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An Inquiry into Factors of Leadership and Cohesion in Complex Teams

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Abstract

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MBA, Saint Leo University, 2005

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Dissertation Submitted in Partial Fulfillment

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Abstract

The external competitive environments and internal group dynamics of organizations are increasing in complexity resulting in new challenges for organizational leaders to improve performance in underperforming teams. The purpose of this phenomenological study was to address what factors led to high-innovation outcomes in complex adaptive systems using a framework constructed from elements of complexity leadership theory and group dynamics research. An in-depth interviewing approach was used to collect data on the lived experience and meaning the participants attributed to their experiences regarding improved team performance. A total of 21 participants were selected from multiple business settings where their team experienced adaptive tension and improved group cohesion. Their stories were reduced into themes using an inductive process and later analyzed through the lens of complexity leadership theory. The factors that emerged in this study, leveraging tension in the group dynamics enabled through objectivity, roles, alignment, capability, execution, purpose, and work ethic that led to mutual respect, directness, and reliance, offer leaders an effective method for achieving sustained team performance. These factors can be used by organizational leaders to improve team performance and consistency in team outcomes over traditional command and control approaches with a work exchange that benefits individual team members. The findings from this study contribute to social change by improving not only team performance, but also member satisfaction. When leadership is viewed from the perspective of the whole system instead of from the perspective of the individual, the relationships between people emerge as the primary enabling factor for high-innovation outcomes.

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Chapter 1: Introduction to the Study

Researchers have explored group cohesion and the cohesion-performance relationship in many disciplines including sociology, organizational behavior, political science, and psychology (Castaño, Watts, & Tekleab, 2013; Hedlund, Börjesson, & Österberg, 2015). In addition, several meta-analyses have been conducted over the years to examine the moderators to the cohesion-performance relationship (Castaño et al., 2013; DeChurch, Mesmer-Magnus, & Doty, 2013; Mesmer-Magnus, Glew, & Viswesvaran, 2012). Although there is general agreement that cohesion and performance are related, there is still inconsistency in the literature related to the relationship of moderators in different group settings. Researchers to date have not provided a detailed enough understanding of group interactions and events that lead to high-innovation outcomes (Srikanth, Harvey, & Peterson, 2016). In this study, I constructed a view of group cohesion in the business setting focused on high-innovation teams (i.e., teams facing challenges requiring creativity, adaptation, and learning) and used complexity leadership theory (CLT) as a theoretical foundation. By focusing on high-innovation teams, I wished to discover insight into the methods that organizational leaders use to improve team performance through the administrative, enabling, and adaptive leadership roles of CLT.

CLT includes a model for understanding the complex nature of high-innovation teams and a unit of analysis at the group level as recommended by some group dynamics researchers. In this model, leadership is both administrative and emergent, enabled through the interactions of interdependent group members (Marion & Uhl-Bien, 2011). Incorporating emergent dynamics into the framework was important for understanding

high-innovation teams because creativity, adaptation, and new learning are emergent processes that cannot occur through simple dictate (Marion & Uhl-Bien, 2011). One of the conditions for high-innovation teams, as defined in CLT, is the need for tension to exist within the team to provide the motivation or incentive to innovate, create, or apply knowledge in a new way. This tension, however, stands in conflict with group cohesion; therefore, I focused on understanding the cohesion-performance relationship considering the adaptive tension defined in CLT.

Statement of the Problem

Improving team performance is not as straightforward as it was in the industrial age (Mendes, Gomes, Marques-Quinteiro, Lind, & Curral, 2016). Organizational leaders are facing new challenges as the competitive landscape and group dynamics within their organizations continue to increase in complexity. This is evidenced by the volume of research on organizational and leadership performance and current findings from studies grounded in CLT. The majority of the past studies on leadership performance were grounded in traditional hierarchical theories and overly simplistic models (Graham, 2010; Marion & Uhl-Bien, 2011; Ott, 2010; Sweetman, 2010). Organizations of all sizes are complex adaptive systems (CAS) comprised of people in continually changing patterns of interaction that adapt based on formed tension within the group dynamics (Marion & Uhl-Bien, 2011).

Although past researchers have examined group cohesion and team performance, there is still little understanding of how group cohesion emerges out of the complex adaptive interactions of group members and how these interactions relate to team performance (Graham, 2010; Marion & Uhl-Bien, 2011; Sweetman, 2010). Because

organizations must deal with the nonlinear and unpredictable nature of adaptive interactions of group members, further research on a more precise understanding of the cohesion-performance relationship within the full context of the group dynamics may lead to ways for organizational leaders to improve team performance through the administrative, enabling, and adaptive leadership roles as defined in CLT. Still, too many teams are continuing to underperform because adaptive tension that forms within CAS is producing unpredictable adaptations that frequently result in lower performance outcomes as organizations increase in complexity.

Background

Raelin (2016) indicated that traditional views on leadership are focused on predetermined outcomes, because leaders exert influence to achieve predetermined goals. These leaders emphasize directing, controlling, or influencing the behaviors of others and are credited for the success or failure of the team. Further, emergance and self-organizing behaviors are viewed as disruptive to the organization, requiring correction. Because hierarchical approaches that over control organizations have been shown to limit flexibility and experimentation, a new approach is needed to improve innovation (D'Innocenzo, Mathieu, & Kukenberger, 2016).

Enabling innovative outcomes requires tension to exist between conformity and creativity, or the balancing of administrative and entrepreneurial leadership (Pierro, Raven, Amato, & Bélanger, 2013). Marion and Uhl-Bien (2011) proposed a view of leadership using the concept of CAS where people interact in a neural-like network of interaction held together by a common goal, making the unit of analysis at the group level. Within this concept, leadership is directed from the hierarchical authority and

emerges from the interactive group dynamics. There are three types of leadership in CLT: administrative, enabling, and adaptive leadership. Administrative leadership is the traditional hierarchical authority that acts formally to coordinate organizational activities, including goal setting and other managerial roles. Enabling leadership structures conditions that give CAS the freedom to create, innovate, and learn. Adaptive leadership is the dynamic interaction of administrative and enabling leadership within the CAS where choices are made.

The context in CAS is not seen as a moderator effect, but "the ambiance that spawns a given system's dynamic persona" (Marion & Uhl-Bien, 2011 Editor's note, para. 6). Leadership cannot be separated from the context of the organization (Graham, 2010). The people, both leader and follower, are interconnected, coinfluencing and naturally adapt to each other. They adapt to their individual and shared experiences, the contextual conditions of the environment, and interactions both internal and external to the organization. CLT defined this interconnected form of leadership as the space between people where interactions allowed for creativity, adaptation, and learning (Ott, 2010).

For a CAS to emerge within an organization, the group members must be able to interact with one another and the environment, the productive well-being of each of the interacting group members must be positively correlated (i.e., interdependent), and there must be a tension or a clash of seemingly incompatible ideas (Marion & Uhl-Bien, 2011). It is in this context that creativity, adaptation, and knowledge formation occur; however, this tension is a contradiction to cohesion within CAS (Marion & Uhl-Bien, 2011). Because cohesive teams maintain higher levels of productivity (Chun & Choi, 2014), a

more complex construct for examining the cohesion-performance relationship is needed to understand the context of CAS.

Group cohesion is defined as the degree to which members are attracted to each other and are motivated to stay in the group (Castaño et al., 2013). In practice, it is more useful to conceptualize cohesion in more than one dimension (Castaño et al., 2013). Castaño et al. (2013) proposed a two-factor conceptualization: task cohesion and social cohesion. Task cohesion is the degree to which members are committed to completing group tasks and motivated towards the overall goals of the group. Social cohesion is the emotional bond that motivates an individual to stay in the group based on friendship and enjoyment of his or her interactions with the other group members. These concepts fit well with the context of interdependent agents experiencing adaptive tension. Task cohesion works to reinforce the cohesion of the group (assuming the agents require one another) and also works to create tension if the agents are in disagreement. Social cohesion works to reinforce group cohesion but likely would also reduce adaptive tension.

Trust among group members was a common theme in the literature on CLT (Ernst & Chrobot-Mason, 2011; Graham, 2010; Hinrichs, 2010; Ott, 2010; Sims, 2009). Another common theme was the concept of community or some nonlinear event that led to new interactions between group members. Other themes such as individuals feeling secure in their position, mutual respect among group members, and accountability were also frequently associated with team success (see Table 1).

Table 1

Emergent Themes from Selected Research in Complexity Leadership Theory

Theme	Bennis (2003)	Ernst & Chrobot-Mason (2011)	Graham (2010)	Hinrichs (2010)	Ott (2010)	Sweetman (2010)
Accountability			X	X		
Community		X	X	X	X	X
Creativity			X			X
Diversity						X
Integrity	X					
Interdependence		X				
Learning					X	
Listening			X			
Respect	X	X	X		X	
Safety		X		X	X	
Transformation		X				
Trust	X	X	X	X	X	

Ott (2010) explored the nature of relationships and interactions between individuals who enabled the successful leadership of radical product innovation in the biomedical context. These were high-innovation teams focused on the creation of entirely new products or existing products being applied to an entirely new market as opposed to incremental product innovation where improvements were made to existing products for the same market. Ott explained that these team environments were comprised of many interactions between interdependent group members who worked within a network and best examined as CAS. Ott affirmed that context was important in leadership, and traditional hierarchical management does not work well in a rapid change context. Ott discovered that structures that enabled collaborative interaction between group members existed and these relationships were collegial, trusting, caring, and supportive. The organization had a learning orientation, and leadership was fluid, based on influence, not authority. Emergent leadership was encouraged, and these leaders were eventually mentored into formal roles. Tension around ideas was also encouraged, but the interpersonal conflict was diffused.

Sweetman (2010) studied the relationship between collective creativity and shared leadership. According to Sweetman, the creative moment occurs from the mindful interactions of individuals within a social system as opposed to the individual. Sweetman used social network analysis to examine creativity in the space between individuals, which aligned with the adaptive leadership role of CLT. Sweetman demonstrated that shared leadership and creative interaction predicted innovation. Further, innovative teams were far more decentralized than less innovative teams, supporting the theory that

the network of interactions, rather than a handful of creative leaders, produced innovative outcomes.

Ernst and Chrobot-Mason (2011) conducted a survey with 2,800 respondents and in-depth interviews with 300 leaders in six global regions, and identified major organizational boundaries and some strategies that organizations used to span these boundaries enabling group cohesion. Ernst and Chrobot-Mason identified boundaries between the hierarchical levels, functional, and other units of division, including stakeholders, demographics, and geography. In addition, some of the themes that emerged and enabled organizations to span these boundaries included protecting individuals so they felt safe, fostering mutual respect among group members, building trust through collaboration and interaction, and crafting a common purpose for the newly formed teams to create a new community. Ernst and Chrobot-Mason introduced methods for organizational leaders to manage group membership by breaking down barriers and rebuilding cohesion around newly formed teams. Within the context of high-innovation teams, these methods helped both the adaptive and the enabling leadership roles by realigning group membership that created conditions for emergance and facilitated the adoption of new innovations by the organization.

Graham (2010) conducted a narrative study with the purpose of understanding how individuals in a leading relationship facilitated dynamic coemergence. Coemergence means the whole not only arises from its parts but also the parts arise from the whole. Graham discovered that because a leader was in a coinfluencing relationship with the group, the team experience coemerged. Trust and listening surfaced as conditions for these coinfluencing relationships, which is consistent with the adaptive and enabling

leadership roles in CLT. By expanding the leadership framework beyond the administrative leadership role to include both adaptive and enabling leadership, CLT is leading to new understanding of the group dynamics.

Sims (2009) conducted a case study on an organization that went through a transformative event, which was defined as a phase transition. The objective was to understand how phase transition occurred within organizations. Sims mapped the stages the organization went through from the conditions that existed prior to the change, what led to adaptive leadership, and the new reality. The stages that emerged were adaptive tension, far from equilibrium, increased interaction, emergent ideas (i.e., aha moments), new interactions, interdependence, accumulation, phase transition, and new emergent order.

Graham (2010) and Ernst and Chrobot-Mason (2011) also mapped phase transitions in their studies. Graham started with entering a relationship with paradigms defined by prior experience followed by coinfluencing, enablement, role shift, and coemergence. The enablement stage included elements such as trust and listening. Role shift involved leading, teaching, and learning. Graham demonstrated how these coinfluencing relationships moved through each of these stages culminating into coemergence. Earnst and Chrobot-Mason started with buffering followed by reflecting, connecting, mobilizing, weaving, and transforming. Earnst and Chrobot-Mason defined safety, respect, trust, community, interdependence, and reinvention as enabling conditions for each stage.

Foundation Analysis of Selected Research

In the course of reviewing the literature for completeness, citations that provided theoretical or conceptual foundations for the selected studies above were analyzed. This analysis led to the discovery of additional literature that was incorporated into the analysis below (see Tables C1 through C7 in Appendix C). Further, additional searches were conducted for works by the individual authors most cited. These authors included Uhl-Bien, Marion, McKelvey, Anderson, Conger, Lewin, Lichtenstein, Pearce, and Yukl (see Table 2). These sources were included in the literature review in Chapter 2 and provided a review of prior leadership theory and research on group cohesion.

The studies included in the foundation analysis dated from 2010 to 2014. These studies were grounded in CLT and were selected based on their relevance to this study. The literature that supported the theoretical foundations of these studies were also examined to identify additional authors relevant to CLT. I found that many authors are cited, but only a few were common across all the studies. The most cited work was Marion and Uhl-Bien (2011) referenced by the following five authors: Geer-Frazier, Metcalf & Benn, Ott, Presley, and Sweetman. This cited work is discussed further in the Theoretical Support for this Study section later in this chapter.

Table 2

Researcher Concentrations from Selected Studies on CLT

Researchers	Graham (2010)	Geer-Frazier (2014)	Metcalf & Benn (2013)	Ott (2010)	Presley (2014)	Sims (2009)	Sweetman (2010)
Marion	X	X	X	X	X	X	X
Uhl-Bien	X	X	X	X	X	X	X
McKelvey		X	X	X	X	X	X
Anderson	X	X			X	X	
Conger	X		X	X			X
Lewin	X	X				X	X
Lichtenstein				X	X	X	X
Pearce	X		X	X			X
Yukl			X	X	X	X	
Graen	X		X			X	
Hazy			X	X	X		

In addition to Uhl-Bien, Marion, and Mckelvey, there were only two cited works referenced by four authors and two cited works referenced by three authors. Some of the authors of these cited works contributed to more than one study, so a list was created of each contributing author and the corresponding frequencies across the selected studies. The result was the discovery of nine authors who contributed to the foundations of these selected studies. The contributing authors are discussed below and are listed alongside Marion, Uhl-Bien, and McKelvey in Table 2.

Anderson (1999) described four elements to CAS: agents with schemata, self-organizing networks sustained by importing energy, coevolution to the edge of chaos, and system evolution based on recombination. Agents with schemata speak to a person's nature and operating mechanisms to achieve outcomes (Crawford & Kreiser, 2015). Agents in CAS adapt based on their perception of the environment or how they adapt to maximize their derived value from the environment. These agents are interdependent, and they tend to self-organize and contribute work to the group. As they contribute, the environment changes forcing the agents to adapt further. This process leads to the point of equilibrium between order and chaos, which is based on environmental evolution and fitness concepts. When viewed in the macro sense, the whole system evolves based on the complex adaptations of the interdependent agents who contribute work at lower levels of details within the system.

Though Anderson's (1999) objective was the discovery of new models in organizational science to predict the behaviors of agents in CAS, more recent studies have discovered that the adaptations of these agents are unpredictable (Geer-Frazier, 2014; Graham, 2010; Presley, 2014). Still Anderson posed a series of questions that were relevant to this study (Anderson, 1999, p. 227):

1) Who are the agents?
2) What are the agents' schemata?
3) How are the agents connected?
4) What payoff functions do these agents pay attention to?
5) How do the actions of one agent affect the payoffs of others?

Conger (2013) discussed three gaps that are inhibiting the transfer of lessons from the classroom into practice: a reality gap, a skill intensive gap, and an application gap. Conger explained that leadership models are simplistic and lack the realism necessary to convey an accurate account of leadership. These education programs tend to be broad, lacking a depth complex enough to fully develop leadership skills. Finally, many of these programs lack a practical application component needed for effective retention and subsequent implementation in the workplace. Conger also grouped leadership models into three categories: normative, leader-follower, and iconic. Normative or traditional leadership models (i.e., transformative, transactional, etc.), do not explain the complexity of leadership. Normative models are based on substantive research, but only provide insight into small aspects of the "real richness of leadership phenomenon" (Conger, 1999, p. 79). Other models are based on a dyadic leader-follower construct and do not include concepts of influence from peers, subordinates, and other stakeholders. Conger also explained that iconic leader models are popular for illustrating best practice but are inadequate for explaining other factors that lead to these leaders' success, such as their time in history, fit with the organization, and influences that caused them to adapt.

Lewin (2000) also explained the limits of traditional leadership models. Organizations are CAS that are in many ways unpredictable and require leadership models that recognize the complex nature of these systems (Lewin, 2000). Organizations should not be viewed as machines to be controlled, but as ecosystems to be influenced. Leadership models grounded in complexity science are designed to address this issue. These models show the interactions among people in CAS enable the emergence of creativity, culture, and productivity. Structure and some control are still required, but

how the leader establishes this structure, and control mechanisms influences what emerges.

Pearce et al. (2014) explained shared leadership as an approach to achieve responsible leadership. Shared leadership is not a replacement for hierarchical leadership, but instead works in conjunction and is made possible by leaders in their formal role. Trust is essential for the emergence of shared leadership as is good communication skills, alignment of responsibility with ability, accountability, and a common vision. Shared leadership is similar to CAS because it involves a complex adaptive process of interaction between people, leading the team towards a collective goal (Schermerhorn, 2012). Shared leadership minimizes practices that focus on control and direction and emphasize facilitation and development (Graham, 2010).

Yukl (2012) conducted a meta-analysis on the landscape of leadership theory and discovered that the effectiveness of leadership behavior is better explained by group dynamics research than by leadership theories. Four broad meta-categories emerged in the analysis: task-oriented, relations-oriented, change-oriented, and external. Within these broad categories, 15 behaviors were identified (see Table 3). Yukl concluded, "the essence of leadership in organizations is influencing and facilitating individual and collective efforts to accomplish shared objectives" (p. 66). Behaviors impact team performance (Yukl, 2012); however, scholars need a better understanding of which behaviors are important.

Table 3

Leadership Behaviors

Task oriented	Relations oriented	Change oriented	External
Clarifying	Supporting	Advocating change	Networking
Planning	Developing	Envisioning change	External monitoring
Monitoring operations	Recognizing	Encouraging innovation	Representing
Problem solving	Empowering	Facilitating collective learning	

The remaining three contributing authors recommended new methods for researching leadership. Graen et al. (2013) suggested a postmodern framework for examining complex group dynamics, and Hazy (2013) introduced models and various metrics for measuring complex leadership interactions in the context of CAS. One of the primary conclusions, consistent across all of these authors, was traditional leadership theories explain a part of the organizational constructs, but something new is needed to explain interactions between interdependent agents in complex systems commonly found in teams focused on innovation.

Purpose of the Study

The purpose of this study was to discover how adaptive tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance. Traditional hierarchical leadership theories do not provide an

adequate theoretical lens for understanding the complexities of high-innovation teams (D'Innocenzo et al., 2016). These teams are comprised of interdependent, free thinking individuals engaged in complex interactions that promote creativity, adaptation, and learning (Marion & Uhl-Bien, 2011). The group dynamics are not based on simple leader-follower exchanges, but of multiple individuals who step in and out of leader and follower roles, adapt to one another, and collectively create outcomes that are greater than the sum of individual contributions.

Traditional leadership theories partially explain the organizational context, but lack the complexity to explain how organizational contexts emerge out of group dynamics. Better explanations of these emergent behaviors can be found in group dynamics research, but this theoretical foundation lacks a complete model for leaders to leverage for improving team performance. Group dynamics researchers have shown that cohesion between group members improves team performance (Chun & Choi, 2014); however, a deeper understanding of the factors involved in the cohesion-performance relationship and how adaptive tension interplays with group cohesion to produce high-innovation outcomes was needed. Prior research on traditional leadership methods and group dynamics has produced inconsistent results (D'Innocenzo et al., 2016). This study was grounded in complexity leadership theory, but incorporated elements of group dynamics to formulate an understanding of how adaptive tension interplays with group cohesion. This approach led to new methods organizational leaders can leverage to improve team performance through the administrative, enabling, and adaptive leadership roles of CLT.

Significance to Practice, Theory, and Social Change

When leadership is viewed from the perspective of the whole system instead of from the perspective of the individual, the relationships among people emerge as more important than the actions of any one person (Sweetman, 2010). Relationships built on trust and mutual respect form emotional bonds that serve to connect people (Ernst & Chrobot-Mason, 2011). In this study, I introduced a view of leadership in CAS that was not previously provided by prior research and led to new methods for leaders to improve team performance through the enabling, adaptive, and administrative functions of CLT. This type of leadership has the potential to create outcomes in team performance that will be of interest to organizational leaders, but in a way, that also improves the overall work environment for the people involved.

Methods promoted by traditional views on leadership emphasize directing and controlling the behavior of others to achieve predetermined goals, which diminishes or limits alternative contributions (Raelin, 2016). The new methods derived from the emergent forms of leadership promoted by CLT, and confirmed by this research study, was sustainable team performance and improved job satisfaction for the people on these teams. Command and control methods have demonstrable outcomes, but from only one side of the work exchange. The free participation of individuals in organizational systems built on relationships of mutual respect has the potential to produce superior outcomes with a work exchange that benefits both the organization and the individual team participants.

Nature of the Study

Because the focus was on the lived experiences of people within CAS, this study was interpretive and inductive by nature, which necessitated a qualitative methodology (Leedy & Ormrod, 2012). I sought an understanding of group cohesion from the team perspective within the context of CAS. Although a narrative approach may have worked, it would have focused on lived experiences from an individual's perspective. The focus of this study was the shared experience as interpreted by the individual members of the team, so a phenomenological approach was more appropriate (Leedy & Ormrod, 2012). There is a cultural aspect to this shared experience, but because the focus was on the phenomenon of adaptive tension in cohesive group dynamics and not the participants' culture, an ethnographic approach was not chosen (Leedy & Ormrod, 2012).

Research Questions

This study rests within the realm of CLT, but at a point of convergence with a significant volume of research on the cohesion-performance relationship in psychology (Castaño et al., 2013; DeChurch et al., 2013; Hedlund et al., 2015; Mesmer-Magnus et al., 2012; Moore & Mamiseishvili, 2012). Though the relationship between group cohesion and group performance was well established, there were inconsistencies in how cohesion was defined and measured that required more clarity (Castaño et al., 2013). Framing the cohesion construct in the context of CAS provided a new perspective to the cohesion-performance relationship. I focused on understanding the dynamic mechanisms within the cohesion constructs through the theoretical lens of CLT, which meant viewing teams as CAS. The general research question that drove this study was the following:

What factors led to high-innovation outcomes in complex adaptive systems? The subresearch questions that followed were

RQ1: How did group cohesion emerge through the interactions of interdependent group members within complex adaptive systems?

RQ2: How did group cohesion relate to improved team performance in the context of complex adaptive systems?

Conceptual Framework

"Complexity theory is the study of the dynamic behaviors of complexly interacting, interdependent, and adaptive [teams] under conditions of internal and external pressure" (Marion & Uhl-Bien, 2011, The uniqueness of complexity theory, para. 1). As applied to leadership and organizational systems, the people who make up organizations, or what CLT calls CAS, are comprised of free-thinking individuals within complex, interdependent relationships (Marion & Uhl-Bien, 2011). Prior leadership theories have lacked a model complex enough to explain beyond the acts of leaders influencing individuals to the group dynamics of many individuals influencing each other within a complex system (Marion & Uhl-Bien, 2011, Limitations of current leadership theory, para. 5). The leadership model proposed in CLT focuses on leadership in the context of CAS with the premise that creativity, adaptation, and learning are enabled by the informal network dynamics (Marion & Uhl-Bien, 2011). The CLT model assumes that (a) adaptive leadership is a function of interaction between group members; (b) the unit of analysis is the CAS, (c) enabling and adaptive leadership roles differ across the hierarchical levels of the organization, and (d) leadership is intertwined with the planning, organizing, and missions of the organization (Marion & Uhl-Bien, 2011).

The overarching framework for CLT is comprised of three leadership roles: administrative, adaptive, and enabling (Marion & Uhl-Bien, 2011). Administrative leadership refers to actions taken by individuals in their formal roles including coordinating activities, allocating resources, and managing crises. Adaptive leadership refers to the self-organizing, adaptive interactions between group members within CAS. Enabling leadership involves creating the conditions for fostering effective adaptive leadership when innovation and adaptability are needed and facilitates the flow of knowledge outcomes from the innovative teams back into the organizational structures and processes.

Marion and Uhl-Bien (2011) explained that enabling leaders protect CAS from external politics and other top-down actions. Enabling leaders work within the formal administrative leadership role of an organization to allocate the resources needed by CAS and manage the balance between organizational goals and individual freedom needed for the adaptive leadership role within the CAS. The creative, adaptive, and learning outcomes from the CAS are put to use within the organization, and the organization needs to guide the overall creative direction toward the goals of the organization. Enabling leadership is about finding the balance between control and freedom within the details of the complex dynamics.

CAS are open systems of interrelated group members that define and are defined by their membership in the team (Marion & Uhl-Bien, 2011). CAS are defined as complex and not merely complicated. If a system is complicated, it can be understood by examining its components; complex systems, on the other hand, must be examined as a whole. Group members within CAS adapt to one another through interactions in a self-

organizing emergent process that seldom is repeated or predicted (Marion & Uhl-Bien, 2011). Further, CAS are open systems, meaning that group members interact freely outside the group, deriving energy and influence from outside the system. Certain conditions must exist for CAS to emerge; the group members must be able to interact with one another and the environment, the productive well-being of the group members within the team must be interdependently connected, and the group members must experience tension (Marion & Uhl-Bien, 2011). Coordination of CAS is facilitated by the informal emergent constraints imposed by the group members and constraints imposed by external forces including environmental and administrative (Marion & Uhl-Bien, 2011).

The other theoretical foundation for this study came from research on group dynamics. Group cohesion and the cohesion-performance relationship is a well-studied construct in group dynamics literature (Castaño et al., 2013). Because maximizing performance is a primary objective for organizations, understanding antecedents like cohesion is invaluable (Castaño et al., 2013). Several researchers conducted meta-analyses of studies focused on the cohesion-performance relationship in an attempt to better understand the moderators of this relationship (Castaño et al., 2013; DeChurch et al., 2013; Mesmer-Magnus et al., 2012).

Group cohesion is defined as the degree to which members are attracted to each other and are motivated to stay in the group. Multiple operational definitions have been defined by various researchers, which resulted in some disagreements in the cohesion-performance relationship (Castaño et al., 2013; DeChurch et al., 2013; Hedlund et al., 2015; Mesmer-Magnus et al., 2012). Part of this inconsistency was the result of

researchers from multiple disciplines contributing specialized operational constructs and definitions from their fields of study (Castaño et al., 2013; Hedlund et al., 2015). Some examples of these disciplines are sociology, group dynamics, organizational behavior, political science, military psychology, industrial-organizational psychology, educational psychology, clinical and counseling psychology, and sports psychology. These disciplines focused on different group settings such as sports teams, military units, business teams, or academic teams that were shown to have different cohesion-performance correlations.

Within the meta-analyses, moderators were examined, as well as the varying levels of analysis (Castaño et al., 2013; DeChurch et al., 2013). Castaño et al. (2013) conducted a comprehensive meta-analysis of studies focused on the cohesion-performance relationship. The most prevalent moderators discovered were group setting, group beliefs, similarities between group members (i.e., age, education, knowledge area, etc.), pregroup perceptions and motivations, tenure, and group size. Castaño et al. also found that the cohesion-performance relationship was stronger when the unit of analysis was at the group level instead of the individual. These moderators are discussed further in Chapter 2.

The pairing of these research traditions resulted in a conceptual framework of the cohesion-performance relationship that had the requisite complexity necessary to understand the group members' experience. In this study, I sought an understanding of moderating elements within the group dynamics involved in mechanisms of adaptive tension and cohesion in the context of CAS. The target was to understand how adaptive tension interplayed with group cohesion when high-innovation outcomes were achieved.

The conceptual framework was grounded by CLT, but at a point of convergence with group dynamics research, focused on the cohesion-performance relationship.

Definitions of Terms

The following were definitions of terms and expressions relevant to this study:

Adaptive challenge: A problem that requires exploration, new knowledge, and adjustments in behaviors as opposed to problems that can be solved by dictate or known processes (Marion & Uhl-Bien, 2011).

Adaptive leadership: " An emergent change behavior under conditions of interaction, interdependence, asymmetrical information, complex network dynamics, and tension [that is manifested] in CAS and interactions among [group members]" and is recognized as significant (Marion & Uhl-Bien, 2011, Emergence, para. 3).

Adaptive tension: The perturbations that occur within a CAS as a result of divergent ideas that motivate group members to adapt (Marion & Uhl-Bien, 2011).

Administrative leadership: The traditional hierarchical authority that acts formally to coordinate organizational activities including goal setting and other managerial roles (Marion & Uhl-Bien, 2011).

Coemergence: The whole not only arises from its parts, but also the parts arise from the whole (Graham, 2010).

Complexity theory: "The study of the dynamic behaviors of complexly interacting, interdependent, and adaptive [group members] under conditions of internal and external pressure" (Marion & Uhl-Bien, 2011, The uniqueness of complexity theory, para. 1).

Complexity leadership theory (CLT): The study of emergent leadership dynamics within the context of traditional organizations (Marion & Uhl-Bien, 2011).

Complex adaptive systems (CAS): An open system of dynamic interdependent and interacting group members cooperatively bonded by a common purpose (Marion & Uhl-Bien, 2011).

Enabling leadership: A form of leadership that creates the conditions for fostering effective adaptive leadership when innovation and adaptability are needed and facilitating the flow of knowledge outcomes from these innovative teams back into the organizational structures and processes (Marion & Uhl-Bien, 2011).

High-innovation team: A team that requires creativity, adaptivity, and new learning to overcome an adaptive challenge (Mendes et al., 2016).

Leadership: The space between people where interactions allow for creativity, adaptation, and learning (Ott, 2010).

Scope and Delimitations

Because there are different moderator effects and cohesion-performance relationships from one setting to another, I focused on the cohesion-performance relationship of high-innovation teams in a business setting. The participants for this study were delimited to teams that experienced a tension where multiple group members were forced to adapt, and group cohesion ultimately remained the same or improved. Teams that performed well that did not demonstrate adaptive tension were not included in the scope of this study. Further, study participants had to be willing to commit at least 2 hours to the study, and there had to be multiple members of the team who experienced the same shared event.

The study included an in-depth interview process that was designed to allow the participants to tell their story from their viewpoint. At no point were any of their stories paraphrased or interpreted for additional meaning. This delimited the study to the direct view of the study participant. The interviews were structured to discover emergent themes and to guide participants to topics that related to the goals of this study, but the stories themselves were as the participant told them. The only editing was to eliminate hesitations and repetitions, correct grammatical errors, and remove some of the idiosyncrasies of conversational speech versus written form in order to protect the participant. These stories were reviewed and approved by each participant as an additional check.

Limitations

I introduced a complex model for examining the cohesion-performance relationship of high-innovation teams based on CLT. The purpose was to understand the cohesion-performance relationship in the context of CAS and how adaptive tension, which was required for creativity, adaptation, and learning, interplayed with group cohesion. Because this study led to a new operational definition, I did not unify the operational definitions discussed earlier. However, this new model provides a detailed view of the group cohesion construct that may lead to future unifying research.

The sampling strategy was purposeful and 21 participants representing 12 distinct teams made up the population for this study. These teams were derived from multiple organizations where I had an established relationship with a gatekeeper. The actual number of participants was determined based on two criteria: sufficiency and saturation of information. Sufficiency is achieved when the number of participants reaches a

sufficient quantity that the diversity represented by the sample is enough to connect with a significant majority of people who have experienced a similar phenomenon (Seidman, 2012). Saturation of information is achieved when additional interviews are producing the same information (Seidman, 2012). Seidman (2012) indicated that this occurs at approximately 25 participants, and I reached sufficiency and saturation of information at 21 participants.

The nature of this study was phenomenological, and I sought the rich, contextual experience told in the form of stories by individuals who had experienced adaptive tension in a business setting. Because of this, a nonprobability sample was required, which had the risk of making it difficult to generalize the results beyond the population of this study. Although the sampling strategy served the purpose of this study, it represented only one phenomenon. Other group constructs may exist that could provide supportive or competing explanations.

Assumptions

The following assumptions were made in this study:

1. Individual interviews with group members on the perception of group beliefs will result in a consensus view of group level beliefs, and these beliefs will provide a detailed enough view of group cohesion and performance to understand the adaptive tension interplay (Castaño et al., 2013).
2. Organizations consist of complex environments where individuals are a part of complex adaptive systems (Marion & Uhl-Bien, 2011).

3. Complexity leadership theory will provide a perspective view of high-innovation teams that will lead to a better understanding of the cohesion-performance relationship (Marion & Uhl-Bien, 2011).

Summary and Overview

In this chapter, I introduced CLT as a theoretical foundation for exploring the cohesion-performance relationship as defined in group dynamics research. The pairing of these research traditions resulted in a conceptual framework of the cohesion-performance relationship that had the requisite complexity necessary to understand the group members' experience. High-innovation teams (i.e., teams that use creativity, adaptation, and learning to overcome adaptive challenges) experience tension, creating conditions for dynamic self-organizing adaptation that made these teams candidates for exploring this phenomenon.

Chapter 2 is a review of the literature beginning with the organizational context, including culture, structure, politics, and stakeholders. This is followed by a discussion on organizational growth, leadership theories, the nature of professional work, leadership effectiveness, and aspects of organizational capital. CLT is discussed alongside past leadership theories. The chapter concludes with a review of the cohesion-performance relationship from group dynamics research, which is the other theoretical foundation. It is the combination of CLT, along with elements of group dynamics research on the cohesion-performance relationship, that was the conceptual framework for this study.

Chapter 3 covers the research methodology and study design. This study had an initial target of 20 to 25 individuals from multiple teams who were interviewed using a phenomenological approach. In Chapter 3, I explain the purposeful sample strategy and

methods for collecting data followed by an explanation of the data analysis procedures used in this study. Other aspects covered in this chapter include a review of the conceptual framework, selection criteria, and validity. I used an in-depth interview method inspired by Seidman (2012) to collect the stories as told by the study participants, which was used to develop an understanding of how the administrative, adaptive, and enabling leadership roles of CLT can be leveraged to improve team performance.

Chapter 4 is organized into sections that detail the general contextual background of the high-innovation teams, excerpts of the stories as told by the study participants related to discovered emergent themes, correlation of these emergent themes with the research questions, and an analysis of significance of these themes in terms of volume and frequency across all teams. Chapter 5 concludes this study with an analysis of the results, conclusions, and suggestions for future research.

Chapter 2: Literature Review

Many teams are continuing to underperform because adaptive tension that forms within CAS is producing unpredictable adaptations that frequently result in lower performance outcomes as organizations increase in complexity. The purpose of this study was to discover how adaptive tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance. This study was grounded in CLT at a point of convergence with group dynamics research, but was also informed by other contextual foundations outlined in this review. These contextual foundations were essential to make meaning of the group dynamics, isolate the phenomenon of adaptive tension in a cohesive high-innovation team, and identify moderating variables in adaptive tension and group cohesion. The foundations included in this review are organizational culture, structure, political behavior, and stakeholders, along with growth objectives and the nature of professional work. The chapter concludes with a review of traditional leadership theories, CLT, leadership effectiveness, and the cohesion-performance relationship as presented in group dynamics research.

Literature Search Strategy

I reviewed books, E-books, peered reviewed journal articles, and dissertations obtained from online bookstores, general Internet searches, and the online library databases of Walden University. My objective was to review scholarly research on general leadership theories, complexity leadership, group dynamics, organizational contexts, and team performance. The library searches included the following databases: ProQuest Central, Business Source Complete, ABI/INFORM Collection, Emerald Insight, Sage Journals, ScienceDirect, LexisNexis Academic, Academic Search

Complete, PsycINFO, SocINDEX with Full Text, and Political Science Complete. Frequently cited authors from complexity leadership theory were searched along with the following terms: *complexity leadership, shared leadership, transactional leadership, transformational leadership, servant leadership, cohesion-performance, group dynamics, innovation teams, business performance, culture, politics, industrial age, agricultural age, human resources, information technology, legal profession, information age, basis of power, self-efficacy, company performance, M&A strategies, performance management, stakeholder management,* and *organizational design*. The searches were limited to 2012 to 2017 and then expanded to broader years if limited results were obtained. Searches on specific authors or cited sources where not limited by date.

Organizational Context

Through the lens of CLT, organizations are viewed as CAS comprised of people in changing patterns of interaction (Graham, 2010). People do not always respond predictably given a defined set of controlled conditions. Instead, people continually adapt to their experiences, modifying their actions and interpretations of the actions of others as they attempt to navigate the organizational contexts in the pursuit of their objectives. Leadership cannot always be prescribed because the leadership is not singularly in the domain of the leader but the complex exchange of interactions between leader and follower. Even the terms leader and follower do not accurately describe the roles in that the follower is also influencing the leader and in that sense a leader as well.

Organizations are becoming increasingly more interdependent (Sweetman, 2010). Although prior leadership theories have helped to explain the leader-follower roles and leadership style, there are other organizational factors that contribute to leadership

effectiveness including culture, structure, and politics. Incorporating these other elements of the group dynamics into the leadership model is important. Organizations have diverse stakeholders both internal and external. These stakeholders create the cultures, structures, politics, and conditions that produce the foundational contexts of their organizations' personas through their interactions, influences, and authorities. This context can promote cohesion or division, be positive or negative, or be used to construct or destruct an organization (Srikanth et al., 2016).

Organizational Culture

Culture is the aspect of an organization that informally regulates the behaviors of people (Janićijević, 2012). These cultures can be either constructive or destructive resulting in reinforcing behaviors that lead to high-performing or underperforming teams. Want (2013) identified seven types of cultures, five underperforming and two high-performing. The underperforming cultures were labeled predatory, frozen, chaotic, political, or bureaucratic, whereas the high-performing cultures focused on service or bringing a new product to market.

Want (2013) described these cultures as follows: Predatory cultures were exploitive of customers as well as investors. They could also be punitive and retaliatory toward employees. Frozen cultures live in denial and suffer from gridlock. They have an aversion to risk-taking, are typically authoritarian, and resist change. Chaotic cultures are fragmented and have an unfocused market view. There is little or no coherent mission, and divisions within the organization fight over influence and resources. Political cultures are similar to chaotic ones in that they lack a coherent mission and fight over influence, but within political cultures, individuals also tend to focus on their career

advancement and seek greater independence and authority. Bureaucratic cultures are rigid, authoritarian, and highly procedural. They usually have a defined mission and attempt to ensure fairness and protection, but tend to victimize the people they are supposed to serve and protect.

Want (2013) also described high-performing cultures as focused on build strategies, centered on customers or creating new markets. Cultures that focus on their customers seek to exceed expectations through fair and ethical sales practices. Cultures that focus on creating new products seek to create change; they are often described as innovative, egalitarian, consensual, entrepreneurial, informal and visionary. An interesting point of comparison between the underperforming and high-performing cultures is the order of value creation. With the exception of bureaucratic, which is over controlled, the other underperforming cultures place self-realization ahead of value creation. Both of the high-performing cultures are focused first on the needs of the customers. These are examples of culture and are illustrative of force within the organizational context that promotes a particular type of behavior (Want, 2013).

Structure

Organizations use formal and informal structures, as well as other tools and mechanisms like forecasts, quotas, policies, procedures, directives, and standards to manage large spans of control (Jesuthasan, 2013). These mechanisms reinforce the structures throughout the organization and guide the work tasks that people perform. Each of the functional groups defined by the structures can also form subcultures adding to the complexity of the organizational context. Though necessary to manage the

organization, the more complex these structures and mechanisms become, the more likely they are to dampen creativity, adaptation, and learning (D'Innocenzo et al., 2016).

Sims (2009) discovered that spans of control can be managed in the absence of structure and control mechanisms because people will naturally form groups that work together interdependently. Through self-organization, change can emerge through an organic process; but, the nature of self-organization is typically messy. There are conditions and environments that enable the likelihood of creativity, adaptation, and learning while also providing structure and controlling mechanisms to facilitate efficiency. Conditions and environments should be no more than is minimally necessary to coordinate organizational goals (Marion & Uhl-Bien, 2011).

The administrative, adaptive, and enabling leadership roles within CLT addresses the need to find a balance between predetermined structure and self-organization to maximize the performance of the team (Haken & Portugali, 2016). Administrative leadership provides the minimal amount of structure and control to steer a group towards the organization's goals whereas adaptive and enabling leadership allows a group to influence the leadership and enables creativity, adaptation, and new learning through an emergent process. These leadership roles are explained later in this chapter under CLT.

Political Behavior

Organizations are political in nature (Ugwu & Duru, 2015). Most leaders understand the necessity of political behavior and engage in this type of behavior to accomplish goals. Political behavior is an exercise of influence derived from a relationship, position, or reputation (i.e., political capital) to facilitate the achievement of personal or organizational goals (Ugwu & Duru, 2015). Political behavior is neither

inherently positive nor negative. Most people need to rely on the skillful navigation of political contexts in addition to their professional skills and expertise in order to succeed (Ugwu & Duru, 2015). People commonly use political behavior to secure the resources they need for a project or to manage a favorable impression on their leaders. Those highly skilled in political behavior will tend to have enhanced career growth, whereas those who are not skilled can come across as manipulative, actually harming their potential for career growth (Ugwu & Duru, 2015). Whether the political behavior is constructive or destructive within an organization depends on the person's awareness of how an action will impact others as well as intent. Both ignorance and ill will are the causes of destructive outcomes, not the political behavior itself.

People are more likely to engage in this type of behavior when they are ambitious in the achievement of their personal goals and when this type of behavior is condoned or seen as necessary to succeed (Ugwu & Duru, 2015). In highly structured organizational environments with many rules or hierarchies, the political behavior occurs when people see frequent and successful outcomes from using personal influence or bending the rules. Engaging in political behavior requires the expenditure of political capital, which is limited, so people highly skilled in political behavior engage in such action only when it helps them achieve an important goal.

Stakeholders

Organizations are obligated to many different constituencies and are dependent on their willing participation in a free market (Doh & Quigley, 2014). These organizations must meet their moral, social, political, and legal obligations; but, stakeholder management would prescribe the use of management discretion to allocate more value to

stakeholders than would be prescribed by a shareholder profit objective (Schnackenberg & Tomlinson, 2016). Not all stakeholders benefit from every decision a firm makes and may even be harmed by some. However, organizations must manage the complex interdependency of all stakeholders and balance decisions to serve everyone (Doh & Quigley, 2014). Stakeholders will support an organization when they believe the value received is commensurate with their contribution relative to others. Justice and fairness are core contexts for stakeholders to be open to equal exchange.

Fairness is a subjective measure and prone to perception error (Bridoux & Stoelhorst, 2016). Without active perception management through good and consistent communication, people will tend to view an organization as fair only if they are successful and unfair if they are unsuccessful (Lakshman, Ramaswami, Alas, Kabongo, & Rajendran Pandian, 2013). Even with good communication, people who are unsuccessful may still see the organization as taking advantage of them. All stakeholders will have to realize an adequate degree of the outcome.

There are some inconsistencies in the literature on outcomes from stakeholder management as a strategy; but, some benefits are well documented (Mellahi, Frynas, Sun, & Siegel, 2015). Promoting employee welfare, for example, translates into organizational success, which is why many organizations allocate resources to taking care of their employees (Doh & Quigley, 2014). Regardless of the impact on performance, understanding stakeholder relationships to the organization are essential for understanding influences on the group dynamics.

Organizational Growth

Organizations typically define growth in two categories: organic, which is growth excluding mergers and acquisitions, and nonorganic, which is growth attributed to mergers and acquisitions. Organizational growth is a dominant goal within organizations, and financial markets pay a premium for organic growth (Dickinson, Wangerin, & Wild, 2016). Although organic growth is typically a priority, nonorganic growth plays a role as organizations can achieve other strategic goals including acquiring new technology or know-how, entering new markets and eliminating competition. Scale acquired through acquisitions adds to an organization's basis for additional organic growth. A strategy that encompasses both organic and nonorganic growth will usually result in an overall growth rate greater than organic growth alone.

Growth strategies also take into account an organization's core competencies. These are the collective learnings an organization has that enables it to coordinate processes and leverage technology to competitively deliver products and services to the market (Forés & Camisón, 2016). These strategies may serve other purposes beyond growth. Leveraging synergies (i.e., cost out or efficiency opportunities), industry restructuring, and risk reduction are examples of objectives that may play a role in an organization's overall strategic plan. From a product and marketing perspective, strategies may focus on entering existing markets or developing a new market with existing or new products. How well an organization's growth strategy leverages its core competencies will determine competitiveness within the market. This is important in order to gain or defend market share, which is fundamental to achieving growth.

Bhattacharya (2009, pp. 50-51) outlined 13 aspects of competitiveness across two dimensions (process and performance) that enabled growth as follows:

Process Dimensions

1. Value innovation – Simultaneous pursuit of radically superior value for buyers and lower cost of companies.
2. Customer centricity – The willingness and ability to bring the customer to the focus of organizational being.
3. Operational excellence – Ability to organize for speed and quality deliveries to consistently achieve desired objectives.
4. Human resources management – Ability to identify human resource needs and attract, nurture, and retain capable employees.
5. Leadership – Strategic leadership ability to anticipate growth opportunities, evolve flexibility for transformation.
6. Technological – Capability to transfer, absorb, upgrade and develop new technologies to enable growth and have the best products, content, and services.
7. Financial management – Capability to mobilize funds and sustain new strategic/business initiatives for the long term.
8. Cooperation – Ability to forge alliances and access external resources through cooperative arrangements.
9. Mergers and acquisitions – Merger is the pooling of two or more companies as equals; acquisitions is where one company purchases or absorbs the operations of the other.

10. International operations – Expanding beyond domestic boundaries and competing in other countries.

Performance Dimensions

1. Cost leadership – Ability to deliver a product or service at a cost lower than that of the competitors.
2. Productivity – The internal capability of an organization; among several measures, employee productivity is adapted here.
3. Competitiveness performance – The relative position of an organization against its (international) competitors.

Organizational growth can be measured in several different ways including: sales, profit, market capitalization, and the number of employees. The number of employees is a popular measure for small- and medium-sized organizations (Stella, Aggrey, & Eseza, 2014). Growth rates can also be illusory in that they may not be related to anything the firm is doing (Bhattacharya et al., 2009). It is important not to place too much faith in numbers, but enhance growth measures with qualitative insight and objective analysis to ensure sustainability.

Because growth is a dominant goal, organizations usually attempt to tie the team objectives to this goal (Carnes, Chirico, Hitt, Huh, & Pisano, 2016). These links, however, are not always clear, and organizations struggle with coordinating all the activities within the organization to achieve their growth goal (Heracleous & Werres, 2016). The result is stagnation or a loss of performance within high-innovation teams because these teams require more freedom to enable creativity, adaptation, and learning. Enabling these activities through emergent behaviors is important. However, the

reduction of direct control may lead to a lack of direction. Finding the correct balance between control and emergent outcomes is necessary to maximize the performance of the team.

Nature of Professional Work

Professional work continues to increase in importance as an occupational category (Campbell, 2014). Within organizations, functional disciplines are becoming more formally defined by their knowledge areas, and many are growing closer to achieving professional status (e.g., doctors, lawyers, CPAs, engineers; (Campbell, 2014). This trend is the result of an emergent process, purposely driven by those within these new professions as they seek to gain influence and status within organizations. The other aspect of this trend is these professions are becoming more innovative.

These professions are defined by their body of knowledge (Campbell, 2014). Education, competency, origination, code of conduct, and service are criteria for professional status, but in order to be a profession, there needs to be a community of professionals bounded by a defining knowledge base that is defended by members of the community. More importantly, however, is the need for that community to be recognized as the authority of that knowledge base by those outside the community.

Because knowledge is a defining characteristic of a formal profession, it is appropriate to look at the current perspective of knowledge professionals. Knowledge professionals have existed in each dominant economic paradigm (Sin, Reid, & Jones, 2012). Sin et al. (2012) identified three paradigms: hunting and gathering, agricultural, and industrial age. In prehistoric periods when the dominant economic paradigm was hunting and gathering, the shaman served as the dominant knowledge professional.

During the agricultural age, scribes gained in dominance and during the industrial age, accountants. These knowledge professionals can be linked to the modern finance profession today.

The finance profession has grown significantly, driven by the information needs of organizations and government regulation; however, other functional disciplines are also providing information from their knowledge domains threatening the finance profession (Campbell, 2014). Educators are attempting to prepare new finance professionals for the future, but it is questionable whether these students will be prepared for the challenges that they will face (Campbell, 2014). There are three possibilities that may occur as information-based economic paradigms mature. First, the knowledge domains may fragment with new functional professions gaining influence with no functional group having dominance. Second, another functional discipline may unseat the finance community as the main provider of business information. Third, new specialties may form with no professional group at its core.

Regardless of how knowledge professions evolve, formal professional groups will continue to gain dominance over their knowledge domains. Marketing professionals are gaining dominance over information related to customers, competitors, and products (Homburg, Vomberg, Enke, & Grimm, 2015). Information technology professionals have traditionally focused on the installation and support of business technologies related to data processing tasks; however, are now gaining significant expertise in all areas of the business. Information technology as a profession likely poses the greatest threat to other professions seeking to dominate knowledge work. The human resource profession traditionally focused on attracting, developing and retaining employees, but now takes on

responsibilities for benefits, payroll, and employee related compliance areas (Hinrichs, 2010).

Knowledge Management

"At a fundamental level, knowledge is created by people; it exists in their minds and is created through their encounters with new environments and information" (Smith & Paquette, 2010, p. 118). Knowledge cannot be reused directly; it must be adapted or infused with new knowledge from other experiences and contextual situations to be useful (Chirumalla & Parida, 2016). In this sense knowledge is not useful alone but must be adapted by the creativity of people to be used effectively (Smith & Paquette, 2010). For knowledge to be applied effectively, an open-ended and flexible environment is required that allows for experimentation and emergence of creative solutions. This notion of knowledge management is aligned with CLT and the adaptive leadership role within CAS.

At a fundamental level, team performance depends on the application of knowledge (Forés & Camisón, 2016). This is a creative process, where individual members of the team interact with others in a process of discovery, application of knowledge, and adaptation that results in a significant outcome. The goals that are set by the administrative leadership role of CLT guide the direction of the team. The freedom for creativity, adaptation, and learning as provided by the enabling leadership role of CLT provides the right environment for maximizing outcomes. Finally, once new discoveries are made through adaptive leadership within the CAS, the enabling leadership role delivers the outcomes to the business.

Authority

An often cited analysis of authority is the one by Raven that defined six bases of power, informational, reward, coercion, legitimate, expertise, and referent (Aiello, Pratto, & Pierro, 2013; Bazyar, Teimoury, Fesharaki, Moini, & Mohammadi, 2013; Cross & Gilly, 2014; Hershcovis, Reich, Parker, & Bozeman, 2012; Pierro et al., 2013). It is from these bases of power that individuals derive their authority or people agree to follow the directives of others. Pierro et al. (2013) described these bases of power as follows:

- Informational – When information is provided to someone, and that information causes them to agree with the course of action.
- Reward – The ability for an agent to offer a positive incentive to someone in exchange for their compliance.
- Coercive – The ability of an agent to cause an undesirable outcome should an agent not comply.
- Legitimate – When someone accepts that an agent has the right to require his or her compliance due to a formal position.
- Expert – When someone accepts that an agent has superior insight or knowledge about the course of action. This is different from informational because they do not know the exact knowledge only acknowledge that the agent knows best.
- Referent – When someone identifies with the agent or seeing them as a model to emulate and agree to comply on that basis.

Because people accept authority based on power, it can also be obtained by the perception of power (Pierro et al., 2013). Though perceived power does not equate to

actual power, the authority gained is indistinguishable from authority gained from actual power. As such, perceived power is just as effective as actual power in the context of authority.

Authority is necessary, and people within organizations are expected to abide by the rules; however, if these rules are inflexible and stifle people from exercising creativity, adaptation, and learning, the organization can be harmed (D'Innocenzo et al., 2016). Mechanisms for holding people accountable should not be onerous otherwise people might react poorly. The result is decreased motivation, feelings of resentment or disengagement of group members. As a result, a conflict exists between innovation and conformity. This conflict between innovation and conformity is the balance between independence and dependence. The conflict exists because people seek authority to further their personal or group goals (Claude Mutiganda, 2014). Within CAS the result is an interdependent relationship where people are empowered to do the work for which they are qualified and governed by accountability. Accountability has been shown to relate positively with job performance and job satisfaction (Hall, Wikhamn, & Cardy, 2016).

Authority also plays a role in all three leadership roles of CLT. Within the administrative leadership role, authority is derived from the structure and process, which would include legitimate, reward, and coercive. Adaptive leadership occurs within the interaction of group members so informational and expert authority would occur in this space. Enabling leadership focuses on managing the entanglement between the administrative and adaptive leadership roles, so referent authority applies. Enabling

leadership also facilitates the flow of innovation back into the organization, so legitimate authority is used.

Performance Management

Performance management is an essential part of organizational systems and is often a tactical function of the human resources department (Jesuthasan, 2013). This process involves goal setting, feedback to the employee, setting performance standards and expectations, coaching, and mentoring. For performance management to be effective, the process must be integrated with the organizational management systems. The direct supervisors must have the authority to hold employees accountable, and everyone's priorities must be aligned. Without these three elements, positive outcomes from performance management will not be realized.

An important part of performance management is the feedback provided to employees (Kim, Atwater, Patel, & Smither, 2016). The effectiveness of this feedback depends on whether the supervisor can address the motivational needs of subordinates while asserting management authority and enforcing performance expectations (Brown, 2011). It is important that this feedback is constructive rather than destructive for the performance management intervention to be effective. Constructive feedback is empowering, respectful to the person, and encourages them to perform whereas destructive feedback is domineering, confrontational, and discouraging.

Leadership Theory

Leadership theories span multiple domains ranging from hierarchal command and control paradigms to CAS and emergent processes of change. Much of the disagreement between CLT and traditional leadership theory stems from an understanding that

organizations are complex and leader-follower paradigms do not account for all the interworking parts. Research on leadership has evolved over time, and multiple theories have emerged including transactional, transformational, servant, shared, and CLT (Batistič, Černe, & Vogel, 2016). These theories explain important factors about leadership and have increased in complexity to provide better explanations of human systems.

Leader and follower roles are interrelated (Baker, Anthony, & Stites-Doe, 2015). People assume different roles within organizations as circumstances dictate and are acting as leaders at times and at other times followers. Being a good follower does not mean doing what you are told, but acting in a way that enhances the leader (Baker et al., 2015). In addition, leader and follower roles share the following characteristics: intelligence, broadmindedness, and straightforwardness. Leaders and followers can be ambitious, determined, and independent, but they conduct themselves to actively enhance the organization (Baker et al., 2015). Leaders view good followers as risk takers who innovate and solve problems independently.

Transactional Leadership

There are two primary types of transactional leadership: contingent reward and management by exception (Afsar, Badir, Saeed, & Hafeez, 2017). Management by exception can also be subdivided into active and passive forms. In both cases, the leader is waiting until someone deviates from the objectives, but in active form, the leader intercedes just prior to the error occurring and in passive form, after. When exercising management by exception, the leader focuses on correcting divergent behavior (Afsar et al., 2017). In contrast, contingent reward is an exchange between leader and follower

where the follower is rewarded for accomplishing agreed-upon tasks (Afsar et al., 2017). With contingent reward the leader creates a positive exchange by reinforcing behavior that is in conformance with the leader's objectives. Contingent reward is the most effective form of transactional leadership (Afsar et al., 2017).

Transformational Leadership

Transformational leadership can be conceptualized as a combination of four components: inspiration, intellectual stimulation, consideration, and influence (Yitshaki, 2012). It is focused on motivating people through a vision of the future, effective communication, caring about people, and guiding the direction of tasks (Yitshaki, 2012). Transformational leaders challenge the status quo and motivate people to achieve higher performance. These types of leaders also emphasize trust and ethical behavior (Ott, 2010). Followers of transformational leaders are more satisfied because they are empowered within their roles (Yitshaki, 2012). They are provided clarity of vision, a sense of security, and the resources needed to achieve their objectives. As a result, this style of leadership promotes transformative change.

Transformational leadership does emphasize control over freedom because the leader is defining the objectives and controlling the vision (Ott, 2010). Even though transformational organizations tend to be more innovative, this style of leadership is negatively correlated with innovation at the group level (Ott, 2010). Group level innovation requires adaptation by the group members, which is less likely to occur if the team is overly controlled. This implies that the creative elements are occurring outside of the scope of the team. As a result, transformational leadership is most effective in organizations undergoing a change where the focus is on stimulating and inspiring people

to drive towards a specific goal (Afsar et al., 2017). Leaders must use positive leadership approaches and provide a supportive environment for the team (Graham, 2010). Transformational leadership also promotes group cohesion as people are aligned around a shared vision (Ott, 2010).

Servant Leadership

Servant leadership is a value-oriented definition of leadership that focuses on enabling people (Ott, 2010). Technically not grounded in organizational behavior research, it shares many aspects of transformational leadership (Schermerhorn, 2012). The servant leader approaches leadership through service first and takes a value-centered approach. Leaders typically do not seek the leadership roles but instead are focused on assisting others in achieving a greater good.

The servant leader is focused on helping others to discover their inner spirit; they engender trust from their followers, are effective at listening to others, and seek to assist others instead of their own self-interest (Schermerhorn, 2012). They serve as a role model and emphasize vision, hope, and work as a vocation. Like transformational leaders, they inspire people to act rather than manage people into action (i.e., transactional leadership).

Shared Leadership

Shared leadership differs from the traditional hierarchical approaches in that the influence process involves more than one person directing the actions of the group (Schermerhorn, 2012). It involves a complex adaptive process of interaction between people leading the group towards a collective goal. Shared leadership minimizes

practices that focus on control and direction and emphasize facilitation and development (Graham, 2010).

Transactional and transformational leadership approaches also apply to shared leadership (Sweetman, 2010). Transactional shared leadership involves the establishment of performance metrics and shared rewards based on those metrics. Transformational shared leadership involves the collective establishment of vision and inspiration to excel. Applying shared concepts to previously established leadership models, increases the complexity of the models, which also increases the usefulness of these models for explaining more complex constructs of leadership within organizations.

Complexity Leadership

Marion and Uhl-Bien (2011) stated, "complexity theory is the study of the dynamic behaviors of complexly interacting, interdependent, and adaptive group members under conditions of internal and external pressure" (Marion & Uhl-Bien, 2011, p. 454). When applied to leadership, they recognized that people within organizations are free thinking individuals who continually adapt based on interactions with other people (Uhl-Bien & Arena, 2017). Even when serving in a leadership capacity, these people will change and adapt based on their interactions with those whom they are leading. As such, leadership is not just the style and personality of the leader, but what emerges from the interactions between people.

It is for this reason that CLT defines leadership as the space between people where interactions allow for creativity, adaptation, and learning (Ott, 2010). This form of leadership cannot be separated from the context of the organization (Graham, 2010). Through a natural process, people adapt to each other, their individual and shared

experiences, and the contextual conditions of the environment, both internal and external to the organization, so people within organizations are interconnected and coinfluencing (Grah, Dimovski, Snow, & Peterlin, 2016).

CLT defined three broad types of leadership, administrative, enabling, and adaptive (Marion & Uhl-Bien, 2011). Administrative leadership is the traditional bureaucratic or hierarchal structure and process focused on alignment and control. Enabling leadership is what creates the environment to enable CAS to address creative problem-solving, adaptation, and learning. Adaptive leadership is the force that underlies emergent change activity. The following sections detail these leadership roles and introduce three integrating concepts, entanglement, network dynamics, and emergance.

Entanglement

The three leadership roles, administrative, enabling, and adaptive are intertwined by what is called entanglement. Enabling leadership involves the management of the entanglement between the administrative and adaptive leadership roles and facilitating the flow of innovation back into the organization (Marion & Uhl-Bien, 2011). This entanglement is the complex relationship between the formal hierarchical structures of the organization and the informal emergent forces that exist within CAS. The enabling conditions for entanglement are an environment where group members can freely interact with others inside and outside the group, have an interdependent relationship with other group members, and face an adaptive tension that requires creativity, adaptation, and learning to overcome. This tension creates an imperative for the group to act and can originate from multiple sources including competing ideas, external pressures, and seemingly incompatible differences between group members. As group members interact

producing innovative outcomes, the other function of enabling leadership facilitates the flow of innovations back into the organization where the benefits are realized.

Managing this entanglement requires enabling leaders to protect the team from politics and top-down actions, use authority when necessary to acquire necessary resources, facilitate adaptive dynamics within the group, and maintain alignment between the formal and informal organizational systems (Marion & Uhl-Bien, 2011). The creativity, adaptation, and learning necessary for innovative outcomes depends on the informal adaptive behavior that emerges out of entanglement, but if this informal activity is not bounded and directed towards the needs of the organization the cost of maintaining such a program would be high and harm the organization. Enabling leadership, therefore, requires the management of entanglement between the administrative and adaptive leadership roles to create the enabling conditions while maintaining alignment with organizational needs.

Network Dynamics

Marion and Uhl-Bien (2011) defined network dynamics as the contexts and mechanisms that enable adaptive leadership. They described the context as "the ambiance that spawns a given system's dynamic persona" (Marion & Uhl-Bien, 2011, Editor notes, para. 6). Within this ambiance, ideas emerge, combine, collide, die, reemerge, and adapt to a complex landscape of interactive and interdependent group members in patterns that cannot be predicted or recreated (Marion & Uhl-Bien, 2011). This seemingly chaotic process of discovery is what Marion and Uhl-Bien described as adaptive leadership. They called it leadership because the process of interaction is what enables adaptation or people choosing to adapt to one another. It is the interactions or

what they called the space between people that spawns the creativity, adaptation, and learning required for this type of discovery. Marion and Uhl-Bien (2011) further defined mechanisms as the specific behaviors that produce outcomes. The context and mechanisms that create the network dynamics include the following (Marion & Uhl-Bien, 2011, Network dynamics, para. 1):

Context

- Networks of interaction
- Complex patterns of conflicting constraints
- Patterns of tension
- Interdependent relationships
- Rules of action
- Direct/indirect feedback loops
- Rapidly changing environmental demands

Mechanisms

- Resonance (i.e., correlated action)/aggregation of ideas
- Catalytic behaviors (i.e., behaviors that speed or enable certain activities)
- Generation of both dynamically stable and unstable behaviors
- Dissipation of built up tension as phase transitions
- Nonlinear change
- Information flow and pattern formation
- Accreting nodes (i.e., ideas that rapidly expand in importance and which accrete related ideas)

Emergence

Adaptive leadership that occurs within the network dynamics is the result of an emergent process comprised of reformulation and self-organization. Marion and Uhl-bien (2011) defined reformulation as "the expansion, parsing, amplification, transformation, and combination of multiple interacting, often conflicting elements under conditions of tension and asymmetrical information" (Emergence, para. 1). The result of a reformulation is a fundamental change within the group dynamics where the original elements are transformed producing new meaning. When these reformulation activities find a common cause, it is called self-organization. Thus emergence results from the seemingly random interaction between interdependent agents and is recognized as adaptive leadership when the outcome has a significant positive impact on the organization (Corral de Zubielqui, Jones, & Statsenko, 2016).

This raises a question related to formal coordination of emergent processes. Because emergence is involved with the development of ideas that are unknown, how then can an organization align these activities with the needs of the organization without limiting the creative process? Within CLT, the administrative leadership role serves the purpose of aligning the emergent processes with the needs of the organization through some form of coordination. Emergence, however, is by its nature unpredictable, which means it cannot be planned and managed into existence. One suggestion is to manage this process through stages where projects can be managed in a pipeline with greater degrees of freedom in earlier stages (Cooper, 2016).

Leadership Effectiveness

Ewen et al. (2014) explained that leadership effectiveness is more than outcomes; it includes an evaluation of relational aspects like how people feel about the leader's effectiveness. If the team is performing well and the general view of the leader is poor, other factors that explain the performance are likely. Leadership effectiveness can be measured across three dimensions: content, level of analysis, and target of evaluation (Ewen et al., 2014). Content relates to individual and team performance, how people feel about the leader, and overall how people judge the effectiveness of the leader. Level of analysis can be at the individual, dyadic, group, or organizational level. The target of evaluation is the focus area: either the leader (e.g., leader effectiveness, satisfaction with the leader) or some other outcome that is related to the leader (e.g., team performance).

Ewen et al. (2014) pointed out that top management support was a critical success factor; however, group success depended on other factors. Ewen et al. explained that proper and consistent communication at all levels of the organization, formal and effective change management processes, and organizational culture that supports the work teams are key factors for successful outcomes as well. A strong belief among group members that the outcomes of the team's efforts will be positive is also important. The leader clearly plays a key role, but the space between leader and follower is important (Gooty & Yammarino, 2013).

Innovation

If an organization is managed as a machine with a predetermined purpose that defines what it can process or produce, then the opportunity to innovate is precluded (Smith & Paquette, 2010). If an organization is allowed to evolve by trusting in the

natural determination of individuals to find order, innovation becomes possible, but at the expense of control (Nadim, Marom, & Lussier, 2016). For an organization to survive financially, a balance is needed between a directed purpose and a less controlled innovative environment. This type of innovative environment is highly correlated with interdependent relationships within organizations that enable collective creativity and shared leadership (Sweetman, 2010). New frameworks that meet the requisite complexity to enable a view of organizational interdependence made up of multiple networks of influence and a dynamic flow of ideas are necessary, because this type of environment is most conducive to creativity and innovation (Sweetman, 2010).

Traditional hierarchical leadership limits flexibility and experimentation, which reduces innovation (D'Innocenzo et al., 2016). Instead, a balance between traditional hierarchical leadership and a less controlled environment is needed to enable innovation. This type of environment is created by interdependent teams that adapt within the leader-follower exchange. Sweetman (2010) also pointed out that not all forms of diversity improve innovation, but some forms improve the likelihood of generating innovation.

Factors of Leadership Effectiveness

The interaction that occurs between leader and follower is the interdependent dynamics where leadership occurs. Marion and Uhl-Bien (2011) described this as the space between leader and follower, and it was important for understanding the leader-follower exchange. Within this space, the specific skills and traits of both leader and follower are factors that contribute to the leadership dynamics. These factors are trust, confidence, energy, alignment, responsiveness, commitment, accountability and relationship building (Hinrichs, 2010). Hinrichs (2010) emphasized accountability and

relationships as the most important. These factors are all interrelated and explain aspects of interaction, so an argument can be made that any of the factors contribute to relationships.

Although many factors of leadership are found across organizations, there are multiple ways to lead. Leadership effectiveness is contingent on the fit between many components within the organization and the environment (Geer-Frazier, 2014). An effective leader possess a combination of leadership skills, management skills, and personality traits that match the culture of the organization (Hartnell, Kinicki, Lambert, Fugate, & Doyle Corner, 2016). Leader skills are focused on doing the right things, and management skills are focused on doing things right (Nguyen & Hansen, 2016). Both are important and required, but leaders must also have other traits that make them a good fit.

Organizational Capital

People view the world from their own paradigms. These paradigms are based on their view of the world and is formed from their predisposition, knowledge, and experience. Understanding how paradigms affect outcomes is important because paradigms are subjective views with real effect on a system of interaction. Paradigms are difficult to measure, and are comprised of social, political, and psychological dimensions (Ferris, Perrewé, Daniels, Lawong, & Holmes, 2016).

Social capital is the net value of the interdependent relationships that are developed through interactions between individuals, and can be based on structural, cognitive, or relational constructs (Hall et al., 2016). Any relationship that is developed over time builds social capital, and that relationship will impact how people feel about

one another. Because social capital is the measureable value of a relationship, trust is a fundamental component (Doh & Quigley, 2014).

Political capital is also developed through interactions between individuals, but is the net value of an individual's influence (Doh & Quigley, 2014). This influence is derived from their position of authority and reputation for success. People who consistently succeed will gain influence creating power differentials between functional departments within an organization. This power allows an individual to access more of an organization's resources. If one person loses position with another in terms of political capital, it can lead to utility loss.

Psychological Capital (PsyCap) is the positive psychological state or self-belief an individual has in their ability to succeed. This can be characterized as high self-efficacy, optimism about success, maintaining hope around goals, and resilience in the face of setbacks (Harty, Gustafsson, Björkdahl, & Möller, 2016). PsyCap is rooted in research on positive organizational behavior, which focuses on self-efficacy, hope, optimism, and resilience and its effects on organizational performance (Harty et al., 2016). The interactions between individuals that result in the gain or loss of social and political capital are measured by people in terms of trust, which depends on self-belief. If a person lacks self-belief, he or she will not be able to build social or political capital, so high PsyCap is an important factor within the group dynamics.

Trust

Social psychologists often see trust as an all or nothing proposition, and at a point in time (Slenders, 2010). Slenders (2010) concluded that trust exists on a continuum and develops, builds, stabilizes, declines, and reappears over time. As relationships develop

or change, so do levels of trust. Trust can mean an emotional bond built on mutual respect, or it can also mean a person's belief that someone will behave in a predictable way.

For leaders, mutual respect and trust earned over time through reinforcing interactions are most important (Slenders, 2010). The three most relevant antecedents of trust are ability, integrity, and benevolence. Abilities are skills, competencies, and characteristics that enable a person to succeed in a knowledge area. Integrity is the leader's perception that an individual will adhere to a set of principles the leader finds acceptable. Benevolence is how the leader perceives a person's intent to do well for the organization. In contrast, there are circumstances when trust is achieved without being earned over time (Slenders, 2010). These circumstances include an individual's disposition to trust, strong beliefs in another's reputation or group membership, and when strong laws or regulations mitigate abuse of trust. This type of trust, however, has been shown to be fragile.

Trust is essential for cohesion among group members, but it is not enough for a rational person to reveal information that makes them vulnerable (Doh & Quigley, 2014). Trust and mutual respect are foundational to building effective relationships, but trust earned over time to the point of reliance is better (Ott, 2010). As such, organizations that lack trust relationships and mutual respect among group members will have difficulty with group cohesion.

Relationships

When leadership is viewed from the perspective of the whole system instead of from the perspective of the individual, the relationships among people emerge as more

important than the actions of any one person (Sweetman, 2010). Relationships built on trust and mutual respect form emotional bonds that serve to connect people (Ernst & Chrobot-Mason, 2011). Naturally, groups will form based on these relationships, and that creates group boundaries. These boundaries help promote group identity and cohesion, but they also separate one group from another. These relationships both help and hinder organizations to create opportunities for interaction.

Ernst and Chrobot-Mason (2011) determined the five most challenging boundaries were: vertical, horizontal, stakeholder, demographic, and geographic. Vertical boundaries are divisions between the hierarchical levels in the organization. Horizontal boundaries are between functional disciplines and divisional subunits. Stakeholder boundaries are between groups defined by their stakes in the organization, such as the board of directors, vendors, customers, advocacy groups, governments, and other community groups. Demographic boundaries are between groups that identify themselves based on classifications such as gender, race, education, or ideology. Geographic boundaries are based on the physical location.

Ernst and Chrobot-Mason (2011) also defined six practices that can be used to overcome boundaries: buffering, reflecting, connecting, mobilizing, weaving, and transforming. Buffering provides a sense of protection within a group, so people feel secure in their role; people cannot collaborate effectively across boundaries unless they first feel secure. Reflecting allows group members to see things from another group's perspective, which helps people develop mutual respect. Connecting creates environments where individuals can build relationships with others outside of their groups through opportunities to interact; this can be for official reasons like a common

project or informal through things like common break rooms or social media based technologies. Mobilizing reframes boundaries by creating a higher purpose that is shared by all; this involves helping people understand the larger identity to which they belong such as the organization or common purpose. Weaving occurs when group boundaries interlace through an integrated process of interaction. Transforming is the outcome where new identities form and new possibilities are discovered through these new interactions.

Motivation

Motivation is cognitive in nature; people motivate themselves in anticipation of positive or negative outcomes (Brown, 2011). People also set goals for themselves within boundaries they set based on their PsyCap. An individiual will plan a course of action based on a discrepancy between where they are and where they want to be, moderated by their belief that they can achieve the goal. Individuals with a high fear of failure or little discomfort in their current state are less likely to be motivated. These goals can be framed either positively, the hope of success, or negatively, fear of failure (Brown, 2011). People who are positively oriented are motivated by positive role models. On the other hand, people who are negatively oriented are motivated by negative role models. Positive role models showcase successful outcomes as an example for future actions, and negative role models showcase past mistakes as an example of what to avoid.

High PsyCap is a contributing factor for motivation (Harty et al., 2016). Harty et al. (2016) explained that individuals with high PsyCap demonstrate resilience when faced with challenges and multipathway thinking. Individuals with high PsyCap are more

hopeful, which leads to motivation for achieving goals. This natural tendency to remain motivated when faced with challenges along with the ability to map multiple solutions is the primary factor for achieving success. Success also reinforces self-belief, which results in reinforcing PsyCap.

Agency theory suggests that management compensation is another contributing factor that is correlated with motivation (Hodari, Turner, & Sturman, 2017). This positive correlation is stronger when coupled with higher managerial discretion. Managerial discretion is the strategic freedom of a leader to control every aspect of the organizational design, including its structure, strategy, and technologies. When managers have strategic freedom, and their compensation is tied to outcomes, they tend to be motivated to maximize their opportunity.

Traits

Extraversion and agreeableness are interpersonal attributes that are positively related to leadership effectiveness (Ewen et al., 2014). Ewen et al. (2014) also identified intelligence, conscientiousness, openness to experience, and emotional stability as traits that related to leadership effectiveness. Intelligence is the ability to think, learn, apply knowledge, and make accurate judgments about situations and people. Conscientiousness is dependable, dutiful, and achievement-oriented. Openness to experience means a willingness to be open-minded to new and different ways of working. Emotional stability is the ability to remain calm when faced with challenging tasks. Within the context of high-innovation teams, an individual must have the intelligence to deal with cognitive complexity, think strategically, have high levels of relevant technical

expertise, and tolerance for ambiguity. They must also have creativity and a higher than average but not excessive risk profile (Ewen et al., 2014).

Behaviors

Leadership behaviors fit into four categories: task-oriented, relational-oriented, change-oriented, or passive leadership (Ewen et al., 2014). Task-oriented behaviors are those focused on initiating structure and best explained by transactional leader behaviors. Relational-oriented behaviors are empowering, participative, and democratic in style. Change-oriented behaviors are focused on developing and communicating a vision of change, encouraging innovative thinking and risk taking. Finally, passive leadership is an absence of leader behavior or a lack of engagement with the group.

Cohesion-Performance Relationship

Several meta-analyses have been conducted to examine the moderators to the cohesion-performance relationship (Castaño et al., 2013; DeChurch et al., 2013; Mesmer-Magnus et al., 2012). Mullen and Copper conducted a meta-analysis in 1994 that is still one of the most relevant and comprehensive today (Castaño et al., 2013). Castaño et al. (2013) explained that a small effect exists between cohesion and performance, but a much larger effect between performance and cohesion. What distinguishes teams that perform well from those who do not is a commitment to task. Smooth interaction of group members or group pride were not important factors for group outcomes.

Group cohesion is defined as the degree to which members are attracted to each other and are motivated to stay in the group. In practice, conceptualizing cohesion in more than one dimension is useful (Castaño et al., 2013). Castaño et al. (2013) proposed a two-factor conceptualization including task cohesion and social cohesion. Task

cohesion is the degree to which members are committed to completing group tasks and motivated towards the overall goals of the group. Social cohesion is the degree to which members are attracted to the group in terms of emotional bonds of friendship, caring, closeness, enjoyment of other's company, or social time together.

Castaño et al. (2013) also explained that the cohesion-performance relationship was stronger for real groups. Real groups are formed for a real purpose within organizations as opposed to those created for the purposes of research. Castaño et al. found that the cohesion-performance relationship was a result of a commitment to the task. Castaño et al. also found that when groups were delineated by type, different levels of cohesion existed. Military teams were the strongest, followed by business, academic, and sport teams. Though the literature shows a relationship between group cohesion and performance, researchers still do not fully understand why (Castaño et al., 2013).

Task conflict tends to be positively correlated with team performance (Chun & Choi, 2014). This has been observed in different situations including environments where group members disagreed with task details or cross-functional diversity existed. This is in contrast to status conflict and relationship conflict, which is negatively correlated with performance (Chun & Choi, 2014). Discovering the mechanics of task conflict and its positive correlation with team performance is one of the objectives of this study, because this tension seems to be in conflict with group cohesion.

Summary

Understanding the contextual foundations of an organization is important to understand the group dynamics. In this chapter, I reviewed the literature beginning with the organizational context, including culture, structure, politics, and stakeholders. This

was followed by a discussion on organizational growth, leadership theories, the nature of professional work, leadership effectiveness, and aspects of organizational capital. The organizational context, moderating factors, and interdependent relationships between people create complex group dynamics that requires a conceptual framework of requisite complexity to understand the group members' experience. CLT and aspects of group dynamics research were also discussed and are the two theoretical foundations combined to create the conceptual framework for this study. This conceptual framework along with the research methods I used in this study, are discussed in more detail in Chapter 3.

Chapter 3: Research Method

Many teams are continuing to underperform because adaptive tension that forms within CAS is producing unpredictable adaptations that frequently result in lower performance outcomes as organizations increase in complexity. The purpose of this study was to discover how adaptive tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance. CLT provided a construct for understanding the complex nature of human systems in an organizational context that provided a fresh perspective on the cohesion-performance relationship.

A new conceptual framework was required for this study and created by combining elements of group dynamics research with CLT. The unique pairing of these research traditions resulted in a conceptual framework of the cohesion-performance relationship that had the requisite complexity necessary to understand the group members' experience. Specifically, this study was focused on understanding the moderating elements to the group dynamics involved in mechanisms of adaptive tension and cohesion in the context of CAS. The target was to understand how adaptive tension interplayed with group cohesion when high-innovation outcomes were achieved. The conceptual framework was grounded by complexity leadership theory, but at a point of convergence with group dynamics research focused on the cohesion-performance relationship. Understanding the interplay between adaptive tension and group cohesion may lead to methods for improving team performance through the administrative, enabling, and adaptive leadership roles of CLT.

Research Design and Rationale

Research Questions

The general research question that drove this study was the following: What factors lead to high-innovation outcomes in complex adaptive systems? The subresearch questions that followed were

RQ1: How does group cohesion emerge through the interactions of interdependent group members within complex adaptive systems?

RQ2: How does group cohesion relate to improved team performance in the context of complex adaptive systems?

Methodology Review

Quantitative research is appropriate when the objective is to measure the relationship between independent and dependent variables (Leedy & Ormrod, 2012). Researchers "[intend] to establish, confirm, or validate relationships … that contribute to existing theories" (Leedy & Ormrod, 2012, p. 96). Quantitative is well established, has formally structured methods, and is objective in nature. On the other hand, qualitative research is appropriate when the objective is to understand a phenomenon that is complex in nature or the subjective meaning study participants infer from their experience of a phenomenon (Leedy & Ormrod, 2012). Qualitative researchers "seek a better understanding of complex situations" (Leedy & Ormrod, 2012, p. 96). This type of research is often more exploratory in nature or intends to build a new theory from the ground up. The qualitative methodology is less structured and designed to let ideas emerge. This results in aspects of the study changing along the way to better inform the research problem.

The problem I addressed was complex and consisted of both objective and subjective aspects. The group dynamics of individuals participating as part of the team was the result of both the objective reality of their actions and the subjective interpretation each inferred from the experience. The teams were CAS comprised of individuals working freely in an interdependent relationship for some purpose. When these team members were faced with tension in the form of incompatible ideas, knowledge, and technologies, they had to choose to adapt, discontinue their membership in the group, or allow the tension to increase. It is in this context that "new knowledge and creative ideas, learning, or adaptation" were made possible (Marion & Uhl-Bien, 2011, Adaptive leadership, para. 3). This tension strained the cohesive elements of the group, but the choice to adapt was dependent on these cohesive elements. Because the purpose of this study was to understand the complex nature of this phenomenon, a qualitative methodology was chosen.

Some examples of qualitative design include ethnography, case study, phenomenological, grounded theory, and hermeneutics. What differentiates these designs is their foci and objective (Moustakas, 1994). Ethnography focuses on the lived experience of a cultural group or to advocate for a group, case study a specific case either with a focus on the bounded group or the case itself, phenomenological a shared phenomenon, and grounded theory establishing a new theory grounded in the data. Hermeneutics also focuses on consciousness and human experience, but primarily through the interpretation of texts (Moustakas, 1994).

Ethnographic researchers focus on many individuals, but instead of a shared phenomenon as in phenomenology, this approach is interested in a shared culture

(Moustakas, 1994). The researcher's intent is to understand the shared and learned culture including mores, morals, and language. This approach is focused on the entire group to understand the culture of that group (Leedy & Ormrod, 2012). It is typically a lengthy study that observes behaviors over time to identify all of the cultural norms, beliefs, social structures, and other cultural patterns. Ethnographic research can take on many forms, but the approach is usually either traditional or activist. In a traditionalist approach, the researcher attempts to create an objective account of the culture. The activist approach, however, is focused on advocating for a cultural group. The latter is typically politically minded and seeks either the emancipation of a cultural group or to speak out on behalf of the group.

Case studies are used to focus on an individual, program, or event for a set period of time (Leedy & Ormrod, 2012). Like ethnographic research, case study approaches are focused on a bounded group, but not necessarily bounded by a common culture. Case studies can be scoped to study multiple bounded groups, but are intended to understand an issue or problem using a case as an illustration. Case studies are generalizable and are used to expand theories (Yin, 2013). This method is not used to enumerate frequencies, which is a statistical generalization; instead, case studies leverage an analytical generalization. Theory development is also an essential part of a case study's design (Yin, 2013). Theoretical propositions are hypothetical stories that suggest how or why actions, behaviors, organizations, or even ways of thinking happen.

The case study can be defined by the following two statements (Yin, 2013):

- An empirical inquiry that explores a phenomenon in depth within the context of the situation when the context and phenomenon are intertwined.

- Deals with dynamic situations with many variables, few data points, many sources, triangulation of data that builds upon previous theoretical propositions.

Phenomenological research focuses on understanding a phenomenon from the perspective of a group of people who have a shared experience with that phenomenon (Leedy & Ormrod, 2012). It is used to study a phenomenon more universally with the objective of understanding the nature of things. Researchers who use this approach attempt to separate their view of the phenomenon and focus on understanding the shared experience from multiple individuals to understand the phenomenon. It is similar to ethnographic research but is focused on the phenomenon rather than the culture of the group.

The objective of phenomenology is the meaning a person infers from an experience (Moustakas, 1994): how a person perceives, senses, and finds meaning in their experience. This is a conscious process in which individuals engage in making sense of their experience. A person intuitively interprets an experience deriving knowledge of the human experience. Phenomenology focuses on the experience itself, or the appearance of things. It is used to understand a phenomenon from multiple perspectives resulting in a whole vision. Descriptions of experiences rather than explanations or analysis are sought to retain the essence of the phenomenon.

Underpinning the phenomenological process are three key principles that Moustakas (1994) described as epoche, phenomenological reduction, and imaginative variation. In the epoche, the researcher suspends preconceived understandings and judgments of the phenomenon that have been formed from prior experience and studies.

Phenomenological reduction is writing a prereflective description of the phenomenon with as many contextual aspects as possible to describe the phenomenon as it exists followed by a reduction to thematic understanding. Imaginative variation is the activity of exploring multiple divergent perspectives creatively with the goal of developing a structural explanation of what is being experienced.

Grounded theory researchers seek to construct an integrated theory during the research process (Moustakas, 1994), and use this method to construct a new theory grounded in the data (Leedy & Ormrod, 2012). Gaps in the data are questioned; this includes seeking additional information to understand the influences of the phenomenon fully. Context and social structure are important elements for understanding the phenomenon, so this approach typically uses an open process of discovery where data collection, coding, and analysis are conducted at the same time. It is typically focused on the process and the actions and interactions of the people involved in the process. The data collected in this type of study must be from the perspective of the people involved in the study. The theory is developed from the data rather than starting with an established theory.

Because the objective of this study was to discover how adaptive tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance, a qualitative approach was needed to explore the complex nature of these teams and the subjective meanings the study participants inferred from their experience. This study was grounded in CLT, but at a point of convergence with the cohesion-performance relationship in psychology. Further, the focus was on the

phenomenon and not the cultural aspects of the group. For these reasons, a phenomenological approach was used.

Methodology

Conceptual Framework

Based on group dynamics research, group cohesion is defined as the degree to which members are attracted to each other and are motivated to stay in the group (Castaño et al., 2013; Moore & Mamiseishvili, 2012; Schermerhorn, 2012). In practice, conceptualizing cohesion in more than one dimension is more useful (Castaño et al., 2013). Castaño et al. (2013) proposed a two-factor conceptualization including task cohesion and social cohesion. Group pride is a third factor used in some research, but based on the meta-analysis conducted by Castaño et al., this factor was used primarily in the context of sports teams and seldom used in research of other group settings, so it was not used in this study. Task cohesion is the degree to which members are committed to completing group tasks and motivated towards the overall goals of the group. Social cohesion is the degree to which members are attracted to the group in terms of emotional bonds of friendship, caring, and closeness among group members.

Cohesive elements can also be found in CLT research. Trust among group members was a common theme in the literature (Ernst & Chrobot-Mason, 2011; Graham, 2010; Hinrichs, 2010; Ott, 2010; Sims, 2009). Another common theme was the concept of community, or some nonlinear event, that led to new interactions between group members. Individuals feeling secure in their position, mutual respect among group members, and accountability were other themes that were frequently associated with group cohesion.

People within an organization are interconnected, coinfluencing, and adapt over time. This is a natural process where people adapt to each other, their individual and shared experiences, and the contextual conditions of the environment, both internal and external to the organization. CLT defined this as the space between people, where interactions allowed for creativity, adaptation, and learning (Ott, 2010). The groups are CAS, and they emerge within organizations where individuals interact with one another and the environment; their productive well-being is positively correlated (i.e., interdependent), and adaptive tension exists. Because cohesive teams maintain higher levels of productivity (Castaño et al., 2013; Chun & Choi, 2014; Hinrichs, 2010; Moore & Mamiseishvili, 2012), I sought to understand the adaptive tension elements within the cohesion-performance relationship and how this context related to team performance.

Participant Selection and Sample Size

The nature of this study was exploratory and required a nonprobability sampling strategy to identify participants who had experienced adaptive tension within a business setting that improved group cohesion. A purposeful selection was used with an initial target of 20 to 25 individuals from a minimum of four different teams. These teams were derived from multiple organizations, where I had an established relationship with a gatekeeper. Nonprobability sampling does not ensure that all segments of a population are represented, which was acceptable for this study because the purpose was to select participants based on meeting the criteria described below (Leedy & Ormrod, 2012). A total of 21 individuals from 12 different teams were selected based on their shared experience with adaptive tension within CAS.

The actual number of participants was determined based on two criteria: sufficiency and saturation of information. Sufficiency is achieved when the number of participants reaches a sufficient quantity that the diversity represented by the sample is enough to connect with a significant majority of people who have experienced a similar phenomenon (Seidman, 2012). Saturation of information is achieved when additional interviews are producing the same information (Seidman, 2012). Seidman (2012) indicated that this typically occurs at 25 participants, and I reached sufficiency and saturation at 21 participants.

The nature of this study was phenomenological, and I sought the rich contextual experience told in the form of stories by individuals who experienced adaptive tension in a business setting. Selecting teams from partner organizations where I had established relationships resulted in a high participation rate, though additional organizations would have been recruited if required. Differences can exist from one organization to another that could produce different study outcomes, but this would be true of any selection, so the team selection was acceptable. A nonprobability sample was required for this study to identify participants who had experienced adaptive tension within a group that improved group cohesion. Although this sampling strategy served the purposes of this study, it represented only one small view of reality and is not necessarily generalizable across all organizations.

Three partner organizations were identified to recruit participants. The first was a software engineering firm where I had an established relationship with the partners. The second was a manufacturing company where I had relationships with the senior management team, as well as the management teams of some of the operating units. The

third was a specialty whiskey distillery where I had a relationship with members of the management team. All of these organizations reside in the United States, with teams located on the West coast, Central, Northeast, and Southeast regions. Additional organizations were not needed to reach the targeted number of participants.

Selection Criteria

The teams were chosen based on the following criteria: (a) experienced adaptive tension, (b) multiple group members chose to adapt to this tension, (c) maintained or improved group cohesion, and (d) multiple group members were willing to devote 2 hours to the study. The potential participants were screened (see screening questionnaire in Appendix B) and asked for multiple potential group experiences meeting the above criteria. Based on a consensus from multiple group members, an adaptive tension event was chosen. The in-depth interviews were then conducted based on the selected event.

Instrumentation

Because group members are free thinking individuals who also have a spirit of independence (Marion & Uhl-Bien, 2011), it was important to understand the meaning they attributed to their experience. In-depth interviewing is an approach that is effective in gathering data on the lived experience, as well as the meaning, that individuals attribute to it (Seidman, 2012). This method consisted of two interviews conducted approximately 1 week apart. The first interview was focused on the participants' past experience in teams and on the group experience itself. The participants were asked to reconstruct the details of their experience with adapting to tension, how this tension affected or was affected by group cohesion, and how the dynamics related to team performance. In the second interview, the participants were asked to reflect on the

meaning of the experience, how their past experience played a role in the experience, and how this experience may potentially impact them in the future.

The interview questions (see Appendix A) were constructed to facilitate an open dialog, guide the participants' stories towards the research questions, and collect data on the meaning the participants attributed to their experience. The study questions were developed based on CLT, group dynamics research, and the contextual foundations reviewed in Chapter 2. The resulting series of questions in Interview 1 and 2 aligned with one or both of the research questions focusing on aspects of cohesion or performance (see Table 4). In addition, using the questionnaire as a guide helped to ensure study reliability by standardizing the questions across all interviews. A sample of these questions was provided to each of the study participants before the interview. The participants were encouraged to ask for clarification during the interview if anything was unclear and guided with follow-up questions when necessary.

Table 4
Interview Questions (IQ) relation to Research Questions (RQ)

Interview 1			Interview 2		
IQ	RQ1	RQ2	IQ	RQ1	RQ2
1a	X		1a	X	
1b	X		1b	X	
1c	X		2	X	
1d	X		3	X	
2		X	4	X	
3a		X	5		X
3b		X	6		X
3c		X	7	X	X
4	X		8	X	
5	X		9	X	
6	X		10		X
7	X		11		X
8a	X				
8b	X	X			
8c	X	X			
9	X	X			
10a	X	X			
10b	X	X			
10c	X				
11a	X	X			
11b	X	X			
11c	X	X			
11d	X				
11e	X	X			
11f		X			
12	X	X			
13	X	X			
14	X	X			
15		X			

Data Collection Procedures

Data were collected using an in-depth interview method inspired by Seidman (2012). This approach to interviewing allowed the details of the participants' experience to be recreated from their subjective point of view and allowed data to be collected on what the experience meant to the participants (Seidman, 2012). The goal of phenomenological research is to capture accurately the experience from the participants' perspective (Leedy & Ormrod, 2012).

The data were collected from each participant over the course of 2 to 3 weeks, with every attempt to schedule the interviews 1 week apart. It was anticipated that scheduling conflicts might require flexibility in the scheduling. The goal was to allow the participants time to reflect on their previous interview, while short enough so that their previous interview was still fresh in their minds (Seidman, 2012). The interviews were conducted by telephone. Though in-person interviews were preferred in order to observe the full context of what was being communicated (i.e., body language, hand gestures, etc.), geographic obstacles, travel costs, and time constraints, made it impossible to complete all interviews in-person.

Each interview was recorded unless the participant objected. If the participant did object, then interview notes would have been relied upon to reconstruct the stories. It was my expectation that most participants would agree to the recording of the interviews, and all participants did agree to the recording. Portions of the recorded interviews were transcribed based on emergent themes and themes previously identified from the literature review. Because the objective was to understand the experience from the participants' subjective point of view, providing the transcriptions allowed the

participants to review and adjust the narratives for accuracy (Seidman, 2012). Strictly following this practice added reliability to the study.

The recordings were stored digitally on a recording device and later transferred to a computer. These recordings were also backed up to a USB device. All copies of these recordings were protected by encryption, password, and physical security. Automated software and third party professional transcription services were used for the original transcription and later edited into selected narratives. Field notes were stored in a bound notebook with numbered pages and later scanned for digital storage. Software was also used to help organize transcribed narratives and field notes for data analysis.

Data Analysis Procedures

Separating data collection from the analysis is difficult if not impossible from some respects (Seidman, 2012). During the interview, some degree of analysis was done in terms of recognizing potential themes, notating potential emergent themes, and conceptualizing the meaning from each participant's point of view. It was important not to impose meaning from one interview to the next, so Seidman (2012) recommended not conducting a detailed analysis of the interview data until after all the interviews are completed.

Once the interviews were completed, the data was reduced to relevant themes using an inductive process. The goal was to accurately recreate what was most important from the participants' subjective viewpoint and not to paraphrase or attempt to deduce additional meaning beyond what the participants' said (Seidman, 2012). Relevant passages were highlighted in each transcript and labeled for later analysis. The narratives containing the relevant passages were copied into separate files and stored by their

respective labels. Each of these files was noted with a source reference, so the original interview could be referenced for contextual information if needed. The labels were used to determine relevant themes from the participants' perspective and helped link the data together.

Narratives that were relevant to the research questions were selected and included in Chapter 4 in their original form and context. Presenting the stories that capture the participants' meaning in full context enables the verification of results. This approach also helps to suspend alternate perspectives, which is important in phenomenological research (Leedy & Ormrod, 2012). Future researchers can also determine their own conclusions from the data and leverage the data for other purposes outside of the scope of this study.

Issues of Trustworthiness

Conducting a research study takes time, and a researcher will pay attention to internal and external validity, reliability, and objectivity, while crafting the design to make the study worth the effort. In qualitative approaches, some researchers prefer to substitute concepts of credibility, transferability, dependability, and confirmability for internal and external validity, reliability, and objectivity (Seidman, 2012). Validity is achieved if the researcher can draw conclusions including cause and effect or other relationships from the data and if those conclusions can be generalized to other contexts (Leedy & Ormrod, 2012). From a qualitative perspective, validity would be achieved if the results represent the meaning of the phenomenon from the participants' point of view with credibility and with transferability to other contexts. Reliability is achieved through consistency of measurement (Leedy & Ormrod, 2012). If the same thing is measured

twice will you get the same result? This is addressed by accounting for context changes that could impact the dependability of the study results and whether the results can be corroborated or confirmed.

Credibility

A researcher may use several strategies to ensure internal validity including: a controlled laboratory, double-blind design, unobtrusive observations, and triangulation of multiple sources of data (Leedy & Ormrod, 2012). Additionally, spending extensive time in the field, actively looking for alternative explanations, describing situations in sufficient detail, getting feedback from others, and allowing respondents to review conclusions can also help ensure internal validity. Yin (2008) identified pattern matching and logic models in case study designs as additional mechanisms for ensuring validity. Strategies also exist for ensuring external validity, including conducting research in a real-life setting, making sure you have a representative sample, and replicating studies in different contexts.

The in-depth interview approach as defined by Seidman (2012), was designed to help accomplish validity. The narratives as reviewed and edited by the participants were presented in the original form and context. The process itself of conducting the interviews over the course of 2 to 3 weeks with the interviews scheduled approximately 1 week apart, helped account for off days for the participants and enabled the stories to be reconciled through multiple interviews (Seidman, 2012). Lastly, because multiple participants were selected from the same group experience, the stories were checked against those of the other participants.

Transferability

In addition to presenting the narratives in the original form and context, contextual backgrounds for the companies and teams were also included in Chapter 4. The selection of participants from multiple companies, with multiple functional backgrounds, and multiple team experiences helped establish transferability. The nature of in-depth interviewing also provided for thick descriptions that will allow others to determine for themselves the transferability to other contexts.

Dependability

Because human beings share experiences and possess self-awareness, they are uniquely qualified to explore paths of inquiry about human existence (Howell, 2012). Researchers must leverage their experience to make meaning of the participants' stories. An interviewer's capacity for understanding emotions, human nature, societal norms, and dynamics of social interaction, makes inquiries of the human phenomenon possible, but objectivity still needs to be addressed in the study design. Is what the participant is saying true or true from another's perspective as well? Would a different interviewer get a different response? Is the timing of the interview impacting the result? People can have off days, and there may be events occurring at the time of the interview that cause an emphasis on one factor versus another.

Selecting multiple teams from different organizational contexts and multiple participants from the same team experience allowed for transferability and triangulation. The process of conducting the interviews over the course of 2 to 3 weeks with the interviews scheduled approximately 1 week apart helped account for off days. Further,

following the same interview template with each participant and tracking for material events throughout the study established dependability.

Confirmability

In addition to triangulating comments from multiple participants who shared the same experience, conducting the interviews over time, and allowing the participants to edit their stories, the selected narratives were included in Chapter 4 with enough detail to enable others to draw their own conclusions on meaning. Moreover, every effort was made to maintain objectivity throughout the process to maximize the quality of this study.

Ethical Procedures

Consent letters were obtained from the organizations agreeing to assist in the recruitment and data collection. These consent letters were submitted to Walden University's IRB along with the proposed participant consent form and standard application for research ethics review to request approval to conduct research. The approval was obtained from Walden University's IRB on February 16, 2016, approval number 02-16-16-0040463.

No substantial risks were anticipated for the study participants, and appropriate controls were instituted to ensure the confidentiality of all study participants. I used an interview technique that facilitated self-reflection of past events by the participants. Self-reflection offers study participants an opportunity to gain new meaning from past experiences, but no other benefits monetary or otherwise were provided to the participants. A pre-inclusion interview was conducted with potential participants using the screening questionnaire in Appendix B after receiving consent via email. These

potential participants were identified through gatekeepers at each organization and while interviewing other participants.

Summary

This qualitative study used Seidman's (2012) in-depth interview method to reconstruct the group experience of adaptive tension while maintaining or improving group cohesion from the group members' perspective. The study was founded in CLT but at a point of convergence with group dynamics research. The unique pairing of these research traditions resulted in an operational model of the cohesion-performance relationship that had the requisite complexity necessary to understand the group members' experience. Allowing the stories of each of these participants to be told in their own words enabled a contextually accurate representation of the group dynamics that was needed to understand how adaptive tension interplayed with group cohesion. Understanding this interplay led to methods for improving team performance through the administrative, enabling, and adaptive leadership roles of CLT.

Chapter 4: Presentation and Analysis of Findings

Many teams are continuing to underperform because adaptive tension that forms within CAS is producing unpredictable adaptations that frequently result in lower performance outcomes as organizations increase in complexity. The purpose of this study was to discover how adaptive tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance. The nature of this study was exploratory and required a nonprobability sampling strategy to identify participants who had experienced adaptive tension within a business setting that improved group cohesion. A purposeful selection strategy was used with an initial target of 20 to 25 individuals from a minimum of four different teams. A total of 39 potential participants were identified and invited to participate in the study. Of those invited, 24 people agreed to participate and met the inclusion criteria. Only two of the three target organizations were selected as partner organizations. Due to schedule conflicts, 3 of the 24 people were removed from the interview schedule. Of the remaining 21 participants, 12 were from the partner organizations with the remaining 10 participants recommended by other participants in the study or through other professional contacts. The participants were recruited and invited to the study through four rounds of recruitment until sufficiency and saturation of information were achieved, which was achieved at 21 participants.

The final 21 participants spanned six different companies, and data collected were on team experiences of 12 different projects. Of these 12 projects, 9 were experienced by newly formed teams with the remaining 3 by previously formed teams. The previously

formed teams did have new members, but the group dynamics had previously been established (see Table 5).

Table 5

Participant Teams and Projects

Company	Team	Dynamics	Project
A	A1	Existing	Divestiture
A	A2	New	ERP Implementation
A	A3	New	Infrastructure Upgrade
A	A4	New	Plant Performance
A	A5	New	Strategy Deployment
A	A6	New	Product Launch
B	B7	Existing	New Client/Product Development
B	B8	Existing	New Client/Product Development
C	C9	New	Startup Company
D	D10	New	New Leadership Team
E	E11	New	Acquisition
F	F12	New	Establish Trading Entity

Research Setting

Each of the participants participated in two telephone interviews that were conducted approximately 1 week apart except for one participant conducted on 2 consecutive days due to scheduling requirements. Two of the participants were displaced from their job prior to the start of the study. Of the remaining participants, five discussed

team experiences from a previous company. No remarkable events happened during the study that would have influenced the interpretation of the data.

Contextual Overviews

Company A

Company A was a manufacturing organization with multiple plants located in the United States and Mexico. The company sells into multiple markets with significant variations in sales strategies and cycles. The common strategic alignment was around manufacturing capability and engineering expertise. The manufacturing operations were synergistic around capabilities, and the commercial practices evolved into multiple, specialized market-centric approaches.

Team A1. Team A1 was a technical team charted to carve out the operational and commercial systems necessary to divest one of the company's market segments. The group dynamics was previously established through multiple successful project deliveries, though there were some members of the team who were new to the organization. The team faced new group dynamics from the acquiring company's integration team. Predominantly, the group dynamics manifested as tension around a perception of lower technical capability and differences in approach. There was also little trust between the two teams, and the task requirements of the project required some amount of reliance by each group on the other. This requirement created procedural challenges that were overcome and group tension that was only partially mitigated.

The largest challenges that had to be overcome and forced the team to adapt were a significant difference in how the two companies operated and system capabilities. Because the market segment had multiple commercial, business, and analytical systems

key to company performance that did not directly transfer to the acquiring company's systems, the team was concerned with how the acquiring company would be successful if these systems were not transferred. This caused additional tension within and between the two groups, which forced adaptation. There were multiple points of realization when each group recognized they had to rely on one another to successfully complete the project. During these periods of adaptation, trust appeared to develop. The project was successfully completed without any significant issues. The group cohesion was previously established, and the successful project further reinforced this group cohesion.

Team A2. Team A2 was a new team formed to implement an enterprise resource planning system at one of the plants of Company A, which comprised of not only a new software but also significant process changes in terms of how the plant operated. Though this was a new team in terms of this project, many of the people on the team had been with the organization for a long time and even worked together on other teams in a different capacity. The processes were described as archaic but in the context of what would ultimately be a significant shift in process. Some of the group members were anxious in the face of this change because the concepts being discussed were all foreign. There was also a limited amount of computer literacy amongst many of the group members, though they had significant knowledge and expertise in their respective functional areas. There was one member of the team who ultimately was removed because he did not fit well with the team.

The project spanned multiple years including both the initial implementation and subsequent stabilization period. The level of commitment was high, and each of the group members invested a significant amount of time both during and after normal

working hours. The outcome was significant, changing the way the plant operated and for the better. This success created a cohesive bond among the group members; but, in the initial stages of the team formation, these individuals were used to working within their own functional silos. This caused tension within the team that forced adaptation. Once the team began adapting to each other, cohesion formed.

Team A3. Team A3 was comprised of individuals who had previously operated as separate information technology resources embedded within the plant operations of Company A. As a part of an overall objective of integrating the information technology function, this team was formed to integrate the company's infrastructures. The first project was to implement a single active directory for the company, which was a foundational component of the infrastructure necessary to manage all user identities from one user directory. The individuals on this team knew of each other, but had never previously worked with one another. Further, one of the individuals on this team was promoted to a managerial position with the other people reporting to him.

There was little friction between the individuals, though they needed to learn to work together. Most of the tension in the group was focused on the technical challenges, which created a focal point for them to work together. The new manager did not face any significant resistance, though his own uncertainty about taking on the new role was a prominent point in his story. Ultimately, the team was successful, and after overcoming a few minor technical setbacks in the first two plant migrations, the remaining migrations were completed with precision. The team was organized and continued to refine the approach as they went along, which was the prominent factor underpinning the

significant accomplishment of the group. This accomplishment resulted in group cohesion.

Team A4. Team A4 was a management team for one of the company's newly acquired manufacturing plants. Due to some attrition that happened after the acquisition and a change of the general manager, this team had to reestablish itself. The team had just gone through a cultural shift acclimating to the company culture, and there was uncertainty within the team as to how things would operate going forward. The new general manager assigned to this plant had been with Company A for many years, so the hope was she would be able to help bridge the cultural divide and bring stability to the team.

There was a lack of trust between the people at this plant and the leadership of the company, so the new general manager faced tension from the first day. Further, roles and responsibilities were not clearly defined, and with the change in operating approach brought on by the new acquisition, uncertainty and friction increased within the team. The primary focus of the new general manager was to establish open and honest communication and more clearly define the roles and responsibilities of each person on the team. Though the new general manager faced resistance, she continued to push open communication and the definition of roles, and the team's performance slowly improved. The success did improve the cohesiveness of the group over time.

Team A5. Team 5 was the senior leadership team of the company. The team was functioning, and some trust had already been established between the group members. The company had just been sold by its former parent organization to private equity, and the chief executive officer wanted to improve the performance of the organization. His

focus was on transforming the senior leadership and subsequently the plant leadership into high-innovation teams. The primary tenets of this transformation were establishment of even higher levels of trust to enable open, direct conversations, hyper focus on goals, unambiguous measurements of key metrics on goal attainment, and removal of waste in process.

He introduced the organization to this transformation through a series of meetings meant to foster an honest and vulnerable conversation among group members about themselves, objectives, and purpose. This led the team to higher levels of trust, defining the core principles of the organization and a thematic goal that became the rallying cry for everyone to organize around, deriving purpose and energy. Further, all metrics for measuring progress were provided directly and automatically out of the company's operating systems, creating one official system of record. The result was a more effective senior team and effective attainment of goals, which further reinforced the group cohesion. The management teams at the plant level were aligned with the thematic goals, and varying degrees of success were achieved from plant to plant in terms of cohesion.

Team A6. Team A6 was formed from individuals from both the commercial and operation teams of multiple plants and the corporate staff to explore the commercial viability of a new capability to offer sterilization services for medical device customers. From the onset, a bias existed against creating this capability thinking it was too risky, so tension existed against the stated goal of the team. A new commercial leader had joined the company who supported the initiative, which enabled the project to get off the ground.

The team leader had a background in group facilitation, operations, and quality functions within the medical market segment of the company. He had also been with the company for a long time. Other members of the team were from a newly acquired plant that did not have the same operational bias, as well as members from another plant who had been with the company for a long time. The dynamics of the group was difficult to navigate, but the team leader forged forward bringing in outside expertise and was able to get the team to conduct a fact-based value assessment. Through this experience, the group members came to recognize the operational bias. The assessment was accepted, and the new capability was successfully built, which improved the profitability of existing products and enabled the commercial teams to target new sales opportunities. As a result of the success, the group's cohesion improved.

Company B

Company B is a software engineering company that specializes in the design, development, and implementation of custom software solutions. The company staffs its own software engineers with all development work completed in house. This enables the company to provide a differentiating level of customer focus by involving their clients more intimately with the development process.

Team B7. Team B7 was a development team that had already established cohesive group dynamics. They were assigned a new client company that needed a payment processing interface developed. The challenge of this project was centered around uncertain design requirements. When the team first started working on a software product for the new client company, the focus was on compliance with persons with disability regulations, though the client company did not realize the design implication of

this requirement. The more advanced graphical design elements they envisioned were not immediately realized due to the compliance requirements being applied to everything.

Once the project progressed to demoing some of the initial design elements, the client company realized they needed to expand the scope of the project to achieve their design objectives. This also meant a significant increase in time and cost. The team was able to accommodate the scope increase by assigning additional resources to the team and minimizing the impact on the overall project timeline by involving the client early in the process identifying the design issue sooner rather than later. As a result of the success, the group cohesion improved.

Team B8. Team B8 was a development team that had also established cohesive group dynamics. This team was introduced to a new client company by an individual who was working at company B and was related to an individual at the new client. The client company had tried unsuccessfully to create a new system that dealt with complex actuarial calculations, so was a high degree of doubt as to whether any company could successfully create a viable product software. This doubt created tension within the group dynamics from the beginning, which was further magnified by issues that surfaced from the individual who had the relationship with the client company because of the role he played on the project.

Some of the biggest challenges that needed to be overcome were moving this individual into a different role, translating semantic differences from the client company nomenclature, and establishing trust. Through open communication, adaptation to the client company needs, and perseverance through multiple complex design sessions, the

team was able to create a product platform that the client company ultimately trusted. As a result of the success, the group cohesion improved.

Company C

Team C9 was a newly formed team tasked with the startup of Company C and focused on commercializing a market opportunity using new filtration technology. The primary challenges for this team were three-fold: a shift from a large company culture to a startup, typical startup issues, and first-to-market challenges in terms of establishing standards and adoption. At first, a few of the original group members did not fit well with the new culture and ended up leaving the company. The remaining core team had a commitment to the success of the company that enabled them to persevere through the other challenges. Overcoming the challenges and successfully launching the company resulted in group cohesion.

Company D

Team D10 was the result of a significant change in leadership members of Company D in a short period of time. As a result, the new leadership team had to not only reestablish the group dynamics but also deal with company performance challenges that remained from the previous team. The new president had difficulty establishing trust relationships with the rest of the leadership team, ultimately resulting in him leaving the company. The other group members did establish trust with one another and group cohesion was created as a result of the successful navigation of challenging circumstances.

Company E

Team E11 was formed to lead the acquisition and integration of a new company into Company E. This was the first acquisition that this leadership team had undertaken at the company. The future of the merger and acquisition program hinged on the successful completion of this project. Three challenges were identified that needed to be overcome: hierarchical, roles, and workload. Communication, navigation of roles and responsibility assignments, detailed planning, and strategic compromises helped overcome these challenges. Some groups performed well, and others not as optimally, but overall the success of the project established group cohesion.

Company F

Team F12 was formed to establish a new trading entity in Mexico. The company needed to establish a new entity in order to secure a commercial deal to sell in the region. The primary challenge the team faced was a lack of experience establishing a commercial presence in a foreign country and knowledge gaps in terms of laws and regulations. The team was comprised of individuals from the local region, the US-based regional headquarters, and the Chinese based parent company. There existed a tension between the parent company leadership team and the local leadership. This made it difficult to navigate some of the internal discussions, further complicating decision making. The team was able to persevere through the challenges and successfully created the new trading entity, which created group cohesion within the team.

Data Analysis

Emergent Themes

The participants' stories were transcribed and later bracketed based on emergent themes. The themes that informed the research questions and were relevant to the contextual foundations established in Chapter 2 were bracketed and quoted directly in the below excerpts. Originally there were 23 themes that emerged from the data. Some of these themes emerged with significant distributions across many teams with others only a few teams. All 23 themes, listed below in alphabetical order, did emerge across at least two teams:

1. Accountability
2. Adaptive Team
3. Adaptive Leadership
4. Alignment
5. Attitudes
6. Commitment
7. Complexity
8. Directness
9. Feelings
10. Focus
11. Freedom
12. Group Cohesion
13. Human Nature
14. Judging

15. Leadership
16. Maintaining the bigger picture
17. Mutual Respect
18. People
19. Positive Tone
20. Reality
21. Reward
22. Role and Responsibility
23. Trust

The themes that did not emerge with significant distributions across at least five teams were reduced to six macro themes. Through a process of reduction, each story was grouped into a macro theme that captured its meaning. The six macro themes that emerged encompassed the meaning in a larger context. For example, mutual respect rolled up into trust, and other categories like reality had stories assigned to multiple macro themes, adaptive leadership, adaptive team, or commitment depending on the nature of the participant story. The six macro themes that emerged all had significant distributions across at least five teams. The order of the list is intentional beginning with stories that conceptualized leader actions followed by stories that spoke of individuals, choices, and reinforcing mechanisms. This sequence emerged as a natural order from how the participants told their stories and may relate to how cause and effect were perceived. The related mechanisms of leader actions, team actions, individual traits, individual choices, and reinforcing mechanisms appear in the presentation of data that follows, and I explore in more detail in Chapter 5. Within the discussion of individuals

and their choices, an additional concept of humility emerged, which is also explored in more detail in Chapter 5. The six macro themes that emerged in the perceived natural order are:

1. Adaptive Leadership (leader)
2. Adaptive Team (team)
3. People (individual)
4. Commitment (choice)
5. Trust (choice)
6. Group Cohesion (reinforcing mechanism)

Presentation of Data

The six macro themes are defined in this section with direct quotes in the form of short narratives from the participants' stories that illustrated the macro theme. The narratives listed under each macro theme were grouped by subthemes that bounded the meaning. These subthemes emerged out of a secondary analysis described later in this chapter and are included in this section along with the macro themes. The narratives presented were analyzed as collections of data for each subtheme as they relate to the six macro themes, as such, they are introduced as a group of data for each subtheme with conclusions presented at the end of each macro theme section. The data are then interpreted against the research questions in the study results section below and synthesized into a leadership model with examples for use in practice in Chapter 5.

Adaptive Leadership. The macro theme of adaptive leadership encompassed stories that emphasized leaders overcoming obstruction or demonstrating objective measurement. The predominant commonality of data in this category was adaptation by

leadership focused on the group dynamics. These adaptations range from adjustments to approach and style to new learning or realization. The adaptations resulted in material changes in how the groups were led and were focused directly on improving team performance. The following data are direct quotes from the participants' stories that illustrate adaptive leadership. The narratives spanned four different companies and eight different teams.

The following 10 narratives had a 69% frequency distribution associated with cohesion as determined by the interview question assignments. The frequency distributions are discussed later in this chapter. The emergent subtheme that bounded these was labeled objectivity and represents the orientation of the leadership team to measure performance objectively. The reference at the end of each of these narratives indicates the interview number and corresponding question. For example, interview 1 question 2 is noted [1Q2]. Editing to eliminate hesitations and repetitions, correct grammatical errors, and remove some of the idiosyncrasies of conversational speech were made without notation. Editing for context and clarity are enclosed in brackets and were reviewed by the study participants for accuracy.

> I'd say, [two different] people, I could be critical of both, where one [relationship] improved and the other, I would have to say has gotten worse. [2Q2]

> I think there were certain decisions we should've taken quicker and we should've been bolder with certain decisions. It's difficult to kind of rationalize post the

event, but for sure, there are things we should've done faster and had been bolder about. [1Q11]

I've always tried to encourage a lot of candor within my team and it's been quite painful at times when that happens. I would say one thing that stands out in particular was, I had asked [someone on my team] what can I do differently, what can I do to support you differently? His answer was, you have lots of great ideas. I love the ideas but the execution frankly at times, is a little poor. Basically meaning, there were too many ideas and not enough focus on one, two, or three things to get them done. It has changed the way I share my ideas a little bit. [1Q12]

Well I think that I gained a better appreciation, or a better understanding, about in business that different functions have to somewhat work in concert. I became more acceptant that every individual [function] has an optimal state, but if you ran every function at its optimal state, the business probably would not be optimized. There's limited resources, limited ability to invest and as a business leader, the demand is trying to figure out a way to get the right amount of resources to the right system or to the right function that helps the business run best as a system and run the most effectively. [2Q1]

I think there was a lull [in cohesion]. I think prior there was a much more team oriented, peer-oriented leadership group and I think the hierarchy manifested

itself. So, I think that gave it a different dimension, how people perceive each other as colleagues, more superior-subordinate type of roles rather than peer related roles in leadership. I think that was a consequence of the tension created. [1Q6]

You have to be very tough and single-minded to make sure you don't let it slip. I think we wouldn't be in these roles if you didn't get some type of enjoyment out of seeing success, people grow, and people get better at these types of things. [1Q1]

I think if you're a business leader, you can't be like a dictator where you're the only one who is ever right. I think you have to be very conscious of the mood of the team, the needs of individuals, and you shouldn't be so arrogant that you think that because you've got this idea that this is the way we're going to do something, that [it is] the only way it can be done. I think you have to be prepared to listen to your colleagues and change accordingly. I think the one thing that is a strength of [our company] is that we've never been afraid to change. [1Q11]

[It] surprised me just how quickly people who are well paid, not stupid, [and] have done it before, think if that's what they want to do then leave it to them. [They will] make the decision, and so you get bombarded with all this stuff you have to sort out yourself. And there are a number of examples of that, how the local teams have broken down a little bit, and didn't work as we wanted them to

work, because they felt that hey, somebody in corporate will make that decision, we're fine, it's not my worry. That's where the one [company theme] backfired a little bit as well. Another thing that we sort of moderated if you remunerate everybody based on the whole effort, sites that are doing poorly don't feel the pain and they don't feel that worried about it, that's fine, [other sites] are doing fine we're going to get bonuses. So, these are the sort of things that have kind of taken us by surprise, because in our naivety I suppose, we assumed that everyone is going to continue to work in a responsible fashion and unfortunately human nature is not always that way. [2Q4]

It was necessary to do something; I think in hindsight maybe we could have moderated a little bit, but that's hindsight, you can always go back and look at it as an error. Something needed to be done, we went too far, and we had to back off; anyway, we identified that there was an issue and we corrected it with positive effect, but it takes a while anytime you make a change. It's not instant. It takes you maybe a year for those things to sort of flow through and have a noticeable benefit. [2Q4]

Everyone has [things that trouble them]. Everyone out there has sleepless nights, stress, and all that stuff. That happens. You wouldn't be human I don't think, [or] the humble accessible manager of a business if you were any different. You meet cold people, callous people, [with] no sense of feelings, but I doubt that they can be rounded. So, I think that you have to deal with it. I think that you have to be

> physically fit, I think that you have to have your life in balance, I think you have to have a supportive family, you have to have all those good things right. And you have to have a [view] that says, you know this was a problem, it was a dark day, and we'll get past it. Our vision is that this business will be so much better anyway. [2Q6]

The next seven narratives are also from the macro theme of adaptive leadership and had a 57% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that bounded these was labeled obstruction and described the adaptive tensions the leadership faced in the team experiences.

> We wrestle with the fact that we used to have regional management teams that were more decentralized. We were probably easier to do business with, surely nimbler, but as much as we say we're a functional organization now and probably more efficient doing some things [in a centralized] way, we kind of lost this decentralized, quick decision making. We want those people at those sites to think themselves as their core management team, but we're probably more suited to run their plant as a business. I think it's a challenge and I'd say it would be an exception if we had one or two that actually ran [the plant] that way, so we debate that at the senior level time and again. Are any of those people really leaders? I'd say a lot of them aren't. They're fine within their function, but they don't easily step up and take the leadership role to try and run that plant as a business. [1Q4]

I felt after coming out of that particular session that I was a skeptic, right? Meaning you've got plant managers and some other key people in plants telling you they buy all that and they're on that, but at the end of the day, I think they get back and when you're at a plant, [they are] firefighting and it didn't really make an impact across the organization like we would have hoped. [1Q2]

[I felt] pretty crappy actually for the most part. It was definitely not a very enjoyable couple of years. There was a lot of restructuring activity that took place. You had a lot of turnovers, but then you were always trying to rehire people and trying to keep people motivated, enthused. [1Q2]

There were plenty of times that there was a lot of tension in the room. I'm sure because a lot of people don't like change. I mean, that's just human nature, that you don't like change. If it's going to make extra steps for anybody, nobody wants those extra steps. I think, all in all, … we all did fine working together. [1Q4]

When I teach my staff, not everybody learns the same way. You can say it one way and they're not going to get it. I can say it over and over until I could come up with a way that they could understand what I was trying to tell them. [2Q1]

Early in the cycle, we were in a group meeting and it became very chaotic. Everybody was slowly raising their voices, feeling that they couldn't compromise,

> that they had to have their way. I had to [change] from my typical management style and said, okay people, here's the scenario. We've got x amount of time to accomplish this. It will be accomplished. Once in a while you have to raise the temperature of the environment in order to clear away the smoke, to clear away the misconceptions, and to establish that firm goal and firm understanding that the team has to operate as a team in order to effectively address it because we cannot resolve issues in silos and hope that the rest of the team will come along. [2Q6]

The remaining 11 narratives concluded the macro theme of adaptive leadership and had a 50% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that bounded these was labeled overcome and expressed aspects of leaders adapting and overcoming challenges.

> Some people came up with the purpose of [the company], to fulfill the needs of industry. Other people had a very financially centered purpose in mind. It relates to different backgrounds and maybe different core values and things like that. You can pass through it when you're designing all that stuff, but I think then once an event [that tests] that happens, those differences start to shine. I think that weighs on reactions [people have] to events thereafter. [1Q5]

> We're all going to work together in this seamless organization. If a piece gets changed out, then it will be where I would think; okay, I know two of the players

are good and the third player, they must go through the proving process. In my perspective, I'd give everybody the opportunity to go and shine and if they stumble, help them out. [2Q1]

The essential theme still for the business is growth and the frustration for the business around growth, so to have everyone do their 20-minute spiel about whatever is on a typical agenda and not focus on specific things, commercial things, operation things, that are impeding growth [is not effective]. So, we got to the point where we said those are important things that we need to deep dive on and so [we] were much more flexible in our meeting agenda. [1Q2]

Everyone should participate directly, and shouldn't hold themselves back if they think someone's going to get upset with what they're saying. That's if a team is really going to be effective, people have to be open and honest. Get to the root of issues and determine where you're going. Too many management teams I've been on, people all have their views, and you've got a strong CEO [who] will squash anything that's counter to what his belief is, and those are very ineffective teams. You're just going through the motions, showing up. Getting a check in the box, but really not making an impact on the business. [2Q6]

I would say, emotion is definitely one answer. I think there were times we got fairly close to stand up riles. We didn't actually get there, but I think, had we, that

could have been very, very negative. Had we gone down that path, that's when things would have broken. [1Q11]

A lot of it is understanding the gap that exists between people, people to people, department to department, and then closing that gap by taking away some of the misconceptions as well as the risks. The true risks as opposed to perceived risks, because once you get that clear then you can start seeing who is carrying that risk. [2Q10]

We stayed committed and focused. [We] had the same message and communication in each of the members of the team. [We] had a consistent message to the site, and nobody really faltered when we communicated to the sites. It was one message from the exec team, we had our meeting and we made sure that we all agreed on what was going out to the group. [2Q4]

We tried to spend a lot of time on what are we willing to do and what are we not willing to do. Because the big trap is you can have people running all over the place unless you say we just are not going to do this today. [1Q2]

You've got these people at the senior level, again all good people, all thinking they are doing the right things. Maybe from very different backgrounds, but don't really know enough about each other, don't really understand why certain people have strong views on certain things, and why they go off the deep end at the

thought of other things. That's where we started coming together. First and for most the senior team [must] be speaking as one. They've got to be all joined at the hip, they need to understand each other's position, and perhaps understand their upbringing and experience, that makes them what they are today. When you can do that, agree on the strategy, and everyone is whole hardily behind it (no one is in silent disagreement) you will be the better for it. [1Q1]

From my perspective, we have [every year], whether it's put up by ourselves or jointly agreed with our owners, financial goals and longer-term strategic goals. We've all agreed, we've all signed off, and no one should be in silent disagreement. It's then, how do we make sure the company achieves those things and that the business doesn't get taken off track along the way? Years come around very quickly, you just finished one year, and no sooner have you done the year end accounts and you're through the first quarter [of the next year].

We've got some big goals to achieve [each] year and you haven't a lot of time to waste. And so, in any business I've been involved with, it's very easy to agree to the strat plan, agree to a budget, come out of it and sort of breathe a sigh of relief that you've got through the process. Then the day to day stuff takes over and before you know it you're a quarter of the way through the year and you think where are we and we're off track, and that's the biggest challenge.

For me it's ensuring that my senior team are all engaged, focused on the key goals in the business, and we have a process that makes sure we keep on track. We [are] constantly looking at what we've agreed to achieve and where we [are] against those targets, and [making sure] that day to day things that come along don't side track us to the point where we lose any momentum. Then make sure also, that these individuals are working in alignment with one another and the things that we set [for] ourselves don't conflict so end up [in] little battles within the business that are unhealthy and not helpful to achieving the goals. For me it's about the senior team being aligned, all singing from the same hymn sheet, and making sure that message is cascaded down to every single site and those local teams do the same with their teams to make sure they are aligned. In a perfect world, you want to make sure that everybody in the business is pulling the same direction. [1Q1]

They saw that even though I made [the] decision, I was willing to change my mind if [they had] enough experience backing [their] decision and they took responsibility for it failing, which they would have had to have done. So, yeah, I think that's easier, saying, my way goes, unless you explain why. [1Q12]

We run a pretty open-door policy. Typically [a person] would come in and speak to me about their concern. I would then make a judgment call if I felt that was a valid concern or if the problem is more on their side. If it was a valid concern then I would get the other person involved. [1Q9]

Adaptive leadership emerged as a macro theme different from the adaptive team theme discussed below because of a variation in the group context. Like adaptive team, tension led to adaptation, but the leader adaptation was focused on overcoming something that was obstructing the success of the team rather than adapting to a peer. These narratives described factors of leader adaptation where the leader was acting outside the group to affect the group dynamics. For this reason, the term obstruction was used to label the adaptive tension and overcome the adaptation to differentiate them from the group level constructs presented under adaptive team below. It is also interesting that the actions taken by the leader to overcome the obstruction sometimes introduced tension within the group dynamics.

The other subtheme under adaptive leadership was not necessarily a mechanism of action, but instead a predisposition or learned trait of the leader towards objective reality. It was labeled objectivity and was either the tendency to measure things objectively or an orientation towards direct honest communication, good or bad. This communication was not mean spirited but instead, direct constructive communication. The leader discerned the difference between subjective and objective conclusions and would choose to adapt or overcome accordingly. The difference between subjective and objective was subtle, and various methods were described that aided the leader in discerning the difference. For example, in one of the narratives above, the leader stated, "you have to be very conscious of the mood of the team, the needs of individuals" and "be prepared to listen to your colleagues and change accordingly." In another example, the leader stated, "I would then make a judgment call if I felt that was a valid concern or

if the problem is more on their side." This unique trait to measure things objectively is what stood out in all the narratives.

Adaptive Team. Adaptive team encompassed participant stories that emphasized group level challenges and complex situations that produced tension resulting in individuals adapting to one another and reinforcing roles and responsibilities. The predominant commonality of data in this category was also adaptation, but by individuals adapting to peers within the group dynamics. The situational problems that required creativity, adaptation, and learning to solve, for high-innovation outcomes to be achieved, are highlighted in this section. There are also elements of positive and negative tones in the narratives and correlation to context, which is discussed in chapter 5. The narratives spanned five different companies and 10 different teams.

The following 11 narratives had a 56% frequency distribution associated with cohesion as determined by the interview question assignments. The frequency distributions are discussed later in this chapter. The emergent subtheme that bounded these was labeled roles and described how roles and responsibilities came into play within the team experience. The reference at the end of each of these narratives indicates the interview number and corresponding question. For example, interview 1 question 2 is noted [1Q2]. Editing to eliminate hesitations and repetitions, correct grammatical errors, and remove some of the idiosyncrasies of conversational speech were made without notation. Editing for context and clarity are enclosed in brackets and were reviewed by the study participants for accuracy.

When this started I got everybody together and said, okay you're in charge of your realm, operations, systems and analytics. Start thinking about what [needs to] happen. Everybody went and did their diligence. Each [group] had their own meetings and [got] it all planned. Everybody performed as I thought they should. It was great. [1Q4]

I think just knowing we all rely on each other is a big part of it. Knowing that we all rely on each other, we're all dependent on each other just [reinforces] a strong relationship. [1Q8]

We were very lean, so everybody had their role. There wasn't a lot of overlap, if you had that job, you owned it, and you know what you have to do. You could rely on each other to do the job. [1Q11]

We each had a role. While I was working with routers and getting those configured up, [the other guys] would go around and prep the workstations. It was a good feeling just because everyone felt knowledgeable, believed in the plan and the plan was working for us. Everyone had their strengths and we were able to all play off each other. [1Q3]

Having an expertise in a certain area always helps. It's nice to watch subject matter experts kind of rise up and take responsibility and find [ways] to be able to get past certain obstacles. [1Q11]

I think it solidified all of our roles in a way that I think gave us all a lot more confidence in the positions we were working. It certainly did for me. [2Q8]

I think we at various times overstepped into each other's territory because the boundaries had [become] so blurred. That created a bit of [tension]. You kind of got into habits [of stepping in], and then you forgot there was an actual functional leader responsible for that. [1Q8]

It was really more facilitating, giving each of the individuals an opportunity to talk about what it was that they were looking at without interruptions from others. [1Q3]

So really getting people to listen to what others were saying rather than being confrontational and arguing. Letting individuals become more involved in talking about what they were specialized at, rather than all the things that would go wrong. Thus, getting them each to identify their real roles and responsibilities within the project. [1Q4]

Some of the people thought the salespeople were interfering in operations and vice versa. They just felt that the other was interfering in their realm and telling them what to do as opposed to saying, we are one [company], we work together. [1Q8]

> We all clicked in our different areas of expertise and we were able to put it all together into one package that worked well. [1Q8]

The next 14 narratives are also from the macro theme of adaptive team and had a 61% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that bounded these was labeled tension and described the adaptive tensions group members experienced in the group dynamics.

> I think we shouldn't kid ourselves, ... a number of us have worked in plants, you easily get sucked into day to day firefighting, but then sometimes, lose sight of the bigger picture. [1Q4]

> So, we'd have to have meetings to say, okay, are you sure you're getting this? Then they would call back and say, we're going to look at it and then we'd never get an update. Our communication was, I think, quite good, but it was always a one-way street it felt like. [1Q1]

> If [someone] stumbles, help them out. If they improve, that's always good, but, if they [keep] failing, it's kind of one of those things where the team would be stressed because of that weak link. [2Q1]

I was hired to bring some control which wasn't totally received by everybody as easy. Some percent of commercial side said, yes, okay, this is what we actually need, but the ones that were there on the technical and production kind of went, we're just fine without you. So, there was a little bit of friction I would say at first when they expanded the team from the first core few. Leadership knew they needed to get in some help, but the technical folks kind of liked the way they could do what they wanted to do however they wanted to do it. Bringing some discipline, I would say caused a little bit of initial friction, but it started to bring some real successes. [1Q1]

Tension can be polarizing, pushing people away, or galvanizing, making people who have similar interests come together and kind of get through a situation. [2Q10]

You get more confrontation, but it's not personal. It's being critical of the business and not necessarily the individuals. [1Q3]

It was probably 6 months to a year I would say after [the project]. Because we're still understanding what affects you get. If you change this then it's going to affect that. I think … that's probably one of the biggest problems even today, you know. I don't think anybody thinks anything through to the very end. [1Q1]

We would change something, so it would be good on her end, but all of a sudden, it's not good on my end. Then we have to get a hold of our customers. We're implementing this new operating system and when you get your invoice, it's not going to be as it used to look like. It's going to be something different. I mean it changed everything from the quoting process all the way to the invoice. [1Q1]

We were torn apart because our core team got torn apart. After the implementation, after [the system] was up and running for like 6 months or so, then all of the sudden, things started changing, and that wasn't through any of our faults. It wasn't because of us it was because of senior management, that all of the sudden cut us off [from each other]. [1Q7]

The major tension in our business has always been the same. Between operations and sales, and the same old cry that the salespeople go out and find business that's unsuitable, they don't ask the right questions, they can't throw this all over the wall and expect someone to quote. I think the interaction between the salespeople and the operations people has just highlighted the need for engineering people to be involved in some of these big projects at a much earlier stage. [2Q11]

The risk was that we would lose momentum at the customer level, and I guess we did lose momentum in certain areas. That's where the one [company] thing doesn't work well actually. The one [company] would work better if all the

business was the same and when they're so different it's almost a different playbook. [2Q7]

I think of the newest [group] members, they've been great and very flexible. I don't think they've had any issues. The only major tension was probably between the project lead and the individual I mentioned, because both of them are very strong technically. Tension may also be what's making him successful, because they'll have arguments over how to implement a solution, but at the end of the day it has to get resolved by saying, this is the way it's going to be done. [1Q8]

I'm of the attitude that if there's not any tension or not any passion [then] you don't get the best product. You need people who are passionate about what they do and what they want. When that happens, there's going to be conflict. If there's not conflict and it's too easy going, I'm the one who tries to start it, to try to get that passion involved. I think that's one of the things that really makes products special. [1Q10]

I think there was a tension working with [one of the group members], because [the rest of the team] was questioning what value that individual [was] adding. They were ultimately concerned that what the person was doing was ultimately creating more work for them in the long run. [1Q8]

The remaining 16 narratives concluded the macro theme of adaptive team and had a 59% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that bounded these was labeled adaptation and expressed aspects of group members adapting to one another within the group dynamics.

> Near the end, I think they were humbled once they started saying, oh no! We have cut-over weekend in 2 weeks. That's when I think the real panic started. They started to be a lot humbler and wanted a lot more of our time instead of just saying yes, we'll do it on our own. [1Q1]

> A lot of people [now] weigh in on the issues that aren't being talked about. As an example, you can have a sales pipeline and we keep seeing that we got all these new customers, the sales pipeline's [growing], and in the meeting [we] say wow, pat ourselves on the back. So, you [now have] some people like myself who go, yeah that's all well and good, but our actual sales are going backward. What are we missing in the discussion? I think that's an example of a meeting that I'd say tangibly we started to talk about things. We [now have] commercial guys who give a more balanced view to us on the good things and the things we need to improve on. [1Q3]

> I don't feel restricted at all in what I want to talk about, and it doesn't have to be finance. It's anything in the business, and that's what we're trying to do. All these

people are coming from different backgrounds and different functions, but a good team gets input from all those different perspectives, which is helpful. [1Q10]

We [need to] have thick skin across the group, [be] strategic, and objective. We needed to grow the business rapidly. [1Q2]

Some of them walked out the first meeting feeling that they had lost a little bit, but I think afterward when they sat down, they just started putting together what they had to put together. I think when people got out of the meeting, they had realized that they hadn't really been listening to each other before. They were just defending themselves and their silos. Although they're a very well-organized operation, they still need to make some changes to become more harmonized. [1Q9]

Well I think with the transparency, everybody on our team was highly functional and highly productive, but it's rare that everybody runs at the same speed. They're rarely going to get to the end state at the same time. The [people] that were [ahead say], you guys need to get caught up. Well, that causes tension. Get out of my sandbox, I'm getting my job done. Well, I'm done, so I'm here to help because I'm going to be graded on the whole thing being done, not just my portion. [1Q8]

Our manufacturing person and our QA person butted heads all the time. It got to the point where it got so bad we just switched them. We told the guy that was the

QA guy, just run manufacturing if you think you can do a [better] job and we took the lady that was running manufacturing and made her the QA person. About a month later they both came and asked if they could have their old jobs back. Not only did they get an appreciation [for each other's roles], but also [each] was really strong in areas that [the other] was particularly weak. In that month, they ended up fixing the shortfall in each other's jobs. They came back to a job that was running better than when they left it. [1Q9]

You had to work through everything. [Our business analyst] was there, corporate was there. Everyone was there to cover our back. And yes, we ran into quite a few bumps, but we learned an awful lot. I think each department learned a lot about each department and what we all did. [1Q1]

[She] and I always had issues. We never really saw eye to eye and I think, being thrown into something like that, it either makes you or breaks you. I think it really helps [us] realize what every department does, because everybody, every department thought that they did the most. [1Q5]

It's always good to know what somebody else must do. Then you can have empathy, or try to help. I think that's the biggest thing that I [got] out of that experience. [2Q1]

You know I think we've [tried] various, different things. Even as we came together as a team, we realized that the business couldn't carry on as a collection of independent mom and pops, and so the challenge was how do you make it a better business without losing the good attributes that attracted [us] to those businesses in the first place. [1Q1]

The highlight, I think, is how we have managed to get the operations and commercial teams to work so much better together. If you think about the battles we've had with [engineering and sales], a lot of that has been diffused, because there's a greater understanding of what would set [engineering] off the deep end and there's an honesty around some of the failings of how the sales people weren't really doing their job properly. All of those problems would end up on [the engineering] teams desk. Then when the project would go wrong there was blame allocated to the engineering department when really the problem started way back earlier in the process. I think overcoming those [problems] and changing the way we do all those things by having [a senior engineering leader] involved at an early stage in these big projects and prepared to sort of fight back and say look, at the very beginning of the project, if we want this to be successful we're going to have to do X, Y, Z because this isn't going to go well. Whereas beforehand I think we left it to too low of a level and they didn't feel that they should be seen as a sales prevention officer. [1Q3]

My biggest concern was that when you have a business that has not had organic growth for years, and you bring sales people on, who's task it is to grow the sales line, and they bring things in that you won't cope with or won't be welcomed, because it kind of disrupts people's lives. I mean those are things we used to worry about. So, we face those challenges today. We [now] have sites that are seeing decent organic growth for the first time in a long time. There are challenges as you try to gear up. [There] are the things that some sites haven't seen for years. [and] we're working our way through [the] challenges [that] impact the customer. Without a lot of conflict, unbelievably. [1Q11]

I think they all sort of gain appreciation for each other's roles within the business and therefore came away a little more well-rounded from a cohesion standpoint. I'm sure each one of them just better appreciated and therefore better respected what everyone else did on a day-to-day basis. [1Q8]

We had a couple guys on our side that seemed to have a problem dealing with a female that was very strong. She was very smart, very strong, and they got the impression that she was being not necessarily mean but not nice. What I had to get across to them is she's a busy lady. She's got things going on and just because she does something, don't make the assumption that she's trying to tear you guys down. She's just trying to get her point across, with the least amount of words possible. If it's not warm and fuzzy, [then] it's not warm and fuzzy. You guys [have to] move on. She didn't change, our attitude on our side got more and more

> used to it. [We] realized that she's very appreciative of us but that's just her communication style. [1Q5]

> They could make their own choices. Not only could they see what they were doing [for the client], but also could make decisions on how to make it better. As the project moved forward, [they got] better and better feedback from the client. It became evident that they got [the client's problem] solved and [the client] was getting more and more excited about using it. [1Q5]

Adaptive team as a macro theme represented a group level adaptation between peers in contrast to adaptive leadership described above. As predicted by the literature review in Chapter 2, tension within the group was the catalyst that led to group members choosing to adapt. Roles and responsibilities served as a governing factor within the group context in the place of the administrative function described in CLT. Other regulating factors of trust and group cohesion had similar affects as reinforcing mechanisms, but emerged as macro themes and are discussed in detail below.

Like adaptive leadership, a tension formed that resulted in group members choosing to adapt. As mentioned previously, this was a group level interaction, and the narratives consistently described situational constructs were the group members for one reason or another honored each other's contribution to the group. The factors of roles, trust, and group cohesion helped by establishing boundaries or rules of engagement that provided a relatively safe place within the group context for adaptation to occur. These

boundaries also helped establish a foundation that led to trust and group cohesion, which produced a cyclical reinforcement of the mechanisms of action within the group context.

People. This section focused on stories that emphasized alignment, execution, and capabilities of people. The sentiments expressed in the quoted excerpts included appreciation towards the skill and experience of group members, description of attributes of people, and explanations of human nature. The predominant commonality of data in this category was positive contributing factors of the individual people. The narratives spanned four different companies and five different teams.

The following four narratives had a 60% frequency distribution associated with cohesion as determined by the interview question assignments. The frequency distributions are discussed later in this chapter. The emergent subtheme that bounded these was labeled alignment and described aspects of orienting group members to common objectives. The reference at the end of each of these narratives indicates the interview number and corresponding question. For example, interview 1 question 2 is noted [1Q2]. Editing to eliminate hesitations and repetitions, correct grammatical errors, and remove some of the idiosyncrasies of conversational speech were made without notation. Editing for context and clarity are enclosed in brackets and were reviewed by the study participants for accuracy.

> [The company] is a collection of lots of small manufacturing sites, which were at one time or other independent privately-owned businesses and over many years through numerous different ownerships those businesses have become what we consider [the company today]. But of course, they've all got different

backgrounds, different experiences, different cultures, and some of the original people from when they were independent companies. That all came into a public company environment that continued to add to that portfolio of sites and then ultimately the public company sold the business and it became a private equity business again. You got this mishmash of all these different people from different walks of life, who've been successful in their own way, trying to work together for a common good. So, that's the background to our business and I don't know that that's all that unusual, but I think it's probably a little more extreme, certainly in my experience, to have such a range of backgrounds come together in a very short space of time. [1Q1]

Through default almost you've got a group of people charged with running [the] business thrown together as a management team and you've got to make it work. Thereby lies the challenge, as with all things those challenges come back down to people. People with cultures, how they work together, if they understand each other, different temperaments, different hot buttons, [and] different styles. You know you name it, it's all in the melting pot. So, if you're in my position you've got those people who you [have] to manage, motivate, and bring the best out of [them] to achieve the goals you've set yourself or have been set for you. [1Q1]

What you can't do as you get very low in the organization, you can't force them all to listen and take notes. Some do and some don't. [1Q2]

> I think the [people] with more experience were able to help the ones with less experience deal with some of [the] challenges much more smoothly. It seems that the best team has a mixture of age groups. You want some of the millennials, some of the young guys, fresh out of college, but you really need the older guys. [They] can help deal with not only the technical challenges that come up, but also the interpersonal ones because the interpersonal ones seem to be the bigger and the more complicated issues. The one that leaves scars. [1Q11]

The next seven narratives are also from the macro theme of people and had a 50% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that bounded these was labeled capability and describe the capabilities of people in terms of their contribution to the team.

> If you have a good team, and you have people who know what they're doing, the project should just go. [2Q8]

> These are all good people who we're talking about. I think a lot of it goes back to just having good professional people to start with. When you have that in the beginning a lot of the issues and conflicts that come up, don't come up as often or are handled quickly because the people, to begin with, are smart and confident and knowledgeable people. [1Q15]

I think it was the intelligence and experience of everybody on the team. The team leadership was good, but I think because everybody brought so much to the table, we were able to just make it happen. That was the biggest part of it. It's a very bright team and there were a lot of brain cells being thrown at it. [2Q6]

One of things you have to be as a leader is you have to be quite humble and be prepared to be vulnerable like that. Hey, you are what you are. I don't think anyone should be ashamed or worried about who they are. People make mistakes and should be honest about those. People have experiences and it shapes how they're going to behave in the future and I think if the people around them understand those things, were all the better for it. [1Q5]

Well, I think having a stable team has been extremely important. I think that we have people on the team like [our COO] who is really focused on making money, and focused on running the operations well. I think we couldn't have had a better CFO for the period we are in with all his manufacturing experience, understanding, and just a very supportive business partner. So, I think all of those people we had on the team and then the teams that they in turn created have been tremendous. Whether you think of the finance team or the IT team, these are tremendous teams. The likes of which a lot of larger businesses have never seen, and I've heard that many times from people who come in have said this is incredible. With the processes that you have, the information that you have, I think we just make quick decisions, the way we could supply our owners with that

information without hurting our own team with lots of work, but all those things are very helpful. There's no one thing or combination of things, but people are always [going] be the biggest asset. [2Q6]

I think that you don't really notice that [people have] changed until you get someone new on board. That some of the things that we take for granted, like our ability to analyze down to a very deep level in the business. It just shows up that a good [person] comes in from the outside, formidable career, [with] a great resume, and [there] out of touch with all those things. [It] just shows you that our managers in our business have become very used to really managing the day to day detail, every aspect of it. You get used to what you have around you, so when you realize what's on the outside, you realize how good the business has become. [2Q7]

I think the biggest thing was the confidence that had instilled, both in myself as well as in the company as a whole, that we had tremendous amount of resources, that we could take on acquisitions and acquisition integrations. So, I think doing the first one, which was chaotic and coming out of it successfully, I think it boosted everybody's confidence. [2Q1]

The remaining five narratives concluded the macro theme of people and had a 50% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that

bounded these was labeled execution and described aspects of group members taking action and executing plans.

> I think you always have an idea or maybe a perception of who your contributors are and how much they can add to circumstances, [but] you don't have necessarily a way to test that until you get into the throes of having an opportunity to see who really steps up and works and who doesn't. [2Q1]

> I think it builds a lot of confidence, because the [people] you're pushing responsibility to are demonstrating competence. That's how you build depth in an organization and giving people opportunities to be responsible for important projects. When they do, their credibility within the organization improves and they get opportunities to do more. Then other people see that there's a causal connection between being involved in a project and [it] being a spark or ignition for [earning credibility]. [2Q3]

> We tended to try to manage over achievement, if that makes sense. We would say [about a person] who always got her [job] done before everybody else, [we] want to use her energy, but [we] don't want to penalize her for being productive. If the most productive people find out that once they get their things done, you just throw more work at them, the next time they won't work as hard out of the gate. [1Q8]

> When we investigate [a problem] we usually find there has been a breakdown at the [group] level and they are not doing what they are supposed to, not in agreement and not communicating. I think that the problems are usually self-made by people who are perhaps not acting in a team way. Either they've just become very difficult, they've just forgotten, or some panic or crisis sends them into a mode that is automatic for them and they forget about the communications side of it. [1Q3]

> I've worked with people before, and I'm sure you have, that as soon as they get in [trouble], they dish it out ten times worse to their own team, and I don't think that makes a healthy organization. [2Q6]

All of the narratives above were grounded in the context of how people were a critical factor in the successful outcomes of the team, but specifically achieving alignment, individual capability, and ability to execute. Alignment was an outcome of leadership action and a mechanism of action for team effectiveness. The other two subthemes, capability and execution, described aspects of the person. Capability was not surprisingly an important factor, and it aligned well with roles, leading to the development of respect. Ability to execute was a factor that described the attitudes and propensity of individuals towards action.

Commitment. Excerpts that expressed work ethic and purpose that explained the commitment people had to the group are listed in this section. The commitment expressed in these stories was at the individual level that resulted in people choosing to

adapt to the challenge rather than leaving the group. Some researchers classified this commitment as a form of task cohesion. However, what emerged as the thematic element that bound this category did not fit exactly as expected with the definition used for task cohesion. This was a notable finding because it was one of the focuses of this study, and is discussed later in this chapter. The narratives spanned four different companies and seven different teams.

The following six narratives had a 50% frequency distribution associated with cohesion as determined by the interview question assignments. The frequency distributions are discussed later in this chapter. The emergent subtheme that bounded these was labeled purpose and represented commitment born out of a purpose the group member believed in. The reference at the end of each of these narratives indicates the interview number and corresponding question. For example, interview 1 question 2 is noted [1Q2]. Editing to eliminate hesitations and repetitions, correct grammatical errors, and remove some of the idiosyncrasies of conversational speech were made without notation. Editing for context and clarity are enclosed in brackets and were reviewed by the study participants for accuracy.

> When we installed the equipment and I hired some people, the very first month we had no production. The people are looking at me like, did we make a mistake? We quit jobs to come work for you, so then it was sort of one of the very first times I had a realization that I had other people relying on me, these people had families and children. So, I had to be successful now, not only making products for our sales guys to go sell for us to make money but also to tell the owner of the

company hey we're doing okay, I've got people working for me that need a paycheck. [1Q2]

We employ 2000 people and we didn't want them to suffer as a result [of us failing]. I think the other bit is we clearly believed in the purpose and the mission of the business which was to aid patient's well-being, so those things I think they go a lot together, I think that fully amounts to what created that passion and commitment. [1Q3]

I remember having multiple conversations with my two colleagues about why we're doing this, and I think that was one of the overwhelming themes that kept repeating. Just we refused to be beaten, this is too important, there was too much at stake. [1Q7]

The need and the understanding that open communications in a team environment is key. Without the buy-in of the team and acceptance of the results of the team mind, you don't have a good, solid solution that everybody can support, and that's key. It has to be a supportable type of scenario, and then you have to have the appropriate team efforts to be able to do that. [2Q6]

Everyone on the team felt like they were making a significant impact on what the other company did and how successful they were at doing it. [1Q5]

> I had a little bit more drive [back then] for extrinsic recognition. Now I don't care so much about that, of course, but back then it meant a lot to me to be sort of recognized for accomplishing the significant task, or accomplishment. [2Q2]

The remaining five narratives concluded the macro theme of commitment and had a 57% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that bounded these was labeled work ethic and represented commitment born out of a work ethic the group member held.

> I've been given kind of crappy deck with the consultants, but we just keep trucking along, keep methodically going, and eventually we came to a very good ending. [1Q11]

> There was already this mentality of it's us against the world, and I think that just drew us three closer together. [1Q2]

> It was always about solving a problem. Either fixing a problem, keeping a customer happy, [and] was always positive. You can say that everybody had their heart in it. Which was an indication to me that people were dedicated to that group and to what we were doing. [1Q8]

> We were definitely all committed because it was, this is the way it's going to be. You're must learn this, and you guys are going to be the ones to help implement this. That's why it was so important, as we were learning and going through things, that we were starting to do screenshots and typing up things so that we could get everything into the [real practices]. [1Q1]

> We are really fortunate [that] the individuals on this team all have a passion for what they're doing. I know that may sound cliché, but it's true in the case, including the individual that I mentioned who we were having issues, they really take ownership of their [work], and they like their [work] to be high-quality. [When] they see something someone else is doing and they don't feel it's right, they don't like it. They get into very passionate arguments about it. And even though sometimes that can cause problems it's good in the end because you can tell they really have the client's interest at heart, more so probably than I've seen in any team I put together before, to be honest with you. [1Q4]

These narratives described a form of commitment that differed from what was expected based on prior research that defined this as task cohesion. The two subthemes, purpose and work ethic, emerged as variations in motivation that were the basis for the individuals' commitment. Commitment turned out to be an important factor for establishing high-innovation teams because prior to group cohesion, the group members required a motivational force to remain within the group context and adapt. This commitment was either derived from a sense of purpose or the individuals' intrinsic

motivation towards hard work. Neither of these themes fit with the definition of task cohesion, which was an unexpected result. Though arguably a semantic difference, the working definition discussed in Chapter 1 for task cohesion was the degree to which members were committed to completing group tasks and motivated towards the overall goals of the group. What was discovered was not a group-level phenomenon or a commitment to task, but instead an individual level commitment to purpose or work ethic.

Trust. Another macro theme that emerged was trust, which encompassed stories that emphasized trusting others to the point of reliance and enabling open direct conversations. The trust expressed in these stories went beyond common expressions of trust used in casual vernacular and was the predominant thematic element which bound this category. The original themes of mutual respect, direct communication, and honesty were grouped into this category. There was also a strong connection between data in this category with stories describing roles and responsibilities included in the adaptive team theme above. The narratives spanned three different companies and seven different teams.

The following five narratives had a 71% frequency distribution associated with cohesion as determined by the interview question assignments. The frequency distributions are discussed later in this chapter. The emergent subtheme that bounded these was labeled directness and described the open and direct aspects of communication within the team after trust was formed. The reference at the end of each of these narratives indicates the interview number and corresponding question. For example, interview 1 question 2 is noted [1Q2]. Editing to eliminate hesitations and repetitions,

correct grammatical errors, and remove some of the idiosyncrasies of conversational speech were made without notation. Editing for context and clarity are enclosed in brackets and were reviewed by the study participants for accuracy.

> Mutual respect would probably be the best way to describe it. It was new for each of us. We knew of each other prior, but there wasn't a lot of communication [before]. [1Q4]

> I think [the cohesion] is as good as it's ever been. We can have some really challenging discussions and call each other out, so I think that is a really good thing. I think we trust one another. I think we can challenge one another. No one's going through the motions in meetings anymore, so the meetings are really trying to get to the issues. That's time well spent. [1Q4]

> I think it started out being quite professional. You all have your functional role to play, I think then the need became apparent that we needed to be [leaders]. So, it became far more transparent, far more to the point, it just became a lot more intimate, I would say. We started asking each other for opinions on any number of things. It went way beyond each [of us] having a functional role, acting more as three business leaders, who were very willing to share everything and get feedback on stuff and it was very open. [1Q5]

> I think a willingness to be very open and candid is probably the number one thing. We clearly exposed ourselves to each other in terms of our reservations and I think that forged a fair bit of trust. So, trust and the willingness to have very candid and open interactions. [1Q8]

> I would like to say it was kind of done on the field of play and then you came off the field and everyone was friends again. There was a bit of open venting and venting in private with each other. I think those sessions helped quite a lot. It never felt like there was any bitterness and resentment that built up [1Q8]

The remaining 15 narratives concluded the macro theme of trust and had a 93% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that bounded these was labeled reliance and described aspects of trust that grew to the point of reliance.

> This is probably one of the bigger projects of [our] career, splitting off a third of a company and making it its own company. Everybody from the whole team understood that and stepped up, working long hours. [1Q4]

> [Everybody] in each [functional area] knew what they were doing, and that makes the team. Everybody trusts each other [and] had confidence in [the team]. They knew, as we got the new server up, [one person] got it running [and the next] got the implementation of [the software] on it. Boom, done. [2Q1]

We probably did the hardest project we'll do in our careers, and we all succeeded in it. Now, any other project, I have full confidence that the team's not going to bash each other or anything like that. We're all going to work together in this seamless organization. [2Q1]

I think it's mostly personalities. We're all professionals and very interested in doing good work and getting the job done in the end. I think that sentiment is throughout the whole team. [1Q8]

I think before, we each kind of did our own thing and our paths crossed now and then. Throughout this project, we had to depend on each other a lot more. I think there's a lot more trust among the [group] members now. [2Q9]

Once that core group started functioning, I would say probably a year into it, it was an experience like I hadn't ever had before. Because I would say that we all had that sort of common goal, common focus, and it was very challenging. We could trust that we all would do our part, so there wasn't a lot of second guessing. [It] was just get together, talk about what needs to be done, and go away and rely on [each other] to do it. [1Q1]

We were very open and trusted each other, and we got to the point where if I was doing something somebody didn't like, or didn't match up with what they thought, they could just tell me. [1Q4]

Definitely more cohesive. We had worked pretty well together before, but I think we know what everybody is capable of and we know we're all willing to turn to each other for these problems. [2Q9]

I think it's due to the fact that there was positiveness. We started to find ways about how they can do it, as opposed to why they can't do it. [1Q7]

It was a matter of showing just how personalities can be reined in to be able to make a team far more positive and react together far more positively for the greater good of the company as opposed to fighting each other. [2Q1]

I think we're much more confident as a team and a group, as an executive team. I think success breeds more success, right? So, we've been together as a group now for many years, and I think the competence shows. You have an air of, not invincibility, but you feel like you can tackle most things now. [2Q2]

We all sort of knew what everybody's actions were and we all knew that those were the actions it took to support some particular milestones. It enabled us to say all right here's our strategy and [to the team] this is what you have to do and

> by the way, if you don't get them done, we'll probably not hit this milestone. So, what I saw happen over time [that] I thought was beautiful was there became a lot of interdependence on each other. Within that interdependence there became a lot of trust and there became a lot of support. [1Q2]
>
> I think it was a very positive outcome. We grew to trust each other. We grew to be able to work together on projects and tasks more closely. I think the biggest thing was the trust element and knowing that we were all working towards the same objectives. [1Q5]
>
> The team got much closer. We had more confidence in one another. I would say that we bonded even more toward the end. [1Q6]
>
> I think, I came away with more respect for the guys, what they could do, their professionalism, and their maturity. It's just that you come away feeling so much better that regardless of what gets thrown at us in the future, we knew we would be able to do a great job. [2Q2]

The narratives presented under the subtheme directness described an outcome of trust that enabled direct open communication. This direct communication allowed group members to engage in efficient conversations about difficult topics with minimal effort spent on managing relationships. The other subtheme that emerged was from narratives describing the level of trust that formed. This level of trust grew to the point of reliance,

and the narratives were similar to those discussed above, that described roles and responsibilities. As such, both trust and roles led to mutual respect, which acted as a reinforcing mechanism further improving group cohesion and team interaction.

Group Cohesion. Given the focus of the study was on factors of group cohesion this theme was expected to emerge as dominant and would otherwise be unremarkable. However, this category focused on the reflective statements that expressed factors of cohesion. Two factors emerged from the data, mutual respect and group success. The bounding element was a group-level construct of cohesion as predicted, but only encompassed social cohesion. This finding is notable given the individual level construct of commitment discussed above that was discovered prior to the formation of group cohesion. This is discussed later in Chapter 4. The narratives spanned four different companies and six different teams.

The following six narratives had an 86% frequency distribution associated with cohesion as determined by the interview question assignments. The frequency distributions are discussed later in this chapter. The emergent subtheme that bounded these was labeled mutual respect and expressed aspects of group cohesion that represent mutual respect. The reference at the end of each of these narratives indicates the interview number and corresponding question. For example, interview 1 question 2 is noted [1Q2]. Editing to eliminate hesitations and repetitions, correct grammatical errors, and remove some of the idiosyncrasies of conversational speech were made without notation. Editing for context and clarity are enclosed in brackets and were reviewed by the study participants for accuracy.

I think [cohesion] was pretty good at the beginning, but now we are more cohesive as a group. We know each other's strengths, which [improves the] group dynamics. Everybody knows what is in everybody's wheelhouse and the depth of each position. [2Q9]

I've continued to try and seek out experiences like that, and question whether I should be in a large corporation like I am or a smaller, more dynamic, fast-paced, small privately-owned company. [I] continue to [think about] how to get that back and figure out how to get that same type of dynamics working for a large corporation with very matrixed operation. [2Q3]

How we interact with people, I think changes in every conversation we have with them. I think, as we got to know each other, our relationship just strengthened as a team. [1Q12]

I think it is a combination. One, the team's been together the longest, probably of other teams I've been on, [and two], I think [we] have a leader that even though he is a strong leader, he lets people speak their mind. He doesn't always happen to agree but that's just the way it is, so I think the leader sets the tone overall, if it's just going to be a farce or if it's actually going to be productive. I've worked for some really strong leaders whom I've got along with well, but they really didn't welcome other views. I don't think that is the case here. You [have] a leader here

that if things aren't working he's looking for a change to try and get things to improve. [1Q6]

[In] the beginning [cohesion] was very nonfunctional. At the start there was a lot of apprehension on if the project can be done. I got the feeling like they felt like they were wasting their time [because] this had already been tried three times. Then as the project went along the more and more they got comfortable with us and we got comfortable with them. Then I think towards the end, we had a great working relationship. [1Q4]

Overall, the more you work with people, the better, the stronger [a] team you get. Every time a new team gets put together it functions way better at the end than it did at the beginning. The next project you go on, ideally you keep that same team, so the communication has already kinda worked itself out on what are the best practices between the [group] members. [1Q5]

The remaining five narratives concluded the macro theme of group cohesion and had a 71% frequency distribution associated with cohesion as determined by the interview question assignments discussed later in this chapter. The emergent subtheme that bounded these was labeled success and described aspects of group cohesion born out of previous success.

Anytime you work on a project that goes well, not just personally but from the company's standpoint, it only helps everybody appreciate what others can contribute. I'm looking forward to this group of people being able to show that they're capable of stepping up and contributing more fully the next time around. [2Q2]

I actually think it was a very positive time. I think we all grew together in the process. This was probably one of the first big, projects that the team did together where we had the same goals, objectives, and focus. And it was a huge accomplishment for us. [1Q8]

I think this brought us together and was a much-needed positive impact on us, as an executive team. I think it helped us get to know each other better professionally and personally. [2Q1]

Today, [the cohesion] has never been better. Particularly, between operations and sales, it's a lot stronger. I'd say in the last year we've made tremendous strides in that area and to great effect that is affecting the amount of business we are winning. [1Q4]

I think the more challenges that are thrown at the group, assuming they can get around those challenges, makes the group so much stronger in the long run. [1Q11]

Both subthemes, mutual respect and success, were outcomes that led to establishing or reinforcing group cohesion. These subthemes were so similar that separating them may not be necessary. The narratives under mutual respect were similar to those presented under the subtheme reliance above but focused on the cohesiveness of the group. The narratives under success described group cohesion as a result of the success of the group directly and implied the same factors of trust and mutual respect. The difference is so subtle that it may make more sense to combine all of these narratives under one macro theme of group cohesion. Still, mutual respect related more closely to reliance than success.

Evidence of Trustworthiness

Credibility

The in-depth interview approach as defined by Seidman (2012), was designed to help accomplish validity. As planned, the narratives were reviewed and edited by the participants and presented in their original form and context. Additionally, the interviews were scheduled approximately 1 week apart helping account for off days for the participants. The participants also represented six companies and twelve team experiences. These team experiences spanned multiple constructs including senior management, plant management, and project teams and the team experiences were distinctly different.

Transferability

In addition to presenting the narratives in the original form and context, contextual backgrounds for each of the companies and teams was also presented. The

planned selection of participants from multiple companies, with multiple functional backgrounds, and multiple team experiences was also achieved, which helped establish transferability. Thick descriptions were also included that allows others to determine for themselves the transferability to other contexts.

Dependability

Multiple participant stories from the same teams were triangulated in 8 of the teams interviewed and themes were triangulated across all 12 teams. Further, participant narratives that were used in the data analysis are presented in the original form. The process itself of conducting the interviews over the course of 2 to 3 weeks with the interviews scheduled approximately 1 week apart helped account for off days. Further, the interview template was followed for all interviews, and no significant material events were noted throughout the study that would impact dependability.

Confirmability

The nature of this study makes the interpretation of the data prone to subjective interpretation. However, the participants' stories were presented with enough detail to enable others' reading this study to draw their own conclusions on meaning. Still, every effort was made to maintain objectivity throughout the process to maximize the quality of this study. In addition to triangulating comments from multiple participants each of the participants were allowed to edit their stories for accuracy.

Study Results

Emergence of Group Cohesion and Performance Relationship

The problem that drove this study was too many teams were underperforming within the context of CAS. As the competitive landscape and organizational dynamics

increase in complexity, organizations continue to face new challenges for maintaining or improving team performance. The purpose of this study was to discover how adaptive tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance. CLT provided a construct for understanding the complex nature of human systems in an organizational context that created a fresh perspective on the cohesion-performance relationship.

As I discussed in Chapter 3, this study rested within the realm of CLT (Marion & Uhl-Bien, 2011), but at a point of convergence with a significant volume of research on the cohesion-performance relationship in psychology (Castaño et al., 2013; DeChurch et al., 2013; Hedlund et al., 2015; Mesmer-Magnus et al., 2012; Moore & Mamiseishvili, 2012). The reason for combining these theoretical foundations was to create a conceptual framework for exploring the experience of adaptive tension in the complex context of group cohesion. Prior research in CLT, which was discussed in Chapter 2, identified that creativity, adaptation, and learning within teams were emergent processes that cannot occur through simple dictate (Marion & Uhl-Bien, 2011). Further, CLT defined leadership as the space between people where interactions allowed for creativity, adaptation, and learning (Ott, 2010). One of the specific conditions for high-innovation teams as defined in CLT is the need for tension to exist within the team that provided the motivation or incentive to create, adapt, and learn. This study was focused on understanding this experience of adaptive tension in teams that improved group cohesion.

Relation to Research Questions

The general research question that drove this study was: What factors lead to high-innovation outcomes in complex adaptive systems? The subresearch questions that followed were

RQ1: How does group cohesion emerge through the interactions of interdependent group members within complex adaptive systems?

RQ2: How does group cohesion relate to improved team performance in the context of complex adaptive systems?

The series of questions in Interview 1 and 2 were consructed to align with one or both of the research questions focusing on aspects of cohesion or performance (see Table 4). The expected relationship between these interview questions and the research questions was established prior to collecting data to aid in correlating emergent themes. Frequency distributions were calculated based on the interview question assignments and represent the correlation of the emergent themes within this study's sample set. Further, data collected from each of the interview questions were analyzed to confirm that the predetermined relationships did inform the research questions as expected, which was confirmed. The cause and effect relationship between group cohesion and performance was established in previous studies on group dynamics (Castaño et al., 2013). Castaño et al. (2013) discovered that there was a small cause and effect relationship from cohesion to team performance, but a much stronger cause and effect relationship from team performance to cohesion. Evidence of this correlation was found in the data. There were examples of group cohesion that had a positive effect on team performance, but the

participants' stories were consistent across all team experiences showing team performance led to cohesion.

The data were consistent across emergent themes in terms of frequency between RQ1 and RQ2 except for Group Cohesion and Trust (see Table 6). The frequency distributions were calculated to help correlate the emergent themes between RQ1 and RQ2. These distributions should not be used to generalize the data beyond this study's sample set. Group cohesion by the nature of its concept was expected to be related to RQ1, so this relationship is not remarkable. Trust, however, stood out as the one theme that emerged more frequently in relation to RQ1 as a factor involved in the development of group cohesion. It was notable that trust was a frequent outcome of success in the participant stories in the same sense as group cohesion. Trust was also a prominent theme that emerged in prior research, so the data supported this prior finding (Ernst & Chrobot-Mason, 2011; Graham, 2010; Hinrichs, 2010; Ott, 2010; Sims, 2009). The other emergent themes, though they tended to have a higher frequency towards RQ1, had a small frequency delta between RQ1 and RQ2 and was considered unremarkable.

Table 6

Emergent Themes Relationship Frequency with Research Questions

Emergent Theme	RQ1 Group Cohesion	RQ2 Team Performance
Adaptive Leadership	59%	41%
Adaptive Team	59%	41%
Commitment	54%	46%
Group Cohesion	79%	21%
People	53%	47%
Trust	86%	14%

Adaptability within the group and at the leadership level, commitment, and capability of people, were associated directly with the performance of the group. These themes were notable in that they were told in stories outside of the context of group cohesion, with group cohesion resulting from the successful performance of the group. For the new groups that had not yet developed group cohesion, commitment was the dominant theme that led to adaptation. Given the two-factor approach for defining cohesion proposed by Castaño et al. (2013) that included task and social cohesion, commitment would have been grouped into the category of task cohesion. Task cohesion was the degree to which members are committed to completing group tasks and motivated towards the overall goals of the group, whereas, social cohesion was the degree to which members are attracted to the group in terms of emotional bonds of friendship, caring, and closeness among group members, enjoyment of others' company,

or social time together. The data described an experience with commitment in a construct that was different from both task and social cohesion. The emergence of commitment was experienced by an individual with an inward view of conviction, whereas group cohesion was experienced by an individual with an outward view of the group. Because these experiences were directionally opposite, the label of commitment was chosen over task cohesion to distinguish the difference. Commitment described why the individual chose to adapt prior to group cohesion forming and described the phenomenon better than a variation of cohesion.

Emergence of Subthemes

A second level of analysis was conducted to further classify the meaning of the stories within each of the six macro themes. The subthemes that emerged were used to organize the data into groups and produced a more detailed view of the frequency distributions between RQ1 and RQ2 (see Table 7). Most of the new subthemes produced similar frequency distributions to the macro themes. However, seven had deltas greater than 20% including tension, objectivity, mutual respect, success, alignment, reliance, and directness. It was notable that no RQ1 frequency distributions fell below 50%, which is likely related to the study design, but may also be explained by the cause and effect relationship between performance and cohesion. Multiple interview questions were constructed to align with both research questions and were used to test the validity of the RQ1 and RQ2 assignments using an inductive analysis process. The participant responses to these questions were used to confirm the interview question assignments.

Table 7

Subtheme Relationship Frequency with Research Questions

Emergent Theme	Subtheme	RQ1 Group Cohesion	RQ2 Team Performance
Adaptive Team	Tension	61%	39%
Adaptive Team	Adaptation	59%	41%
Adaptive Team	Roles	56%	44%
Adaptive Leadership	Objectivity	69%	31%
Adaptive Leadership	Obstruction	57%	43%
Adaptive Leadership	Overcome	50%	50%
Commitment	Work Ethic	57%	43%
Commitment	Purpose	50%	50%
Group Cohesion	Mutual Respect	86%	14%
Group Cohesion	Success	71%	29%
People	Alignment	60%	40%
People	Execution	50%	50%
People	Capability	50%	50%
Trust	Reliance	93%	7%
Trust	Directness	71%	29%

Tension was the motivating force within the group dynamics that led to adaptation, usually related to two seemingly incompatible ideas. Objectivity referred to leadership orientation towards objective measurement or critical self-assessment. Mutual respect described an individual level expression of trust that was related to group cohesion. Success was also a subtheme of group cohesion but was a group level factor that led to cohesion versus an individual level expression. Alignment referred to the degree of interdependence and directional correlation of individuals within the group. Reliance was a category that described the high degree of trust among group members. Directness was the truthful almost blunt form a communication that focused on the issues not people that was enabled from trust.

Given group cohesion and trust both emerged related to RQ1, the subthemes were expected to have a high-frequency relation to RQ1 as well. Reliance and directness were substantially different; reliance had a 94% correlation with RQ1 and stood out as a subtheme so closely related to cohesion, it was nearly synonymous. Mutual respect and success were not remarkably different from the macro theme, but mutual respect had a slightly higher frequency, which provided additional context. It was noted that tension emerged with a high frequency to RQ1, which was one of the focus areas in this study. This was the factor that was identified in Chapter 1 as standing in contrast to group cohesion, and the data confirmed that tension was related to group cohesion. The remaining subthemes, objectivity and alignment, also emerged but with a frequency delta that was relatively small.

Summary

The answers to the research questions achieved the objectives of this study with some unpredicted outcomes. The general research question that drove this study was: What factors lead to high-innovation outcomes in complex adaptive systems? The subresearch questions that followed were

RQ1: How does group cohesion emerge through the interactions of interdependent group members within complex adaptive systems?

RQ2: How does group cohesion relate to improved team performance in the context of complex adaptive systems?

Successful group outcomes along with the factors of mutual respect, trust to the point of reliance, and directness in communication were related to group cohesion, which was the answer to RQ1. The role of tension along with factors of objective measurement, roles and responsibilities, team alignment, individual capability, the ability to execute, a sense of purpose, and work ethic were related to team performance, which was the answer to RQ2. I review these findings in more detail in Chapter 5, but they illustrated the complex nature of high-innovation teams. Combining the research traditions of CLT and group dynamics created a conceptual framework that achieved the goals of this study. Not only were the primary tenets of these research traditions confirmed in this study, but the combination enabled a perspective on CAS that was previously not possible.

Chapter 5: Discussion, Conclusions, and Recommendations

The interactions of people within CAS determines the group outcomes. Whether called a functional, department, business unit, project, or leadership team, the people who are associated together in work or activities are the team that, through their performance, determine the performance of the organization. Moreover, the collection of these teams, which at a macro level is synonymous with the organization, is a compounded group of teams with interdependent interactions in a similar but even more complex construct as the individual team units, working together in external competitive landscapes. Many teams are continuing to underperform because adaptive tension that forms within CAS is producing unpredictable adaptations that frequently result in lower performance outcomes as organizations increase in complexity. The purpose of this study was to discover how adaptive tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance.

CLT, which provided the construct for understanding the complex nature of human systems in an organizational context, defined leadership as the space between people where interactions allowed for creativity, adaptation, and learning (Graham, 2010; Ott, 2010). Within this space, three broad types of leadership roles, administrative, enabling, and adaptive, interact through mechanisms of action labeled entanglement, network dynamics, and emergance (Marion & Uhl-Bien, 2011). These concepts were reviewed in more detail in Chapter 2, but administrative was the traditional hierarchy, enabling created the environment, and adaptive resulted in emergent change activity. The complex relationship between these broad types of leadership was what CLT labeled entanglement and represented a portion of the mechanisms of action involved in

leadership. The other mechanisms of action were defined as the network dynamics and emergence. Within the network dynamics, ideas emerged, combined, collided, died, reemerged, and adapted to a complex landscape of interactive and interdependent group members in patterns that could not be predicted or recreated (Marion & Uhl-Bien, 2011). What occurred, if the group members chose to adapt to one another for a common constructive objective, was an outcome that had a significant positive impact on the organization.

Teams that require creativity, adaptation, and new learning to achieve outcomes are high-innovation teams. The participants described their experiences within high-innovation teams for this study. Within the data were references to other teams within the organization that would not be classified as high-innovation on their own, but as a part of the compounded group, were essential members who contributed to what was a high-innovation outcome for the organization. The mechanisms of action that occurred within these teams produced a tension or a motivational force that led people to create, adapt, or apply knowledge in a new way. Discovering how this tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance was the purpose of this study.

The other theoretical foundation leveraged in this study was group dynamics research, which provided a foundation for understanding the cohesion-performance relationship within high-innovation teams. The cause and effect relationship between group cohesion and performance is stronger from performance towards cohesion than from cohesion towards performance (Castaño et al., 2013). These cause and effect correlations were confirmed in this study. Many of the factors that moderated this

relationship as identified by the meta-analyses discussed in Chapter 2 were also confirmed.

Group cohesion and the two-factor definitions of task and social cohesion, had notable findings. Based on the two-factor definition provided by Castaño et al. (2013), it was expected that task cohesion would emerge as a factor like social cohesion but focused on the task. What emerged was an individual-level construct of commitment that spawned from either work ethic or purpose. Neither of these factors related to group cohesion but emerged as the initial reason why individuals chose to adapt. Though it could be construed that this theme was task cohesion given the definition of commitment to task, the participants did not describe cohesion or an experience that was a group-level construct. Instead, commitment existed prior to the formation of task cohesion. Social cohesion, on the other hand, was consistent with the definition discussed in Chapter 2, and the factors of success, mutual respect, reliance, and directness as described in Chapter 4, had associations with group cohesion.

Prior to group cohesion forming, which was the case in all but three of the teams in this study, commitment was the only factor that explained why individuals stayed within the group and made a choice to adapt to meet the challenges facing the group. From a leadership perspective, these challenges were viewed as obstructions that had to be overcome to move the team forward and at the group level as tensions between peers that required individuals to adapt. Commitment in the form of purpose or work ethic, along with the factors of objectivity, roles, alignment, capability, and execution, as described in Chapter 4, had associations with team performance. Objectivity and roles

turned out to be predominate factors, and all the factors centered around the individual choice to either adapt, overcome, obstruct or leave.

Factors of Group Cohesion and Impact on Team Performance

As predicted by group dynamics research, group cohesion led to a higher level of team performance, but with relatively small effect. Successful group outcomes along with the contributing factors of mutual respect, trust to the point of reliance, and directness in communication were the prominent themes related to group cohesion, which was the answer to RQ1. The role of tension along with factors of objective measurement, roles and responsibilities, team alignment, individual capability, the ability to execute, a sense of purpose, and work ethic were the prominent themes related to team performance, which was the answer to RQ2. Directness was an outcome of reliance that acted as an accelerator of team performance once group cohesion was achieved, and the other adaptive factors were descriptions of the challenge facing the group and administrative functions of leadership as defined in CLT. In total, five types of mechanisms were discovered in this study that explained how high-innovation outcomes were achieved through the administrative, enabling, and adaptive leadership roles. These mechanisms were: leader actions, team actions, individual traits, individual choices, and reinforcing mechanisms.

The Adaptive Leader Versus the Adaptive Team

The mechanisms related to adaptive tension emerged from two types of actions: the adaptive leader and the adaptive team. The adaptive leader was focused on overcoming something that was obstructing the success of the team whereas the adaptive team was focused on adapting to tensions between peers. Group members demonstrated

actions that fell into all five types of mechanisms independent of their functional role. A person acting as the adaptive leader in one group context also acted as a peer in another group context.

The mechanisms related to leader actions were leveraging tension within the team, facilitating alignment of group members, and overcoming anything that was obstructing the goals of the team; but, the mechanisms themselves were not the important factor. A predisposition of the leader toward objective reality emerged as a significant factor across all of the narratives that explained why high-innovation outcomes were achieved. The objectivity enabled the teams to resolve group conflicts, agree on tangible measures for group success, and learn from mistakes. In contrast, the adaptive team was focused on adapting to tensions between peers that were preventing the success of the team. These tensions were introduced from leader actions or directly from peer interactions within the group dynamics.

The mechanisms related to team actions were maintaining roles and responsibilities, a commitment born out of purpose and work ethic, and individual adaptations to tension. The boundaries formed from well-defined roles enabled group members to contribute effectively within the group dynamics and protected people within their roles. Self-governing mechanisms within the group dynamics discouraged members from acting outside of their roles, creating an environment where people felt secure. As the team achieved success, mutual respect between peers in different roles grew and was the catalyst for group cohesion to form. Prior to the formation of cohesion, commitment at an individual level was the primary factor for enabling the initial team formation and acted as a surrogate mechanism until group cohesion formed. After the formation of

cohesion, commitment continued to influence individual choices that maintained group cohesion.

Group cohesion and commitment were factors because the level of adaptation required within teams to achieve high-innovation outcomes was significant. It was important for group cohesion to form quickly because the mechanisms that formed commitment were not as effective at holding the team together. It was important for newly formed teams to achieve some level of success early in the process with well-established roles in place, so that group cohesion formed before tension grew beyond that which could be managed by commitment alone. This success helped build trust to the point of reliance, develop mutual respect between team members within their individual roles, and enable direct forms of communication. Success, reliance, mutual respect, and directness reinforced the primary factors of objectivity and roles creating a cyclical mechanism of reinforcement.

Trust Within Teams

People may be part of a team because they like the people. It may even be the reason why someone participates on one high-innovation team versus another; however, prior to the formation of group cohesion, individuals must make a choice to trust each other at least to a minimum level required for everyone to work effectively within the role. The participants all shared the common theme of reaching a point of vulnerability when pretense was lost and enough of the other group members at that moment in time chose to trust each other. A trust formed through direct human communication that was heard with humility, as it was spoken with a true understanding of intent. The choice

made was to rely on one another, and the trust that formed was never undermined to the point that would have permanently cemented doubt in the minds of the group members.

Trust was a multidimensional construct that meant multiple things throughout the process of team formation and development of group cohesion. In the beginning, it was a choice, but once the group began operating as a high-innovation team, trust became more important, growing to the point of reliance, either accepting another person's opinion to the point of relying on it or relying on a person's role or action in a critical way. This type of reliance required that doubt about intent never come to mind, so multiple mechanisms supporting trust from safety and intent to alignment and competence. Once the teams developed this type of trust, their relationship had evolved beyond requirements of self-assurance where few things were taken personally, and the purpose of each person was aligned with the purpose of the team.

Communication

Words that speak of human connection like communication, trust, relationship, cohesion, and reliance hold multiple dimensions of meaning that are difficult for people to discern from one person to another. People tend to write these differences off to benign semantics; however, in the context of CAS like high-innovation teams, the meanings behind words that help people understand another are not benign and require alignment or the team will never achieve high-innovation. For example, telling someone they need to improve their communication with the team is likely ineffective in improving outcomes because it is difficult to understand such a multidimensional construct like communication. Moreover, the person observing the communication issue within the team is probably observing the dysfunction within the team, which is

symptomatic of the problem and does not translate directly into a practical course of action without a constructive understanding of communication built from experience and applied knowledge of the subject.

Something like being direct versus taking a softer approach was an example of a practical shift in communication; but as was shown, the culture of the organization must be mature enough so people interpret direct communication from the correct point of view. This was achieved after trust formed to the point of reliance. It was more efficient; but, people must be equipped to handle the directness. Another practical example was using a positive tone. Speaking things up, focusing on positive aspects, or redirecting people towards positive outcomes was a way to overcome poor perception and can be used regardless if the perception is based on real circumstances or perception error. If perception error, then positive communication was a necessary and correct practice for overcoming the error. If real circumstances, then positive communication was used to help hold things together until circumstances changed.

The difference between practical guidance that constructively helped the teams improve and other types of communication that were too general to provide practical guidance was significant. None of the teams handled these situations perfectly and that did not appear to be required. The teams achieved enough alignment and understanding of these complex situations in time to prevent the group dynamics from breaking down. One participant described it this way, “I think there were times we got fairly close to stand up riles. We didn't actually get there, but I think, had we, that could have been very, very negative.” In practice, leaders should look for complex group dynamics and focus on alignment within these situations.

Nature of People

There is a type of connection that people can only experience in verbal interactive conversation with other people. Though this meaning was not conveyed in the written stories above, the following narrative explains the feeling and meaning that I experienced during the interviews. Every individual who participated in this study was open. Some allowed themselves to be vulnerable and everyone was self-reflective of the actual meaning. I was surprised with the degree of raw honesty that I heard. All of the conversations had moments of positive tone and negative tone that correlated directly to the story. The negative tone was used in the context of people who put the group dynamics at risk. Challenges or negative things that happened outside of this were told in a positive tone about how the group succeeded in the face of it. When I went back and listened to the interviews during the transcription and coding stage of my study, it struck me how it made me feel. Some of these people I knew before the study in a professional context and many I met for the first time. When I played back the interviews, it dawned on me that it felt like I was with old friends. Because of the honesty and trust each of the participants placed in me in sharing their stories, I felt as if I was one of them participating on their team. It raised a question in my mind as to the factors in group dynamics that engenders trust and group cohesion. Is it possible to enable conditions necessary for trust and group cohesion to develop outside of intentions grounded in genuine acceptance and kindness? Everybody who participated in this study was good natured, and the attitudes they held towards someone who was cold or calloused were similar. Every participant shared, to some extent, an aspect of dealing with individuals who were perceived to be unaccepting of others, and this attitude was rejected by the

team. A rejection that was not easy to trigger within the teams because of their willingness to give people every opportunity to be part of the group, a willingness to forgive mistakes and missteps as long as they demonstrated the same capacity for forgiveness in return.

Limitations of the Study and Recommendations

Organizational contexts are complex, and this study only scratched the surface on group dynamics in the context of these teams. Though data were collected on high-innovation teams across multiple organizational and situational contexts, there are many other team contexts that exist within organizations that were beyond the scope of this study. The convergence of two theoretical foundations also produced a conceptual framework for investigating CAS that achieved the goals of this study and may be relevant for future research in other team contexts. Also, the factor of commitment in the formation of teams prior to group cohesion changed the definition of group cohesion discussed in Chapter 2. Other team contexts, however, may not require the same degree of commitment or enabling factors to produce the desired outcome, which would result in different emergent themes.

This study also did not focus on negative factors that undermine trust and group cohesion. In all organizational contexts, there are people seeking opportunities to take advantage of the good nature of other people or situations. Though evidence of this was seen in the participant stories, the study design was limited to high-innovation outcomes, so these other factors will need to be left for future research to examine. Still, there were examples of teams that did successfully discern the intent of bad actors and ultimately overcame the challenge, but had the organizational leadership not accepted the

conclusions of the team, a different outcome may have occurred. Future research into methods for leadership to discern between the difference of opinion within team conflicts versus a difference of intent would be valuable.

Significance to Practice, Theory, and Social Change

I began this study with a thought on the potential impact for positive social change that recognized traditional views on leadership emphasize directing and controlling methods to achieve predetermined goals, which diminished or limited alternative contributions. Assuming the emergent forms of leadership promoted by CLT produced superior outcomes, the new methods derived from this research study would be sustainable team performance with improved job satisfaction for the people on these teams. The administrative, enabling, and adaptive leadership roles were confirmed to exist within high-innovation teams, and the participants' experienced improved job satisfaction as a result of the group dynamics. Leveraging tension in the group dynamics enabled through objectivity, roles, alignment, capability, execution, purpose, and work ethic, led to mutual respect, directness, and reliance. These factors offered leaders an effective method for achieving sustained team performance. Moreover, this method offered improved consistency in group outcomes over directing and controlling methods and a work exchange that benefited individual team participants.

As initially discussed in Chapter 1 and affirmed in this study, when leadership is viewed from the perspective of the whole system instead of from the perspective of the individual, the relationships between people emerge as the primary enabling factor for high-innovation outcomes. Relationships built on trust and mutual respect form emotional bonds that serve to connect people, and this connection enables contributions

from people that would otherwise be precluded (Ernst & Chrobot-Mason, 2011). In practice, this means leaders who emphasize directing and controlling methods reduce the likelihood for creativity, adaptation, and learning within the group dynamics, which is required for high-innovation outcomes. Directing and controlling methods do effectively achieve the predetermined outcomes, but the leader's actions become the primary mechanism for innovation. If the group dynamics does not exhibit the factors discovered in this study then directing and controlling mechanisms are likely required, but the potential for high-innovation outcomes is greatly reduced.

Conclusion

The purpose of this study was to discover how adaptive tension interplayed with group cohesion in high-innovation teams and how this interaction related to improved team performance. This purpose stemmed from a growing problem of underperforming teams as organizations increase in complexity. Because these teams are complex adaptive systems, when adaptive tension is introduced the adaptations that occurs is unpredictable and frequently results in lower performance outcomes. Past researchers in complexity leadership theory demonstrated that traditional command and control methods of leadership limit creativity, adaptation, and learning in complex adaptive systems, which is likely one of the primary reasons why these teams underperform.

A new conceptual framework was required for this study and created by combining two research traditions: complexity leadership theory and group dynamics research. The unique pairing of these research traditions resulted in a conceptual framework of the cohesion-performance relationship that had the requisite complexity necessary to understand the group members' experience. Specifically, this study sought

an understanding of moderating elements to the group dynamics involved in mechanisms of adaptive tension and cohesion in the context of complex adaptive systems. The target was to understand how adaptive tension interplayed with group cohesion in this context when high-innovation outcomes were achieved. The conceptual framework was grounded by complexity leadership theory, but at a point of convergence with group dynamics research focused on the cohesion-performance relationship.

People within an organization are interconnected, coinfluencing, and adapt over time. This is a natural process where people adapt to each other, their individual and shared experiences, and the contextual conditions of the environment, both internal and external to the organization. Complexity leadership researchers defined this as the space between people, where interactions allowed for creativity, adaptation, and learning (Ott, 2010). These interconnected groups of people within organizations are complex adaptive systems, and they emerge within organizations where individuals interact with one another and the environment, their productive well-being was positively correlated (i.e., interdependent), and adaptive tension existed. Because cohesive teams maintain higher levels of productivity (Castaño et al., 2013; Chun & Choi, 2014; Hinrichs, 2010; Moore & Mamiseishvili, 2012), this study sought to understand the adaptive tension elements within the cohesion-performance relationship and how this context related to team performance.

High-innovation teams are complex adaptive systems that achieve substantial positive outcomes. Because these teams require a high degree of alignment, ability to execute, and capability, any disruption to these factors precludes high-innovation outcomes. Group cohesion is not required for high-innovation teams to form, though

there has to exist a commitment by each member of the team that gets them through the forming stage. Trust must be allowed to form, which is difficult to do without genuine acceptance and kindness, so the attitudes of the people, the culture, and governing factors that protect people in their roles is important. With the right environment in place, tension is introduced within the team and forces adaptation. The rest is up to the group members because they are able to make a choice, do I stay and see this through or do I walk away?

By definition, high-innovation outcomes can only be achieved by overcoming significant challenges. Honesty and willingness to face reality through objective measures of both people and performance are paramount because anything short of this will undermine trust. Moreover, a willingness to forgive and attitudes of acceptance has to exist because anything short of this will also undermine trust. This creates an interesting dichotomy; though these teams critically measured their performance objectively, everybody also felt safe in their role. Objectivity and roles were discovered to be the two primary factors for high-innovation outcomes. What results is a highly functioning team that develops trust to the point of reliance and further reinforces and accelerates the team performance. This is an iterative process that forms group cohesion primarily as an effect of the group experiencing success together.

The administrative, enabling, and adaptive leadership roles as defined in complexity leadership theory were confirmed to exist within high-innovation teams. Moreover, group members experienced improved job satisfaction because of the group dynamics, which was important for positive social change as identified in this study. Not only was sustainable team performance with improved job satisfaction important for the

people on these teams, but also the combination of success and job satisfaction turned out to be important mechanisms for reinforcing group cohesion. The reinforcing mechanisms of success, reliance, mutual respect, and direct communication acted directly on the primary factors of objectivity and roles leading to positive choices by group members to overcome obstructions or adapt to peers.

Ultimately, it was the choices made by individuals within the group dynamics that resulted in the achievement of high-innovation outcomes. When faced with adaptive tension, each group member had the option to choose to overcome, adapt, obstruct, or leave. Though some examples of obstruction and choices to leave the group occurred, the primary factors of objectivity and roles along with the supporting factors of alignment, capability, execution, purpose, and work ethic led to group success reinforcing reliance, mutual respect, and directness. Success, reliance, mutual respect, and directness, in turn, reinforced the primary factors of objectivity and roles continuing the cycle that over time resulted in the formation of a high-innovation team.

In practice, group member selection was important to match capabilities with roles, ensure commitment through work ethic and purpose, and minimize obstruction. Command- and control-methods were used sparingly relying instead on well-defined roles and responsibilities, and team alignment as governing mechanisms of the group dynamics. Lastly, the leader acted objectively and adapted when required while carefully discerning when action was required to overcome obstacles. This action was in the form of tension that leveraged the group dynamics and led to choices of adaptation. Once the factors and mechanisms were in place for entanglement and to manage the group dynamics, the first team success activated the reinforcing mechanisms that through

multiple success cycles developed trust to the point of reliance and ultimately resulted in the emergence of high-innovation outcomes. As compared to command and control approaches, these leaders leveraged the mechanisms outlined in this study that managed the group dynamics to produce predictable high-innovation outcomes.

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Appendix A – Interview Guides

Interview 1

1. I would like you to focus on your experience with this team.
    a. Describe your experience focusing specifically on the [adaptive challenge] that forced you to adapt.
    b. What were your intentions?
    c. How did you feel at the time?
    d. What were you thinking?
2. How did you know the group was aligned with the organization's needs?
3. How would you describe the procedural aspects of the team?
    a. Were there organizational processes that you needed to follow?
    b. Was any of these procedures obstacles?
    c. If so, how did the group overcome these obstacles?
4. Describe the cohesion of the team?
5. How did your relationships with your teammates change through the experience?
6. How did the cohesion of the group change over time?
7. What do you think helped keep the group together?
8. Thinking about the relationship you had with your teammates and the relationships your teammates had with the rest of the group.
    a. What factors do you feel contributed to strengthening the group’s cohesion?
    b. Were there tensions within the group that could not be overcome?
    c. How did the group deal with these tensions?
9. Describe how your team managed group conflict.

10. Where there conflicts that were allowed to play out?
    a. How did these conflicts differ from those that the group prevented?
    b. What was the outcome?
    c. Did it strengthen or reduce group cohesion?
11. Describe the details of the [adaptive challenge] and how the group overcame the challenge.
    a. What aspects of the group contributed to overcoming the challenge?
    b. What aspects put the outcome at risk?
    c. How did the group deal with this?
    d. What was the impact on the cohesion with the group?
    e. Were there any negative outcomes?
    f. How did this impact to the group's performance?
12. Were you influenced by subordinates on this team?
13. Did you influence any superiors on this team?
14. Describe the details around any observations you had where a subordinate caused a superior to change their mind?
15. How did these events impact the performance of the group?

Interview 2

1. In our first two interviews, we discussed your prior experience leading up to joining this team and your specific experience within the group. I would like you to reflect now on the meaning of this experience.
    a. How did your perspective change going through this experience?
    b. How do you think this experience will impact your future views going into a new team experience?
2. How would you describe your relationship with your team now versus before?
3. How do you think this experience will influence you going forward?
4. What surprised you the most from this experience?
5. What were the outcomes?
6. What do you think was the most important factor for the group's success?
7. What do you think was the most significant risk?
8. Describe how you think your teammates changed through this experience?
9. How would you describe the cohesion of the group now versus before this experience?
10. How was the group's work introduced to the rest of the organization?
11. How did the group's work impact the organization's future?

Appendix B – Screening Questionnaire

1. As a member of a group, have you ever experienced a challenging event where the group successfully was able to overcome the challenge?
2. How did you come to become a member of this team?
3. What was your role within the group?
4. How were you influenced by the other group members?
5. How did you influence the other group members?
6. Tell me a little about the challenge the group overcame?
7. Tell me a little about the outcome of this group's experience?
8. How did your experience in teams prior to this group set your attitude going into this experience?
9. How did your attitude change from this experience?

Appendix C – Cited Works from Select Research on CLT

Table C1

Cited Works from Select Research on CLT 1 of 7

Citations	Graham (2010)	Geer-Frazier (2014)	Metcalf & Benn (2013)	Ott (2010)	Presley (2014)	Sweetman (2010)
Anderson (1999)	X	X			X	
Bloom (2005)	X					
DeJaegher & DiPaola (2007)	X					
Graen & Uhl-Bien (1995)	X		X			
Griffin (2002)	X					
Kelso (1995)	X					
Luthans & Avolio (2003)	X					
Marion & Uhl-Bien (2001)	X		X	X	X	
Maturana & Varela (1980)	X					
Maturana & Varela (1992)	X					
Pearce & Conger (2003)	X		X	X		X
Prigogine (1996)	X					
Regine & Lewin (2000)	X					

Table C2

Cited Works from Select Research on CLT 2 of 7

Citations	Graham (2010)	Geer-Frazier (2014)	Metcalf & Benn (2013)	Ott (2010)	Presley (2014)	Sweetman (2010)
Regine & Lewin (2003)	X					
Schwandt (2008)	X			X		
Stapp (2007)	X					
Strasser (1969)	X					
Thompson (2007)	X					
Varela, Thompson, & Rosch (1991)	X					
Wheatley & Kellner-Rogers (1996)	X					
Wheatley (2006)	X					
Duin & Baer (2010)		X				
Ilinitch, D'Aeni, & Lewin (1996)		X				X
Lians (2013)		X				
Macey (2011)		X				
Psychogios & Garev (2012)		X				
Richardson (2004)		X				

Table C3

Cited Works from Select Research on CLT 3 of 7

Citations	Graham (2010)	Geer-Frazier (2014)	Metcalf & Benn (2013)	Ott (2010)	Presley (2014)	Sweetman (2010)
Schneider & Somers (2006)		X				
Smith & Lewis (2011)		X				
Uhl-Bien, Marion, & Mckelvey (2011)		X	X	X	X	X
Wilson (2009)		X				
Barker (2001)			X			
Beddoe et al. (2009)			X			
Crossan et al. (2008)			X			
Funke (2010)			X			
Gemmil and Oakley (1992)			X			
Hazy (2006)			X			
Holland (1995)			X			
Ireland & Hill (2005)			X			
McKelvey (2001)			X			
Plowman et al. (2007)			X		X	

Table C4

Cited Works from Select Research on CLT 4 of 7

Citations	Graham (2010)	Geer-Frazier (2014)	Metcalf & Benn (2013)	Ott (2010)	Presley (2014)	Sweetman (2010)
Prigogine & Stengers (1984)			X		X	
Stacey (1995)			X		X	
Stacey (2000)			X			
Thietart & Forgues (1995)			X			
Thompson & Cavaleri (2010)			X			
Yukl (2001)			X			
Bourgeois & Eisenhardt (1987)				X		
Brown & Eisenhardt (1997)				X	X	
Chiva-Gomez (2003)				X		
Eisenhardt & Brown (1998)				X	X	
Lichtenstein et al. (2006)				X	X	X
Marion (1999)				X	X	
Mumford & Licuanan (2004)				X		
Mumford et al. (2002)				X		

Table C5

Cited Works from Select Research on CLT 5 of 7

Citations	Graham (2010)	Geer-Frazier (2014)	Metcalf & Benn (2013)	Ott (2010)	Presley (2014)	Sweetman (2010)
Panzar et al. (2007)				X		
Surie & Hazy (2007)				X	X	
Yukl (2006)				X		
Barret (2012)					X	
Chilliers (2000)					X	
Colbert (2004)					X	
Drath et al. (2008)					X	
Eisenhardt & Bhatria (2002)					X	
Emery & Trist (1965)					X	
Goldstein (2008)					X	
Hazy (2005)					X	
Hazy (2008)					X	
Heifetz & Laurie (2001)					X	
Heifetz (1994)					X	

Table C6

Cited Works from Select Research on CLT 6 of 7

Citations	Graham (2010)	Geer-Frazier (2014)	Metcalf & Benn (2013)	Ott (2010)	Presley (2014)	Sweetman (2010)
Hunt & Esenhardt (1998)					X	
Hunt (1995)					X	
Kegan (1994)					X	
Lichtenstein & Plowman (2009)					X	X
Macintosh & Maclean (1999)					X	
Plowman & Duchon (2008)					X	
Uhl-Bien & Marion (2009)					X	X
Uhl-Bien (2001)					X	
Weick & Quinn (1999)					X	
Yukl (2010)					X	
Bradbury & Lichtenstein (2000)						X
Davenport (2001)						X
Hargadon & Bechky (2006)						X
Meyer, Gaba, Colwell (2005)						X

Table C7

Cited Works from Select Research on CLT 7 of 7

Citations	Graham (2010)	Geer-Frazier (2014)	Metcalf & Benn (2013)	Ott (2010)	Presley (2014)	Sweetman (2010)
Osborn, Hunt, & Jauch (2002)						X
Tsoukas (1996)						X
Weick & Roberts (1993)						X