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The Role of the Vertical Leader in Shared Leadership

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The Role of the Vertical Leader in Shared Leadership

A Dissertation

Submitted to the Faculty of the Opus College of Business of the University of St. Thomas

By

Jacqueline P. Anderson

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The Role of the Vertical Leader in Shared Leadership

by

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Abstract

The purpose of this quantitative, positivistic study is to investigate the unique roles, actions, and behaviors of vertical team leaders that lead to the emergence of shared leadership, effectiveness, and performance in work teams in organizations. The correlational study design evaluated critical leadership functions relative to a 20-item shared leadership inventory. The study included 34 team leaders and 101 team members associated with primarily Midwestern organizations.

The findings revealed that all leadership functions can be shared to a certain extent, but the leadership function of providing feedback was notably less shared than other leader functions. In addition, not only can functional leadership participation be a predictor of shared leadership, but also, this research has established new reliability and validity of the he Team Leadership Questionnaire (TLQ).

Other findings from this sample indicate that functional leadership can be a predictor of shared leadership and when leadership functions related to planning and initiating (transition phase) are more shared, then the execution functions (action phase) are also more shared. The transition function predicts the outcome of shared leadership more strongly. Finally, there is a strong correlation with perceived leader effectiveness and leadership satisfaction with shared leadership in this study. This research provides new insights for creating an environment that better supports shared leadership and challenges some traditionally held norms of the unique role of the vertical leader.

Dedication

This is dedicated to the women of my past and future. To my mom, Barbara Purcell (née Jurgella), who never had the opportunity to complete a college journey; it is your qualities of faith and perseverance that you passed on to me, that made this achievement possible. As my example, it is not lost on me all the strong women I descended from; that spirit filled me with fortitude and moved me through the most difficult times. Finally, to my daughters, Lindsay, Erin and Ava, my wish for you as you navigate your amazing futures is that your love of learning continues to thrive. Despite any obstacle in your way, I know you will persist!

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Finally, I would like to thank my dear, sweet husband, who may have never really understood why I needed to do this, but always gave his full support despite that fact. For my lovely daughters, who ARE the future: never stop challenging yourself to grow. I am eternally grateful for the love and flexibility my family provided me on this journey and look forward to what lies ahead.

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Chapter 1: Introduction

The scale and scope of technological innovation in the past decade is creating profound and systematic change in the economic, social and cultural environment (Schwab, 2016). This tipping point in technology is driving what is described by the World Economic Forum as the fourth industrial revolution. The disruptive, smart technologies characteristic of this industrial revolution are happening in parallel with a modern world where volatile, uncertain, complex and ambiguous events, collectively termed VUCA, are the new normal (Bennett & Lemoine, 2014).

The prevalence of VUCA events in the twenty-first century, combined with the fourth industrial revolution, are influencing the nature of organizational work thereby suggesting new requirements for leadership success (Schwab, 2016). Those who hold on to traditional business and leadership approaches, are vulnerable to other organizations that are reinventing their business models and creating innovation ecosystems in response to the pace of change. Historically, large, bureaucratic organizations created formal, hierarchical positions to provide leadership for simple, independent and repetitive work. Prominent leadership theories were developed in service to the attributes of command and control concepts to maximize productivity and efficiency (Uhl-Bien et al., 2007). Leadership was viewed as a rigid, uni-directional influence process monopolized by an appointed manager (Carson et al., 2007). This leadership paradigm is counterintuitive to the challenges of complex coordination demanded in the new environment.

In the VUCA environment, the actual action of leadership in groups is not necessarily the province of the formal authority structure (Schwab, 2016). Shared leadership is a team-centric theory that is relevant to work that is complex and requires

interdependent efforts of teams. Organizations that can harness the leadership capabilities of the team will take advantage of innovation opportunities and economic productivity while expanding organization resilience (Mehra et al., 2006). A shared leadership model is driven by “responsiveness, participation and mutual influence between parties that acknowledge and respect each other’s leadership attributes” (Mehra et al., 2006).

Although a hierarchical, or vertical leader, has an important influence on any outcome regardless of the leadership approach, the hierarchical leader has an essential role in increasing the probability of a successful shared leadership objective (Antonakis & Day, 2018). It is incumbent on the formally appointed leader to create and maintain conditions that enable shared leadership (Ensley et al., 2006). Integral to shared leadership is the concept that the individual, not necessarily the hierarchical leader, with the most relevant experience, best line of sight to the emerging challenge, and an ability to influence, will allow the team to function most effectively in a shared leadership scenario. Reciprocal influence, not authority, is the undercurrent to a shared leadership impact. However, the vertical leader, denoted by a hierarchical role, is essential to overall shared leadership success (Conger & Pearce, 2003).

Background

Evolving Nature of Work

The fourth industrial revolution blurs the physical, digital, and biological domains (Bennett & Lemoine, 2014). Emerging technologies are now enabled in a way that advancements are experienced exponentially and create new complexities to navigate. Klaus Schwab, the Founder and Executive Chairman of the World Economic Forum, identified three convictions that characterize the recent technological transformation and

upheaval of the world of work (2016). These three elements, referred to as “convictions” of the fourth industrial revolution include: (a) velocity, (b) breadth and depth of the change, (c) system wide impact.

Waves of breakthroughs have created a velocity in organizational change that had been inconceivable in the prior three industrial revolutions (Schwab, 2016). Change is broader in breadth and deeper in scale, and the combination of multiple technologies leads to a full transformation of the traditional paradigm. Schwab (2016) states that this industrial revolution will not only change “the ‘what’ and ‘how’ of doing things, but also the ‘who’ we are” (p. 3). The interconnectivity will reconstitute entire systems across society in countries, companies, and industries.

The fourth industrial revolution is also characterized as Industry 4.0. This moniker refers to the complete supply chain transformation in which virtual and physical systems cooperate in a new and flexible way, a “cyber-physical” system of sorts (Schwab, 2016). The new levels of complexity and innovation will demand leadership and talent capabilities that combine expertise and influence in a novel way. Skills identified as the most critical of the fourth industrial revolution include: social skills (e.g. negotiations, influence, and emotional intelligence), cognitive skills (e.g. creativity and analytics), personal abilities (e.g. resilience and persistence), process skills (e.g. critical thinking), and systems skills (e.g. decision making and entrepreneurial skills)(Eberhard et al., 2017). Many of these skills are directly aligned with the type of leadership influence and team processes considered vital for a shared leadership approach (Zaccaro et al., 2001).

Schwab (2016) further suggests the essential component for success in this latest revolution is contextual intelligence. Contextual intelligence is the ability to adapt skills

and knowledge to diverse situations and rapidly changing environments (Schwab, 2016). A higher level of sense-making skills for solving problems and exploiting opportunities is characteristic of contextual intelligence. Locke suggested that “holding the right context for any given decision is one of the skills that make great business leaders great” (Pearce et al., 2007, p. 287). Contextual intelligence comes with an awareness and a readiness to engage those that have a stake and line of sight to the issue at hand (Kinsinger & Walsh, 2012).

Unlike command and control leadership, the fourth industrial revolution’s VUCA challenges suggest a shared leadership model may produce better outcomes for particular industries and organizations most impacted by the rapidly changing business environment.

The VUCA concept was introduced in the 1970’s by the U.S. Army War College (Kinsinger & Walsh, 2012). Bennett and Lemoine (2014) later explored each VUCA component in order to identify skills and approaches to best offset the negative implications. Starting with volatility, defining it as unstable change, Bennett and Lemoine suggest that to effectively address this element, agility and flexibility are required. With uncertainty, a lack of appreciation about the significance of certain events requires understanding and having access to key sources of information. When complexity is introduced, interconnected parts may form elaborate networks and matching internal resources and solutions to mirror the environmental complexities may be necessary. Finally, ambiguity represents the lack of knowledge about the “rules of the game” and overcoming this knowledge void requires informed experimentation and innovation.

Team-centric Leadership

The fourth industrial revolution, ripe with VUCA characteristics, demands a variety of expertise and a team-centric leadership approach. The idea of sharing leadership as an explicit concept is not new but is likely more relevant than ever before although preceded by scholars such as Mary Parker Follett. Shuffler, Burke, Kramer and Salas (2013) cite Gibb (1954) as one of the first authors that referenced distributed leadership by suggesting “leadership is probably best conceived as a group quality, as a set of functions which must be carried out by the group” (p. 153). Later, the use of shared leadership terminology represented the concept that leadership not only emerges from the formal, designated leader, but from the team members themselves (Carson et al., 2007; Nicolaidis et al., 2014). These notions support shared leadership as “lateral influence among peers rather than simply relying on vertical, downward influence by an appointed leader” (Pearce & Conger, 2003, p. 48).

Lateral influence can result in different versions of shared leadership, which includes everything from full dispersion of individual leadership functions across team members, to a rotation of leadership responsibilities in general, or delegation of leadership functions based on individual abilities and team member strengths (Shuffler et al., 2013). Regardless of the approach to sharing leadership, under the right conditions, it can be “an important predictor of team effectiveness” (Pearce & Sims, 2002, p. 183).

A number of studies have shown that shared leadership is positively related to team outcomes. Recent research has documented the relationship between shared leadership and successful team performance (Carson et al., 2007; Hoch & Kozlowski, 2014; Small & Rentsch, 2010), team effectiveness (Pearce & Sims, 2002); innovation

(Hoch, 2013); team proactivity (Erkutlu, 2012), new venture performance (Ensley et al., 2006) and sales performance (Mehra et al., 2006). More generalizable evidence has been presented in three recent meta-analyses. These studies explored the relationship between shared leadership and team effectiveness (Wang et al., 2014) and team performance (D’Innocenzo et al., 2016; Nicolaides et al., 2014). Results from these meta-analyses indicate that shared leadership is correlated with team performance and effectiveness.

Recent reviews of team-centric leadership conclude that most team leadership research simply borrows from generic leadership theories, but has not focused on leadership models that are explicitly team-focused (Kozlowski et al., 2016). Exceptions to this are models of shared leadership and the functional leadership perspective. Kozlowski et al. (2016) recommended further research is needed to help form a “coherent and consistent conceptualization of shared leadership” (p. 44) and illuminate the processes that aid in the emergence of shared leadership in teams.

Vertical Leadership in Shared Leadership

One key factor that is under-researched is the role of vertical leadership in the effort to achieve shared leadership in teams. Previous research has addressed the vertical leader’s role in facilitating shared leadership, the impact of various vertical leadership styles in shared leadership (e.g. transformational leadership), specific actions of vertical leaders that lead to things like goal alignment (Shamir & Lapidot, 2003) or empowerment of team members (Fausing et al., 2015), and the qualities of vertical leaders that appear to help them contribute to the development of shared leadership. However, a clear and comprehensive picture of what a vertical leader should or can do to promote shared leadership in teams has not been proposed.

Several studies have examined the relationship between vertical leadership (i.e. hierarchically-based, formally appointed team leadership) and shared leadership, showing both types of leadership are related to outcomes such as team performance. Wang et al. (2014) found that shared leadership predicted team performance after controlling for vertical leadership. Nicolaidis et al. (2014) confirmed this result, showing that shared leadership accounted for an additional 5.7% of the variance in team performance beyond vertical leadership; Ensley et al. (2006) found that shared leadership explained an additional 14-20% of the variance in firm revenue growth over vertical leadership; and Small and Rentsch (2010) reported that shared leadership accounted for an incremental 2-9% of the variance in team outcomes. However, Drescher et al. (2014) found it likely that not all leadership functions in a team may be equally distributed. Moreover, not all scholars agree that all leadership functions can be shared.

In particular, Edwin Locke has argued that the top leader in an organization cannot fully delegate or share certain responsibilities such as setting direction, establishing values, or selecting and appraising members of their management team without creating inefficiency, confusion, or organizational paralysis (Locke, 2003; Pearce et al., 2008). Locke's ideal leadership model is an integrated model; a combination of the shared leadership model and the top-down model, but also containing a bottom-up component (Locke, 2003, p. 281).

There is a misconception that shared leadership supersedes or replaces hierarchical leadership, but this is not the case (Wassenaar & Pearce, 2018). In practice, "leadership probably involves a continuous ebb and flow between vertical and shared

leadership” (Ensley et al., 2006, p. 237). In the end, shared leadership supplements, but does not replace the impact of vertical leadership (Fausing et al., 2013).

Research supports the benefit of shared leadership for teams and Antonakis and Day (2018) concluded that these various studies of vertical and shared leadership also have identified “the important role that vertical leadership has in the display and development of shared leadership” (p. 175). There is an opportunity to know more about how vertical leadership and shared leadership work together and further, “how and under what situations vertical leadership facilitates, hinders, complements and/or supplements shared leadership” (Nicolaidis et al., 2014, p. 935). Other researchers have similarly called for a better understanding of “what roles vertical leaders can play as catalysts of facilitators of shared leadership and in what ways vertical leadership and shared leadership can complement one another to enhance the effectiveness” of a team (Pearce & Conger, 2003, p. 287).

Problem Statement

The fourth industrial revolution, characterized by VUCA, describes an environment that may render command and control, and other traditional approaches to leadership, less effective. Shared leadership is a model that allows team members with the relevant expertise to provide leadership. However, even in a shared leadership model, there is an important role for the vertical leader to perform in order to create shared leadership success. Understanding what elements of the leadership role are exclusive for the vertical leader will eliminate confusion and expand understanding of the essential role and skills required for vertical leadership in a shared leadership context.

Research Purpose

The purpose of the study is to investigate the unique roles, actions, and behaviors of vertical team leaders that lead to the emergence of shared leadership, effectiveness, and performance in work teams in organizations. With this knowledge, organizations that are interested in leveraging a shared leadership approach can better prepare identified vertical leaders for the critical aspects and competencies to succeed with multifaceted team leadership. Additionally, individuals participating in a shared leadership environment will have better managed expectations of the role and boundaries of the vertical leader.

Significance of the Study

The complexity of work and the pace of organizational change are facilitating greater emergence of a shared leadership approach. The significance of this study will focus on creating clarity of the essential or potentially exclusive roles and responsibilities that must be primarily executed by the vertical leader. It will highlight any leader role in a shared leadership environment of a rational organization that cannot be shared. Prior research has emphasized the functions of leadership and the skills and traits that may enable a leader to be more effective, however, this study will center on a team leadership model where the leadership functions are shared yet the vertical leader has a unique and primary responsibility for aspects of leadership that cannot be distributed. There is a better opportunity to explain team effectiveness when both vertical and shared leadership are assessed within the same study and more research needs to address both factors (Wang et al., 2014). A number of scholars have recommended that this issue is in need of further research and clarification (Grille et al., 2015; Nicolaidis et al, 2014, Pearce &

Conger, 2003). Understanding the interplay between shared and vertical leadership will better equip organizations that strive for the benefits of a shared leadership model to combat elements of the VUCA world and take advantage of the opportunities presented in the fourth industrial revolution.

Research Questions

Vertical leaders have a role as a “catalyst and a facilitator of shared leadership” (Pearce & Conger, 2003, p. 287). In understanding the essential and unique contributions a vertical leader provides to enhance the effectiveness of a group or organization in a shared leadership context, leadership in teams will be better equipped to benefit from the possibilities of a team-centric leadership approach. Therefore, the present study investigates:

1. What do vertical team leaders do to promote shared leadership in their teams?
2. What roles and responsibilities do vertical leaders in teams have that cannot be fully or easily shared?

Limitations

The primary limitation of this study will be constraints on its generalizability. A smaller sample size (relative to sample sizes found in meta-analyses) of about 20-30 team leaders and team members will be used to explore the vertical leader’s unique role and contribution to the development of shared leadership in their teams. The geography will most likely be restricted to teams operating in organizations located in the upper mid-west region of the US. In addition, the Team Leadership Questionnaire (TLQ) proposed for this study does not appear to have been used in published research and should be

considered experimental. While it has good content validity (see Morgeson et al., 2010), its reliability and validity are unknown which could affect the results.

Chapter Summary

The fourth industrial revolution represents a fundamental change in the way we work and relate to each other. Many industries are acutely aware of the necessity for a new approach to leadership in order to survive and thrive. The pace and complexity of change, in many cases demands the knowledge worker to contribute and influence the team in a new way to drive the best possible outcomes. The optimization of the team in a VUCA world implies a leadership approach that allows for expertise and collaboration as well as influence and leadership from those that are best positioned to provide it within the team.

Shared leadership has many benefits that are relevant to success in a rapidly changing environment. Although many functional leadership components can be shared, a vertical leader's role has essential aspects that are potentially the singular responsibility of that leader. Donald McGannon, a broadcasting industry executive in the formative years of television, asserted that "Leadership is action, not position" (Class Act Media, n.d.). This research will clarify that sentiment by identifying if there are any actions that only a certain position (i.e., the vertical leader) can execute.

Chapter 2: Literature Review

Small group and team effectiveness theory and research represents one of the largest, richest, and longest-standing areas of work in the social sciences. The interested reader can acquire a good understanding of the published work from just the last 40 years (or so) and the state of the field today from a variety of annual reviews, including Levine and Moreland, (1990); Guzzo and Dickson, (1996); Kerr and Tindale, (2004); Ilgen et al. (2005); Kozlowski et al. (2016); and Mathieu et al. (2019). This review is focused more narrowly on the subject of team leadership, and more precisely on what Kozlowski et al. (2016) referred to as “team-centric” leadership theories and research – those that have been explicitly team-focused. Specifically, this review addresses shared leadership, the vertical leader in sharing leadership, and functional leadership perspectives.

Shared Leadership in Teams

The idea of sharing leadership has appeared in the theoretical and research literature for nearly one hundred years, but was largely unacknowledged for decades due to the dominance (in theory, research, and practice) of the traditional “great man” leadership theory (Pearce & Conger, 2003). The “great man” theory is a single, leader-centric proposition that emphasizes individual qualities and traits of the formally designated leader as the essence of leadership success (Zhu et al., 2018).

Most scholars trace the concept of a shared approach to leadership to 1924 when Mary Parker Follett proposed the “law of the situation.” Follett’s proposition suggested that rather than following the appointed leader in a particular scenario, it is more productive to follow the individual on the team with the most knowledge of the situation (D’Innocenzo et al., 2016; Pearce & Conger, 2003). Through the years, shared leadership

concepts have been evident in a number of theories of and research into team and organizational effectiveness, including the early human relations perspectives, social exchange theory, participative goal setting and decision-making, empowerment, and self-managed work teams, among others (Antonakis & Day, 2018).

Although under-appreciated at the time, the “law of the situation” has become increasingly more relevant as the growing complexity and interdependence of work during the “fourth industrial revolution,” also known as “Industry 4.0” (Schwab, 2016), has required a different approach to leadership. Industry 4.0 represents the exponential changes to work and life as smart technologies are integrated into a variety of organization functions and activities. Today, team-based leadership demands an array of skills and expertise to deal effectively with a complex environment versus the historical reliance on a single leader (Pearce, 2004). In order to examine the unique role of the vertical leader in a shared leadership context, it is important to understand the underpinnings of shared leadership including: the definition of shared leadership, performance outcomes from shared leadership, and other influences on implementing and achieving successful shared leadership.

Definition of Shared Leadership

One of the most frequently cited definitions of shared leadership is “a dynamic, interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both” (Pearce & Conger, 2003, p. 1). Similarly, Carson et al. (2007) described shared leadership as “an emergent team property that results from the distribution of leadership influence across multiple team members” (p. 1218). Zhu et al. (2018) presented 19 definitions of shared

leadership developed since 2002. Of the 19 definitions, 16 of them included three central characteristics: (a) lateral influence among peers, (b) an emergent team phenomenon, and (c) leadership roles and influence that are dispersed across team members.

Lateral Influence Among Peers. A fundamental difference in defining shared leadership versus traditional leadership is the shift from leadership as a role or an activity to leadership as an influential, social process (Pearce & Conger, 2003; Pearce et al., 2014). Shared leadership theory hinges on the process of mutual influence while “traditional vertical leadership models consider leadership as emanating solely from the leader” (Kozlowski et al., 2016, p. 36). Thus, shared leadership involves any individual’s ability to influence the team rather than viewing leadership as a formal position of authority (Pearce & Conger, 2003). Further, shared leadership is catalyzed by a “social process that occurs in and through social interactions” and the skills required create “conditions in which collective learning can occur” (Pearce & Conger, 2003, p. 24). In short, shared leadership emphasizes interactions among team members and a general consensus in the team of the role and opportunity for collective execution of leadership (Wang et al., 2014).

Emergent Team Phenomenon. Shared leadership as an emergent team phenomenon is the idea that based on contextual factors; organic leadership occurs with and from interactions among team members, including both the vertical leader and followers, and overrides the concept of unitary leadership in favor of distributed influence to achieve a particular outcome. This emergent team leadership is “influence without authority” and distributes the leadership responsibility for team success to both official and unofficial leaders (Pearce, 2004). The emergent team phenomenon “naturally

develops from general role consensus when team members send verbal and nonverbal cues for leader behaviors” (Hess, 2015, p. 86).

Shared leadership is a complex adaptive process that emerges from the work of the team or group and constitutes more of a social system than early theory acknowledged (DeRue, 2011). The social structure of shared leadership materializes as individuals “realize, that, in order to achieve their individual goals (ends), they must come together and engage in a common and interdependent set of actions (means)” (DeRue, 2011, p. 141). By recognizing that their success is co-dependent on the actions of the team and requires collective and interdependent action to be successful, the emergent property of shared leadership is substantiated (DeRue, 2011).

Leadership Roles and Influence are Dispersed. Leadership has been “conceptualized as a social and cultural phenomenon, contextually bound” as the leader, follower, and context, and the interactions among these elements must be fully considered (Rumsey, 2013). Pearce et al. (2014) claimed that shared leadership is a “meta-theory of leadership...all leadership is shared leadership; it is simply a matter of degree” (p. 276). By foregoing the operating assumption that leadership is a form of one-directional influence, there is an opportunity for a more “dynamic and social conception of the leading-following process” (DeRue, 2011, p. 129). In the end, “individuals in a shared leadership structure are consistently and collectively engaging in acts of leading and those acts are mutually reciprocated by collective acts of following...thus, shared leadership also entails shared followership” (DeRue, 2011, p. 135). Followership suggests a certain vulnerability that requires an openness to learning and ceding control to engage in work that is being undertaken by peers. The seamless shift “between expert

and non-expert, teacher and learner with no loss to self-esteem, but rather, with some gain in self-in-relation esteem” expands potential solution sets (Pearce & Conger, 2003, p. 41).

Shared leadership is a “reconceptualization of leadership on the team level” (Fausang et al., 2013, p. 272). This dynamic construct is intended to fluctuate the leadership structure in order to serve the goals and outcomes that the team seeks thereby dispersing the leadership role (Carson et al., 2007). No longer a whisper, Mary Parker Follett’s voice regarding the “law of the situation,” is channeled in the shared leadership definitions and characteristics cited in the literature.

Outcomes from Shared Leadership

There has been substantial interest in the practice of shared leadership over the past decade. A large body of empirical research, including several meta-analyses is available. This research supports the general understanding that shared leadership is positively related to team outcomes (Barnett & Weidenfeller, 2016). There have been variety of criteria used to demonstrate positive team outcomes, such as team effectiveness, innovation, team proactivity, new venture performance, and sales performance (Barnett & Weidenfeller, 2016). In addition, several different instruments, such as the Shared Leadership Questionnaire (SLQ), the Team Multifactor Leadership Questionnaire (TMLQ), or the Shared Professional Leadership Inventory for Teams (SPLIT), have been designed and used to measure fundamental aspects of shared leadership (Grille & Kauffeld, 2015; Small & Rentsch, 2010). Much of the research has used these or other instruments to collect team leader and/or team member ratings of team performance and outcomes. Alternatively, shared leadership has also been examined by social network approaches (D’Innocenzo et al., 2016) which track and examine the

patterns of relationships among team members. There is considerable evidence to support that shared leadership can be a positive force within teams and organizations. What differs are the outcomes deemed relevant and how to best measure those outcomes.

A number of studies report significant and positive relationships between shared leadership and team outcomes (for example, see Carson et al., 2007; Ensley et al., 2006; Mehra et al., 2006; Pearce & Simms, 2002). However, Barnett and Weidenfeller (2016) summarized three meta-analyses of shared leadership and team performance (D’Innocenzo et al., 2016; Nicolaides et al., 2014; Wang et al., 2014) which provide the strongest and most generalizable evidence for the shared leadership–team outcome relationship. Barnett and Weidenfeller’s (2016) main conclusions included:

- Shared leadership is positively related to team performance.
- Shared leadership accounts for unique variance beyond vertical leadership.
- Shared leadership is moderated by task complexity, task interdependence, team tenure as well as, measurement approach, type of sample, and type of measure.

Table 1 presents a more detailed overview of Barnett and Weidenfeller’s (2016) summary and shows there is a positive relationship between shared leadership and team performance in the results of all three meta-analyses; measures of shared leadership correlate with team outcomes in the .21-.35 range. However, in some individual studies correlates with team outcomes have been reported to be as high as .46 (Carson et al., 2007). The meta-analysis performed by D’Innocenzo et al. (2016) reported a lower overall shared leadership–team performance correlation (.21) than Nicolaides et al. (2014) or Wang et al. (2014). However, the authors noted that teams sampled from

classroom and laboratory settings yielded lower average effect sizes compared to teams of employees working in field settings (D’Innocenzo et al., 2016).

While these meta-analyses focused on shared leadership–team effectiveness criteria, other outcomes that were analyzed included team adaptability, creativity, viability and members’ commitment and work-related attitudes. Wang et al. (2014) offered a taxonomy to differentiate performance outcomes relative to team effectiveness. This taxonomy included: (a) attitudinal outcomes, (b) behavioral process and emergent states, (c) subjective performance, and (d) objective performance (p. 187). Wang et al. (2014) reported that shared leadership impacted team performance ($\rho = .34$) but was more strongly correlated to attitudinal outcomes ($\rho = .45$) and behavioral processes ($\rho = .44$) than to measures of subjective performance ($\rho = .25$) or objective performance ($\rho = .18$).

Influences on Shared Leadership

A number of studies have attempted to uncover the variables and conditions that are associated with optimizing the emergence, benefits, and impact of shared leadership in teams. These have been primarily researched as antecedents to or moderators of shared leadership.

One of the first studies to examine antecedent conditions for shared leadership was conducted by Carson et al. (2007). In their study, the authors proposed that the internal team environment would be positively related to the level of shared leadership emerging in a team. The specific internal environment of interest was one “characterized by a shared understanding about purpose and goals, a sense of recognition and importance, and high levels of involvement, challenge, and cooperation” (Carson et al.,

2007, p. 1223). Fifty-nine consulting teams of MBA students (N = 348) rated the degree of leadership that was displayed by each of their fellow team members and completed a 10-item scale measuring the internal team environment. Using moderated regression analysis, the authors found that their measure of the internal team environment had a direct relationship with shared leadership ($\beta = .25, p < .05$). Subsequently, Daspit et al. (2013) confirmed that the internal team environment was positively related to shared leadership in cross-functional teams using Carson et al.'s (2007) internal environment measure.

Shared leadership has been shown to be particularly relevant with the expansion of virtual teams within organizations, a common characteristic of Industry 4.0. Hoch and Kozlowski (2014) demonstrated that “hierarchical leadership was less strongly associated with team performance the higher the level of team virtuality” but shared leadership was “significantly related to team performance regardless of the degree of virtuality” (p. 398).

Other antecedents of shared leadership have been reported in the literature. For example, Grille et al. (2015) found significant positive effects for empowerment (an intrinsic factor) and fair rewards (in the extrinsic factor) on shared leadership. Antecedents of shared leadership have also been conceptualized as team member attributes. Hoch (2013) found that team member integrity (i.e., trustworthiness) functioned as an important antecedent of shared leadership. Intragroup trust was also analyzed by Small and Rentsch (2010) who found that trust which developed early through team interactions was positively related to shared leadership later in a team's life. Fransen et al. (2018) found that the more team members were perceived as warm and

Table 1*Meta-Analyses of the Relationship Between Shared Leadership and Team Effectiveness and Performance*

Study	<i>k</i>	<i>n</i> of Teams	ρ	<i>SD</i>	95% CI	<i>Z</i>	<i>Q</i> (<i>df</i>)	Key Findings
D’Innocenzo, Mathieu, & Kukenburger (2016)	50	3,198	.21	.21	[.15, .27]	6.94***	128.00(49)***	<ol style="list-style-type: none"> 1. Shared leadership is related to team performance. 2. Shared leadership is moderated by (a) measurement approach (social network vs. aggregation approaches), (b) type of sample (field vs. student samples), and (c) task complexity.
Nicolaidis, LaPort, Chen, Tomassetti, Weis, Zaccaro, & Cortina (2014)	54	3,882	.35	--	[.21, .35]	8.31**	213.33(53)**	<ol style="list-style-type: none"> 1. Shared leadership is related to team performance and accounts for unique variance beyond vertical leadership. 2. Team confidence mediates the effect of shared leadership. 3. Shared leadership is moderated by (a) task interdependence, (b) type of measure (subj. vs. objective), and (c) team tenure.
Wang, Waldman, & Zhang (2014)	42	3,439	.34	.10	[.29, .38]	--	--	<ol style="list-style-type: none"> 1. Shared leadership is positively related to team performance. 2. Shared traditional leadership is less powerful than shared “new genre” leadership. 3. Shared leadership accounts for unique variance beyond the impact of vertical leadership. 4. Shared leadership is moderated by task complexity.

Note. Reprinted from “Shared leadership and team performance,” by Barnett, R. C. and Weidenfeller, N. K., 2016, *Advances in Developing Human Resources*, 18(3), p. 338.

k = number of effect sizes; ρ = corrected correlation; *SD* = standard deviation of ρ ; CI = confidence interval; *Z* = test of significance from zero; *Q* = homogeneity of effect sizes; ***p* < .01; ****p* < .001. Copyright 2016 by Barnett, R.C. & Weidenfeller, N.K. Reprinted with permission.

competent, the greater degree of influence they were seen as having; which in turn was related to stronger team performance.

Leader behavior and style has also been studied as an antecedent variable (Fausing et al., 2015; Grille et al., 2015; Hoch, 2013). In brief, empowering and transformational leadership approaches have been found to be powerful antecedents of shared leadership emergence. This topic is reviewed in more detail in subsequent sections.

Nine studies examined moderators of shared leadership and are summarized in Table 2. In total, these studies explored the impact of as many as 29 variables or conditions that could influence the direction and degree of shared leadership's impact on team outcomes; however, only 11 were found to be statistically significant. The most frequently studied moderator variable was task or work complexity (D'Innocenzo et al., 2016; Fausing et al., 2013; Muller et al., 2018; Wang, et al., 2014). In most of these analyses, complexity of a team's described task was coded from low to high by the researchers. For example, Wang et al. (2014) provided highest complexity ratings for those team tasks calling for a high degree of creative thinking and information sharing. Muller et al. (2018) was the only study that measured task complexity directly by administering a measure of perceived task complexity to each study participant (N = 78). Three of these studies found significant moderator effects for task or work complexity (Fausing et al., 2013; Muller et al., 2018; Wang, et al., 2014). That is, these studies have shown that when a team's task or work was more complex, a higher degree of shared leadership was required to ensure team effectiveness. The results from the D'Innocenzo

et al. (2016) meta-analysis were also significant for task complexity; however, they were in a negative direction.

Two studies shown in Table 2 investigated the role of task interdependence—the degree to which team members must depend on each other to perform their tasks and accomplish goals. Burke et al. (2006) found that teams with tasks rated as highly interdependent also showed stronger effects for task and person-oriented leadership on team effectiveness. Nicolaides et al. (2014) coded interdependence (low, moderate, high) for 51 of the studies they included in their meta-analysis and found strongest correlations between shared leadership and team performance when interdependence was high ($r = .47$, $p < .01$). To complement these findings, Fausing et al. (2013) found that shared leadership had little benefit to teams whose work was routine, standardized and straightforward.

Two meta-analyses (Nicolaides et al., 2014; Wang et al., 2014) also examined the impact of type of criteria (e.g., subjective vs. objective) and reported a stronger relationship between shared leadership and team outcomes when more subjective criteria were used as outcome measures.

Table 2 shows that eight other variables had moderating effects on shared leadership (e.g., sample type, team tenure, team autonomy, etc.), but these have not been replicated or confirmed by other research. Nonetheless, the collective results from these nine studies indicate that the effectiveness of shared leadership is variable dependent on the degree of work complexity, task interdependence, the type of effectiveness measure employed, and most likely, other additional moderating influences.

Table 2*Moderators of Shared Leadership*

Study	# of Moderators Analyzed	# of Significant Moderators Found	Significant Moderator Variables
Burke, Stagal, Klein, Goodwin, Salas, and Halpin (2006)	1	1	Task Interdependence
D’Innocenzo, Mathieu, and Kukengerger (2016)	6	2	Sample Type (student teams vs. work teams), Task Complexity
Erkutu (2012)	1	1	Organizational Culture (bureaucratic, innovative, or supportive)
Fausing, Jeppesen, Jonsson, Lewandowski, and Bligh (2013)	4	2	Team Autonomy (degree of discretion over work tasks, conditions, and decisions), Work Function (knowledge vs. manufacturing teams)
Grille, Schulte, and Kauffeld (2015)	1	1	Leader Prototypicality (perceived similarity to team and team members)
Hoch, Pearce, and Welzel (2010)	2	2	Team Member Age Diversity, Team Coordination (quality and quantity of shared effort)
Muller, Pintor, and Wegge (2018)	1	1	Task Complexity
Nicolaides, LaPort, Chen, Tomassetti, Weis, Zaccaro, and Cortina (2014)	9	3	Task Interdependence, Outcome Indices (subjective vs. objective), Team Tenure (length of time team worked together)
Wang, Waldman, and Zhang (2014)	4	3	Leader Style, Outcome Criteria (attitudes, behavioral processes, subjective performance, objective performance), Work Complexity

Vertical Leadership in Teams

Theory and research on the role and effectiveness of the formal or vertical (team) leader is extensive and effective team leadership is viewed as a necessary component of successful teams and work groups (for example, see LaFasto & Larson, 2001). Zaccaro et al. (2001) proposed that the leadership process of the vertical leader influences four sets of team processes: cognitive, motivational, affective, and coordination. These four processes inform functional elements of a leader's role, and therefore, in a shared leadership model, will be distributed within the channels of mutual influence by team members. All four processes are relevant to vertical leaders and the approach or leader style will impact implementation of leadership functions necessary for team performance.

Effective team leadership is a complex confluence of having the right traits, skills, and behaviors; and multiple leadership models attempt to specify what these are, and how they combine to produce positive follower (or team) outcomes (Antonakis & Day, 2018). For example, in a meta-analysis of leader personality, Judge et al. (2002) found that the multiple R-value for the Big 5 dimensions of personality was .39 for predicting the criterion of effectiveness. Pearce and Sims (2002) developed a model of team leadership based on the theoretical and research work focused on transactional and transformational leadership. They identified five leader types and corresponding behavior examples that are shown in Table 3.

In a subsequent meta-analysis, Burke et al. (2006) reported the correlates between leadership style or approach (i.e., skills and behaviors) and team outcomes such as perceived team effectiveness, team productivity, and team learning. Select findings from their study are presented in Table 4 and show a pattern of highly significant results. Task-

Table 3*Representative Behaviors of Five Types of Leader Behavior*

Leader type	Representative behaviors
Aversive leadership	Engaging in intimidation, dispensing reprimands
Directive leadership	Issuing instructions and commands, assigning goals
Transactional leadership	Providing personal rewards, providing material rewards, managing by exception
Transformational leadership	Providing vision, expressing idealism, using inspirational communication, having high performance expectations
Empowering leadership	Encouraging independent action, encouraging opportunity thinking, encouraging teamwork, encouraging self-development, participative goal setting, encouraging self-reward

Note. Adapted from “Vertical Versus Shared Leadership as Predictors of the Effectiveness of Change Management Teams: An Examination of Aversive, Directive, Transactional, Transformational and Empowering Leader Behaviors,” by C. L. Pearce and H. P. Sims Jr., 2002, *Group Dynamics: Theory, Research, and Practice*, 6, p. 173. Copyright 2002 by the Educational Publishing Foundation.

focused leadership (leadership behavior focused on dealing with task accomplishment including facilitating understanding task requirements, operating procedures, and acquiring task information), and three specific types of task-focused behaviors (transactional behavior, initiating structure, and boundary spanning) produced significant correlations with outcome criteria. Table 4 also shows that person-focused leadership (leadership behavior that facilitates the interactions, understanding, and attitudes that must be developed before members can work effectively as a team), and three more specific person-focused leadership behaviors (transformational leadership, consideration, and empowerment) produced an even stronger set of results, including strong and significant correlates with team learning outcomes. These studies (Burke, et al., 2006,

Judge et al., 2002) are mentioned only to illustrate some of the research that help us understand what is known about (vertical) leadership in teams.

Table 4

Select Results from Burke et al. (2006)

Leader style or behavior	Correlation (<i>r</i>) with Team Outcome		
	Team effectiveness	Team productivity	Team learning
Task-focused leadership	.33***	.20***	
Transactional leadership	.34 (<i>ns</i>)		
Initiating structure	.31***	.20***	
Boundary spanning	.49**		
Person-focused leadership	.36***	.28***	.56***
Transformational leadership	.34***	.25***	
Consideration	.25**	.22**	
Empowerment	.46***	.31***	.56***

Note. Empty cells indicate an insufficient number of studies to conduct the analysis. Adapted from “What type of leadership behaviors are functional in teams? A meta-analysis,” by C. S. Burke, K. C. Stagl, C. Klein, G. F. Goodwin, E. Salas, and S. M. Halpin, 2006, *The Leadership Quarterly*, 17, pp. 296-297. Copyright 2006 by Elsevier Inc. ** $p < .01$, *** $p < .001$

Definition of Vertical Leadership

Leadership is a process, or set of actions, that determines what needs to be done, how it will be done, and then facilitates individual and collective efforts to achieve the desired outcomes (Ensley et al., 2006). Vertical or hierarchical leadership refers to the leadership exercised by the individual who is formally appointed to lead a team (Hoch, 2013). The vertical leader is the official designee who leads the team processes and is responsible for decision-making. The behaviors of a vertical leader in a traditional, hierarchical organization should differ from leader behaviors in an organization with a goal of a shared leadership model. In the former, the team will rely more on the sole skill

and wisdom of the vertical leader through a top-down influence process, whereas shared leadership flows through a collaborative process with the team (Ensley et al., 2006).

Role of the Vertical Leader in Shared Leadership

According to Zaccaro et al. (2001), team leadership is a key characteristic of effective team performance. Shared leadership is meta-concept of leadership and can intersect with vertical leadership in a way that optimizes team performance. The “juxtaposition of vertical and shared leadership generates several interesting theoretical propositions” (Pearce & Sims, 2002, p. 187) and vertical leadership may be one of the most crucial elements that allows shared leadership to emerge (Zhu et al., 2016). Shared leadership is a “supplement” to vertical leadership and throughout the different stages of a project or team life cycles different team members engage in acts of leadership, “sequentially or simultaneously” (Hoch, 2013). The vertical leader facilitates the conditions for the emergence of shared leadership by designing the team and managing team boundaries (Rumsey, 2013). The most critical leadership activities in teams may emanate from the formal leader, as they have more opportunities to exercise power and influence (Wang et al., 2014). A key responsibility of the vertical leader is to initiate a “change in the existing exchange structure of the group to create a more effective group network” (Pearce & Conger, 2003, p. 186). Shared leadership does not negate vertical leadership, but instead, can support and enhance vertical leadership to ensure the team performs effectively (Pearce, 2004).

Vertical and Shared Leadership Research

Vertical leadership as a component of shared leadership has been explored by a number of researchers. Within the shared leadership literature, the research has primarily focused on three questions:

- What is the relationship between shared leadership and vertical leadership?
- What outcomes does vertical leadership predict?
- How does vertical leadership function as an antecedent to shared leadership?

Shared Leadership and Vertical Leadership. Two of the three previously discussed meta-analyses of shared leadership (Nicolaidis et al., 2014; Wang et al., 2014) specifically investigated the unique contributions of shared and vertical leadership to team outcomes. Nicolaidis et al. (2014) found that the two forms of leadership explained 16.5% of the variance in team performance, and “vertical leadership explained 4.3% of the variance in team performance over and above shared leadership” (p. 932). Wang et al. (2014) analyzed the incremental validity of shared leadership on team effectiveness after taking into account vertical leadership. They found that both shared traditional leadership and shared new-genre leadership accounted for unique variance in team outcomes over vertical leadership. Based on these meta-analytic findings, it is reasonable to conclude that both shared and vertical leadership can make unique and valuable contributions to team performance.

Individual studies have similarly analyzed the relationship between vertical and shared leadership. Ensley et al. (2006) reported that shared leadership accounted for as much as an additional 40% of the variance in new venture performance beyond that explained by vertical leadership. Similarly, Small and Rentsch (2010) found that shared

leadership accounted for an incremental 9% of between-team objective performance in a study of 60 student teams completing a business simulation.

Outcomes from Vertical Leadership. Burke et al.'s (2006) meta-analysis investigated team leadership behavior, but was not focused on shared leadership per se. Nonetheless, their results showed that several types or styles of (vertical) team leadership were significantly related to team effectiveness, productivity, and learning (see Table 3). Pearce and Sims (2002) investigated vertical versus shared leadership as predictors of effectiveness in 71 change management teams who were part of a larger organizational TQM effort. Using multiple regression analysis, they found that an aggregation of five vertical leadership behaviors explained significant amounts of variance in team effectiveness, although (individually) vertical aversive and directive leadership behavior were negative related to outcomes. However, aggregated shared leadership behaviors explained relatively more variance in team effectiveness ratings than did vertical leadership. The authors concluded that because both vertical and shared leadership behaviors could function as useful predictors, "these two types of leadership should not necessarily be considered as mutually exclusive" (Pearce & Sims, 2002, p. 184).

The impact of vertical leadership on outcomes other than team effectiveness has also been investigated. Ensley et al. (2006) found that vertical directive and vertical transactional leadership in top management teams were related to firm growth in a sample of over 200 start-up ventures, but vertical empowering and vertical transformational leadership were not. In contrast, in a study of vertical and shared leadership's impact on team innovative behavior Hoch (2013) found that vertical

empowering and vertical transformational leadership was directly related to team innovative behavior as rated by team leaders.

Vertical Leadership as an Antecedent to Shared Leadership. Antonakis and Day (2018) described vertical leadership as an important antecedent of shared leadership in teams.

Not surprisingly, hierarchical or vertical leaders have been found to have a considerable influence on the development and occurrence of shared leadership. For example, top leader support has been found to be related to shared leadership development (Hess, 2015), while trust in the hierarchical leader is directly correlated to the shared leadership formation in groups (George et al., 2002; Olson-Sanders, 2006), as it serves as a facilitating force or smooth social interactions (Dirks & Ferrin, 2002), which in turn directly affect the group's ability to share leadership effectively." (p. 174).

Certain types of leadership styles or behavior appear to promote the development of shared leadership more than others, especially empowering leadership (a leader's encouragement of employees to initiate tasks, set goals, learn new things, assume responsibilities, and coordinate and collaborate with each other). Hoch (2013) found that vertical transformational and empowering leadership significantly predicted shared leadership. In a separate paper, Hoch and Dulebohn (2014) explained that "leaders can empower team members and thus facilitate the development of shared leadership by providing them with autonomy, support, increased responsibility, decision-making capabilities, and access to information" (p. 119). Fausing et al. (2015) confirmed these results. They demonstrated that vertical empowering leadership was positively associated with the development of shared leadership in teams in a sample of 81 Danish knowledge and manufacturing teams.

Summary of Shared and Vertical Leadership in Teams

Both shared and vertical leadership can contribute to positive outcomes and successful performance for teams. Transformational and empowering leadership approaches are especially helpful, while aversive and directive leadership behaviors are not, even if shared (Pearce & Simms, 2002). The right kind of vertical or hierarchical leadership appears to be an important antecedent to shared leadership and its potential benefits to teams. However, the results from some studies are confusing or even contradictory which lead Grille et al. (2015) to conclude that the relationship between vertical and shared leadership is not completely or clearly understood, and that “the influence of vertical on shared leadership might not be as straightforward as previously expected” (p. 333).

Functional Leadership in Teams

Functional leadership is one of the oldest approaches to team effectiveness and is focused on the key leadership behaviors required for satisfying core team needs and getting processes and activities initiated and accomplished that lead to team success (Kozlowski et al., 2016). Functional leadership is not a single theory; rather it is a collection of taxonomies aimed at identifying the team functions that must be accomplished for effective team performance. From the functional leadership perspective, the primary task of the leader is ensuring, or in some cases, doing, whatever is not being sufficiently completed to serve the critical team needs; key functions can be accomplished by any team member rather than by only the appointed team leader. In its simplest configuration, the leadership function is “leader as completer” (Morgeson et al., 2010, p. 8).

Early Functional Taxonomies

After World War II, leadership research turned from investigation of leader traits toward understanding what leaders do. Stemming from the classic research conducted at Ohio State University and the University of Michigan, Bowers and Seashore (1966) summarized a four-factor description of leader functions which included support (or consideration), interaction facilitation, goal emphasis, and work facilitation (or initiating structure).

Support is defined as “behavior that enhances someone else’s feeling of personal worth and importance and shows mutual trust and respect” (Campbell, 2013, p. 404). Interaction facilitation describes actions that support the development of “close, mutually satisfying relationships” and showing “awareness of potential conflict and stressors” (p. 404). Goal emphasis consists of “behavior that stimulates an enthusiasm for meeting the group’s goal or achieving excellent performance” (p. 404). Finally, work facilitation focuses on enabling the scaffold such as planning, scheduling and identifying resources to get the work done.

Kozlowski et al. (2016) credit McGrath (1962) for developing the first typology of critical leadership functions in work conducted for the US Civil Service Commission. Briefly, McGrath’s leadership functions were described in a two-by-two matrix showing the type of activity (monitoring or taking executive action) and its’ orientation (internal or external to the group).

Work by Henry Mintzberg (1973) identified 10 managerial roles and organized them in three general categories: interpersonal roles, informational roles, and decisional roles. The interpersonal category included roles such as a figurehead, a leader, and

liaison, which represent the formal authority assigned to a leader. The informational category included monitor, disseminator, and spokesperson, representing activities that center on acquiring and disseminating information. The final category of decisional roles included entrepreneur, disturbance handler, resource allocator, and negotiator, reflect critical organizational decision-making responsibilities. These general categories combined with the specific managerial roles were not only considered critical for effective leadership, but they also reflected leadership functions prescribed by other theorists (Zacarro, 2001).

A more integrative taxonomy of functional leadership was developed by Fleishmann and his research colleagues (Fleishman et al., 1991). They specified 13 behaviors organized in four dimensions: information search and structuring, information use in problem solving, managing personnel resources, and managing material resources. Table 5 presents the Fleishman et al. (1991) taxonomy.

The commonalities across the various early taxonomies are fairly consistent. All include information coordination, influencing human resources, and decision-making regarding goals, problem solving and resource allocation.

Morgeson, DeRue, and Karam (2010)

In an effort to build a comprehensive taxonomy describing the full range of leadership functions in teams, Morgeson et al. (2010) reviewed 85 articles and book chapters to compile a pool of possible team leadership behaviors. They identified 517 behavioral items relevant to team leadership, coded them to 15 leadership functions and further organized the functions within two team phases of goal-directed activities for teams: the transition phase and action phase (Marks et al., 2001), and are shown in

Table 5*Fleishmann et al. 's Leadership Behavior Dimensions*

Superordinate Dimension	Leader-Behavior Dimension
Information search and structuring	Acquiring information Organizing/evaluating information Feedback and control
Information use in problem solving	Identifying needs and requirement Planning and coordinating Communicating information
Managing personnel resources	Obtaining and allocating personnel resources Developing personnel resources Motivating personnel resources Utilizing and monitoring personnel resources
Managing material resources	Obtaining and allocating material resources Maintaining material resources Utilizing and monitoring material resources

Note. Reprinted from “Leading teams: Past, present, and future perspectives,” by M.L. Shuffler, C.S. Burke, W.S. Kramer, and E. Salas. In Rumsey, M.G.(Ed.), *The Oxford handbook of leadership*. 2013, p. 149. Copyright 2013 by Oxford University Press.

Table 6. Each of these two phases can present a range of opportunities and challenges that demand different functions from the leadership role. The transition phase occurs when the team is preparing to address a set of goals and objectives. The action phase is characterized by the actual work to solve problems and achieve outcomes. Morgeson et al. (2010) provided considerable theoretical support and research evidence in their review to support each one of the 15 leadership functions they identified. This research evidence is not repeated here; however, a brief description of each of their leadership functions is summarized below.

Transition Phase Leadership Functions. The transition phase in a team's cycle of activities consists of seven functions that help the team plan, structure, and evaluate its work relative to achieving its goals: composing the team, defining the mission, establishing expectations and goals, structuring and planning, training and developing the team, sense making for alignment, and providing feedback.

- *Compose the team.* Composing the team is one of the most critical team leadership functions. This requires ensuring individual team members have the capabilities and attributes necessary to effectively perform team tasks and includes attending to the changing demands of the external environment so that the team can remain effective over time, as well as ensuring that team members can contribute to an internal team environment characterized by trust and cooperation.
- *Define the mission.* Defining the mission ensures the team has an aligned purpose and goals that support creation of a tactical plan with concrete steps to achieve its outcomes. A compelling mission ensures that the team has aligned its purpose, goals, and plans with the broader organization's values and strategy.
- *Establish expectations and goals.* Establishing performance expectations and setting clear, challenging goals focuses team member behavior on the team's targets and outcomes, can help create a common identity across the team, and by participating in the goal setting process, fosters commitment to the goals and enhances a sense of cohesion within the team.
- *Structure and plan.* Structuring and planning the team's activities determine how the work of the team will be accomplished, who will do what, and when the work will be done. This results in an integrated work plan that directs team performance, coordinates team efforts, and standardizes team processes.
- *Train and develop the team.* Training and developing the team (or team members individually) is necessary to ensure each individual has the knowledge and skills required to successfully perform their role. Developing the team is also concerned with helping the team acquire good interpersonal and communication processes and practices so that effective teamwork is enabled.
- *Sensemaking.* Various events – both internal and external to the team – occur over the life span of a team's experience. If any event is particularly disruptive to the team, it may require immediate attention. Sense making involves

identifying these events, interpreting them for the team (i.e., making sense out of them), and communicating this interpretation to the team.

- *Provide feedback.* Providing feedback is essential to improve, enhance, or direct and control behavior so the team can adapt as it needs to in order to ensure ongoing success. When team leaders provide meaningful feedback they facilitate certain task and interpersonal processes that enable team to function more effectively.

Action Phase Leadership Functions. The action phase includes eight functions that involve activities that directly contribute to accomplishment of the team's goals: monitoring the team, managing team boundaries, challenging the team, performing team tasks, solving problems, providing resources, encouraging team self-management, and supporting the social climate.

- *Monitor team.* Monitoring the team includes the evaluation of the team's progress towards its desired outcomes. With monitoring, comes the assurance that the resources, tools, and the environment are sufficient and supportive to allow for successful team performance.
- *Manage team boundaries.* Managing team boundaries involves governing relationships between the team and the larger organization by communicating and coordinating with other teams and buffering it from external forces or other internal organizational influences that may have competing priorities. Skilled boundary management requires effective negotiation, influence, and conflict resolution skills.
- *Challenge the team.* Challenging the team involves proposing ideas and processes to identify the best method to accomplish the work. Challenging the team should stimulate creativity, new ideas, and a capacity to think about old problems in new ways.
- *Perform the team tasks.* Performing team tasks involves participating or intervening as an active participant in the team's work. It is simply the ability to get things done on a day-to-day basis.
- *Solve problems.* Solving problems involves problem identification, analysis, solution development, and implementation of solutions for any issue that keeps the team from operating effectively and accomplishing their work successfully.

Table 6*Temporal Cycle for Team Activities and Select Meta-Analytic Evidence*

Transition Phase			Action Phase		
Function	ρ (with Team Performance)	Meta-Analysis	Function	ρ (with Team Performance)	Meta-Analysis
Compose team	.04-.27	Bell (2007)	Monitor team	.25	LePine et al. (2008)
Define mission	.27	LePine et al. (2008)	Manage team boundaries	.47	Hulsheger et al. (2009)
Establish expectations and goals	.32	LePine et al. (2008)	Challenge team		
Structure and plan	.35	LePine et al. (2007)	Perform team task	.30	LePine et al. (2008)
Train and develop team			Solve problems	.24	Klein et al. (2009)
Sense making			Provide resources	.17	LePine et al. (2008)
Provide Feedback			Encourage team self-management	.21 .24 .34	D’Innocenzo et al (2016) Nicolaides et al. (2014) Wang et al. (2014)
			Support social climate	.29	LePine et al. (2008)

Note. Adapted from “Leadership in teams: A functional approach to understanding leadership structures and processes,” by F.P. Morgeson, D.S. DeRue, and E.P., Karam, 2010, *Journal of Management*, 36, p.10, Copyright 2010 by Southern Management Association, and “Embracing complexity: Reviewing the past decade of team effectiveness research” by J.E. Mathieu, P.T. Gallagher, M.A. Domingo, and E.A. Klock, 2019, *Annual Review of Organizational Psychology and Organizational Behavior*, 6, pp. 22-23. Copyright 2019 by Annual Reviews.

ρ = estimated true-score correlation. Empty cells indicate no meta-analytic result for that team process was reported by Mathieu et al.

- *Provide resources.* Providing resources includes obtaining and providing personnel, material, financial, and informational resources for the team. Securing and providing sufficient resources to the team is essential for completing tasks effectively, and also signals to the team that their work is necessary and supported.
- *Encourage team self-management.* Team self-management is encouraging team members to rely on their own resources to perform their own leadership functions.
- *Support the social climate.* The final team leadership function is supporting and promoting a positive, constructive social climate. Facilitating positive working relationships, addressing interpersonal issues, and improving interpersonal relationships among team members are key aspects of this function.

As noted, Morgeson et al. (2010) was thorough in providing both theoretical support and research evidence for each of the 15 leadership functions they identified. The literature they drew from spanned 60 years (roughly 1950-2010). However, additional support for their taxonomy has been published more recently. Mathieu et al. (2019) provided a review of 685 team effectiveness articles published primarily from 2008-2018. One interesting feature of their review is that it included 29 meta-analyses involving team constructs. Collectively, these meta-analyses provided evidence for 30 team structural and compositional variables related to team outcomes, and 38 variables found to mediate the relationships between predictors and team performance or attitudinal outcomes, many of which relate directly to the Morgeson et al. taxonomy. Select meta-analytic results reported by Mathieu et al. are also presented in Table 6.

Bell's (2007) meta-analysis showed a direct positive relationship between team composition variables and team performance including the Big 5 personality dimensions ($\rho = .04-.12$), values (i.e., collectivism) ($\rho = .25$), and general mental ability ($\rho = .27$). LePine et al. (2008) conducted a meta-analysis of 138 studies to specifically test the

Marks et al. (2001) dimensional structure of teamwork processes. Meta-analytic evidence was found for the relationship between three transition phase processes and team performance as shown in Table 6. LePine et al. also analyzed “overall transition processes” when measures in the studies they reviewed included items from multiple facets of the transition phase and found this broader variable (*overall action processes*) also correlated with team outcomes ($\rho = .29$).

Table 6 also shows correlates between Morgeson et al.’s (2010) action phase processes and team performance. LePine et al.’s (2008) meta-analysis included results relevant to four of these: (a) monitor team (labeled *monitoring progress toward goals* by LePine et al.), (b) perform team task (referred to as *team monitoring and backup behavior* by LePine et al.), (c) provide resources (which LePine et al. referred to as *systems monitoring*), and (d) support social climate. Marks et al. (2001) initially conceptualized a third category of team processes labeled interpersonal processes that Morgeson et al. included as part of their action phase. LePine et al. meta-analyzed three narrow interpersonal processes specified by Marks et al. (2001): *conflict management* ($\rho = .26$), *motivating and confidence building* ($\rho = .34$), and *affect management* ($\rho = .30$). The correlation shown in Table 6 for Morgeson et al.’s *support the social climate* ($\rho = .29$) is the broader estimate of this team process from studies that used measures with items from multiple facets of these interpersonal processes in LePine et al.’s meta-analysis. Hulsheger et al. (2009) meta-analyzed results from 91 articles to examine predictors of innovation network. The results for one variable from their study (external communication) is provided as the estimate for Morgeson et al.’s *manage team boundaries* action phase process. Results from Klein et al. (2009) were used to estimate

the relationship between Morgeson et al.'s *solve problems* process and team performance. Finally, results from the three meta-analyses of shared leadership previously discussed are included in Table 6 to show the relationship between Morgeson et al.'s *encourage team self-management* and team performance.

Clearly, there is substantial theoretical and empirical support for Morgeson et al.'s (2010) taxonomy. Based on their review, Morgeson et al. developed an 82-item measure of their 15 transition and action functions. Regrettably, Kozlowski et al. (2016) reported that the “scale developed by Morgeson et al. (2010) is more than a half a decade old, but we found no empirical studies that have used it” (p. 40). A search of the literature published subsequent to Kozlowski et al.'s review produced the same conclusion.

Chapter Summary

Shared leadership represents a departure from most leadership theories since it is explicitly team-centric. That is, shared leadership cannot be divorced from the team context (Kozlowski et al., 2016), and “focuses on leadership is a process that is collectively held by the team in a shared or distributed across its members” (p.23). There is a growing body of research evidence that supports the value of shared leadership to teams, provided that their work is complex and requires interdependent effort. Arguably, most teams or work groups in organizations function with a formal, hierarchical (i.e., vertical) leader. A vertical leader's behavior is a key determinant of team performance and can accelerate team effectiveness and the potential benefits of shared leadership, especially if the leader is transformational and/or empowering in their style and approach. The functional leadership perspective is useful in describing the activities and processes that teams must engage in to be successful. Morgeson et al.'s (2010) taxonomy is one of

the most carefully derived and comprehensive. Despite a fairly persuasive set of empirical results that support its content, neither Morgeson et al. nor other functional leadership taxonomy research has clarified what or to what extent key leadership functions for teams can be shared or distributed.

Chapter 3: Methodology

Research Paradigm

This study makes use of a quantitative research strategy with a positivistic philosophy. The researcher served as an objective observer and was independent of the actual study. The research process was deductive and value-free. A field survey method was deployed to teams of four or more members, including the vertical leader, located in Midwestern organizations. Participants from the team assessed the shared leadership status of the team as a unit and provided a rating of functional leadership behaviors to determine the extent to which they were shared in their teams.

Research Design

The design for this research was a correlational design intended to evaluate the critical team functions that can be or are shared in teams to achieve shared leadership, and to identify which of the team functions are fully or primarily retained by or are the responsibility of the team leader.

Participants and Research Procedures

The study used convenience sampling. Approximately 70 team leaders were invited to participate. Identification of prospective participant team leaders was via the researcher's professional network. Criteria for inclusion included having at least three team members that were also willing to complete the inventories.

Team leaders were initially contacted in the summer of 2020 to solicit their interest in participating in the study. Those interested were invited to complete the inventories online and to provide contact information for at least three of their team members. Team members were then similarly contacted and invited to complete the

inventories online. Several follow-up emails and reminders were sent to both team leaders and team members in order to ensure an adequate sample size. A template for the email to team leaders and an email template to team members from the team leader is included in Appendix A. In total, 135 individuals, including both team leaders and team members, completed the inventories. 28 full team units completed the process, which included participation by 94 team members, in addition to the 28 team leaders, resulting in 122 participants. Additionally, six team leaders completed the inventories and seven of their respective team members participated, and although not full team units, their inclusion increased total participation by 13.

Table 7 presents the demographic and background data for the study participants. The participants are employed in a variety of industries and include for-profit and non-profit organizations based in the Midwest, most (96%) hold a bachelor's or higher degree, and a majority (71%) of both team leaders and team members were female.

Instruments and Measures

The study employed several measures that included (a) participant background information, (b) the Shared Professional Leadership Inventory for Teams (Grille & Kauffeld, 2015), and (c) a Team Leadership Questionnaire measuring the leadership functions proposed by Morgeson et al., (2010).

Table 7*Study Participant/Organization Descriptive Information*

	<i>Participant Category</i>		
	All Participants	Team Leaders	Team Members
Number of Participants	135	34	101
Male	39 (29%)	13 (38%)	26 (26%)
Female	96 (71%)	21 (62%)	75 (74%)
Average Age	45	51	43
Min Age	23	33	23
Max Age	64	64	64
Education			
High School	6 (4%)	1 (3%)	5 (5%)
Undergraduate Degree	58 (43%)	9 (26%)	49(48%)
Advanced Degree	67 (50%)	21 (62%)	46 (46%)
Doctorate	4 (3%)	3 (9%)	1 (1%)
Team Tenure			
Less than 1 Year	4 (12%)		
1-2 Years	4 (12%)		
2-3 Years	6 (18%)		
Greater than 4 Years	20 (58%)		
Organization Size			
Small: \$5M-\$10M	3 (9%)		
Medium: \$10M-\$1B	23 (68%)		
Large: >\$1B	8 (24%)		
Organization Sector			
Natural Resources	1 (3%)		
Construction / Manufacturing	5 (15%)		
Retail / Service	11 (32%)		
Consulting / Education	17 (50%)		
Organization Classification			
For Profit	22 (65%)		
Non-profit	12 (35%)		

Background Information

A brief background and demographic information questionnaire was used to understand individual characteristics, team tenure and organization industry. The background questionnaire also included several items asking participants for their opinions about their team's effectiveness, the degree of complexity in their work, and the degree of interdependence among team members. The complete background information questionnaire is included in Appendix B.

The Shared Professional Leadership Inventory for Teams (SPLIT)

The Shared Professional Leadership Inventory for Teams or SPLIT (Grille & Kauffeld, 2015) was used to measure team leaders' and team members' perceptions of shared leadership in their team. The SPLIT is a 20-item inventory using a 6-point agree-disagree Likert-scale format that assesses four aspects of shared leadership: (a) Task Leadership, (b) Relationship Leadership, (c) Change Leadership Orientation, and (d) Organizational Network Leadership (see Appendix B). The four dimensions were identified from a comprehensive literature review conducted by the authors and are based on sound theoretical and empirical support.

To establish the instrument's psychometric properties, the authors employed two-study confirmatory factor analysis strategy. In Study 1, the 352 non-leader team members (in Germany) completed a 30-item version of the instrument. Item analysis showed that 10 items with low factor loadings could be eliminated, resulting in the final 20-item instrument. Factor analyses of the four proposed scales, as well as a second-order factor (Overall Shared Leadership) indicated a good fit. Internal consistency was high for all four factors and the second-order overall factor ($\alpha > .80$). In Study 2, an independent

sample of 414 member participants completed 20-item version of SPLIT. Confirmatory factor analysis replicated a good model fit for both the 4 first-order factors and the second-order overall model. Internal consistencies were good to excellent ($\alpha = .84-.93$). In Study 2, the authors also established convergent validity for SPLIT by showing significant correlations between its scales with another measure of shared leadership - the Shared Leadership Questionnaire (Hoch et al., 2010). Further, the authors presented criterion validity for SPLIT by showing significant correlations between its scales and measures of team centrality ($r = .19-.27$), autonomy ($r = .28-.42$), and team performance ($r = .50-.57$).

Although the SPLIT instrument has adequate reliability and validity evidence, it appears it has not been used extensively in published research. Grille et al. (2015) used it as the measure of shared leadership in a study of 328 team members nested in 67 work teams. Han et al. (2018) used two SPLIT scales (task-oriented leadership, relation-oriented leadership) in a study of team processes and team performance with a student sample. The SPLIT inventory appeared to suitably measure shared leadership in both studies.

Team Leadership Questionnaire (TLQ)

A Team Leadership Questionnaire adapted from the work of Morgeson et al. (2010) was used to measure the extent to which leadership functions are shared by the team leader with team members. Morgeson et al. identified 82 behavioral items (from an initial pool of 517 items) relevant to team leadership through an extensive literature review and then sorted them into 15 categories that were proposed by Marks et al. (2001) as either the transition phase of team activity (the phase concerned with a focus on the

structures and processes that enable future effectiveness) or the action phase (activities that involve directly accomplishing team goals).

The Team Leadership Questionnaire proposed by Morgeson et al. (2010) included 82 items in 15 scales. Most (i.e., 12 of 15) scales included 5 items. To develop an instrument with uniform scale length, a panel of experts was used to refine the three scales proposed by Morgeson et al. that included more than five items using the Delphi Technique. The final Team Leadership Questionnaire used in this study included 15 scales of five items each and is included in Appendix B.

Reliability and Validity. Although Grille and Kauffeld (2015) reported good reliabilities for their SPLIT measure, their research was conducted on a German sample, and few additional studies using their instrument have been published. Thus, reliabilities were computed for the SPLIT and its subscales for the participants in this study and are shown in Table 8. The results are comparable to the initial reliability reported by Grille and Kauffeld, ranging from .80-.93.

While the content validity for the Team Leadership Questionnaire appears to be solid, there has been no published research available that has used the instrument (Kozlowski et al., 2016), and consequently, no previously established reliability or validity data for it was available. Table 8 also reports the reliability analyses for the Team Leadership Questionnaire used in this study. Reliabilities for the instrument as a whole ($r = .98$) and for each of the 15 scales were very good to excellent ($r = .86-.97$).

To further examine the psychometric properties of the Team Leadership Questionnaire, an exploratory factor analysis was conducted. Two empirical procedures, the Empirical Kaiser Criterion (EKC) and parallel analyses, were employed to determine

the number of factors to extract. These methods suggested the extraction of 14 and 7 factors, respectively. The theoretical structure proposed by Morgeson et al. suggested a 15-factor solution. Both a 14- and 15-factor solution were estimated, and the 14-factor solution was retained as the more interpretable and parsimonious model. Specifically, the ‘Monitors the team’ subscale is not well represented by a single latent factor. The estimated 14-factor solution is depicted in Table 9. Extracted factors were estimated using least-squares estimation and rotated via an oblique geomin rotation.

Table 8

SPLIT and Leadership Functions Scale and Subscale Reliabilities

Scale	Reliability
SPLIT	0.93
SPLIT subscales	
Task leadership	0.80
Relationship leadership	0.86
Change leadership	0.87
Org. network leadership	0.85
Leadership Functions	0.98
Leadership Functions Subscales	
Transition	0.96
Action	0.97
Composes Team	0.95
Defines Mission	0.91
Establishes Goals	0.90
Structures Work	0.88
Trains Team	0.91
Sensemaking	0.94
Provides Feedback	0.87
Monitors Team	0.88
Manages Boundaries	0.88
Challenges Team	0.86
Performs Tasks	0.96
Solves Problems	0.94
Provide Resources	0.90
Encourages Team	0.95
Supports Social Climate	0.94

Note. Org. = Organization.

SPLIT = Shared Professional Leadership Inventory for Teams.

Table 9*14 Correlated Factor Solution for the Team Leadership Functions*

Item	Factor with the largest loading													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
53. Works with team members to help do work	.92													
52. Will “roll up his/her sleeves” and help the team do its work	.91													
51. Will “pitch in” and help the team with its work	.91													
54. Will work along with the team to get its work done	.89													
55. Intervenes to help team members get the work done	.56													
9. Ensures that the team has a clear understanding of its purpose	.83													
8. Develops and articulates a clear team mission	.78													
6. Ensures the team has a clear direction	.75													
7. Emphasizes how important it is to have a collective sense...	.74													
10. Helps provide a clear vision of where the team is going	.70													
11. Defines and emphasizes team expectations	.48													
12. Communicates expectations for high team performance	.38													
27. Assists the team in interpreting things that happen outside...			.87											
30. Helps the team make sense of ambiguous situations			.82											
29. Helps the team interpret internal or external events			.81											
28. Facilitates the team’s understanding of events or situations			.72											
26. Assists the team in interpreting things that happen inside...			.63											
2. Selects team members who have previously worked well...				.86										
5. Selects highly motivated team members				.85										
1. Selects highly competent team members				.84										
3. Selects team members that have previously worked well...				.82										
4. Selects team members so there is the right mix of skills...				.81										
32. Reviews relevant performance results with the team					.90									
35. Provides corrective feedback					.72									
31. Rewards the performance of team members according to...					.72									
37. Monitors team and team member performance					.55									

Table 9*14 Correlated Factor Solution for the Leadership Functions, continued*

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14
33. Communicates business issues, operating results, and...					.54									
39. Requests task-relevant information from team members					.39									
36. Monitors changes in the team's external environmental					.39									
34. Provides positive feedback when the team performs well					.35									
41. Buffers the team from the influence of external forces or...					.28									
69. Encourages the team to be responsible for its own affairs						.75								
68. Encourages the team to solve its own problems						.73								
67. Encourages the team to make its own decisions regarding...						.68								
70. Encourages the team to assess its performance						.66								
66. Encourages the team to be responsible for determining the...						.60								
57. Seeks multiple different perspectives when solving problems							.78							
58. Creates solutions to work-related problems							.76							
59. Participates in problem solving with the team							.59							
56. Implements or helps the team implement solutions to...							.56							
60. Helps the team develop solutions to task and relationship...							.56							
74. Does things to make it pleasant to be a team member								.81						
75. Looks out for the personal well-being of team members								.75						
72. Engages in actions that demonstrate respect and concern...								.66						
73. Goes beyond own interests for the good of the team								.63						
71. Responds promptly to team member needs or concerns								.51						
44. Advocates on behalf of the team to others in the organization									.74					
43. Acts as a representative of the team with other parts of the...									.72					
45. Helps to resolve difficulties between different teams									.54					
38. Keeps informed about what other teams are doing									.51					
42. Helps different teams, communicate with one another									.50					

Table 9*14 Correlated Factor Solution for the Leadership Functions, continued*

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14
24. Helps new team members to further develop their skills										.78				
22. Helps new team members learn how to do the work										.73				
23. Provides team members with task-related instructions										.65				
25. Helps the team learn from past events or experiences										.51				
19. Clarifies task performance strategies											.64			
18. Develops or helps develop standard operating procedures...											.62			
16. Defines and structures own work and the work of the team											.57			
20. Makes sure team members have clear roles											.50			
17. Identifies when key aspects of the work need to be completed											.49			
21. Makes sure the team has the necessary problem solving...											.38			
61. Obtains and allocates resources (materials, equipment,...												.69		
62. Seeks information and resources to facilitate the team's...												.62		
64. Makes sure that the equipment and supplies the team needs...												.61		
63. Sees to it that the team gets what is needed from other teams												.51		
65. Helps the team find and obtain "expert" resources												.41		
14. Sets or helps set challenging and realistic goals													.61	
15. Reviews team goals for realism, challenge, and business...													.57	
13. Maintains clear standards of performance													.48	
40. Notices flaws in task procedures or team outputs													.25	
49. Suggests new ways of looking at how to complete work														.48
48. Challenges the status quo														.48
50. Contributes ideas to improve how the team performs its work														.44
47. Emphasizes the importance and value of questioning team...														.34
46. Reconsiders key assumptions in order to determine the...														.28

Note. Only the factor with the highest factor loading for each item is shown. Some items are abbreviated for space considerations, full item language for those that are abbreviated can be found in Appendix B.

Data Analysis

Descriptive statistics were used to identify the degree to which team members perceived each of the Morgeson et al. team functions were shared in their teams. The main analysis involved correlating the results from the SPLIT and the Team Leadership Questionnaire to determine the degree to which Morgeson et al.'s team leadership functions were related to shared leadership. Finally, multiple regression analysis was used to determine the relative contribution of known influences on shared leadership (e.g., task interdependence, task complexity, team member satisfaction, and team member ratings of leader effectiveness), and two summed variables representing (a) all team *transition* function ratings and (b) all team *action* function ratings in predicting shared leadership.

Chapter Summary

This chapter presented the approach for the correlational design that was leveraged to determine which critical leadership functions can or cannot be shared in a shared leadership context. Participation of team leaders and team members resulted in a final sample of 135 usable inventories. The SPLIT inventory reliability was revalidated in this research with internal consistency in the very good to excellent range. Similarly, the Team Leadership Questionnaire used was also analyzed and showed reliabilities also in the very good to excellent range. Finally, an independent factor analysis was conducted for the Team Leadership Questionnaire proved that the majority of the factors (14 of 15) presented are indeed representative of the variables of the suggested factor.

Chapter 4: Results

The goal of this study is to better understand how functional leadership responsibilities can be shared in teams. Morgeson et al. (2010) identified 15 team leadership functions that could be measured with the Team Leadership Questionnaire (TLQ). Grille and Kauffeld's (2015) SPLIT inventory was used to measure shared leadership in this study. This chapter presents the analyses of the results from these measures, including the predictors of shared leadership.

Shared Leadership

The scales for the SPLIT inventory are anchored by response options between (1) does not describe or apply to our team, to (6) fully describes our team. Table 10 presents the means and standard deviations for the SPLIT inventory and its subscales. As shown in Table 10, the overall mean on the SPLIT inventory is 4.71, indicating the SPLIT survey described their team "adequately" (rating of 4) to "well" (rating of 5). Organization Network leadership had the lowest score (mean score of 4.56) while change leadership had the highest score (mean score of 4.93).

In addition, Table 10 presents the intercorrelations between SPLIT and its subscales. The results indicate that shared leadership was not disproportionately skewed by individual components of shared leadership represented in the SPLIT inventory. The subscales measure separate aspects of shared leadership and are correlated with each other to a lesser degree than with the overall SPLIT score.

Table 10*Descriptive Statistics and Intercorrelations of SPLIT for All Participants (N=135)*

	Mean	SD	SPLIT	Task	Relationship	Change	Org Network
SPLIT	4.71	.66	1.00				
Task	4.62	.73	.84	1.00			
Relationship	4.72	.82	.84	.57	1.00		
Change	4.93	.71	.87	.67	.73	1.00	
Org Network	4.56	.91	.81	.59	.51	.55	1.00

Functional Leadership

Table 11 presents the descriptive statistics for the Team Leadership Questionnaire. The response alternatives for the TLQ ranged between (1) team leader is exclusively responsible, to (6) most or all team members are responsible. As Table 12 shows the mean score for the overall TLQ measure was 3.60. Leadership function scale means as measured by the TLQ indicate leadership functions are the responsibility of a few team members (score of 3) to several team members (score of 4).

Table 11*Descriptive Statistics of TLQ Inventory (N=135)*

Variable	Mean	SD	Median
TLQ (Total Score)	3.60	0.95	3.47
Transition Functions	3.32	0.97	3.20
Composes Team	3.17	1.33	3.00
Defines Mission	3.20	1.36	2.80
Establishes Goals	3.14	1.31	2.80
Structures Work	3.62	1.17	3.40
Trains Team	3.89	1.20	3.80
Sensemaking	3.32	1.36	3.00
Provides Feedback	2.90	1.22	2.80
Action Functions	3.85	1.03	3.88
Monitors Team	3.33	1.26	3.20
Manages Boundaries	3.13	1.20	3.00
Challenges Team	3.82	1.19	3.80
Performs Tasks	4.92	1.31	5.60
Solves Problems	4.41	1.29	4.40
Provides Resources	3.13	1.21	2.80
Encourages Team	3.39	1.45	3.00
Supports Social Climate	4.63	1.42	5.20

Note. TLQ= Team leadership questionnaire

Figure 1 includes illustrations about the variation in responses to the leadership function subscales. The left-hand graph depicts variability of leadership function responses using a box and whisker plot (i.e., depicting non-parametric indices) and the right-hand graph provides a visual display of means and confidence intervals. The median comparison on the left side of the figure illustrates non-uniformity of subject responses. The longer whiskers translate to a flatter distribution indicating a large spread in responses. The extent of sharing for each type of leader function may varies greatly across teams. In other words, the mean may not always be representative of an individual team.

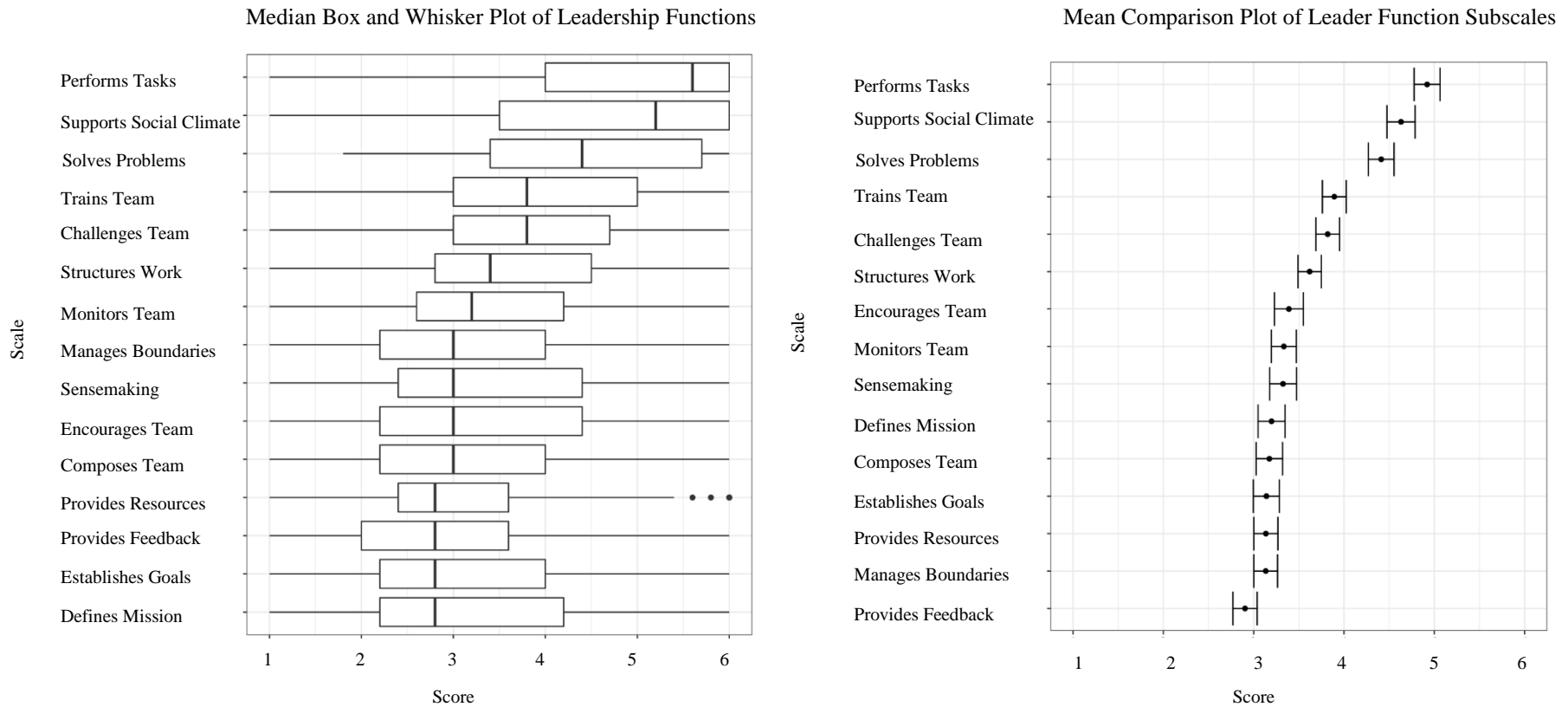
The right-hand graph in Figure 1 depicts mean differences and confidence intervals of the leadership functions from the TLQ. For example, the lowest mean score is for the leadership function of Provides Feedback ($M = 2.90$), while the leadership function with the highest score is Performs Tasks ($M = 4.92$). Visual inspection of Figure 1 shows that the 80% confidence intervals for these two scales do not overlap and are statistically significantly different.

It is worth noting that the right-hand side of Figure 1 shows that four of the five highest rated leadership functions (Performs Tasks, Supports Social Climate, Solves Problems, and Challenges Team) are considered to belong to the *Action* cycle. In contrast, five of the seven lowest rated leadership functions (Sensemaking, Defines Mission, Composes Team, Establishes Goals, and Provides Feedback) are categorized by Morgeson et al. as belonging to the *Transition* cycle of team activities; and do not overlap with (i.e., are significantly different from) the high-rated *Action* phase items. Although some Transition and Action function mean scores do overlap, it appears that a number of Transition functions are shared less fully than Action functions in this study.

Table 12 presents the intercorrelations among the TLQ leadership functions. Correlations range from .18 to .77 with the median correlation of .52. No correlations are negative, suggesting a relatively strong positive pattern across each of the 15 leadership functions. In other words, the more a team shares in a particular leader function; they are more likely to also share other functions across the team. As a corollary, teams that do not share in one function tend also to not share in the other functions. This suggests that teams may possess a general predisposition for sharing team leadership functions.

Figure 1

Distributions for the Functional Leadership Responses



Note. The left-hand graph compares the median values for the leader function subscales. Vertical lines in the box and whisker plot depict the median, the boxes denote the upper and lower quartiles, and the horizontal lines represent the interquartile ranges. The right-hand graph compares the means, depicted as the enclosed circle, of the leadership function subscales. Error bars represent an 80% confidence interval. Non-overlapping intervals closely approximate a statistically significant difference at the 5% significance threshold.

Table 12*Intercorrelations of TLQ Variables for All Participants (N=135)*

Leadership Functions	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Composes Team	1.00														
(2) Defines Mission	.46	1.00													
(3) Establishes Goals	.49	.71	1.00												
(4) Structures Work	.31	.42	.57	1.00											
(5) Trains Team	.26	.40	.54	.70	1.00										
(6) Sensemaking	.28	.39	.50	.62	.59	1.00									
(7) Provides Feedback	.44	.49	.64	.56	.57	.58	1.00								
(8) Monitors Team	.38	.45	.64	.70	.73	.66	.76	1.00							
(9) Manages Boundaries	.34	.39	.52	.67	.60	.61	.61	.77	1.00						
(10) Challenges Team	.29	.36	.48	.65	.61	.62	.54	.67	.65	1.00					
(11) Performs Tasks	.18	.25	.31	.57	.48	.47	.43	.56	.45	.67	1.00				
(12) Solves Problems	.24	.37	.48	.57	.48	.56	.45	.62	.53	.72	.70	1.00			
(13) Provides Resources	.44	.31	.45	.58	.53	.51	.54	.66	.64	.52	.42	.47	1.00		
(14) Encourages Team	.39	.43	.50	.51	.53	.47	.55	.64	.59	.48	.39	.46	.68	1.00	
(15) Supports Social Climate	.21	.33	.44	.57	.50	.43	.45	.55	.49	.69	.68	.70	.46	.53	1.00

Note. TLQ = Team leadership questionnaire

The Relationship Between Shared Leadership and Leadership Functions

The leadership functions represented by the TLQ results are consistently correlated with SPLIT in the .28-.39 range, as depicted in Table 14. The correspondence between shared leadership and leadership functions appears to be similar across the different team function scales. No one function is necessarily more substantively related to shared leadership, meaning that leadership functions equally contribute to shared leadership. Moreover, none of the 95% confidence intervals overlap with zero, indicating all leadership functions are significantly (positively) correlated with shared leadership in this sample.

Table 13

Intercorrelations between Leadership Functions and SPLIT (N=135)

Leadership functions	<i>r</i>	95% CI	
		LL	UL
Composes team	.34	.19	.49
Defines mission	.32	.16	.47
Establishes goals	.35	.19	.49
Structures work	.38	.23	.52
Trains team	.34	.34	.48
Sensemaking	.35	.19	.49
Provides feedback	.36	.20	.50
Monitors team	.37	.22	.51
Manages boundaries	.36	.20	.50
Challenges team	.38	.23	.52
Performs tasks	.34	.18	.48
Solves problems	.39	.24	.53
Provides resources	.28	.11	.43
Encourages team	.32	.16	.46
Supports social climate	.35	.19	.49

Note. CI = confidence interval; LL= lower limit, UL = upper limit

Predictors of Shared Leadership

In order to assess the predictors of shared leadership, a multiple regression analysis was used. Variables of interest were identified from previous research. For example, team performance has been shown to be significantly related to shared leadership (see Table 1). Task interdependence has been shown to be an important influence on shared leadership (Burke et al., 2004; Nicolades et al., 2014); as has task complexity (D’Innocenzo et al., 2016; Muller et al., 2018). Wang et al., (2014) showed that shared leadership was strongly related to attitudinal outcomes (i.e., satisfaction). The sample size in this study does not provide sufficient statistical power to test each of the 15 team functions as individual predictors. However, similar to the model developed by LePine et al. (2008), broader transition and action process variables were computed and used as predictors in the regression analysis. Table 14 represents the intercorrelations of independent variables used as predictors of shared leadership as measured by SPLIT.

Table 14

Intercorrelation between Variables Used in Multiple Regression (N=135)

	SPLIT	Transition	Action	Interdep	Complex	Perf	Sat
SPLIT	1.00						
Transition	.45	1.00					
Action	.44	.79	1.00				
Interdependence	.21	.09	.05	1.00			
Complexity	.10	.10	.12	.29	1.00		
Performance	.50	.32	.44	.12	.16	1.00	
Satisfaction	.38	.25	.34	.08	.12	.27	1.00

The intercorrelations in Table 14 suggest that the transition processes and the action processes are similarly correlated with shared leadership in the .44-.45 range.

The .79 correlation between the transition phase and the action phase translates to a high

level of co-association such that when there is a high degree of “sharedness” in leadership functions during the transition phase there will likely be a similar level of “sharedness” in leadership functions in the action phase. Interdependence, complexity, performance, and satisfaction had small to large correlations with SPLIT. These team characteristics are associated with both the leadership functions and shared leadership, so they were entered in the regression to control for their effects. Table 15 presents the results of the regression analysis.

Table 15

Standardized Regression of Team Characteristics on SPLIT

	<i>SPLIT</i>	
	β	<i>SE</i>
Transition	.31***	.11
Action	.05	.12
Interdependence	.14*	.07
Complexity	.05	.07
Performance	.35***	.08
Satisfaction	.22***	.07
Observations	134	
R^2	.40	
Adjusted R^2	.37	
Residual Std. Error	.78 ($df = 128$)	
<i>F</i> Statistic	14.36*** ($df = 6; 128$)	

Note. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Total observations = 134 as one participant included missing data and was removed from this analysis.

SPLIT = Shared professional leadership inventory for teams

The reported values are standardized regression coefficients. These β weights (i.e., standardized regression coefficients) are interpreted as follows. The effect of transition functions on shared leadership ($\beta = .31$) means that, holding all other predictors/regressors constant, a one standard deviation increase in shared transition functions corresponds to an increase in shared leadership by .31 standard deviation units. The collective effect of the six predictors (i.e., R^2) accounts for 40.2% of the variance in

shared leadership. The adjusted R^2 value indicates 37.4% of the variation in shared leadership is accounted for in the model. Transition, Performance and Satisfaction have significant effects in the model whereas the effects of interdependence and complexity did not reach significance. Despite transition and action having comparable correlations with shared leadership, it appears that after accounting for transition functions, the action functions have little to no residual impact on shared leadership. However, it is important to note that the exceptionally large correlation between transition and action functions makes it difficult to precisely estimate beta weights. In what is sometimes known as ‘bouncing betas,’ the beta-weights are likely to differ in another sample due to this multicollinearity issue.

Chapter Summary

This study was designed to identify the extent to which leadership functions in teams can be shared, and the contribution they make to the outcome of shared leadership. Although analyses suggest that all leadership functions can be shared to a certain extent, some leadership functions are shared to a greater extent in the sample. Team performance, satisfaction, and participation in the transition activities of team leadership functions appear to be the most influential on the outcome of shared leadership.

Chapter 5: Discussion

Introduction

The VUCA environment and the fourth industrial revolution were the catalyst for my initial interest in shared leadership research. However, with a sad and ironic twist, this research was initiated, conducted, and completed in 2020, the year of the COVID-19 global pandemic. A pandemic, by its very nature, is characterized as a VUCA event and has created an entirely new lens that highlights the importance of successful shared leadership. In the case of the pandemic, a shared leadership approach may help team leaders and members who must work on new challenges, likely virtually, perform more effectively. Successful shared leadership, in the appropriate context, is the keystone for breakthrough results as it provides greater influence, authority, discretion, and responsibility to team members; puts those most qualified on the front line of innovation, problem solving and leadership.

This research was proposed to understand two questions relative to shared leadership: (1) What do vertical team leaders do to promote shared leadership in their teams? and (2) What team leadership roles and responsibilities can or cannot be shared?

The central characteristics of shared leadership include: (a) lateral influence among peers, (b) an emergent team phenomenon, and (c) leadership roles and influence dispersed across team members. These characteristics underscore the fundamental idea that even though a team most likely has a formal, vertical leader, the team is open to multiple members fulfilling essential team leadership roles and responsibilities. The team members with the best line of sight and most appropriate skill for any task or emerging

challenge are granted the informal, or formal, authority to influence direction and problem solving while promoting team effectiveness and team health.

Earlier research emphasized certain team conditions are better suited to a model of shared leadership. Work that is complex and interdependent may be optimized with a shared leadership model. The benefits of this type of model may be moderated by the length of time the team has been working together and the overall perceived effectiveness and satisfaction with the leader.

Results of the Research

This study involved 135 team leaders and team members who provided data generating four core insights regarding shared leadership:

- All leadership functions can be shared to a certain extent, but the leadership function of providing feedback was notably less shared than other leader functions.
- Functional leadership can be a predictor of shared leadership and the TLQ is a sound instrument for understanding it.
- Shared leadership in the transition phase strongly influences shared leadership.
- There is a strong correlation with perceived leader effectiveness and leader satisfaction with shared leadership.

All Leadership Functions can be Shared

Shared Leadership was Observed in the Sample. The mean score for overall shared leadership from the SPLIT inventory was 4.71. The score indicates that overall, leadership was shared, and it remained notably consistent across the SPLIT subscales of:

task leadership, relationship leadership, change leadership and organization network leadership.

Leadership Functions were Shared. Of the 15 team leadership functions identified by Morgeson et al. (2010), the results from the TLQ supported the conclusion that all leadership functions can indeed be shared. The overall mean for the TLQ of 3.60 translated to the majority of the responses indicating that most or all leadership aspects were shared, to some extent within the team. This outcome is not surprising, as there has been a long history of research and practice aimed at increasing involvement, participation and empowerment in teams. Antonakis and Day (2018) provide a good account of this history beginning with Follet's *law of the situation*, through the advent of the human relations perspective (1930s), participative decision-making (1970s), self-managing teams (1980s), and empowerment in the 1980s-1990s (see also Burke et al., 2006; Kozlowski et al., 2016; Fausing et al., 2013). This also reinforces the concept of "team leadership as a process, not a person" (Morgeson et al., 2010, p. 287). However, this does stand in contrast to some scholars who argue that there are some things that cannot be shared and remain the sole responsibility of the leader (Locke, 2003).

Sharedness of Leadership Functions Varies. The data in this study identified the most shared leadership functions. Those with mean scores above 4.40 included: Performs Tasks, Supports Social Climate, and Solves Problems. Each one of these items are categorized in the action phase of Morgeson's et al. (2010) taxonomy and suggests that the tactical elements of team functioning are more easily shared by team members.

The lowest rated leadership functions included: Sensemaking ($M = 3.32$), Defines Mission ($M = 3.20$), Composes Team ($M = 3.17$), Establishes Goals ($M = 3.14$), Provides

Resources ($M = 3.13$), Manages Boundaries ($M = 3.13$), and Provides Feedback ($M = 2.90$). Of these 7 leadership functions, only the functions of Provides Resources and Manages Boundaries are classified in the action phase of the taxonomy, whereas the remainder are defined within the transition phase. This suggests that the Morgeson et al. (2010) transition functions were shared, but not as consistently or as completely as the action functions.

The leadership function related to Providing Feedback had the lowest mean score and is statistically significantly different from the most shared leadership functions. This suggests that most participants' ratings were between a (2) Team Leader is Mostly Responsible and a (3) A Few Team Members are Responsible. The Provides Feedback items in the TLQ included: (1) Rewards the performance of team members according to performance standards, (2) Reviews relevant performance results with the team, (3) Communicates business issues, operating results, and team performance results, (4) Provides positive feedback when the team performs well, (5) Provides corrective feedback.

The individual mean for each of the Provides Feedback items was 2.70, with the exception of statement 4, which had a mean of 3.70. It can be assumed that providing rewards and reviewing and communicating operating results, suggested in items 1, 2 and 3, is viewed by team members as more of the provenance of the leader due to the access to specific information and/or formal authority required to provide rewards. It is encouraging, and not surprising, that in a shared leadership context, the positive feedback and reinforcement element was commonly shared, as represented in item 4. However,

item 5, regarding corrective or developmental feedback, remained the domain of the leader or only a few of the individuals sharing leadership.

Other research has found that feedback was a significant determinant of shared leadership (Hans & Gupta, 2018). Further, when team members receive timely feedback they are motivated to “pursue their work by bridging the gaps” (Hans & Gupta, 2018, p. 740). It is important that the right level of feedback be achieved as teams learn best while doing (Kozlowski & Ilgen, 2007). However, for feedback to be effective, the internal team environment must be psychologically risk free (Hans & Gupta, 2018).

The lower scores relative to corrective feedback are statistically different from the majority of the leadership functions and raises the question of why corrective feedback is an outlier. Potential reasons include the possibility that corrective feedback had been formally or informally viewed as the expectation of the leader, the team environment was not psychologically safe, or the skills to effectively and appropriately communicate feedback were not well developed or deployed by team members. Regardless, the notion that feedback is critical to shared leadership efficacy remains and would be interesting to evaluate further in future research.

Functional Leadership can be a Predictor of Shared Leadership

Functional Leadership is a New and Relevant Variable. This research incorporated the leadership functions in the regression analysis and demonstrated functional leadership predicts shared leadership. Past research has focused on predictors of shared leadership based on characteristics such as team tenure, task complexity, task interdependence, and team and leader cohesiveness, rather than comprehensive measures of functional leadership. There has been very little research that has used a thorough and

comprehensive measure of validated team functions such as Morgeson et al. (2010) as a predictor of shared leadership. Although this study focused on sharing of the leadership functions, future considerations could emphasize which functions are most essential, or how important is effective functional leadership sharing in order to predict shared leadership.

Strong Co-Association of Transition Phase and Action Phase of Leadership Functions. In addition to the regression analysis supporting the notion that functional leadership can be a predictor of shared leadership, the co-association of the transition phase and action phase of the functional leadership taxonomy demonstrates sharedness is fairly even across the phases. When shared leadership is high in one phase it is high in the other, and vice versa, reinforcing the idea in another way, that functional leadership participation is valuable in supporting shared leadership goals.

The TLQ is a Valid Instrument for Understanding Functional Leadership in Teams. It is important to note that in this study, Morgeson's et al. (2010) leadership functions were confirmed as a relevant set of activities for teams to undertake and leaders to share. Little or no research has been published about the usefulness of Morgeson et al.'s taxonomy, despite the comprehensive and thoughtful review the authors undertook to develop it. Moreover, this study appears to be among the first that has attempted to evaluate all of the team functions Morgeson et al. (2010) proposed, despite the large number of studies and meta-analyses that have focused on subsets of various team leadership functions (see Table 6).

The TLQ being a useful approach is significant, but the fact that the researcher was approached regularly by team leader research participants inquiring about adding

their team leader and peer team to the study, was unexpected. The general sentiment from those inquiring was the belief that if their team leader participated in the study it would elevate the concept of shared leadership and provide an objective assessment for their team leader and the peer team they were a team member of. This raises the possibility that administering the TLQ measure itself was a useful intervention in stimulating the dialogue about functional leadership and the roles of shared leadership within the teams of the respective participants.

Shared Leadership in the Transition Phase Strongly Influences Shared Leadership

The TLQ's phases of transition and action provide scaffolding to evaluate other elements influencing the effectiveness of shared leadership. The TLQ was chosen as it has been described as "a way for researchers to assess the efficacy and relative importance of the functions across the transition and action phases of team activity" (Kozlowski et al., 2016). The multiple regression analysis included the leadership phases of transition and action, task interdependence and complexity, and leader attributes of effectiveness and satisfaction as reported by team members as potential predictors of shared leadership. The transition phase, satisfaction with the leader, and leader performance were the significant variables influencing the outcome of shared leadership.

The lower mean score for the (overall) transition phase activities ($M = 3.32$) relative to the mean score for the (overall) action phase activities ($M = 3.85$) suggested that fewer team members shared the transition phase functions; but the regression weight for this variable is large and significant ($\beta = .31, p < .01$) Based on this research, it may be even more critical for team members to be engaged in the transition phase activities if the objective is to achieve a high level of shared leadership.

The transition function represents imagining and planning for the future. The team members provided with the opportunity to put their own “fingerprints” on the plans for the future may plant the sense of ownership and accountability needed to contribute more fully to the action phase team activities. Including team members in the transition phase may not only create stewardship in execution, but also bring the requisite expertise needed to the planning. Regardless, being involved in both phases has been determined by previous research to be important to shared leadership (D’Innocenzo et al., 2014) and is supported by the results from this study.

Satisfaction with the Leader was Correlated with Shared Leadership

A strong predictor of effective shared leadership is the role of the vertical leader and the environment that he or she creates and supports (Pearce & Sims, 2002). The multiple regression analysis in this study highlighted the importance of perceived leader effectiveness and satisfaction. Further, team members perceptions of their team leader’s performance and their overall satisfaction with the team leader, yielded correlations with shared leadership of .56 and .57, respectively. This indicated that perceptions of team leader effectiveness had a positive influence on shared leadership. This finding aligns to the idea that team members with a positive experience and a “good relationship with their leaders tend to share climate perceptions with their boss and co-workers,” and these attitudinal features would support shared leadership empowerment ideas (Kozlowski & Ilgen, 2007, p. 59).

There was a strong correlation with both perceived leader effectiveness and satisfaction with shared leadership in this research. Shared leadership has been shown to be related to “team attitudinal outcomes and behavioral processes and emergent states,”

which can be influenced with the context and environment the vertical leader creates (Wang et al., 2014). The style of the vertical leader remains influential and both empowering and transformational leadership approaches have been found to be positively correlated antecedents (Fausing et al., 2015; Grille et al., 2015; Hoch, 2013).

Methodological Considerations

This study was methodologically noteworthy for several reasons. First, the SPLIT instrument has not been widely used in the past but offers an interesting alternative to other assessments of shared leadership. Other measures such as an aggregation approach affiliated with specific forms of leadership (e.g., transformational leadership) and social network approaches (Zhu et al., 2016) have been used. The SPLIT provides a 20-item assessment of overall shared leadership. The findings from this study contribute to establishing the SPLIT as a viable measure of shared leadership, and its elegant simplicity may increase practitioner application.

Second, the TLQ, as used in this research (i.e., to determine the extent of sharedness for each function), had almost all (14 of 15) factors confirmed. The exploratory factor analysis presented in Table 9 showed that the Morgeson et al. (2010) scales were reliable, and largely intact as those that Morgeson and his colleagues proposed. Only the items measuring the performance monitoring activity were spread across other scales. This is a significant contribution, since the TLQ has not been used or analyzed in previously published research. The results from this study support use of the TLQ as a sound tool for future studies.

Limitations

This study provides key insights and contributions, but there remains several limitations. The current study was conducted in primarily Midwestern organizations and included (only) 135 participants. The sample size, the participant selection from largely the researcher's network and the geographic limitations, may have influenced the research outcomes. A larger sample and a broader selection of participants across a larger geography and a wider set of industries would strengthen conclusions or suggest new directions for further research.

A new limitation, not likely mentioned in this past century of research, is the fact that the study was conducted at the height of a global pandemic. As such, the conditions and channels for teamwork were significantly changed. Be it the remote working aspect that many, if not all participants encountered, and the emerging set of new business challenges or opportunities, all may have had a unique influence on the degree of shared leadership participation experienced.

Recommendations for Future Research

Shared Leadership and Teams

All of Morgeson's et al. (2010) functions can be shared according to this research, but not all teams share leadership equally. A richer evaluation to parse out the degree each function is deemed appropriate for sharing would yield new insight for managing expectations when moving towards a model of shared leadership. Taken further, it might seem that teams would tend to develop more cohesiveness the longer the time that they work together. One meta-analysis (Nicolaidis et al., 2014) found team tenure was a significant moderator of team performance in their analysis of 36 teams, but that the

relationship became weaker as team tenure increased. The authors speculated that this supported the idea that the positive benefits of shared leadership may be difficult to sustain over time. Notwithstanding some of the difficulties of conducting such research, longitudinal or cross-sectional studies of teams that could show which leadership functions increase or decrease over time would serve to further clarify what and how leadership functions can be shared over the lifetime of a team. Further, such research could help prepare shared leadership teams for changes in leadership and team membership over time.

Analyzing type of team and the relationship with shared leadership was outside of the scope of this study, however, the box and whisker plot of median leadership functions in Figure 1, highlighted the breadth of responses to the leadership functions. One potential explanation of this variation is the suggestion that type of team could be an important factor in how much leadership is shared.

Team “type” has been a popular variable studied in previous team and shared leadership research, but results are mixed. In two meta-analyses, team type was investigated in a similar way. Wang et al. (2014) coded teams in their study as either work teams ($k = 31$) or student teams ($k = 11$). They found a correlation between team type and shared leadership for both work teams ($\rho = .35$) and student teams ($\rho = .28$), but concluded that team type did not influence shared leadership because the confidence intervals for the correlations overlapped. D’Innocenzo et al., (2016) also analyzed the influence of sample (i.e. team) type by comparing teams in organizational work settings to those in classroom/lab settings and found that results were significantly higher for work teams. Finally, Nicolaides et al. (2014) classified teams in their analysis as a)

decision-making teams, b) action teams, or c) project teams. They reported that shared leadership was beneficial to all three team types, although not significantly different from each other. Perhaps further research on shared leadership in work vs. student teams is inconsequential, however, the *organizational level* of a team may be of interest. For example, teams at the top versus teams in the middle, versus teams on the front lines of organizations may show different patterns of sharing the functions they perform. Leaders of teams at the lowest levels in organizations may find that they have to take more responsibility for doing things like setting goals and direction or providing training and feedback compared to their executive counterparts who presumably have skilled and experienced leaders as their team members.

Functional Leadership and the TLQ

Since this research was one of the few or only investigation to employ the TLQ as a measure, there are a number of recommendations for its future use that should be considered. The factor structure of the TLQ was largely confirmed. However, this was an exploratory analysis, and further research to confirm the structure with larger and more diverse samples is warranted. Second, while the items measuring the 15 functional leadership team activities provided by Morgeson et al. (2010) appear to work, the authors were silent regarding the nature of the response options that could be used. Morgeson et al. were interested in speculating about various sources of “leadership” in and for teams, including leadership that could be exercised by team leaders and members, as well as coaches, champions, and executive coordinators among others. It seems logical therefore, that the item stems that were developed by Morgeson et al. could be used to gain a measure of “how much” these were shared in the team. The response options could,

however, be redefined or re-configured to measure importance, effectiveness, performance, satisfaction, or other variables. That is, although the factors were confirmed as legitimate measures of how much they were shared in a team, this does not guarantee that, for example, asking how important each one is would produce similar results. Finally, the scale proposed to monitor the external and internal team environment may need further research, assuming that as Morgeson et al. proposed based on their review of the literature, scholars agree this is a crucial activity that is distinct from other team leadership actions.

Recommendations for Practice

The results from this study support several recommendations for team leaders, team members, and organizations that aim to enhance shared leadership in teams.

Enhance Team Conditions to Encourage Feedback

This research suggested all leadership functions can be shared, but the lower scores regarding provision of corrective or development feedback is intriguing. Knowing that corrective or constructive feedback is useful in strengthening shared leadership, building the skills that make it effective is important. To increase frequency as well as improve confidence and quality of peer-to-peer corrective or development feedback, the team environment is crucial. Creating a team environment with psychological safety will open opportunities for trust across peers as well as with the team leader. Trust develops over time, but the foundation can be established with intentional team building and team interventions. The purpose of these interventions is to create connection, understanding, and esprit de corps. The interventions can include fundamentals such as appreciating individual work styles to building team rules of engagement to strategic planning, with

the overarching goal of psychological safety and engagement for the shared leadership team.

Even with a team environment characterized by psychological safety, there are specific skills related to addressing difficult issues, such as providing effective corrective feedback, which can be developed within the team. By providing access to skills training focused on coaching and feedback, team members and leaders could expand personal capabilities in the functional leadership areas consequential for shared leadership.

Leverage TLQ and SPLIT as Intervention Tools for Functional Leadership

Functional leadership can be a predictor of shared leadership and developing common meaning of shared leadership elements is advantageous. The TLQ and the SPLIT are provocative dialogue tools that could be used as an intervention to foster shared leadership. The simplicity of this recommendation emerged from the number of study participants that reached out to the researcher after participating in the online survey. Regardless of being a team leader or team member, the researcher was contacted by several research participants asking for a copy of the survey tools and inquiring if the researcher could enroll others in the study. The reason for the request was that the tools leveraged in the data collection process provided an interesting discussion tool about elements and expectations of trying to further shared leadership within their own work teams.

The SPLIT tool is a lesser-known measure of shared leadership, but it is powerful and quickly understood. The TLQ has been validated in this study and is useful in

guiding discussions to the extent certain leadership functions should or can be shared within the specific context of their team and organization.

Engage Team Member Participation in the Transition Phase

This research suggests the transition phase of the leadership functions makes a larger contribution to SPLIT, and therefore, shared leadership as reported by team members and leaders is also influenced. It is necessary to engage team members early in the leadership process, not only to benefit from their specific expertise in the transition phase but also to manage expectations of their involvement in leadership and encourage their participation and accountability with goals from development to execution. The engagement by the team leadership in the transition phase will influence shared leadership. If the conditions for psychology safety are robust, and there are opportunities for open dialogue regarding shared leadership expectations, potentially using the SPLIT and/or TLQ as discussion scaffolding, co-leadership can be encouraged early on.

Participation is the key to commitment and involving team member's participation in leadership responsibilities traditionally reserved for the team leader will signal leadership aspirations. It will also be meaningful to validate team member participation when they assume leadership functions. With intentionality, involving those that share in leadership in the transition phase will encourage not only greater ownership and better accountability in the action phase but a greater level of overall shared leadership.

Establish Team Leader Connection to Team Members and Team Member Perceptions

The team leader casts a long shadow, and that shadow can impact shared leadership. It is important that the team leader stays connected and aware of the team's beliefs and attitudes as both perceptions of team leader effectiveness and the overall satisfaction with the team leader are relevant to shared leadership. For team leaders, this can translate to regular one-on-ones or team meetings to understand team member experiences and perspectives. Team leader perceptions can be influenced by information sharing which would also suggest frequent communication and connection points regarding obstacles, opportunities, and successes of the team. It is recommended that the team leader, regardless of method, remain vigilant about being connected with team members.

Conclusion

What has been emerging slowly over the last six decades and now is emerging quite quickly with the onset of a VUCA event in the COVID pandemic is that shared leadership can be the pathway to innovative solutions, creative problem solving, and expanded capacity. Based on this research, all leadership functions can be shared with team members. The role of the vertical leader remains important in encouraging the proper environment and setting expectations for involvement in leadership functions. Seizing the opportunity to encourage participation in the strategic planning (transition phase) will encourage accountability in execution (action phase).

Shared leadership is likely to be a powerful tool in adapting to dynamic and changing situations. The vertical leader, despite sharing leadership functions, has a critical role in supporting the environment that makes that possible. Moreover, as the

world wrestles with the dire reality of a global pandemic, the hope that those with the best line of sight to the challenge before us are given the support to lead, innovate and drive new solutions, remains. In short, shared leadership matters.

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Appendix A

(Email to TEAM LEADERS prior to survey start)

Role of Vertical Leadership in a Shared Leadership Context Study

Dear _____,

As a colleague, I am inviting your participation in my doctoral dissertation research regarding shared leadership and the roles of leadership that can or cannot be fully shared.

What Participation Involves:

If you agree to participate, you will be invited to answer online survey questions focused on elements of shared leadership and the degree to which certain leadership functions can be shared. The survey should only take **15-25 minutes to complete**.

In addition, it is important to have participation of at least three direct reports. Before I can include any of your direct reports in the study, please seek their permission to participate in the research. If you do have at least three direct reports willing to participate, you will be asked to share their email addresses during the survey. Once the emails are received, I will send a consent form and the online survey instrument to your interested direct reports.

Participation in this study is voluntary and your identity as a participant will remain anonymous and your individual responses will remain confidential.

The deadline will be 10 days from receipt of the survey.

Benefits

After completing the survey, you and participating direct reports will receive the overall summary of the research results.

Questions

If you have questions regarding the research, please contact me at: Phone: 763-354-9599 or jpanderson@stthomas.edu.

Next Step:

Please reply to this email and confirm your willingness to participate and we will get the survey process rolling!

Thanks as always, for your support of my professional growth and adding to the body of knowledge related to shared leadership!

(Leader Note to DIRECT REPORTS soliciting voluntary participation)

Dear [Name],

I am participating in a study the role of vertical leadership in a shared leadership context being conducted by Jacque Anderson, a researcher at the University of St. Thomas, Opus School of Management. These findings will help inform training and development programs for future leaders that want to leverage a shared leadership approach.

As a part of this research, I have been asked to include at least three direct reports that will give their perspective on our team's level of shared leadership as well as individual perspectives on what leadership roles can or cannot be shared.

What Participation Involves:

If you agree to participate, you will be invited to answer online survey questions focused on elements of shared leadership and the degree to which certain leadership functions can be shared. The survey should only take **15-25 minutes to complete**

Your participation is voluntary, and will be confidential. Information that you provide will also remain confidential, and will not be shared with me. There is no penalty for not participating, however, your participation would contribute greatly to the knowledge and understanding of how best to train leaders.

Next step: If you are willing to participate and support this important effort, please reply to me with a confirmation of your voluntary participation as well as your email address to share with the researcher.

If you have questions or would like to confirm your participation, please contact Jacque Anderson at: Phone: 763-354-9599, Email: jpanderson@stthomas.edu. Otherwise she will be contacting you soon if you choose to participate.

Appendix B

(SURVEY)

General Information

Welcome to the Role of Vertical Leadership in a Shared Leadership Context Study.

By participating in this study, you are advancing understanding of the responsibilities of the vertical leader (the formal, appointed leader) in a shared leadership context.

You have been selected for this study as a leader who is likely to have supported shared leadership in one form or another. In this questionnaire, you will be asked about your experience with shared leadership with your current team and your assessment of roles of leadership that cannot necessarily be shared. The majority of questions are requesting your insights on what degree a certain element is present or to what extent a particular aspect of leadership can be shared.

Following the consent form on the next page, this study will consist of **three sections**:

1. Participant information
2. Shared Professional Leadership Inventory for Teams (20 items)
3. Leadership Functional Questionnaire (75 items)

The survey will take **15-25 minutes** to complete. You **MUST answer each question**.

Once you have answered all questions on a page, **please scroll down to the bottom right side of the page, and select "Click to Advance."** If you have missed a question, the question will be highlighted when you attempt to advance to the next section, alerting you that a response is needed.

Thank YOU in advance for YOUR participation in this important research!

Participant Research Consent for “The Essential Role of the Vertical Leader in a Shared Leadership Context” [1543343-1]

Purpose:

The purpose of this study is to examine what leadership roles can be shared and which of those roles need to be the primary or exclusive responsibility of the formal, hierarchical leader, known as the vertical leader.

Researchers:

This study is being conducted by Jacqueline P. Anderson, the principal investigator, with faculty advisor Dr. Robert Barnett. The faculty committee assessing this study includes Dr. David W. Jamieson and Dr. Jean Davidson at the University of St. Thomas, Opus School of Management. This study was reviewed for risks and approved by the Institutional Review Board at the University of St. Thomas.

What Participation Involves:

If you agree to participate, you will be invited to answer survey questions focused on elements of shared leadership and the degree to which certain leadership functions can be shared. The survey should only take **15-25 minutes to complete**.

Protecting Your Confidentiality:

The records of this survey will be kept confidential. All information will be aggregated so that it will not be possible to identify you or your responses. **There is minimal risk to the participant** of a breach of confidentiality as names will be removed from the survey responses when returned.

Voluntary Participation:

Your participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your current or future relationship with this researcher or the University of St. Thomas. If you decide not to participate, you are free to withdraw at any time until the survey is submitted. **There are no direct benefits for participating** in the study. Participants will have the option of receiving the results of their assessment and a summary copy of the aggregated report.

Questions?

You may ask any questions you have now and any time during or after the survey by contacting me, the researcher, at (763) 354-9599 or jpanderson@stthomas.edu.

By clicking "I consent" (below), you are agreeing to participate in the study and are at least 18 years of age.

After you click "I consent," please scroll to the bottom right and select "Click to Advance" to move to the first section of the survey.

Please print this form to keep for your records. Please note that this survey will be best displayed on a laptop or desktop computer.

- I consent, begin the study
- I do not consent, I do not wish to participate at this time

Section 1: Participant Background Information [FOR TEAM LEADER]

In this section, please provide background information about yourself and your team.

1. Please provide your first and last name.
2. Please enter your email address here.
3. What is your gender?
 - Male
 - Female
4. What is your age in years?
5. What is the highest level of education you have attained to date?
 - High School degree
 - Undergraduate degree
 - Professional degree or Master's degree
 - Doctoral degree
6. How many years have you been a leader, i.e., responsible for managing others?
 - 1-5 years
 - 6-10 years
 - 10+ years
7. What is your current title?
8. How many direct reports do you have currently?
9. What is the total size of the team you have responsibility for?
10. What sector defines your organization?
 - Sector 1: Natural Resources/Agriculture/Mining
 - Sector 2: Construction/Manufacturing/Processing (production of finished goods)
 - Sector 3: Retailers/Entertainment/Financial Company (services to consumers)
 - Sector 4: R&D/Consulting/Education (intellectual pursuits)
11. How is your organization classified?
 - For Profit
 - Non- Profit
12. What is the size of your organization?
 - Small: \$5M-\$10M
 - Mid-Market: \$10M-\$1B
 - Large: Over \$1B
13. How many years have you worked with the majority of the current leadership team?
 - Less than 1 year
 - 1-2 years

- 2-3 years
- 4 years or more

14. Interdependence is the degree to which team members rely on one another to complete and accomplish key tasks to achieve goals. Interdependence is low if individuals can complete their work through little interaction with one another and autonomously.

To what degree is the success of one team member intertwined and dependent on the success of others on the team? On a scale from 1-5, 1 being the work is completely separate and independent and 5 being the work is highly interdependent and requires a high level of integration and coordination. *For example, if you can accomplish your overall goals without input, advice or collaboration with others on the team, you would indicate 1.*

- 1-Work tasks are not interdependent
- 2-Work tasks are somewhat interdependent
- 3-Work tasks have equal measure of interdependence and independence
- 4-Work tasks are more interdependent than not
- 5-Work tasks are highly interdependent

15. Complexity of work refers to levels of knowledge, skills and abilities required to meet the demands of key tasks and ambiguous situations that demand discussion and exchange of information to achieve goals. Tasks are not considered complex if they are simple, uncomplicated and/or routine.

To what degree do you believe your work tasks are complex? On a scale from 1-5, 1 strongly agree that the work is not complex and is uncomplicated and 5 being the work is highly complex and requires high level of coordination. *For example, if in the course of your work, you are frequently involved in solving unique problems for which there is not a straight forward solution and may require new insights with others and untested solutions, you would indicate 5.*

- 1-Work tasks are not complex
- 2-Work tasks are somewhat complex
- 3-Work tasks have equal measure of complexity of routine
- 4-Work tasks are more complex than routine
- 5-Work tasks are highly complex

16. How would you rate the overall performance of your team in achieving its key tasks and objectives?

- 1-Very ineffective
- 2-Ineffective
- 3-Neutral
- 4-Effective
- 5-Extremely effective

17. Considering your team as a whole, overall, how satisfied are you being a member of this team?

- 1-Very dissatisfied
- 2-Dissatisfied

- 3-Neutral
- 4-Satisfied
- 5-Extremely satisfied

18. Direct Report Contact Information

As explained in the email confirming your participation in this research, we would like to include three or more of your direct reports in the research. For those direct reports that have voluntarily agreed and given permission to participate, please include their contact information below. I will be contacting them in the very near future with the consent form and survey. As a reminder, their participation in the research would be voluntary and confidential, as is yours.

In this section, we ask you to please provide the names and emails of three direct reports whom we may contact.

Direct report #1 name?

Direct report #1 email address?

Direct report #2 name?

Direct report #2 email address?

Direct report #3 name?

Direct report #3 email address?

Direct report #4 name?

Direct report #4 email address?

Direct report #5 name?

Direct report #5 email address?

Section 1: Participant Background Information [FOR TEAM MEMBER]

In this section, please provide background information about yourself and your team.

Your Participant Information:

1. Please provide your first and last name.
2. Please enter your email address here.
3. What is your gender?
 - Male
 - Female
4. What is your age in years?
5. What is the highest level of education you have attained to date?
 - High School degree
 - Undergraduate degree
 - Professional degree or Master's degree
 - Doctoral degree
6. What is your current title?
7. Interdependence is the degree to which team members rely on one another to complete and accomplish key tasks to achieve goals. Interdependence is low if individuals can complete their work through little interaction with one another and autonomously.

To what degree is the success of one team member intertwined and dependent on the success of others on the team? On a scale from 1-5, 1 being the work is completely separate and independent and 5 being the work is highly interdependent and requires a high level of integration and coordination. *For example, if you can accomplish your overall goals without input, advice or collaboration with others on the team, you would indicate 1.*

- 1-Work tasks are not interdependent
 - 2-Work tasks are somewhat interdependent
 - 3-Work tasks have equal measure of interdependence and independence
 - 4-Work tasks are more interdependent than not
 - 5-Work tasks are highly interdependent
8. Complexity of work refers to levels of knowledge, skills and abilities required to meet the demands of key tasks and ambiguous situations that demand discussion and exchange of information to achieve goals. Tasks are not considered complex if they are simple, uncomplicated and/or routine.

To what degree do you believe your work tasks are complex? On a scale from 1-5, 1 strongly agree that the work is not complex and is uncomplicated and 5 being the work is highly complex and requires high level of coordination. *For example, if in the course of your work, you are frequently involved in solving unique problems for which there is not*

a straight forward solution and may require new insights with others and untested solutions, you would indicate 5.

- 1-Work tasks are not complex
- 2-Work tasks are somewhat complex
- 3-Work tasks have equal measure of complexity of routine
- 4-Work tasks are more complex then routine
- 5-Work tasks are highly complex

9. How would you rate the overall performance of your team in achieving its key tasks and objectives?

- 1-Very ineffective
- 2-Ineffective
- 3-Neutral
- 4-Effective
- 5-Extremely effective

10. Team member effectiveness is influenced by team leader performance. Overall, how would you rate the effectiveness of your team leader?

- 1-Very ineffective
- 2-Ineffective
- 3-Neutral
- 4-Effective
- 5-Extremely effective

11. Considering your team as a whole, overall, how satisfied are you being a member of this team?

- 1-Very dissatisfied
- 2-Dissatisfied
- 3-Neutral
- 4-Satisfied
- 5-Extremely satisfied

12. The formally appointed team leader can influence satisfaction, overall, how satisfied are you with your team leader?

- 1-Very dissatisfied
- 2-Dissatisfied
- 3-Neutral
- 4-Satisfied
- 5-Extremely satisfied

Section 2: Shared Professional Leadership Inventory for Teams

Instructions:

We are interested in how you would describe your team. The following 20 items describe *possible* characteristics of a team, but may not accurately describe *every* team. For each item, please click on the option that most closely reflects your opinion about how accurately or completely each statement describes *your* team using the following scale:

- 1) Does not apply to or describe our team at all (0%)
- 2) Describes or applies to our team to a minimal degree (20%)
- 3) Somewhat describes or applies to our team (40%)
- 4) Applies to or describes our team adequately (60%)
- 5) Applies to or describes our team well (80%)
- 6) Fully describes or applies to our team (100%)

For example, consider the item: “*As a team, we take sufficient time to address each other’s concerns*”. If you feel that this does not happen in your team, or happens very infrequently, you would probably select “1” or “2” as your response. If you feel this happens often or always, you would probably select “5” or “6”.

Please respond to every item.

Shared Professional Leadership Inventory for Teams	(1) Does not Describe or Apply to Our Team	(2) Minimally Describes Our Team	(3) Somewhat Describes Our Team	(4) Describes Our Team	(5) Describes Our Team Well	(6) Fully Describes Our Team
Task Leadership						
1. As a team, we clearly assign tasks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. As a team, we clearly communicate our expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. As a team, we provide each other with work relevant information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. As a team, we ensure that everyone knows their tasks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. As a team, we monitor goal achievement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relationship Leadership						
6. As a team, we take sufficient time to address each other’s concerns.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. As a team, we recognize good performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. We promote team cohesion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. We support each other in handling conflicts within the team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. As a team, we never let each other down.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	(1) Does not Describe or Apply to Our Team	(2) Minimally Describes Our Team	(3) Somewhat Describes Our Team	(4) Describes Our Team	(5) Describes Our Team Well	(6) Fully Describes Our Team
Shared Professional Leadership Inventory for Teams						
Change Leadership						
11. We help each other to correctly understand ongoing processes in our team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. As a team, we help each other to learn from past events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. As a team, we help each other to correctly understand current company events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. As a team, we can inspire each other for ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. As a team, we support each other with the implementation of ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organization Networking Leadership						
16. We use networks in order to support our team's work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. We ensure that our team is supported with necessary resources to fulfill the task.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. As a team, we assist each other to network.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. We establish contact with important experts valuable for our team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. As a team, we are open to external assistance in the case of internal team problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 3: Functional Leadership Survey

Instructions:

The following items describe a number of functions or activities that teams might need to accomplish in order to be successful. We are interested in your opinion about how many people in your team you believe are responsible for or involved in the activity to ensure each one is accomplished in your team (e.g., only one team member, many, or all).

For each item, please click on the option that most closely reflects your opinion about *how many* team members are involved in or responsible for the activity in your team using the following scale:

- 1) Handled exclusively by the team leader
- 2) Handled mostly by the team leader (occasionally involves another team member)
- 3) A few team members are responsible
- 4) Several team members are responsible
- 5) Many team members are responsible
- 6) Most or all team members are responsible

For example, consider the item: “*Ensures the team has a clear direction*”. If you feel that the team leader is the only person who is responsible for this (or occasionally involves one other team member), you would probably select “1” or “2” as your response. If you feel many or all team members are responsible for this, you would probably select “5” or “6”.

Please respond to every item.

Functional Leadership Assessment	(1) Team Leader is Exclusively Responsible	(2) Team Leader is Mostly Responsible	(3) A Few Team Members Are Responsible	(4) Several Team Members Are Responsible	(5) Many Team Members Are Responsible	(6) Most or All Team Members Are Responsible
Compose Team						
1. Selects highly competent team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Selects team members who have previously worked well together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Selects team members that have previously worked well with the leader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Selects team members so there is the right mix of skills on the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Selects highly motivated team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Define Mission						
6. Ensures the team has a clear direction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Emphasizes how important it is to have a collective sense of mission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Develops and articulates a clear team mission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Ensures that the team has a clear understanding of its purpose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Helps provide a clear vision of where the team is going	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Establish Expectations and Goals						
11. Defines and emphasizes team expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Communicates expectations for high team performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Maintains clear standards of performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Sets or helps set challenging and realistic goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Reviews team goals for realism, challenge, and business necessity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Structure and Plan						
16. Defines and structures own work and the work of the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Identifies when key aspects of the work need to be completed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Develops or helps develop standard operating procedures and standardized processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Clarifies task performance strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Makes sure team members have clear roles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Train and Develop Team						
21. Makes sure the team has the necessary problem solving and interpersonal skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Helps new team members learn how to do the work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Provides team members with task-related instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Helps new team members to further develop their skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Helps the team learn from past events or experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Sensemaking						
26. Assists the team in interpreting things that happen inside the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Assists the team in interpreting things that happen outside the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Facilitates the team's understanding of events or situations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Helps the team interpret internal or external events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Helps the team make sense of ambiguous situations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide Feedback						
31. Rewards the performance of team members according to performance standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Reviews relevant performance results with the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Communicates business issues, operating results, and team performance results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Provides positive feedback when the team performs well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Provides corrective feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitor Team						
36. Monitors changes in the team's external environmental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. Monitors team and team member performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Keeps informed about what other teams are doing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. Requests task-relevant information from team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. Notices flaws in task procedures or team outputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Manage Team Boundaries						
41. Buffers the team from the influence of external forces or events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. Helps different teams, communicate with one another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. Acts as a representative of the team with other parts of the organization (e.g., other teams, management)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. Advocates on behalf of the team to others in the organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. Helps to resolve difficulties between different teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Challenge Team						
46. Reconsiders key assumptions in order to determine the appropriate course of action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. Emphasizes the importance and value of questioning team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. Challenges the status quo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. Suggests new ways of looking at how to complete work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. Contributes ideas to improve how the team performs its work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perform Team Task						
51. Will “pitch in” and help the team with its work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. Will “roll up his/her sleeves” and help the team do its work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. Works with team members to help do work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. Will work along with the team to get its work done	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55. Intervenes to help team members get the work done	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Solve Problems						
56. Implements or helps the team implement solutions to problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. Seeks multiple different perspectives when solving problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. Creates solutions to work-related problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59. Participates in problem solving with the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60. Helps the team develop solutions to task and relationship-related problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide Resources						
61. Obtains and allocates resources (materials, equipment, people, and services) for the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
62. Seeks information and resources to facilitate the team's initiatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
63. Sees to it that the team gets what is needed from other teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
64. Makes sure that the equipment and supplies the team needs are available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
65. Helps the team find and obtain "expert" resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourage Team Self-Management						
66. Encourages the team to be responsible for determining the methods, procedures, and schedules with which the work gets done	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
67. Encourages the team to make its own decisions regarding who does what tasks within the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
68. Encourages the team to solve its own problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
69. Encourages the team to be responsible for its own affairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
70. Encourages the team to assess its performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Support Social Climate						
71. Responds promptly to team member needs or concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
72. Engages in actions that demonstrate respect and concern for team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
73. Goes beyond own interests for the good of the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
74. Does things to make it pleasant to be a team member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
75. Looks out for the personal well-being of team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you for your participation!