational leadership. In A. Bruckner & D. Simons (Eds.), *Leadership: Theory and practice* (4th ed., pp. 175–206). Thousand Oaks, CA: Sage.

Oke, A., Idiagbon-Oke, M., & Walumbwa, F. (2008). The relationship between brokers' influence, strength of ties and NPD project outcomes in innovation-driven horizontal networks. *Journal of Operations Management, 26*(1), 571–589.

O'Leary, Z. (2004). *The essential guide to research*. Thousand Oaks, CA: Sage.

Ozer, M., & Cebeci, U. (2010). The role of globalization in new product development. *IEEE Transactions on Engineering Management, 57*(2), 168–180. doi:10.1109/TEM.2009.2025492

Pearce, C., & Herbik, P. (2004). Citizenship behavior at the team level of analysis: The effects of team leadership, team commitment, perceived team support, and team size. *The Journal of Social Psychology, 144*(3), 293–310.

Project Management Institute. (2008). *A guide to the project management body of knowledge* (4th ed.). Newtown Square, PA: Author.

Rhaiem, M. (2012). Innovate or perish: Success factors and sources of failure. *Journal of International Business and Economics, 12*(3), 102–121.

Rizova, P. (2006). Are you networked for successful innovation? *MIT Sloan Management Review, 47*(3), 49–55.

Rogers, H., Ghauri, P., & Pawar, K. (2005). Measuring international NPD projects: An evaluation process. *Journal of Business & Industrial Marketing*, *20*(2), 79–87. doi:10.1108/08858620510583678

Sarin, S., & McDermott, C. (2003). The effect of team leader characteristics on learning, knowledge application, and performance of cross-functional new product development teams. *Decision Sciences*, *34*(4), 707–739.

Sarin, S., & O'Connor, G. (2009). First among equals: The effect of team leader characteristics on the internal dynamics of cross-functional product development teams. *Journal Product Innovation Management, 26*(1), 188–205.

Schaubroeck, J., Cha, S., & Lam, S. (2007). Embracing transformational leadership behavior: Team values and the impact of leader behavior on team performance. *Journal of Applied Psychology 92*(4), 1020–1030.

Schönbrodt, F., & Perugini, M. (2013). At what sample size do correlations stabilize? *Journal of Research in Personality, 47*(1), 609–612.

Söderlund, J. (2004). Building theories of project management: Past research, questions for the future. *International Journal of Project Management, 22*(1), 183–191. doi:10.1016/S0263-7863(03)00070-X

Solansky, S. (2011). Team identification: A determining factor of performance. *Journal of Managerial Psychology, 26*(3), 247–258.

Sotiriou, D., & Wittmer, D. (2001). Influence methods of project managers: Perceptions of team members and project managers. *Project Management Journal*, *32*(3), 12–20.

Thamhain, H., & Gemmill, G. (1974). Influence styles of project managers: Some project performance correlates. *Academy of Management Journal, 17*(2), 216–224.

Vigoda, E., & Cohen, A. (2002). Influence tactics and perceptions of organizational politics: A longitudinal study. *Journal of Business Research*, *55*(1), 311–324.

Warrick, D. (2011). The urgent need for skilled transformational leaders: Integrating transformational leadership and organization development. *Journal of Leadership, Accountability and Ethics, 8*(5), 11–25.

Wortman, B., Richardson, W., Gee, G., Williams, M., Pearson, T., Bensley, F., & Carlson, D. (Eds.). (2007). *Certified Six Sigma Black Belt Primer* (2nd ed.). Terre Haute, IN: Quality Council of Indiana.

Yukl, G., & Falbe, C. (1990). Influence tactics and objectives in upward, downward, and lateral influence attempts. *Journal of Applied Psychology, 75*(2), 132–140.

Yukl, G., Falbe, C., & Youn, J. (1993). Patterns of influence behaviors for managers. *Group and Organizational Management, 18*(1), 5–28.

Yukl, G., & Michel, J. (2006). Proactive influence tactics and leader member exchange. In C. A. Schriesheim & L. L. Neider (Eds.), *Power and influence in organizations: New empirical and theoretical perspectives* (pp. 87–103). Greenwich, CT: Information Age Publishing.

Yukl, G., Seifert, C., & Chavez, C. (2008). Validation of the extended influence behavior questionnaire. *The Leadership Quarterly, 19*(1), 609–621.

Appendix A

Project Managers' Use of Lateral Influence Tactics to Achieve Team Commitment in New Product Development Environments as Perceived by NPD Team Members Questionnaire

Project managers who lead new product development teams but lack formal authority over them use leader behaviors that affect the team's commitment to each other. It is important to understand the relationship between that behavior and the team members' response.

The purpose of this survey is to understand the relationship between the project managers' use of lateral influence tactics and team commitment as perceived by NPD team members.

In other words, this study seeks to find out to what extent that you, the NPD team member, understands how the project manager's use of the following lateral influence tactics (inspirational appeals and rational persuasion) results in a change in your thoughts about the team of which you are a part (team commitment).

An additional variable, perceptions of procedural justice, is tested to determine whether the relationship between each of the lateral influence tactics and team commitment can be explained through their relationship with perceptions of procedural justice (thoughts about the fairness of the work environment).

Your input is needed because of your participation in New Product Development team environments in the past year. This questionnaire contains three instruments: (1) The Influence Behavior Questionnaire, (2) Organizational Commitment Questionnaire and Turnover Cognition Items, and (3) Procedural Justice Climate. Finally, you will be asked to provide some demographic information.

Your answers to all questions are important. Be assured that your answers were kept confidential and anonymous. Only your industry and functional role was used in the analysis and results reporting. Please mark one answer for each question unless stated otherwise.

Follow this link to the Survey:
www.imaginarylink.org

Or copy and paste the URL below into your internet browser:
http://www.surveymonkey.com/rcsurveyEditorFull.aspx?sm=22hyZpChVawvzShc7OtyhwY74fuoq9ovhHiEhfW8epk%3d

Thank You for your Participation

Appendix B

Influence Behavior Questionnaire (IBQ)

(Yukl, Seifert, & Chavez, 2008)

Target IBQ-G

Person to be described: **Project Manager**

Instructions: The purpose of this questionnaire is to learn more about the different ways people try to influence each other in work organizations. Please describe how much the person indicated above uses each type of behavior in an effort to influence you. For each behavior item, select one of the following response choices, and write the number for your choice on the line provided.

1 I can't remember him/her ever using this tactic with me

2 He/she very seldom uses this tactic with me

3 He/she occasionally uses this tactic with me

4 He/she uses this tactic moderately often with me

5 He/she uses this tactic very often with me

If an item does not apply to your situation, then use the #1 response. Please try to avoid letting general impressions of the person bias your answers. Before you begin it is helpful to look over the 11 different types of influence tactics so that you do not get them confused with each other.

This person...

Rational persuasion

_ 1. Uses facts and logic to make a persuasive case for a request or proposal.

_ 2. Explains clearly why a request or proposed change is necessary to attain a task objective.

_ 3. Explains why a proposed project or change would be practical and cost effective.

_ 4. Provides information or evidence to show that a proposed activity or change is likely to be successful.

Inspirational appeal

_ 9. Says a proposed activity or change is an opportunity to do something really exciting and worthwhile.

_ 10. Describes a clear, inspiring vision of what a proposed project or change could accomplish.

_11. Talks about ideals and values when proposing a new activity or change.

_12. Makes an inspiring speech or presentation to arouse enthusiasm for a proposed activity or change.

Appendix C

Organizational Commitment Questionnaire (OCQ) and Turnover Cognition Items

(as cited in Bozeman & Perrewe, 2001)

Instructions: Think about a new product development project that you have completed within the last year. Read each question and indicate your agreement with each item on a 5-point scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree)*

---

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this team be successful.

2. I talk up this team to my friends as a great team to work for

3. I feel very little loyalty to this team.

4. I would accept almost any type of job assignment in order to keep working for this team.

5. I find that my values and the team's values are similar.

6. I am proud to tell others that I am part of this team.

7. I could just as well be working for a different team as long as the type of work was similar.

8. This team really inspires the very best in me in the way of job performance.

Appendix D

Procedural Justice Climate (Modified from Baker, Hunt, and Andrews, 2006)

Instructions: Think about a new product development project that you have completed within the last year. Read each question and indicate your agreement with each item on a 5-point scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree)*

---

1. Project-related decisions are made by our project management in an unbiased manner

2. Our project manager makes sure that all team members' concerns are heard before project-related decisions are made

3. To make project-related decisions, our manager collects accurate and complete information

4. Our manager clarifies decisions and provides additional information when requested by team members

5. All project-related decisions are applied consistently across all affected team members

6. Team members are allowed to challenge or appeal project-related decisions made by our managers.

Appendix E

Permission to Use OCQ Instrument

Rochelle Cook <recook@aggies.ncat.edu>

Permission to Use Instrument

3 messages

Rochelle Cook <recook@aggies.ncat.edu> Wed, Oct 31, 2012 at 7:20 PM
To: rmowday@uoregon.edu

Dr. Mowday. Allow me to introduce myself. I am a Doctoral degree candidate in Leadership Studies at North Carolina A&T State University in Greensboro, NC. I am preparing a proposal for my research topic, which is: project managers' use of lateral influence tactics to achieve team commitment in new product development environments.

One of the instruments that I plan to use is the first eight items in the Organizational Commitment Questionnaire (OCQ) and Turnover Cognition Items (Mowday, Steers, & Porter, 1979). Before I submit this proposal to the IRB, I need your permission to use this instrument.

If granted permission, the OCQ will be used for educational purposes only. No financial gain will be received by me.

A reply to this email regarding this request is most appreciated.

Sincerely,

Ms. Rochelle Cook
Doctoral Degree Candidate
Leadership Studies
North Carolina A&T State University

Rick Mowday <rmowday@uoregon.edu> Wed, Oct 31, 2012 at 9:52 PM
To: Rochelle Cook <recook@aggies.ncat.edu>

Rochelle

The Organizational Commitment Questionnaire (OCQ) was originally developed by Professor Lyman Porter. He decided not to copyright the instrument to encourage its use by others in research. As a consequence, the OCQ legally exists in the public domain and it is unnecessary to have formal permission for its use in research.

Good luck on your research project.

Rick

From: Rochelle Cook [recook@aggies.ncat.edu]
Sent: Wednesday, October 31, 2012 4:20 PM
To: Rick Mowday
Subject: Permission to Use Instrument
[Quoted text hidden]

Appendix F

Permission to Use Procedural Justice Climate Scale

Permission to use instrument

3 messages

Rochelle Cook <recook@aggies.ncat.edu> Wed, Oct 31, 2012 at 8:01 PM
To: TBAKER2@clemson.edu, huntt@uncw.edu, andrewsm@uncw.edu

Dr. Baker, Dr. Hunt, and Dr. Andrews:

I am a doctoral student in the Leadership Studies discipline at North Carolina A&T State University in Greensboro, NC.

I am preparing a proposal for my research topic, which is: project managers' use of lateral influence tactics to achieve team commitment in new product development environments.

One of the instruments that I plan to use is the six item Procedural Justice Climate scale (Modified from Baker, Hunt, and Andrews, 2006)

Before I submit this proposal to the IRB, I need your permission to use this instrument.

If granted permission, this scale will be used for educational purposes only. No financial gain will be received by me.

A reply to this email regarding this request is most appreciated.

Sincerely,

Ms. Rochelle Cook
Doctoral Degree Candidate
Leadership Studies
North Carolina A&T State University

Hunt, Tammy <huntt@uncw.edu> Fri, Nov 2, 2012 at 11:23 AM
To: Rochelle Cook <recook@aggies.ncat.edu>, "TBAKER2@clemson.edu" <TBAKER2@clemson.edu>, "Andrews, Martha" <andrewsm@uncw.edu>

Rochelle,

You have permission to use the Procedural Justice Climate scale (Baker, Hunt, Andrews, 2006) for your research.

Appendix G

Permission to Use IBQ

Gmail by Google

Rochelle Cook <rochellecook@gmail.com>

Fw: Permission to use Instrument

6 messages

Rochelle E Cook <recook@ncat.edu> **Mon, Sep 26, 2011 at 10:06 AM**
To: rochellecook@gmail.com

-----Forwarded by Rochelle E Cook/NCAT on 09/26/2011 10:06AM -----

To: g.yukl@albany.edu
From: Rochelle E Cook/NCAT
Date: 09/21/2011 05:31PM
Subject: Permission to use Instrument

Good afternoon, Dr. Yukl.
I am a 2nd year PhD student of Leadership Studies in the School of Education at North Carolina A&T State University. My research interest is in explaining the correlation between influence and project success through the lens fo the project manager.

I am writing to request to use your Influence Behavior Questionairre (Chavez, Seifert, & Yukl, 2008) as documented in the article entitled *Validation of the extended influence behavior questionairre.* This will be used for research and educational purposes only. Please respond by replying to this email.

Thank you for your time.

Ms. Rochelle Cook, PMP®
Doctoral Degree Candidate
Leadership Studies
NC A&T University
Greensboro, NC

Rochelle Cook <rochellecook@gmail.com> **Mon, Sep 26, 2011 at 10:10 AM**
To: g.yukl@albany.edu

Good morning. I am resending the email below; my recook@ncat.edu mailbox was full. Thanks!
[Quoted text hidden]

Yukl, Gary A <gyukl@albany.edu> **Mon, Sep 26, 2011 at 1:21 PM**
To: Rochelle Cook <rochellecook@gmail.com>

Here is the reply I made to your earlier email.

You can use the IBQ if you follow the guidelines for it, which means using the dyadic target version without any changes or deletions unless approved in

advance by me. Whether any changes are necessary depends on the research objectives, design, and sample. I do not know what you mean by the statement "through the lens of the project manager." Who are the targets who are describing the agents use of tactics in influence attempts with them? What type of project leaders are you studying?

From: Rochelle Cook [mailto:rochellecook@gmail.com]
Sent: Monday, September 26, 2011 10:10 AM
To: Yukl, Gary A
Subject: Fwd: Fw: Permission to use Instrument

[Quoted text hidden]

Rochelle Cook <rochellecook@gmail.com> **Mon, Sep 26, 2011 at 1:34 PM**
To: "Yukl, Gary A" <gyukl@albany.edu>

The title of my topic is prject managers' use of influence to achieve project success. Should this topic be approved my the committee, the participants taking the survey using your instrument will be project managers.
Thanks!

[Quoted text hidden]

Yukl, Gary A <gyukl@albany.edu> **Mon, Sep 26, 2011 at 2:51 PM**
To: Rochelle Cook <rochellecook@gmail.com>

It sounds like you are expecting project managers to describe their own use of influence tactics in attempts to influence others such as subordinates (project team members), peers, bosses, and outsiders. Is that correct?

From: Rochelle Cook [mailto:rochellecook@gmail.com]
Sent: Monday, September 26, 2011 1:34 PM
To: Yukl, Gary A
Subject: Re: Fw: Permission to use Instrument

[Quoted text hidden]

Rochelle Cook <rochellecook@gmail.com> **Mon, Sep 26, 2011 at 2:56 PM**
To: "Yukl, Gary A" <gyukl@albany.edu>

Yes, Sir. That is correct.

[Quoted text hidden]

Appendix H

Informed Consent

NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

INFORMED CONSENT TO PARTICIPATE

IN A RESEARCH STUDY

Study Title: Project Managers' Use of Lateral Influence Tactics to Achieve Team Commitment in New Product Development Environments as Perceived by New Product Development Team Members

Principal Investigator: Rochelle E. Cook

Purpose of the Study

You have been asked to participate as a subject in a research study about new product development (NPD) team members' reflections of lateral influence tactics used by project managers. By lateral influence, we mean behaviors used by the project manager to convince you, the team member, to agree to ideas, suggestions, or requests.

The purpose of this research is to explain the relationship between new product development (NPD) team member perceptions of the project managers' use of lateral influence tactics and team commitment (your thoughts about the team of which you are a part). You have been asked because you have been identified as having been a member of a NPD team in your organization.

Procedures

If you choose to participate in this project, you will be asked to complete a 22 – item questionnaire.

The questionnaire was distributed electronically, and should take between 15–30 minutes to complete.

Risks and Discomforts

The Institutional Review Board at North Carolina A&T State University has determined that participation in this study poses minimal risk to participants. This means the risk of harm or discomfort that may happen as a result of taking part in this research study is not expected to be more than in daily life or from routine physical or psychological examinations or tests.

Benefits

There are no direct benefits associated with participating in this study. There are also no monetary benefits that were incurred to the researcher as a result of your participation. However, your participation may result in data that can help others.

Confidentiality

All information collected in this study was kept confidential to the extent permitted by law. Your answers to all questions are important. Be assured that your answers were kept confidential. Only your industry, gender, and functional role will be used in the analysis and results reporting. Data were saved on a password-protected computer.

If the data are not de-identified: Information that identifies you personally will not be released without your written permission, and if the results of this research are published or discussed in conferences, no information will be included that would reveal your identity. Data will be kept for at least three years from publication. Data will be disposed of by means of deletion of files from computer and/or shredding of paper documents.

Since information will be collected via the Internet through Survey Monkey®, please note that absolute confidentiality cannot be guaranteed due to the limited protections of Internet access. Your participation in this online survey involves risks similar to a person's everyday use of the Internet.

Questions about the Study

If you have any questions about your involvement in this project, you may contact me at 336-545-4167 or by email at recook@aggies.ncat.edu. If you have any study-related concerns or any questions about your rights as a research study participant, you may contact the Office of Research Compliance and Ethics at North Carolina A&T State University at 336-334-7995. Dr. Daniel Miller, the study advisor, can also be reached at dmiller@ncat.edu.

Voluntary Participation/Withdrawal

Your participation is voluntary, and you may end your participation at any time. Refusing to participate or leaving the study at a later time will not result in any penalty.

Statement of Consent

I have read the above information and have received answers to any questions I had. I am at least 18 years of age or older and voluntarily consent to take part in this research study. Clicking the "I agree" button acknowledges my consent.

I AGREE

Using language that is understandable and appropriate, I have discussed this project and the items above with the subject and/or authorized representatives.

Signature of Principal Investigator Date

Appendix I

Script Used to Solicit Participation in Research Study

Greetings (to whom it may concern):

I am a Doctoral degree candidate in Leadership Studies at North Carolina A&T State University. My dissertation topic is: Project Managers' Use of Lateral Influence Tactics to Achieve Team Commitment in New Product Development Environments as Perceived by New Product Development Team Members. This study contributes to the body of research by explaining the relationship between leader behaviors (lateral influence tactics) and the NPD team's response (team commitment) as perceived by the team member.

I need your employees' participation as a subject in this research study if:

(1) S/he has been (or is currently) a core team member of a NPD team in the past twelve months
(2) The project manager or the person leading the project was not her/his functional manager or superior
(3) S/he was only a team member—didn't serve as the project manager on the project of which s/he is reflecting

There is no limit in the number of participants as long as they meet the criteria described above. If you agree to allow your employees to participate, simply reply to this email along with the email addresses of the individuals. I will send them a consent form and link to the survey.

Regards,

Ms. Rochelle Cook

Doctoral Degree Candidate

Leadership Studies

North Carolina A&T State University

recook@aggies.ncat.edu

(336) 545-4167

Appendix J

Demographic Survey

Demographic Information

1. Indicate your Gender

Male

Female

2. Which race/ethnicity best describes you? (Please choose only one.)

American Indian or Alaskan Native

Asian / Pacific Islander

Black or African American

Hispanic American

White / Caucasian

Other (please specify)

3. Which category below includes your age?

18-20

21-29

30-39

40-49

50-59

60 or older

4. To what industry are you affiliated?

Other (please specify)

5. In what functional area do you work?

6. How many people were members of the New Product Development team of which you were a member?

Other (please specify)

Done

Appendix K

Script Used to Remind Volunteers to Participate in the Study

Greetings (to whom it may concern):

I am Ms. Rochelle Cook, a Doctoral degree candidate in Leadership Studies at North Carolina A&T State University.

I recently sent you a consent form and link to participate in a survey for my dissertation topic, which is: Project Managers' Use of Lateral Influence Tactics to Achieve Team Commitment in New Product Development Environments as Perceived by New Product Development Team Members.

If you haven't done so, please review the consent form (attached), and if you agree to its terms, proceed to fill out the survey.

If you have any questions regarding this request, please contact me.

Regards,

Ms. Rochelle Cook

Doctoral Degree Candidate

Leadership Studies

North Carolina A&T State University

recook@aggies.ncat.edu

(336) 545-4167

Appendix L

Frequencies and Percentages of Item Scores from Testing Instruments

Table L-1

Frequency of Item Responses for Inspirational Appeals (Influence Behavior Questionnaire)

Item IBQ5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I can't remember him/her ever using this tactic with me	8	13.8	17.0	17.0
	2 He/she very seldom uses this tactic with me	13	22.4	27.7	44.7
	3 He/she occasionally uses this tactic with me	15	25.9	31.9	76.6
	4 He/she uses this tactic moderately often with me	6	10.3	12.8	89.4
	5 He/she uses this tactic very often with me	5	8.6	10.6	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item IBQ6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I can't remember him/her ever using this tactic with me	1	1.7	2.1	2.1
	2 He/she very seldom uses this tactic with me	14	24.1	29.2	31.3
	3 He/she occasionally uses this tactic with me	15	25.9	31.3	62.5
	4 He/she uses this tactic moderately often with me	11	19.0	22.9	85.4
	5 He/she uses this tactic very often with me	7	12.1	14.6	100.0
	Total	48	82.8	100.0	
Missing	System	10	17.2		
Total		58	100.0		

Item IBQ7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I can't remember him/her ever using this tactic with me	7	12.1	14.6	14.6
	2 He/she very seldom uses this tactic with me	17	29.3	35.4	50.0
	3 He/she occasionally uses this tactic with me	12	20.7	25.0	75.0
	4 He/she uses this tactic moderately often with me	4	6.9	8.3	83.3
	5 He/she uses this tactic very often with me	8	13.8	16.7	100.0
	Total	48	82.8	100.0	
Missing	System	10	17.2		
Total		58	100.0		

Item IBQ8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I can't remember him/her ever using this tactic with me	17	29.3	35.4	35.4
	2 He/she very seldom uses this tactic with me	21	36.2	43.8	79.2
	3 He/she occasionally uses this tactic with me	3	5.2	6.3	85.4
	4 He/she uses this tactic moderately often with me	4	6.9	8.3	93.8
	5 He/she uses this tactic very often with me	3	5.2	6.3	100.0
	Total	48	82.8	100.0	
Missing	System	10	17.2		
Total		58	100.0		

Table L-2

Frequency of Item Responses for Rational Persuasion (Influence Behavior Questionnaire)

Item IBQ1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I can't remember him/her ever using this tactic with me	3	5.2	6.3	6.3
	2 He/she very seldom uses this tactic with me	1	1.7	2.1	8.3
	3 He/she occasionally uses this tactic with me	12	20.7	25.0	33.3
	4 He/she uses this tactic moderately often with me	17	29.3	35.4	68.8
	5 He/she uses this tactic very often with me	15	25.9	31.3	100.0
	Total	48	82.8	100.0	
Missing	System	10	17.2		
Total		58	100.0		

Item IBQ2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 He/she very seldom uses this tactic with me	4	6.9	8.3	8.3
	3 He/she occasionally uses this tactic with me	10	17.2	20.8	29.2
	4 He/she uses this tactic moderately often with me	18	31.0	37.5	66.7
	5 He/she uses this tactic very often with me	16	27.6	33.3	100.0
	Total	48	82.8	100.0	
Missing	System	10	17.2		
Total		58	100.0	100.0	

Item IBQ3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I can't remember him/her ever using this tactic with me	1	1.7	2.1	2.1
	2 He/she very seldom uses this tactic with me	5	8.6	10.6	12.8
	3 He/she occasionally uses this tactic with me	11	19.0	23.4	36.2
	4 He/she uses this tactic moderately often with me	17	29.3	36.2	72.3
	5 He/she uses this tactic very often with me	13	22.4	27.7	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item IBQ4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I can't remember him/her ever using this tactic with me	1	1.7	2.1	2.1
	2 He/she very seldom uses this tactic with me	7	12.1	14.6	16.7
	3 He/she occasionally uses this tactic with me	20	34.5	41.7	58.3
	4 He/she uses this tactic moderately often with me	12	20.7	25.0	83.3
	5 He/she uses this tactic very often with me	8	13.8	16.7	100.0
	Total	48	82.8	100.0	
Missing	System	10	17.2		
Total		58	100.0	100.0	

Table L-3

Frequency of Item Responses for Team Commitment (Organizational Commitment Questionnaire)

Item OCQ1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.7	2.1	2.1
	Neither agree nor disagree	1	1.7	2.1	4.3
	Agree	23	39.7	48.9	53.2
	Strongly agree	22	37.9	46.8	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item OCQ2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	2.1	2.1
	Disagree	4	6.9	8.5	10.6
	Neither agree nor disagree	12	20.7	25.5	36.2
	Agree	19	32.8	40.4	76.6
	Strongly agree	11	19.0	23.4	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item OCQ3r1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	4	6.9	8.5	8.5
	2.00	5	8.6	10.6	19.1
	3.00	6	10.3	12.8	31.9
	4.00	15	25.9	31.9	63.8
	5.00	17	29.3	36.2	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item OCQ4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	7	12.1	14.9	14.9
	Disagree	13	22.4	27.7	42.6
	Neither agree nor disagree	15	25.9	31.9	74.5
	Agree	10	17.2	21.3	95.7
	Strongly agree	2	3.4	4.3	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item OCQ5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	5.2	6.4	6.4
	Neither agree nor disagree	6	10.3	12.8	19.1
	Agree	28	48.3	59.6	78.7
	Strongly agree	10	17.2	21.3	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item OCQ6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.7	2.1	2.1
	Neither agree nor disagree	6	10.3	12.8	14.9
	Agree	26	44.8	55.3	70.2
	Strongly agree	14	24.1	29.8	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item OCQ7r1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	3.4	4.3	4.3
	2.00	17	29.3	37.0	41.3
	3.00	16	27.6	34.8	76.1
	4.00	11	19.0	23.9	100.0
	Total	46	79.3	100.0	
Missing	System	12	20.7		
Total		58	100.0		

Item OCQ8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	2.1	2.1
	Disagree	6	10.3	12.8	14.9
	Neither agree nor disagree	17	29.3	36.2	51.1
	Agree	15	25.9	31.9	83.0
	Strongly agree	8	13.8	17.0	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Table L-4

Frequency of Item Responses for Perceptions of Procedural Justice (Procedural Justice Climate Scale)

Item PJC1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	2.1	2.1
	Disagree	7	12.1	14.9	17.0
	Neither agree nor disagree	11	19.0	23.4	40.4
	Agree	20	34.5	42.6	83.0
	Strongly agree	8	13.8	17.0	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item PJC2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.4	4.3	4.3
	Disagree	2	3.4	4.3	8.5
	Neither agree nor disagree	8	13.8	17.0	25.5
	Agree	28	48.3	59.6	85.1
	Strongly agree	7	12.1	14.9	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item PJC3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	2.1	2.1
	Disagree	2	3.4	4.3	6.4
	Neither agree nor disagree	4	6.9	8.5	14.9
	Agree	33	56.9	70.2	85.1
	Strongly agree	7	12.1	14.9	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item PJC4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	5.2	6.4	6.4
	Neither agree nor disagree	1	1.7	2.1	8.5
	Agree	29	50.0	61.7	70.2
	Strongly agree	14	24.1	29.8	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item PJC5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	5.2	6.4	6.4
	Neither agree nor disagree	12	20.7	25.5	31.9
	Agree	27	46.6	57.4	89.4
	Strongly agree	5	8.6	10.6	100.0
	Total	47	81.0	100.0	
Missing	System	11	19.0		
Total		58	100.0		

Item PJC6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1.7	2.2	2.2
	Disagree	6	10.3	13.0	15.2
	Neither agree nor disagree	3	5.2	6.5	21.7
	Agree	28	48.3	60.9	82.6
	Strongly agree	8	13.8	17.4	100.0
	Total	46	79.3	100.0	
Missing	System	12	20.7		
Total		58	100.0		