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POWER AND CONFLICT: A QUALITATIVE LOOK AT THE INTERACTIONS OF
LEADER DYADS

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ABSTRACT

Leaders of innovative endeavors face complex demands and must balance a range of leadership activities throughout the creative process. Dyadic leadership, a special case of shared leadership, provides a unique approach to the circumstances leaders are faced with. This study presents an experimental test of dyadic leadership structure to examine the behaviors of leader dyads. We hypothesize that leaders engage in a lifecycle of behaviors, where the balance of power and conflict is crucial. Our results indicated partial support for the later stages of the lifecycle. We also conducted a series of post hoc analyses, which showed that successful leaders appeared to follow the hypothesized lifecycle. These results provide information on leader dyads that may be used to foster innovation in the workplace.

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Chapter 1

Introduction

Leading for innovation is a complex and difficult task (Hunter & Cushenbery, 2011) requiring a wide variety of thoughts, strategies, and behaviors. Although the leader has traditionally been a singular role, recent work indicates a shift away from this idea toward models of two or more leaders (Eberly, Johnson, Hernandez, & Avolio, 2013). One form, dyadic leadership, is gaining support (Hunter, Cushenbery, Fairchild, & Boatman, 2012). A dyad is defined here as “two individuals who are interdependent on a one-to-one basis” (Yammarino, 1995, p. 52). While the term dyad typically refers to a leader and a subordinate in the leadership research (Yammarino, 1995; Dansereau, Graen, & Haga, 1975), this study examines a *leader dyad*, or a pair of leaders.

Dyadic leadership, a special case of shared leadership, provides a unique approach to the circumstances leaders are faced with. Moreover, the unique experiences of leader dyads are theorized to make them particularly effective in leading for innovation (Hunter et al., 2012). One aspect of leader dyads that supports their effectiveness in leading for innovation is their opportunity for enhanced communication (Hunter et al., 2012). Research has shown that it is much quicker and easier to flesh out ideas between two people, rather than exchanging ideas between several people (Hunter et al., 2012). Also unique to dyadic leadership is the fact that the size of the group does not allow for conspiring (Hunter et al., 2012) because factions cannot be reached between two people (McGrath, 1984). Regardless of the views each leader holds, they must work in partnership *with* one another (Arnone & Stumpf, 2010). Finally, dyads are

theorized to be more effective in leading for innovation because it is easier to split a reward in half than it is to break it up amongst several leaders (Hunter et al., 2012). Thus, dyads “permit a healthy share of success” (Hunter et al., 2012, p. 425).

In examining these principles that make leader dyads unique—and arguably more effective—a trend emerges. The principles are sociological at their core, and the ability for two leaders to work together depends heavily on the nature of their social exchanges. Support for the social view of organizational life began in the 1930s and led to a newfound emphasis on interpersonal dynamics (Pearce & Conger, 2003). In the 1950s, social exchange theory built on the concept of interpersonal dynamics and argued that people enter into social relationships with gain and cost in mind (Homans, 1958). These studies suggest a strong sociological foundation on which leader interactions tend to grow.

Moreover, Slater (1955) found that undesignated leaders who emerged during a task had a unique relationship. The participant who was rated by peers as the “Best-liked man” and the participant rated by peers as the “Idea man” gave one another higher ratings on questions such as: who contributed the best ideas for solving the problem; who did the most to guide the discussion and keep it moving effectively; how well did you personally like each of the other members; and considering all sessions, which member of the group would you say stood out most definitely as a leader in the discussion? (Slater, 1955). This supports the sociological component to the leaders’ relationship, even in an environment where leaders surface as a result of natural behavioral patterns. Additionally, Gronn (1999) has shown that leader dyads are fairly common in leadership and management, affirming their importance in practice and in research. Recognizing these prominent sociological components of the leadership dyad, this study looks to understand the *processes* these leaders engage in while leading for innovation.

Chapter 2

The Lifecycle

Leadership is an important concept that impacts the functioning of the organizational setting (Porter & McLaughlin, 2006). Further, dyadic leadership has been suggested to be particularly effective in leading for innovation (Hunter et al., 2012), which is quite relevant for today's organizational setting where innovation is paramount (Anderson, Potočnik, & Zhou, 2014). Thus, organizations have a vested interest in this line of study because the implications may drive the development of innovative ideas and products. Unfortunately, there is little known about the dynamics of a leadership dyad. In fact, we know of no research examining the relationship of a leadership dyad (Pearce & Conger, 2003) from its initial conception to the end of a task. The purpose of this project is to examine the social dynamics involved in this dyadic leadership process.

We propose that members of the leadership dyad will go through a lifecycle, which is supported by the sociological principles of leader interaction in the organizational setting. Wildridge, Childs, Cawthra, & Madge (2004) have shown that people who engage one another on a task-by-task basis tend to engage in a relatively uniform cycle of interactions. We propose a three-stage model for dyadic leadership interaction, which draws upon the co-leader model suggested by Winter (1976). The first stage, Establishment, is when the members of the leadership dyad will establish themselves and analyze the task on an individual basis. The second stage, Action, is when the dyad will communicate to form a vision and take action toward that

vision. Lastly, the third stage, Unified Presentation, is when leaders will come together to address subordinates from a unified position via collaboration.

In the Establishment stage, we argue that members of the leader dyad will establish themselves to one another on a personal level and analyze the task on an individual basis. In this stage, distinguishing the type of interactions leaders will have is important. While they are likely to engage one another in a general sense, the interaction will only include personal matters (e.g. interests, previous experience in group settings, previous experience as leader, etc.). Interaction regarding the task will come later in the lifecycle. Upon first meeting one another, leaders will likely get acquainted by greeting each other, discussing their backgrounds and personal experiences, and learning more about one other *as a person*. Once they feel as though they have enough information about their partner, we argue that they will turn their attention to the *task*. As individuals, they will likely read the task(s) and begin to form ideas about how they want to achieve the task(s). However, there is no interaction regarding the task(s) to this point in the lifecycle. This part of the Establishment stage will be separate for each of the leaders and the ideas they form about the task up to this point in the lifecycle will be their own. Finally, we suggest that this stage will foster very little conflict, if any at all. Many researchers agree that partnerships begin on generally cooperative terms (Childs & Dobbins, 2003; Gray, 1989; Winter, 1976).

Moving to the Action stage, we argue that leaders will likely discuss their individually formed goals and address the task by forming a vision. This vision will serve as the foundation of their shared leadership. In a study by Wilson and Charlton (1997) that examined managers, about half of managers identified a common vision as a critical success factor. This recognition shows how important a vision is to leadership, and affirms its importance in the lifecycle. Once the

vision is established, we argue that leaders will continue to work through their ideas in an iterative process. They will express their thoughts on the goals they see fit as individuals, how those goals will best be achieved, and how the dyad should approach subordinates. Leaders will continue this back-and-forth communication to solidify their goal(s) and a corresponding plan to achieve their goal(s).

Finally, the dyad will enter the third stage of Unified Presentation. After discussing their views, similarities, and differences regarding the task, leaders will need to converge and address subordinates as a unit. Leaders may come to accept one another's ideas on some level and any conflict that was present in the Action stage will diminish. Regardless of how smooth or intense the Action stage was, leaders will likely attempt to present a unified front to followers. In a survey of co-CEOs, Arnone and Stumpf (2010, p. 19), found that successful CEOs operated on the principle that they would have to "... 'keep my ego in check and serve the firm.'" This suggests that even those leaders with the most singular views realized they needed to work together for the ultimate success of the organization. However, we would like to note that this is suggested as an advanced stage. While collaboration may not be reached by every dyad, as some dyads will likely experience more conflict than others, we argue that collaboration is important for overall performance of leader dyads.

Therefore, we propose that leader dyads will engage in a lifecycle of behaviors, as supported by the sociological principles of leader interactions in the organizational setting. First, we argue that leaders will interact with one another and gather information on a personal level. Second, we argue that leaders will address the task at hand, which is when they will experience the highest degree of conflict. Lastly, we argue that leaders will attempt to collaborate with one another to address followers with a unified front. However, we note that this collaboration may

not be possible for leaders who experienced a great deal of conflict in the Action stage. Next, we will discuss the importance of conducting small group and short-term research.

Chapter 3

Small Group and Short-term Research

We investigate leadership from a micro-level approach (Hitt, Beamish, Jackson, & Mathieu, 2007) to examine the effects of leadership on group performance and processes. In this, we seek to better understand group processes (Marks, Mathieu, & Zaccaro, 2001), as well as the flattening pattern of organizational structures (Rajan & Wulf, 2006). These areas are important because they represent the outcomes of leadership (Yammarino, 2013) in objective terms. This study contributes to the research on group processes and dyadic leadership, as well as theory on organizational structure.

First, the richness of small group research and its application to the functional organizational setting must be stressed. As Slater (1955) notes, “small group research provides a most fruitful meeting-ground for psychological and sociological thinking” (p. 300). In an effort to maximize findings, researchers tend to observe their desired effect on the most people possible. However, this may cause us to overlook the presence of small groups in our everyday lives. This study seeks to depart from this trend of analyzing larger groups by looking at the leadership dyad as its own small group.

Marks and colleagues (2001) discuss the input-process-outcome (I-P-O) model of team processes, which is similar to the proposed stages of our dyadic leadership lifecycle. Also a cyclical process, the I-P-O model begins with *Transition processes*, including mission analysis formulation and planning, as well as strategy formulation and planning. This idea is parallel to the Establishment stage of the lifecycle, where leaders engage in individual analysis of the task

and formulate their own strategies for tackling the assignment. The second component of the taxonomy by Marks and colleagues (2001), entitled *Action processes*, includes coordination, or “Orchestrating the sequence and timing of interdependent actions” (p. 363). This idea relates directly to the Action phase of the lifecycle, which entails leaders expressing their individual analyses and working toward a united vision. Finally, the last stage of the taxonomy includes conflict management, which is similar to the Unified Presentation stage, where leaders must resolve the conflict present in the relationship to address subordinates with a unified direction. The relatedness of the IPO model to the three-stage lifecycle we propose lends support to the use of our lifecycle model in explaining dyadic leadership. Further, the IPO model is a model of group processes, which supports the research of a leader dyad as its own group.

This study also examines group processes as they relate to the flattening of organizational structure (Rajan & Wulf, 2006). With the effects of the economic recession of 2009, companies can no longer afford to have a multitude of mid-level managers delegating orders downward. Thus, organizations have reduced the number mid-level employees, effectively cutting overall costs. This, in turn, has had two side effects: (1) increased leadership responsibilities of employees (Rajan & Wulf, 2006) and (2) increased pace of work. The climate of organizations has turned away from subordinates answering to managers, who answer to divisional managers, who answer to the COO, who answers to the CEO. Now, employees are working together to construct a final product to hand to the divisional managers, who answer directly to the CEO (Rajan & Wulf, 2006). Secondly, the pace of work remains quick in flatter organizations. This means that employees must work quicker to maintain previously set paces, despite the fact that there are fewer employees. In addition to these two side effects of organizations flattening their structures, research has found that organizations are merging at an unprecedented rate (Pryor,

2000) and mergers are a breeding ground of high-level leader partnerships (Arnone & Stumpf, 2010). Therefore, we are seeing increased leadership and small-group demands at both the lower and upper levels of organizations. These relationships are similar in structure to leader dyads and thus, these broad applications of our research to group processes, organizational theory, and leadership support the need for our study.

Chapter 4

Social Dynamics of Dyadic Leadership Lifecycle

Despite the fact that small-group social dynamics have been examined in prior studies, the social dynamics of a leader dyad's relationship have not yet been examined (Pearce & Conger, 2003). This study intends to explain several sociological phenomena that will dictate the lifecycle of the leadership pair. This will include elements of conflict and collaboration, and will be defined by Social Identity Theory (Tafjel, 1982) where the driving force will be in-group and out-group identification. Specifically, those who identify the other leader as being representative of the *in-group*, or characteristically similar to the self, will have less conflict. Those who identify the other leader as being representative of the *out-group*, or characteristically dissimilar to the self, will have more conflict. For instance, if Leader A self-identifies as easy-going and motivated but feels that Leader B is rude and disinterested in the task, the Leader A will identify Leader B as out-group. Subsequently, two such leaders will experience more conflict when working on the task.

Establishment and Social Identity Theory

The Establishment stage is a neutral time for leaders to survey one another and the task. This initial meet-and-greet is an important foundation for the lifecycle. Upon meeting someone new, people have the tendency to immediately evaluate the person and make a first impression about him or her (Willis and Torodov, 2006). People can make these judgments within 100

milliseconds of exposure to a face (Willis & Torodov, 2006). Further, these judgments may be lasting. Nisbett and Ross (1980) found these judgments last, even after the information on which the impression was based has been discredited. This judgment becomes pertinent when leaders make decisions about how similar the other leader is to the self. Social Identity Theory argues that when people identify with others that are like the self, there is a higher chance of social acceptance (Tafjel, 1982). Therefore, we propose the following set of interactions when leaders first meet one another:

H1: In the Establishment stage, leaders will form quick, yet lasting impressions about one another and identify the other as either similar to the self or dissimilar to the self.

Leaders' judgment of one another will thus serve as the foundation for their relationship.

Action and Conflict

We argue that the Action stage, where leaders form a visionary foundation and make decisions on how to achieve that vision, will be characterized by conflict. As leaders become more familiar with one another and the task throughout the first stage, they will begin to express themselves more directly. We argue that this will highlight individual differences and cause conflict (Winter, 1976). In her model of co-leader dyads, Winter (1976) presents conflict as a separate stage, suggesting its overwhelming presence in the process. Huxham (1996) also notes that collaboration is difficult, making conflict a focal point in the relationship between dyadic leaders. Therefore, we argue that conflict will play a large role in the interactions of leader dyads.

H2: In the Action stage, leaders will face varying levels of conflict, depending upon the in-group or out-group impression formed in the initial Establishment stage. Conflict will be negatively related to in-group impressions, such that the more leaders identify one another as similar to the self, the less conflict they will face. Conflict will be positively related to out-group impressions, such that the more the leaders identify one another as dissimilar to the self, the more conflict they will face.

Further, the relationship between the leaders may be complicated by both external and internal factors. An external factor specific to this study is shifting purpose, which Arnone and Stumpf (2010) present as an element that may increase the likelihood of conflict between the leaders. For instance, leaders may change their goals after learning that resources have been cut, or that their timeframe to complete their project has been extended. Internally, the leaders may have different aims, speak different languages, prefer different procedures, or perceive different amounts of power (Huxham, 1996). These factors may also provide grounds for conflict. Depending on the margin of difference between leaders' views and their initial in-group/out-group decisions, the relationship will be characterized by different amounts of conflict. Leaders who find one another to be out-group will likely experience more conflict and leaders who find one another to be in-group will likely experience less conflict. However, we argue that all leaders will experience some degree of turbulence en route to the middle ground.

Unified Presentation and Collaboration

The Unified Presentation stage, where leaders communicate their vision and corresponding plans to subordinates, requires leaders to come together in the relationship. While

leading may vary by task, personality, subordinates, and/or environment, the main purpose of leadership is to provide a vision for subordinates (Avolio, 1999; Bass, 1985; Burns, 1978). This consistently remains the purpose, independent of the initial impression that was formed.

Similarly, the purpose of collaboration is “to create a shared vision and joint strategies to address concerns that go beyond the purview of any particular party” (Chrislip & Larson, 1994). Thus, the agendas of dyadic leadership and collaboration are integrated by way of a *shared* vision.

H3: In the Unified Presentation stage, any conflict the leaders experienced will diminish.

Initial in-group impressions will be positively related to collaboration, such that the more leaders identified one another as being similar to the self, the easier it will be to collaborate. Initial out-group impression will be negatively related to collaboration, such that the more leaders identified one another as dissimilar to the self, the more difficult it will be to collaborate.

We argue that this stage will be complex for the leaders. As Krantz (1989) shows, each individual in the dyad must trust the other while simultaneously coping with feelings of dependence. This friction is difficult enough when leaders are working together, separate from subordinates’ needs and expectations. Adding the element of leading others, the friction becomes amplified because subordinates expect leaders to have clear and confident directions. As a result, they must push aside their personal views and any conflict to lead subordinates effectively.

Additionally, it is important to note the significance of the initial in-group or out-group decision made in the Establishment stage. Collaboration may not come as easily for those leaders who identified one another as characteristic of the out-group. In this case, the leaders may have a difficult time coming to a collaborative state and may never compromise to make a unified presentation to subordinates. Ultimately, this may translate to the dyad being more self-involved

than concerned with the progress of the group. Further, there may be certain thresholds of collaboration to be reached in this stage. There may be one lower level of collaboration that allows the dyad to simply lead, and another higher level of collaboration that allows dyads to lead for innovation. This study intends to understand those levels of collaboration, shedding light on the lifecycle of dyadic leadership, as well as the complexities within each stage of the relationship.

In sum, we propose three stages of the dyadic leadership lifecycle, which come with their own consequences. First, we argue that leaders will meet one another and engage on a personal level to make a judgment about whether the leader is similar to the self (in-group) or dissimilar to the self (out-group). We then argue that leaders will address the task at hand, at which time they will likely experience conflict. The level of conflict will be dependent upon the initial judgment, such that in-group leaders will experience less conflict and out-group leaders will experience more conflict. Finally, we argue that leaders will attempt to come together and collaborate to address followers as a united team. However, we note that this may be difficult for leaders who experienced a great degree of conflict in the Action stage when they addressed the task. Next we will discuss our design, participants, procedures, and measures.

Chapter 5

Methods

Participants and Design

Participants for this study were drawn from a research subject pool system at a large Northeastern university to provide a sample that included 558 participants between the ages of 18 and 24 years old. Those participants from the subject pool who had two years of leadership experience in real-world settings were invited to engage in the leadership role(s). The intent of this was to put participants with leadership experience into leader positions to improve the generalizability of the results to organizational settings. The selected participants were assigned to be leader(s) of a 4-person team composed of randomly selected subjects that had no leadership experience. The selected leader(s) were asked to lead the participant follower group through a series of tasks. All participants signed up for the study and selected an available date and time to participate.

Upon arrival, participants signed a consent form agreeing to participate in the research study. Participants were then directed to one of two rooms: those with leadership experience to the “leader room,” and those without leadership experience (followers) to the “follower room.” The participant(s) engaging in leadership tasks had a separate “leader room” where they were encouraged to brainstorm ways to manage the follower group effectively. The leader(s) were given the list of objectives and tasks that the follower group needed to complete, and had time to sort out how to present the tasks and objectives to the follower group.

The leader(s) were asked to arrive 20 minutes earlier than the followers to work on the task. In this time, they took a survey measuring power. They were then given 10 minutes to prepare for Task 1, or the brainstorming task. When 10 minutes had passed, researchers led the leader(s) into the follower room to engage in the brainstorming task with the group for 20 minutes. After the 20-minute mark, the leader(s) were asked to go back to the leader room. The leader(s) completed the next portion of the survey and were then given five minutes to prepare for Task 2, or the planning task. After five minutes, researchers brought the leader(s) into the follower room to engage in the planning task for 15 minutes. To complete the study, the leader(s) went back to the leader room to fill out the final portion of the survey.

When not actively engaged in completing tasks or managing objectives, the followers and leader(s) completed a series of surveys and responses measuring personality and other relevant constructs. These measures allowed the opposite group adequate time to work on the task and also provided the researchers with relevant data. Additionally, the leader room had a video camera set up to record participants' actions. The footage from the camera in the leader room has allowed the researchers to examine the processes involved in dyadic leadership and compare those interactions to a prototypical one-leader scenario.

Experimental Manipulation

In this study, we were interested in manipulating the type of leadership structure that teams interacted with, as well as the complexity of the tasks required of the group and leader(s). In order to manipulate leadership structure, we randomly assigned participants to a team under one of two leadership conditions: a single leader condition or a dyadic leader condition. These

teams interacted with the leader(s) as they worked to complete the study tasks. Researchers focused on the data collected in the dyadic leader condition for the purposes of this study.

The second manipulation was the type of task that the group worked to complete. This manipulation did not vary between subjects. Instead, this was a manipulation that occurred for each team, but teams engaged in both tasks at different times during the study. The task types used to evaluate creative performance included a brainstorming task and a planning task. These task types are commonly used in creativity research (De Dreu, Baas, & Nijstad, 2008; De Dreu, Baas, & Nijstad, 2012). For both tasks, the deliverables were collected at the team level. Individuals collaborated to develop the ideas, and teams worked together to choose the ideas they felt were most creative or original.

In the brainstorming task, participants were asked to design a program for the effective acculturation of a new class of freshmen college students (for similar tasks, see Hunter, Bedell-Avers, Hunsicker, Mumford, and Ligon, 2008 or Scott, Lonergan, and Mumford, 2005). The participants were told that the program should make considerations for student well-being, adjustment, and academic performance. The program was to be used for the student class that would arrive in the fall of 2014. These instructions were meant to be complex and without a single, clear solution. Thus, participants were required to be creative to effectively accomplish the task. The deliverable for the creative brainstorming task was a list of ideas.

In the planning task, participants were asked to outline the resources and steps that they would need to effectively administer the interventions involved in their strategy. This task is also adapted from the work of Hunter and colleagues (2008). The task required participants to outline ways in which their brainstorming ideas could be made into a plan and asked the group to account for real-world constraints. In doing so, participants developed an innovative application

of these ideas. The deliverable for the planning task was a plan for implementing the ideas generated in the brainstorming task.

Measures

We used two coding teams of three undergraduate research assistants to translate the videos of leader interactions from qualitative behaviors to quantitative information. This provided a way in which to assess the behaviors of leaders that were recorded by video. Specifically, coders were asked to rate the leaders' use of time, power and conflict at the leader-level, power and conflict at the dyad-level, personality at the leader-level, and the leaders' use of reflection on leadership and/or experience with task-relevant information at the leader-level.

The coding process involved 20 hours of training in behavioral assessment and the use of rating scales. A graduate student and an undergraduate lab coordinator with three years of coding experience developed the training materials and oversaw the coding process. All coders completed a thorough benchmarking process in which scale reliabilities were assessed. Alphas for all scales were above 0.70 with the exception of the individual power scale and conflict scale, which had alphas of 0.62, or higher. Variations of the coding process for each of the scales are provided in further detail below, as well as the reliabilities met for each scale.

Time. We assessed the time that leaders devoted to their dyadic relationship in four ways: (1) the amount of time until leaders started to work on the task, (2) the amount of time leaders spent working on the task, (3) the amount of time leaders spent relationship building (not working on the task and not silent), (4) and the amount of time leaders spent in silence. Videos of leader interactions were used in order to assess how leaders used their time. Thus, each leader

dyad had two videos. One was a 10-minute video in which leaders were preparing for the brainstorming task, and the other was a five-minute video in which leaders were preparing for the planning task. The undergraduate research assistant coders were trained to make overall estimates at the end of the entire session (both the brainstorming and planning tasks) as to how leaders used their time. Specifically, coders rated the Time Until Task, as well as the Time on the Task, the time spent Relationship Building, and the Time in Silence. Reliabilities for these ratings provided justification for aggregation within coding teams ($\alpha > 0.75$).

Individual Power and Conflict. To assess power and conflict at the leader-level, we used an interaction process analysis (IPA) scale developed by Bales (1950). Importantly, this scale required the raters to make subjective assessments of behaviors and tally them in the corresponding category. The behaviors are specific to problem-solving interactions in groups and the scale is divided into two sets of actions and responses, with one set of positive actions and responses and one set of negative actions and responses. The first three items include positive socio-emotional actions, and the three items following that are attempted task answers to those actions (Bales, 1950). For example, one category that measures a positive socio-emotional action is, “shows solidarity, raises other’s status, gives help, reward” (Bales, 1950). One category that measures a response is, “gives opinion, evaluation, analysis, expresses feeling, wish” (Bales, 1950). The second half of the scale identifies three task-related questions one could ask, followed by three negative socio-emotional responses to those questions (Bales, 1950). An example of a task-related question is, “asks for opinion, evaluation, analysis, expression of feeling” (Bales, 1950). An example of a negative socio-emotional reaction is, “shows antagonism, deflates others’ status, defends or asserts the self” (Bales, 1950).

For the purpose of coder training, we used the Nam, Lyons, Hwang, and Kim's (2009) version of the IPA scale because it was modernized in terms of language and example behaviors. Coders were trained to identify these behaviors and tally the number of times each leader (Leader A and Leader B) engaged in the behavioral categories. The Bales (1950) and Nam and colleagues (2009) scales are presented in full in Appendices A and B, respectively. Reliabilities for these ratings provided justification for aggregation within coding teams ($\alpha > 0.62$).

Global Power and Conflict. We also measured the power and conflict present overall, considering both members of the dyad together. To do this, we used the Jehn (1995) scale measuring intragroup conflict, rating both task and relationship conflict. This was a suitable scale to use in conjunction with the Bales (1950) IPA scale because both the Bales (1950) IPA scale and the Jehn (1995) scale consider relational and task areas. Thus, researchers were provided with parallel ratings of leaders, on the individual and group levels. The items from the Jehn (1995) scale were intended to apply to small groups, however, we adapted the items to apply to the dyad to increase clarity for coders during the coding process. An example item from the task category is: "To what extent are there differences of opinion between the leaders?" An example item from the relationship category is: "How much friction is there between leaders?" Coders rated conflict present between dyads on a scale of 1 (low) to 5 (high). The original Jehn (1995) intragroup conflict scale is presented in full in Appendix C. Reliabilities for the ratings provided justification for aggregation within coding teams ($\alpha > 0.71$).

Personality. Coders rated the personalities of each leader, independently, using the Big Five personality traits. Coding teams were trained on how to identify and rate these traits, as identified by certain behaviors. They rated each leader on openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism on a scale of 1 (low) to 5 (high).

Reliabilities for four of the five personality ratings provided justification for aggregation within coding teams ($\alpha > .70$). Curiously, openness to new experience could not be rated to have an alpha higher than 0.55 and due to this inconsistency, the analyses performed do not include openness to new experience.

Reflection on Leadership and/or Experience. Initial piloting sessions revealed that leaders often referenced past experiences in their preparation for each task, and thus we used a measure of Reflection on Leadership/Experience. For instance, when working together to formulate a plan for the brainstorming task, a leader may reference a past leadership experience to demonstrate his/her reasoning to the other leader. While preparing for the planning task, a leader may reference the experience of leading during the brainstorming task to illustrate his/her opinion about how well the task went or how the dyad's approach should be altered or maintained when leading the planning task. We argue that these measures provide further information about each leader's experience during the study by capturing the positive and negative connotations associated with the reflection. This contributes new information that cannot be assessed through the scales for power and conflict (Bales, 1950; Jehn, 1995).

Coders were trained to look for either leadership experiences or experiences from an orientation program during leaders' preparation for the brainstorming and planning tasks. They were instructed to code the reflection as either positive or negative, based on how leaders used that reflection to influence their leadership strategy. Regardless of the reflection itself, if the leader built upon that experience and use that to move forward, it was coded as a positive reflection. If the leader simply mentioned a past experience or dwelled up on it—not making any effort to use that experience to better address this task—it was coded as a negative reflection.

Reliabilities for these ratings provided justification for aggregation within coding teams ($\alpha > .73$).

Group Performance: Quality and Originality. We also measured the quality and originality of the groups' (leaders and followers together) outputs from the brainstorming and planning tasks. Quality was defined as the cohesiveness of items for the brainstorming task. For the planning task, Quality was defined as the degree to which the program implementable for the planning task. In other words, how easily could someone outside of the group take the plan, as written by the subjects in the study, and use that to implement the acculturation program? Originality was defined as novelty of items for both the brainstorming and planning tasks. These constructs served as a measure of the groups' performance on the tasks at the midpoint and end of their collaboration. Measuring the groups' performance at different times throughout the study allowed researchers to detect when the high and low points of performance occurred for the group. Thus, researchers were able to indicate whether the group performed well throughout the entire study, only on the brainstorming task, and/or only on the planning task. Coders were trained to rate outputs on a scale of 1 (poor quality/low originality) to 5 (high quality/high originality). Reliabilities for these ratings provided justification for aggregation within coding teams ($\alpha > .70$).

Chapter 6

Results

Hypothesis Testing

We tested Hypothesis 1 using linear regressions. Due to the small sample size in our study, we examined the relationships with a linear regression, using each variable in turn. We expected the time that dyads spent getting to know one another on a personal level would influence the level of conflict between the leaders as they progressed in the dyad. We tested this hypothesis by regressing the performance of the dyad, in the Quality and Originality of ideas, onto the time that the leaders spent Relationship Building while preparing for the brainstorming task. A simple linear regression was calculated to predict Emotional Conflict based on time spent Relationship Building on the brainstorming task. The results of the regression test were not significant ($F(1,21) = .145, p = .71$), with an R^2 of .007. Thus, the amount of time leaders spent building their relationship was not a significant predictor of the amount of Emotional Conflict they subsequently experienced.

We expected that the amount of time leaders spent building their relationship would influence the level of conflict they experienced. We used Conflict of Ideas, a broad measure of conflict, which we identified as conflict in regard to general ideas, not related to the task at hand. An example of Conflict of Ideas would be leaders having conflicting ideas regarding strategy for approaching the task. We calculated a simple linear regression to predict Conflict of Ideas based on time spent Relationship Building on the brainstorming task. The results of the regression test

were non-significant ($F(1,21) = .032, p = .86$), with an R^2 of .001. Thus, our results indicate that the amount of time leaders spent Relationship Building did not predict their level of Conflict of Ideas.

We did not find any relationship between the time leaders spent Relationship Building and general level of conflict, and so we examined the relationship between time leaders spent Relationship Building and Conflict of Work. A simple linear regression was calculated to predict Conflict of Work based on time spent Relationship Building on the brainstorming task. The results of the regression test were non-significant ($F(1,21) = 2.19, p < .16$), with an R^2 of .094. While this is not significant, we do note that it approaches marginal significance. Therefore, our results indicate that the amount of time leaders spent Relationship Building approached significance as a predictor of the amount of conflict leaders experienced regarding work-related ideas.

In sum, we did not find support for Hypothesis 1. The amount of time leaders spent building their relationship was not a predictor for the amount of Emotional Conflict, Conflict of Ideas, or Conflict of Work. However, the amount of time leaders spent building their relationship approached marginal significance in the prediction of Conflict of Work-related ideas. We believe this may be because work-related ideas were the most salient feature of our experimental setup. Emotions may not have been invested in the two-hour timeframe that leaders worked together, thus did not present realistic opportunities for Emotional Conflict. Similarly, strategy and other tangential points may not have been pressing enough to arouse conflict over ideas in that time period. However, the elements of the task were immediately calling on the leaders' input and as a result, may have created the largest source of conflict in that time.

Turning to Hypothesis 2, we predicted that leaders would experience conflict while working together. We hypothesized that they would experience more conflict if they were dissimilar. Due to the nature of our data, we were limited in the statistical techniques available for testing this hypothesis. In particular, our use for the Five Factor Model and the low sample size of our data, further reduced by calculating a difference score for each dyad rather than a simple score for each leader, only supported the use of a simple correlation. Thus, to test this hypothesis, we examined the correlations between dyad leader personality differences and several conflict variables. Our results indicated a significant correlation between Difference in Leader Extraversion (e.g. the level of contrast between each leaders extroverted behaviors) and Conflict of Work ($r = .59; p < .01$). This relationship was positive, such that the more leaders differed in terms of their level of extraversion, the more they experienced conflict on work-related ideas. Our results also indicated a significant correlation between Personality Conflict and Conflict of Ideas ($r = .52; p = .01$). This means that the more leaders appeared to experience conflict due to differences in personality (e.g. one leader was rated high in extraversion and the other leader was rated high in introversion), the greater conflict they experienced over general ideas. Finally, our results indicate a significant correlation between Personality Conflict and Disagreement ($r = .38; p < .01$). Thus, the more leaders differed in terms of overall personality (the Big Five), the greater degree of disagreement between them.

In sum, our results demonstrated that the more leaders experienced conflict that appeared to stem from differing personalities, the more they experienced conflict on general ideas and the more they disagreed with one another. Additionally, the more leaders differed on levels of extraversion, the more conflict they experienced over work-related ideas. This provides partial

support for Hypothesis 2, such that the more leaders appeared to experience conflict stemming from differences in their personalities, the more conflict they experienced.

Lastly, we tested Hypothesis 3 using linear regressions. We predicted that dyad leaders would have more successful collaborations if they experienced less conflict early in the relationship. In order to test this hypothesis, we regressed the Quality and Originality of ideas for the planning task using Personality Conflict observed between leader dyads throughout the session. A simple linear regression was calculated to predict Quality of the planning task output based on Personality Conflict. The results of the regression test were non-significant ($F(1,18) = 1.061, p = .32$), with an R^2 of .056. Thus, Personality Conflict was not a significant predictor for the Quality of group outputs for the planning task.

We regressed Originality of the planning task on Personality Conflict, or the degree of conflict leaders experienced that appeared to stem from differences in personality. The planning task was the last phase for the leaders, at which point we hypothesized they would need to cooperate if possible in order to leader their group. We conducted a simple linear regression to predict Originality of the planning task output based on Personality Conflict. The results of the regression test were non-significant ($F(1,18) = .524, p = .48$), with an R^2 of .028. Our results did not support the hypothesis that Personality Conflict was a significant predictor for Originality of the outputs from the planning task.

While our results did not support Personality Conflict as a significant predictor of Originality of the group output, we tested whether or not the presence of general Disagreement would be a significant predictor for Originality of the group outputs on the planning task. We conducted a simple linear regression to predict Originality of the planning task output using level of Disagreement. The results of the regression test were significant ($F(1,18) = 11.306, p < .01$),

with an R^2 of .386. However, this was not the case for the Quality of the outputs of the planning task. The results of the regression test were non-significant ($F(1,17) = .15, p < .71$), with an R^2 of .009. We believe that Disagreement was a significant predictor of the Originality—and not the Quality—of the group outputs for the planning task because Disagreement may have caused the leaders to stop and examine one another's ideas in depth. We believe this would lead to more original ideas, as suggested by Farh, Lee, and Farh (2010). Concurrently, stopping to examine one another's ideas takes time out of the leaders' already limited preparation time, possibly hindering their progress or diverting their focus entirely from the quality of the task.

Thus, Hypothesis 3 was partially supported. We did not find Personality Conflict to be a significant predictor of the Quality or Originality of group ideas for the planning task, nor did we find Disagreement to be a predictor of Quality of group outputs for the planning task. We did, however, find evidence that Disagreement was a significant predictor of Originality of the group outputs at the planning task, further supporting the notion of Farh, Lee, and Farh (2010) that creative ideas may thrive in less agreeable climates between leaders.

In sum, our results indicated partial support for different stages of the lifecycle; however, our results did not support the full lifecycle as we hypothesized it. Specifically, our results did not support Hypothesis 1, that leaders would initially engage one another on a personal level and make similar- to dissimilar-to-the-self assessments of one another. Our results did provide partial support for Hypothesis 2, that leaders would experience conflict, which we hypothesized to be dependent on their initial analyses of one another. Finally, our results provided partial support for Hypothesis 3, that leaders would come together to address followers. Due to the inconsistency of our results, we decided to conduct a series of post hoc analyses. The exploratory analyses are described in the following section.

Exploratory Analyses

The inconsistent findings described above highlighted the utility of conducting a post hoc examination of the data for other meaningful relationships. By conducting these analyses, we hoped to find relationships between our variables that would help determine which behaviors and interactions impacted dyad performance. Any significant relationships found in these analyses would provide avenues for future research and contribute to our understanding of dyadic leadership. In particular, we were interested in how leaders spent their time and how conflict impacted their performance. We examined whether leaders who spent more time relationship building would lead to decreased levels of conflict, which would be characteristic of dyad outperformance of single leader teams. We examined these relationships using univariate ANOVAs.

As a way in which to parse out our dyad sub-sample, we split the dyad teams based on whether or not they outperformed single leader teams in each task. This information was taken from a separate dataset drawn from the same study. These were dummy coded, with a '0' representing teams that did not outperform the median performance of single leader teams and '1' representing teams that did. The dummy-coding of idea quality and originality between dyad teams was effective in forming near-equal sample sizes for our analyses for brainstorming (quality = 11, 12; originality = 11, 12), but was less effective for planning (quality = 2, 21; originality = 5, 18). While the sample sizes were not equal for the planning task, we still conducted analyses to gather a better sense of the dyad's interactions at each stage in the process so as to capture their full lifecycle. We also provide tests for relationships for the planning task variables, but acknowledge that the statistical power of these tests is limited severely by the group sizes available.

High Performing Dyads and Time Use. We performed a one-way ANOVA to test for team differences in the outperformance of dyads using the way leaders spent their time. This analysis was chosen to examine whether leaders' amount of time spent building their relationship was related to their performance. Hypothesis 1 stated that the lifecycle of leader dyads would begin with leaders discussing personal information about one another to determine if they are similar or dissimilar.

A univariate model was not significant when examining outperformance of single leader teams in time spent Relationship Building on the brainstorming task in terms of Quality ($F(1, 22) = .15, p = .71$) or Originality ($F(1, 22) = .06, p = .81$). Relationship Building time did not influence dyad outperformance for both quality and originality. Similarly, a univariate model examining the difference between dyads in how they spent their time was not significant when examining outperformance of single leader teams with respect to time spent On the Task during the brainstorming task for Quality ($F(1, 22) = .11, p = .74$) or Originality ($F(1, 22) = .01, p = .94$). In other words, the amount of time dyads spent discussing the task during the brainstorming phase did not influence their outperformance of single leaders.

However, an examination of the means for these groups revealed that, while not significant, differences may be present but not detected by our low-power analyses. Leaders of dyad teams that outperformed single leader teams in Quality on the brainstorming task appear to have spent more time Relationship Building on average ($M = 3.08, SD = 2.64$) than dyads that did not outperform single leaders ($M = 2.74, SD = 1.69$). Moreover, dyads that outperformed single leader teams spent less time On the Task on average ($M = 3.51, SD = 2.14$) than dyads that did not outperform single leaders ($M = 3.87, SD = 3.06$). This may suggest that, as proposed in Hypothesis 1, leaders spent more time getting to know one another on a personal level when

first meeting one another. While their similar- or dissimilar to-the-self analysis could not be specifically determined from this data, the dyads that outperformed single leader teams are the dyads that spent more time Relationship Building. This shows that spending more time building the relationship upfront may be helpful for leader dyad performance.

Turning to Hypothesis 2, which stated that leaders would face more conflict if they found one another to be dissimilar and less conflict if they find one another to be similar, we continued the post hoc analyses. Again, we performed a one-way ANOVA and used the dummy-variable for dyad outperformance of single leader teams to examine group differences. A univariate model was not significant when examining outperformance of single leader teams in time spent Relationship Building on the planning task in terms of Quality ($F(1, 22) = .36, p = .55$) or Originality ($F(1, 22) = .03, p = .86$). Thus, there were no significant group differences between dyads that did outperform single leaders and dyads that did not outperform single leaders, based on the amount of time leaders spent building their relationship. A univariate model examining the difference between how leaders spent their time was also not significant when examining outperformance of single leader teams with respect to time spent On the Task during the planning task for either Quality ($F(1, 22) = .25, p = .62$) or Originality of the group outputs ($F(1, 22) = .03, p = .87$). Again, the amount of time leaders spent on the task did not appear to have an effect on whether or not dyads outperformed single leaders.

We also observed the mean differences in time spent on the planning task. An examination of the means for these groups also revealed that differences may be present, but not detected by our low-power analyses. Our results indicated that leaders of dyad teams that outperformed single leader teams in Quality on the planning task spent more time On the Task on average ($M = 3.09, SD = 1.67$) than did dyads who did not outperform single leader teams (M

= 2.88, SD = 1.48). Further, dyad teams that outperformed single leader teams spent less time Relationship Building on the planning task on average ($M = 1.12$, $SD = 1.17$) than dyads that did not outperform single leader teams ($M = 1.31$, $SD = 1.16$). The trend shown by the means indicates that successful leader dyads did spend more time on the task and less time building their relationship when working on the planning task. This is similar to Hypothesis 2, which stated that leaders progress through the initial relationship-building phase to address the task at hand.

High Performing Dyads and Conflict. We also examined specific interactions between leaders (i.e. Emotional Conflict) to better understand the behaviors—beyond how they spent their time—that may have contributed to a leader dyad outperforming a single leader. Continuing the post hoc analyses, we performed a one-way ANOVA with the dummy-variable for dyad outperformance of single leader teams to examine group differences. A univariate model was significant when examining outperformance of single leader teams in Originality and Emotional Conflict on the brainstorming task ($F(1, 22) = 4.58$, $p < .05$). Leaders of dyad teams that outperformed single leader teams on Originality on the brainstorming task appear to have experienced more Emotional Conflict on average ($M = 2.61$, $SD = 1.14$) than dyads that did not outperform single leader teams ($M = 1.82$, $SD = .62$). Further, Emotional Conflict approached significance for Quality of the group's output on the brainstorming task $F(1, 22) = 2.85$, $p = .11$). A univariate model also approached significance when examining outperformance of single leader teams in Originality and Disagreement on the brainstorming task ($F(1, 22) = 3.27$, $p = .11$).

This is similar to Hypothesis 2, which stated that the more leaders felt the other to be dissimilar to the self, the more conflict they would experience. While we could not gather an

exact similar- or dissimilar-to-the-self measurement by leaders of one another, the results show that that dyads that outperformed single leader teams experienced a higher degree of Emotional Conflict and Disagreement. Interestingly, these elements of conflict were particularly important in the brainstorming phase. This deviates from Hypothesis 2. While we hypothesized that conflict would be a crucial element in the middle to late stages of the dyad's relationship, our results indicate that conflict was important for success early on in the relationship. A possible explanation for this may be that the leaders were only working together for a total of 50 minutes, while most dyadic relationships extend beyond an hour's time. Thus, the events and interactions of the lifecycle may have unraveled more quickly for the leaders of this study.

In total, these exploratory findings contribute to our understanding of the dyadic leadership lifecycle. Most notably, these results indicate that successful leaders appeared to follow the hypothesized lifecycle. Further, conflict seems to be an important component of leader dyads in terms of both quality and originality of their group's performance. This indicates that the lifecycle for dyadic leaders is dynamic and may depend on the particular leaders or objective considered. However, there is a relatively constant set of interactions that leaders will engage in through their course of their time working together. We expand on these ideas in our discussion in the following section.

Chapter 7

Discussion

This study examined the interactions between leaders in the lifecycle of dyadic leadership during innovative task completion. We tested our hypotheses in a lab study by manipulating leadership structure and giving teams a series of creative tasks to complete. Hypothesis 1 suggested that leader dyads would first meet and get to know one another on a personal level. This hypothesis was not supported. Hypothesis 2 suggested that after building their relationship, leaders would move on to the task at hand. If leaders found one another to be similar to the self, they would not experience as much conflict in this stage. Moreover, if they felt that the other leader was dissimilar to the self, they would experience a higher degree of conflict. This hypothesis was partially supported, such that the more leaders experienced conflict that stemmed from their different personalities, the greater degree of disagreement between them. Finally, Hypothesis 3 suggested that the leaders would attempt to come together and collaborate to address followers, but that this may be difficult if they experienced an exceptional amount of conflict in the middle phase of the lifecycle. This hypothesis was also partially supported, such that disagreement was a significant predictor of originality of group outputs for the planning task. Due to the inconsistent nature of our results, we also proposed and tested a number of exploratory relationships.

Specifically, we examined how leaders used their time, as well as the types and levels of conflict leaders experienced. Regarding how leaders used their time, our results indicated that the

amount of time dyads spent discussing the task during the brainstorming phase did not influence outperformance of single leaders. While our analyses did not produce any significant relationships, we did find that further analyses of the means provided us with information about the leader dyads. The results demonstrated, as hypothesized in Hypothesis 1, leaders spent more time getting to know one another on a personal level upon first meeting. The trend shown by the means in the analyses was that successful leader dyads spent more time on the planning task. Therefore, the leaders first engaged one another on a personal level and then addressed the task at hand, as suggested in the hypothesized lifecycle.

Additionally, we examined the level and type of conflict that dyads experienced throughout their time together leading the group. The results showed that dyads that outperformed single leader teams experienced a higher degree of emotional conflict and disagreement. Further, results showed that these elements of conflict were particularly important during the brainstorming task. While this deviated from our prediction in Hypothesis 2, a possible explanation may be that this interaction of approximately two hours is quite short when compared to the average leader dyad in the workplace. Thus, the events and interactions of the lifecycle occurred more quickly for the leaders of this study, which is why we saw conflict becoming important at an earlier stage.

Overall, our results and exploratory findings contribute to our understanding of the dyadic leadership lifecycle. Primarily, we were able to identify conflict and collaboration as staple interactions in the leadership dyad lifecycle in terms of both quality and originality of group performance. Additionally, in examining the leader relationships we found that our analyses were only partially supported and there was more support in later stage of our proposed lifecycle. This may indicate that the lifecycle for dyadic leaders is dynamic and depends on the

particular leaders or objectives considered. Perhaps most importantly, we identified a relatively constant set of interactions that leaders will engage in through their time working together.

In terms of implications for the workplace, our results suggest a few important things about the nature of leader dyad relationships. First, leader dyads may be an effective way to increase the level of originality or creativity of group ideas and/or outputs. As suggested in our test of Hypothesis 3, the inclusion of a second leader may allow for leaders to consider more ideas and may cause leaders to become critical of each other's ideas. This may, in turn, lead to ideas that are higher in creativity. Second, our results suggest that the dyadic leader structure may not be the most effective structure if quality is an important outcome. The inclusion of two leaders may clutter the process of completing the task(s) and distract group members from the quality. Specifically, leaders may get caught up with one another on any given matter, or group members may not find a sense of continuity with two leaders in front of them. Third, the actions of leader dyads may not follow the prescribed lifecycle. However, it is important to note that every leader dyad examined in this study experienced conflict, and in multiple forms (e.g. conflict regarding general ideas, conflict regarding work-related ideas, and conflict stemming from personality differences).

Conflict plays a clear role in the interactions of leader dyads. However, not all conflict results in negative outcomes. As suggested by leader dyads that outperformed single leaders, conflict may give way to richer brainstorming or more effective planning. Recognizing the role of conflict, as well as the possible advantages that come with the conflict, suggest that leaders in the workplace should deal with those issues when they arise and capitalize on them. While these findings are quite informative of the behaviors and interactions of leader dyads, including those

that outperformed single leader, we do acknowledge that there are limitations of this study.

These limitations and suggestions for future research are discussed below.

Limitations and Future Research

We would like to discuss several limitations to this study. As we mentioned previously, the time frame of the study was limiting. Leaders were together for approximately two hours to complete the study, and interacted separate from followers for only about 50 minutes. Thus, they were required to engage a random partner, gather information about him/her, work together with him/her on the task, and then lead their group members in a very short amount of time. However, people tend to have anywhere from several days to several years to work with one another in the real-world workplace. We acknowledge that two hours may not have been enough time for the leaders to conduct thorough work with one another.

Additionally, our participants may not have captured the climate of leader dyads in the workplace. In the real-world organizational setting, dyads tend to be involved in high-stakes situations. Whether the dyad is composed of project managers at the local grocery store or Steve Jobs and Tim Cook of Apple, there is usually something at stake (e.g. salary, promotions, patents, etc.). Those leaders dyads in the workplace have not only personal, but also professional stake in the task(s) at hand. Alternatively, our participants were involved in a very low-stakes situation. They participated in this study for class credit, and thus may not have been motivated to sort through a difficult leadership process. This may have tempered the amount and types of conflict and the amount of collaboration that participants engaged in throughout the course of the study.

Finally, the operationalization and measurement of our variables may have been incorrect and/or not comprehensive. For instance, the coding procedures may not have been able to capture the constructs of interest. This can occur when the phenomena being studied are particularly novel—even when the measurement decisions are theoretically driven. While we were careful and considerate when developing coding procedures, we admit that this may have been a limitation in our study.

Future research can build on these limitations to learn more about leader dyads and the identification and/or construction of successful leader pairs. The most notable idea for future research is to examine active leader dyads in the workplace. Examining these pairs in a realistic work environment would answer key limitations in our study, such as the time limit constraint and the matter of low stakes presented in this study. Gathering information about active dyads may better inform our understanding about leader dyads in terms of both the behaviors and interactions they engage in. Specifically, future research could address whether or not this particular lifecycle plays out in the workplace, as well as what types of people make for the best dyads: Is it that two people need to be both extroverted or that one needs to be extroverted and the other introverted? Additionally, we may need to investigate whether leaders need to pair with other leaders who have certain characteristics, or with leaders who bring out certain traits and elicit certain behaviors from one another? These ideas and questions are not exhaustive, but provide a direction for future research on leader dyads.

Appendix B

Nam, Lyons, Hwang, & Kim's (2009) adaptation of Bales' (1950) Interaction Process Analysis Scale

| Functional Area | Category | Example |
|--|--|---|
| Socio-emotional area: Positive reactions | 1. Shows Solidarity/Seems Friendly: Any act that shows positive feelings toward another person | Thanks so much for the help. |
| | 2. Shows Tension Release/Dramatizes: Any act that reduces the anxiety that a person or group may be experiencing | Wow, that was funny. |
| | 3. Shows Agreement: Any act that shows acceptance of what another person has said | Yeah, I agree with you. |
| Task area: Attempted answers | 4. Gives Suggestions: Any act that offers direction/action for how to engage in the task | I believe we can do better than that. |
| | 5. Gives Opinions: Any act that advances a belief or value that is relevant to the task | Just practice some more. |
| | 6. Gives Orientation/Information: Any act that reports factual observations or experiences | Open door by pressing the red button. |
| Task area: Questions | 7. Asks for Orientation/Information: Any act that requests factual observations or experiences | How can I improve my sword slashing? |
| | 8. Asks for Opinions: Any act that requires a belief or value that is relevant to the task | What do you thin of this move? |
| | 9. Asks for Suggestions: Any act that requests direction/action for how to engage in the task | How can I open this door? |
| Socio-emotional area: Negative reactions | 10. Shows Disagreement: Any act that shows rejection of what another person has said | I told you that is not allowed in here. |
| | 11. Shows Tension: Any act that indicates that a person is experiencing anxiety | I am not happy right now. |
| | 12. Shows Antagonism/Seems Unfriendly: Any act that shows negative feelings toward another person | Why don't you just shut up? |

Appendix C

Jehn (1995) Intragroup Conflict

Cronbach's alpha – relationship = .92

1. How much friction is there among members in your work unit?
2. How much are personality conflict evident in your work unit?
3. How much tension is there among members in your work unit?
4. How much emotional conflict is here among members in your work unit?

Cronbach's alpha – task = .87

5. How often do people in your work unit disagree about opinions regarding the work being done?
6. How frequently are there conflicts about ideas in your work unit?
7. How much conflict about the work you do is there in your work unit?
8. To what extent are there differences of opinion in your work unit?

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ACADEMIC VITA

Ashley Niler
avn5105@psu.edu

EDUCATION

Pennsylvania State University, Schreyer Honors College

Bachelor of Science, Psychology, May 2015 (expected)

Labor and Employment Relations, Honors Minor

Senior Honors Thesis: *Balancing Power and Conflict: A Qualitative Look at the Interactions of Leader Dyads*

Paterno Liberal Arts Undergraduate Fellows Program

Dean's List: Spring 2012 – Present

REESERACH EXPERIENCE

Aug. 2014 – Present **The Pennsylvania State University** **University Park, PA**
Schreyer Honors College PNC Bank Leadership Assessment Center

- Collaborate weekly with undergraduate and graduate research assistants and faculty members to develop and improve assessment center exercises, with a focus on behavioral ratings and feedback
- Supervise the day-long Assessment Centers to facilitate the assessment of participants throughout the day
- **Advisor:** *Dr. Rick Jacobs*

June 2014 – Aug. 2014 **American Psychological Association (APA)** **Fairfax, VA**
Summer Science Fellow

- Developed hypotheses and used archival data analysis to examine the effect of team composition on team collective efficacy, as partially mediated by the quality of task force planning (e.g. quality of team charter)
- Conducted literature reviews on the topics of leadership and innovation, teamwork planning, and team composition and collective efficacy
- Coded qualitative data
- Participated in various professional development workshops with professionals from academia, industry, and government positions
- Selected as one of twelve fellows from a pool of 500 applicants
- **Mentor:** *Dr. Stephen Zaccaro*

Secondary project: Men, Women, and Parents: Who Achieves Desired Working Hours, and Why?

- Conducted literature review of gender and work-life balance, specifically reasons why females may prefer fewer working hours than males
- Analyzed data from the National Study of the Changing Workforce survey, a nationally representative sample

- Submitted results to the Society of Industrial/Organizational Psychology's 2015 conference
- **Mentor:** *Dr. Eden King*

Dec. 2013 – Feb. 2014 **Leadership Research Institute (LRI)** **Middletown, CT**
Intern

- Conducted a review of recent literature in the field of emotional intelligence (EI) to develop and support an executive EI tool
- Created templates which included applied examples and best practices as shown in the literature to convey their executive EI tool to clients
- **Mentors:** *Drs. Cathleen Swody and Rob Fazio*

May 2013 – Aug. 2013 **United State Department of Homeland Security (DHS)** **Falls Church, VA**
DHS STEM Intern

- Researched organizational change, change management, and group dynamics
- Formulated a template for large-scale organizational change based off of Kurt Lewin's organizational change model, with specific smart practices in each phase of unfreeze, transition, and refreeze
- Briefed Homeland Security Studies and Analysis Institute staff on findings
- Conducted additional research on strategic workforce management, and smart practices for the final report

April 2013 – Present **The Pennsylvania State University** **University Park, PA**
Leadership Enrichment through Assessment and Development (LEAD) Program

- Gather holistic information about participants from pre-interview materials (e.g. resume, survey, and other self-reported data)
- Interview participants in conjunction with graduate students
- Evaluate participants on behaviorally anchored ratings scales regarding Bartram's 8 Great Competencies
- Transcribe information from pre-interview and interview materials for individual feedback reports
- **Advisor:** *Dr. Rick Jacobs*

Sept. 2012 – Present **The Pennsylvania State University** **University Park, PA**
Leadership and Innovation Lab (LIL), Lab Coordinator

- Contribute to graduate student theses and dissertations by generating task ideas, assisting with data collection, and analyzing data produced from studies
 - Analyze and quantify qualitative research on group performance and leadership relations
 - Qualified for CITI Training certification for human subjects (September 2012)
 - Interview, evaluate, and train potential lab members
 - **Advisor:** *Dr. Samuel Hunter*
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PRESENTATIONS

Posnock, S., Medvin, E., Bleiberg, M., **Niler, A.**, Kanfer, R., and Zaccaro, S. (2015, April). Antecedents to cohesion and process efficacy in teams and MTSs. In S. Posnock and S. Zaccaro (Chairs), *Multi-Team Systems: Determinants and Dynamics of Emergent States*. Symposium accepted at the 30th Annual Conference of the Society for Industrial and Organizational Psychology, Philadelphia, PA.

PUBLICATIONS

Keelan, D., Alford, J., Mara, M., **Niler, A.**, & Harford, L. (30 September 2013). "Smart Practices in Federal Strategic Workforce Planning." *Homeland Security Studies and Analysis Institute* for the U.S. Department of Homeland Security.

Mara, M., Altmire, B., Dugan, E., & **Niler, A.** (30 September 2013). "Operationalizing Mission Integration: A Tool Kit for Practitioners, Final Report." *Homeland Security Studies and Analysis Institute* for the U.S. Department of Homeland Security.

ACADEMIC EXPERIENCE

Oct. 2013 – Senior Honors Thesis

Present *Schreyer Honors Scholar*

- Examined videos of two leaders to identify which behaviors were characteristic of successful leader dyads
- Conducted a literature review, developed hypotheses, collected data, developed benchmarks, trained coders, organized coding, and performed statistical analyses
- Managed a group of six undergraduate research assistants through conducting a lab study and the process of coding qualitative data
- Three faculty members will review and approve the final thesis
- **Thesis Advisor:** *Dr. Samuel Hunter*; **Honors Advisor:** *Dr. Rick Jacobs*

Aug. 2011 – Present **Paterno Liberal Arts Undergraduate Fellows Program**

Paterno Fellow

College of the Liberal Arts and Schreyer Honors College, Penn State

- Required to earn a 3.8 GPA for admittance; must maintain at least 3.4 GPA once accepted, and earn a 24-credit minor
 - Completed an internship for academic credit
 - Served as a leader in the school community
 - Working toward an Excellence in Communication Certificate
 - Completing a capstone project
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LEADERSHIP

Aug. 2011 – Penn State Crew

May 2014 *Coxswain, Varsity Men's Team*

- Extension of coach during practice: teaching and solidification of technique, timing, and boat cohesiveness
- Figurehead to both the men's and women's teams on and off the water
- Attended daily practice at 4:45 AM on the water and 6:15 AM on land

Aug. 2014 – Schreyer Honors College, The Pennsylvania State University

Present *Career Development Program Mentor*

- Advised an underclassmen honors psychology major in classwork, school activity involvement, internship/career opportunities, and time management/work-life balance
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