IBS – ISCTE BUSINESS SCHOOL

The effectiveness of teamwork for military teams with shared leadership.

Serkan Sultan CAKIROGLU

A Thesis presented in partial fulfilment of the Requirements for the Degree of
Doctor in Management / Human Resources and Organizational Behavior

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ABSTRACT

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Despite historical studies of leadership in military teams, few studies have focused on military team factors that could be linked to shared leadership in an international military staff. The focal point of shared leadership is the interaction of team members so as to lead collectively by sharing leadership tasks, rather than the role of an individual leader. This dissertation aims to shed light on the critical question: What is the relation of shared leadership with effectiveness in military teams? The objective of the qualitative study (Study 1) is to explore the military team members' (mid-senior multinational officers') perceptions of shared leadership and to analyze the facilitation of shared leadership in military teams. The aim of the quantitative study (Study 2) is to identify shared leadership predictors and whether shared leadership is a mediator of team effectiveness through self-management. The qualitative study revealed that driving forces of change constituted the primary factor affecting shared leadership in military project teams, and the operational environment was the most important hindrance to shared leadership in military operational teams. With the quantitative study, we proposed that complexity is the critical predictor dimension of shared leadership, and shared leadership is positively related to team effectiveness through self-management in a military context. When self-management is low in military teams, trust compensates in increasing the perceived effectiveness. The findings will contribute to the literature by serving to integrate the field of shared leadership research and identify the implementation of shared leadership in some military teams, using the framework of Leadership Change Context for Military Teams.

Keywords: Shared Leadership; Complexity; Team Effectiveness; Military Team Types

JEL Classification System: L2; M12; M16.

RESUMO

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Apesar dos estudos históricos de liderança em equipas militares, poucos estudos se concentraram em fatores da equipa militar que poderiam estar ligados à liderança partilhada numa equipa militar internacional. O ponto focal da liderança partilhada é a interação dos membros da equipa, de modo a conduzir-la coletivamente, partilhando tarefas de liderança, ao invés do papel de um líder individual. Esta dissertação visa esclarecer a questão crítica: qual a relação da liderança partilhada com a eficácia dasequipas militares? O objetivo do estudo qualitativo (Estudo 1) é explorar as percepções dos membros da equipa militar (oficiais multinacionais de nível médio) sobre liderança partilhada e esclarecer a facilitação da liderança compartilhada em equipes militares. O objetivo do estudo quantitativo (Estudo 2) é identificar preditores da liderança partilhada e se a liderança partilhada promove a eficácia da equipa atavés da auto-gestão. O estudo qualitativo revelou que forças motrizes de mudança constituíam o fator primário que afetava a liderança partilhada em equipes de projeto militares, e o ambiente operacional como obstáculo mais importante para a liderança partilhada em equipas operacionais militares. Com o estudo quantitativo, propusemos a complexidade como a dimensão preditora crítica da liderança partilhada, e a liderança partilhada como positivamente relacionada com eficácia da equipa através da auto-gestão em contexto militar. Os resultados contribuem para a literatura, no âmbito da liderança partilhada e para identificar a implementação da liderança partilhada em algumas equipas militares, usando a estrutura do contexto de mudança de liderança para as equipas militares.

Palavras-chave: Liderança compartilhada; Complexidade; Eficácia da equipe; Tipos de equipe militar

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I sincerely thank my grandfathers that encouraged us to become educated and I hope this is the legacy that my kids will carry on.

The opinions in this article are those of the author and not of any organization.

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CHAPTER 1. INTRODUCTION

As most organizations have been getting increasingly sophisticated in the 21st century, the traditional relationship of leaders and working conditions is undergoing a fundamental change. This new complexity and team members' higher expectations certainly push for a new type of leadership.

Increasing complexity, task interdependence and greater work specialization, technological innovation, more demanding Y generation requirements, and better-educated employees, have transformed the world in which leaders are expected to make all the decisions and others are expected to carry them out to the letter. As Bradford and Cohen (1998) stated in their study, this relationship never worked well in the past, and it does not work well today either. This is undoubtedly the case for military organizations.

A further influence on leadership practices involves the unique characteristics of the millennial generation. It's also known as Y generation, the term applied to individuals born between 1982 and 2000, and this generation's perceptions and working style are different from traditional leadership. Most current discussions of leadership methods are based on the status quo. One can argue that the traditional concepts of leadership can no longer accommodate the changing nature of the work environment and the expectations of new generations, and that makes it more difficult for leaders to possess all the expertise required to perform, adequately, the required leadership functions (Groon, 2002; Howe, & Strauss, 2003; Pearce, 2004; Hiller, Day, & Vance, 2006; Pearce, Hoch, Jeppesen, & Wegge, 2009; Friedrich, Vessey, Schuelke, Ruark, Mumford, 2009; Wang, Waldman, and Zhang 2014). Moreover, as teams have increasingly become the main building blocks of organizations (Mathieu, Tannenbaum, Donsbach, & Alliger, 2014), scholars have begun to research leadership at the team level of analysis and investigated the role of team leaders in creating, developing, and promoting team effectiveness (Mathieu, Maynard, Rapp, & Gilson, 2008). Consequently, leadership styles in organizations have also changed (Wegge, Jeppesen, Weber, Pearce, Silva, Pundt, Jonsson, Wolf, Wassenaar, Unterrainer, & Piecha, 2010) and new leadership approaches have been required to deal with military organizations. Furthermore, there are some questions to be answered. What expectations will the team members of tomorrow have? What kind of challenges will they face? Which methods and tools will the military leaders of tomorrow have in their programs to meet these expectations? Shared leadership in teams has already been discussed by different types of researchers (Avolio, Jung, Murry, & Sivasbramaniam, 1996; Pearce & Sims 2002; Pearce & Conger, 2003; Yukl, 2013; Hoch & Kozlowski, 2014; Wang, et.al., 2014; Pearce, Manz, & Sims,

2014) over the last two decades, and self-management teams have been popular and extensively researched following the 1990s, which involves a shift in focus from individual to group methods of performing work (Manz, & Sims, 1987). Therefore, in the quantitative study we focus on shared leadership with self-management for military teams.

Regarding shared leadership, there are several approaches. In the last two decades, many researchers have defined such leadership as shared leadership, collective leadership, distributed leadership, team leadership, rotated leadership, team empowerment, top management teams, self-managed teams, and team leadership functions. In these similar definitions, shared leadership and distributed leadership are the most used definitions in the literature. Our study is mainly based on the shared leadership approach.

There is no doubt that a leader cannot lift the entire heavy workload by him/herself. S/He needs help with this dense, complex workload. Support comes from team members. In the face of complexity and other, increasingly severe, team effectiveness problems, it is evident that military organizations need sustainable solutions to respond to such global challenges. Like ships in the navy, most of the tools and systems used in the military have been growing more complex every day and getting more difficult for both leaders and team members to integrate. Therefore, is it still a challenge for military organizations to handle increasing complexity? Shared leadership may be a practical solution to complex problems. In a study of 500 companies, the authors found that the leadership of the chief executive officers (CEOs) was valuable, but that the genuinely high performing companies were the ones that were organized in teams, and that practiced effective shared leadership (Pearce, Manz, & Sims 2009).

Furthermore, the use of teams to leverage the capabilities of knowledge workers in organizations has increased extensively. Given this increase of common use of teams, we must also question whether our traditional models of leadership are still appropriate (Pearce, 2004). We believe that Pearce's question holds true for military organizations as well. However, we also agree with the assessment of other authors (Ensley, Hmieleski & Pearce, 2006, p. 218): "this is not to say that vertical leadership is the way of the past, but rather that future thinking about leadership must encompass both vertical and shared facets in order to capture a fuller view of leadership processes and outcomes (Day, Gronn, Salas, 2004; Pearce & Sims, 2002)".

Yet, we do not advocate choosing between hierarchical leadership and shared leadership. On the contrary, the two concepts work in tandem or partnership (Wang, et.al., 2014). Nevertheless, it is high time we moved beyond the hierarchical perspective on

leadership in an era of knowledge work (Day et al., 2004; Osborn, & Hunt, 2007; Shondrick, Dinh, & Lord 2010; Yukl, 2013). At the same time, we support the idea of the inferred connection between self-management and shared leadership. The notion of shared leadership is closely related to self-management; it comprises a collective dynamic influence process among individual group members who lead each other to attain the group's objectives (Pearce, 2004; Pearce & Conger, 2003; Pearce & Manz, 2011). We expect that shared leadership will impact on and provide the conditions for self-management, and that that will lead to effectiveness. Shared leadership as providing self-management conditions, may reveal the members knowledge and abilities on the surface, otherwise with the fully stressed military conditions in a strict hierarchy, members most of the times hide their knowledge in their mind (deep) and it's difficult to present their cards (skills and abilities) on the table. These stressful hierarchical teams decrease the participation, collaboration and contribution. Shared leadership may change the stressful job climate for the military teams and the output will be fruitful with collecting all of the members' knowledge which may increase the military teams' effectiveness. Rather than remaining passive, they may activate their own problem-solving abilities, enabling their real potentials into a high- performing military teams. And together, they will generate a sustainable solution for complex issues. For the last decade, with the rise of each new generation of communications technology, unmanned ground vehicles and Artificial intelligence (AI), classical warfare has been transformed into a new warfare, Hybrid warfare. New generation of communications technology enable connections between soldiers in the field and those who give them orders (commanders/leaders) become easy and this can provide an opportunity for facilitating shared leadership in military organizations. Combination of networked connections and unmanned systems enables modern commanders as never before, linking them closer to the operation theatre from greater distances, and new technologies decentralize operations, enable greater initiative among the lower-level units in war, directed to the researchers to pose a core leadership question and also has started to questioning the navy leadership how to keep up with this change (Jones, 2012; Singer, 2009). New technology with its easy flow of information and velocity that gives military leaders unprecedented ability to apply shared leadership approach even within the geographic distance. Shared leadership approach exists somehow in military teams, for instance, the Commanding Officer in a warship delegates some of the leadership functions while retaining others. Delegated leadership functions are usually performed by team members, depending on the subject and the expertise of the personnel. Yet, the Commanding Officer makes the call. This is a significant example of how shared leadership and vertical leadership can coexist. It

is not possible for the Commander to know every single technical detail on board. Especially technical systems should be operated and maintained by technical specialists. Apart from the actual situation of the ship, the commander could be in a hurry in any circumstances but a technical personnel has the responsibility to warn and advice the Commander about the problems to avoid and precautions to take. In the navy, also missile transfers could be risky at any time because there are too many variables to take into accounts such as weather, sea conditions, crane, and special equipment for loading and unloading and etc. It seems easy to execute but every single detail has own importance. If somebody overlooks some minor tasks that could cause loss of lives and properties. It's difficult to imagine that a tiny broken safety mechanism could cause a missile to fall down. It is almost impossible to predict such a problem by a single man like the Commander in advance. He always needs common understanding to handle it. The Commander should be advised and informed by the experienced technical crew members at all times and the team should give the final decision in the light of common understanding. If he/she ignores the importance of common understanding, everybody might suffer from bitter consequences. Most of the tasks in military teams need common knowledge. Also, Special Forces teams are perfect examples for shared leadership, they are administratively steep in rank and hierarchy, like most military units, yet allow and push decision allocation to near equal levels during operations depending on their knowledge. The Navy ships are multi-disciplinary teams which consist of officers, engineers, comms specialists, doctors, chefs, accountants, chaplains, pilots, meteorologists, mine clearance divers and elite fighting forces, technicians, etc. in a single ship to be successful in war- and peacetime missions. To lead this kind of mindset you need shared the leadership. Shared leadership enables for the team members to see the big picture and take ownership for the team. A shared leadership approach is more of an invitation for the entire member to assume greater responsibility and influence. This will effect to achieve the especially difficult and complex tasks fullfilment.

CHAPTER 2.REVIEW OF LITERATURE

2.1. Introduction and Complexity

There are plenty of articles (Carson, Tesluk, & Marrone, 2007; Osborn & Hunt, 2007; Pearce, et.al., 2009; Yukl, 2013; Müller, Pintor, & Wegge, 2018)) that mention the complexity which creates difficulties for the leadership of organizations, dealing with which complexity is unlikely to fall to any individual. How unlikely it was for any individual to be able to deal with this complexity was also observed empirically by the researchers.

There is an increasing likelihood that no single leader will have all the answers or even be able to make sense of the more significant challenges that are encountered. O'Toole, Galbraith & Lawler, 2002, in their study, affirmed that if a company is uninspired, no one individiual can save that company from that ordinary performance usually, and no matter how capable and smart a leader, can be right in everything. A single leader may not carry out all necessary leadership functions successfully because the environment contains inherent complexity and ambiguity (Day, et al., 2004). Shared leadership serves as mutual influences among team members, which can overcome the limitation of a leadership style practiced by a single leader (Lee, Lee, Seo, & Choi, 2015).

Although a plausible possibility, it seems it would be a somewhat rare occurrence to find an individual possessing all of the knowledge, skills and abilities to lead well in all situations. Alternatively, it would be more realistic to expect multiple individuals with a diverse set of skills and abilities to collectively act as leaders, distributing the roles and tasks based on the situation (Friedrich, et.al., 2009).

Conventional leadership can no longer accommodate the changing nature of the work environment, and that makes it difficult for individual leaders to possess all of the necessary expertise to perform the required leadership functions effectively. In military organizations, leaders of the past, though, never had access to systems like today's Global Command and Control System (GCCS). GCCS is an umbrella system that tracks every friendly tank, plane, ship, and soldier in the world in real time, plotting their positions as they move on a digital map. It can also show enemy locations gathered from intelligence (Singer, 2009). Furthermore, with adding the unmanned systems, rapid growth in ground robotics and ability of technology that enabling military leaders communicate with their units/ships across thousands of miles, enlarge the picture into a chaotic and ultra-complex situation. This kind of

new situation has caused a shift away from the predominant view of leadership as an individual construct to considering leadership as a more distributed, shared construct (Patton & Higgs, 2013). In today's world, where success depends on effectively integrating the knowledge of skilled professionals in complex and ambiguous environments, it is becoming increasingly unlikely that a single, vertical leader will possess all the knowledge, abilities, and skills required to accomplish all the necessary leadership roles and the success of a team can't depend on a individual voice (Day et al., 2004; Carson, et al., 2007; Pearce, et al., 2009, Friedrich et.al.,2009; Doerffer, 2017); hence, leadership responsibilities should shift according to which member's expertise and knowledge is most relevant to the task at hand (Bergman, Rentsch, Small, Davenport & Bergman, 2012). Moreover, success depends on the team members' participation in any task even for the leadership responsibilities. Wegge, et.al., (2010) explained the effect of the organizational participation with a statement: " Ledford and Lawler (1994, p. 635) : We do not need dozens of additional studies, or an annual review of the same old literature, to come to the same conclusion reached in many prior reviews. The evidence is convincing: Limited participation has limited effects." (p.163). If there is limited participation in this complexity, there will be colossal desperation over the team goals.

It is no different for military organizations. For instance, naval vessels are very complex systems of systems, and it is perhaps hard to appreciate how complicated they have grown in recent decades. From 1980 to the 2000s, the move from analog to digital electronics has been a significant force multiplier of this complexity. What can deal with this complexity in military organizations, as well as in non-military organizations, is shared leadership.

Shared leadership within similar definitions (shared, distributed, collaborative leadership etc.) is becoming very popular over the last decade with leadership studies in organizational research. Since research on the shared leadership and performance relationship has been limited to North American samples (D'Innocenzo, Mathieu, & Kukenberger, 2016) and a few European & Asian studies (Grille & Kauffeld, 2015;), this study aims to test the effects of shared leadership in a different culture and environment. Moreover, studies of the relationship between shared leadership and team performance are insufficient and there are few articles that have scrutinized the relations between shared leadership and military organizations.

First, few studies have examined the relation of shared leadership that influences team types, particularly in the context of multinational military teams.

Second, the shared leadership approach theoretically supports that shared leadership and effectiveness are positively correlated. Moreover, shared leadership is likely to be positively related to team performance (e.g., Pearce & Sims, 2002 ; Avolio, Sivasubramaniam, Murry, Jung, & Garger, 2003 ; Ensley, et.al., 2006 ; Hiller, et.al., 2006 ; Carson et al., 2007; Hoch & Kozlowski, 2012 ; Nicolaides, LaPort, Chen, Tomassetti, Weis, Zaccaro, & Cortina, 2014) by increasing team coordination and efficiency. This positive relation has been elucidated by meta-analysis (D'Innocenzo, et.al., 2016). Other studies have found that distributed or shared leadership does not provide benefits to performance in all circumstances (e.g., Mehra, Smith, Dixon, & Robertson, 2006; Boies, Lvina & Martens, 2010; Fausing, Jeppesen, Jonsson, Lewandowski, & Bligh, 2013). Therefore, especially for military teams, the relation of shared leadership and team effectiveness is not confirmed. We analyze the relationship between shared leadership and team effectiveness in the military context.

Third, the literature lacks studies that assess the decision-making process in shared leadership. Shared leadership arises when team members actively and intentionally shift the role of leader to one another as necessitated by the environment or circumstances in which the group operates. With shared leadership, the role of leadership does not rest in one person's hands, but rather in the group's hands as they move together toward common objectives (Pearce, et.al., 2009). This study draws attention to the decision-making process and shared leadership with a model of military teams for future studies. The model that includes the decision-making process could combine the vertical and shared leadership which Kozlowski & Bell (2003) maintained would be stimulating for military organizations. Finally, this study may help military leaders understand the importance of implementing shared leadership of military teams. Thus, this dissertation aims to shed light on the critical question: What is the relation of shared leadership with effectiveness in military teams? For that we conducted two empirical studies. The objective of the qualitative study is to explore the military team members' (mid-senior multinational officers') perceptions of shared leadership and to analyze the facilitation of shared leadership in military teams. The aim of the quantitative study is to identify shared leadership predictors and whether shared leadership is a mediator of team effectiveness through self-management.

2.2. Theoretical background of Shared Leadership

Leadership functions cannot be performed by a single leader and the need to share them with team members is not a new idea. In the literature, the authors who have made a study of shared leadership have linked its roots with theories from the past. While this approach has burgeoned in the last two decades, core ideas can be traced to earlier studies like those of Follett (1924) and Gibb (1954) and some authors link them with McGregor's Theory Y (1960). (Pearce & Conger, 2003; Nicolaides, et.al., 2014 ; Ensley et.al., 2006). Follett (1924) emphasized that individuals should follow the person who has essential knowledge pertaining to the particular situation, and mentioned the importance of experts. Gibb (1954) considered that group members should share leadership responsibilities, stating the importance of the group quality for leadership and proposed the tasks must be performed by the group while naming that concept as a distributed leadership. Also, McGregor's theory (1960) is still a basic theory used when explaining leadership methodologies. McGregor's ideas suppose that there are two approaches, some following Theory X, which generally gets poor results, while liberal managers use Theory Y, which produces better performance and succeeds in managing people. As the study by Mohamed &Nor (2013) stated, an autocratic management style (related to Theory X) is the leadership model whereby the manager makes decisions individually, without paying much attention to the opinions and personalities of subordinates, which is commonly in use in military organizations. The manager who assumes a democratic style (related to Theory Y) of leadership allows the employees to take part in decision-making; therefore, everything is agreed upon by the majority. We can link team members' participation in decision-making with Theory Y.

Ensley, et al. (2006) declared that alternatives included in the decision-making view began to emerge and become popularized through the writings of Bass (1985), Burns (1978), Greenleaf (1977), Lawler (1986), and Vroom and Yetton (1973). Burns (1978) describe the transformational leadership based on inspiring followers to exceed their self-interests to achieve organizational goals and to take ownership in the goals of the team. Bass (1985) explained the transformational leaders effect to change organizational culture by first understanding it and then reorganizing with a new vision and a revision of its shared assumptions, values, and norms. Vroom and Yetton (1973) declared the advantages of subordinate participation in decision-making.

Also, some similar theories like Self-Managing Work Teams (SMWTs) and shared mental models can be accepted as antecedents of shared leadership. These concepts are

closely related to shared leadership theory, having a similar approach to leadership styles. Due to the complexity of many tasks performed in the workplace and technological advances, SMWTs are responsible for their work and for monitoring their own performance. Instead of having a supervisor telling them what to do, these teams are responsible for gathering information, making decisions, and taking responsibility for reaching organizational goals (Hollander & Offermann, 1990). Barry (1991) stated that self-managed teams (SMTs, or "bossless teams") had been credited with saving hundreds of millions of dollars and had achieved conceptual breakthroughs, introduced numbers of new products and solved complex problems. As stated in Converse, Cannon-Bowers, and Salas, (1993) study, shared mental models help to explain how teams can cope with difficulties and changes in task conditions. The term “shared mental model” mentions that team members have a clear understanding of the goals, roles and responsibilities, time sequencing of events, tasks to be performed, process to coordinate for individual efforts, allow team members to predict the information and utilities the requirements of their teammates and progress toward team objectives (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000; Dalenberg, Vogelaar, & Beersma, 2009). Self-managing work teams and shared mental model theories aim to lead the teams with a shared and collective knowledge like shared leadership approach. Despite these origins, radical departure from the traditional leadership view was not accepted until the mid-1990s when "conditions were finally right" (Pearce & Conger, 2003, p. 13). As emphasized in Bolden’s (2011) article, Pearce and Conger claim that a number of reasons for this compulsory shift to shared leadership included the rise in cross-functional teams, besides delivery speed, availability of information, and the complexity of larger jobs. Team members’ potential to tackle with the pressures to react rapidly and with high levels of flexibility, increased use of teams (Hackman, 1987). Team members provide more complex, innovative, and comprehensive solutions to organizational problems (Sundstrom, DeMeuse, & Futrell, 1990). Teams growing increasingly common as the primary work unit of organizations which have shifted from reliance on individual-centered work structures to reliance on teams (Hackman, 1987; Cohen & Bailey, 1997; Kozlowski & Bell, 2003). In the literature, the hierarchical leader’s impact on the team members is essential within the traditional approach. However, recent scholars have highlighted the importance of leadership stemming from the team, instead of focusing solely on the single team leader (Day, et.al., 2004; Carson et al., 2007; Pearce & Conger, 2003). Organizations are coming to depend on teams more frequently to complete work (Hoch, 2013). Thus, this approach, embodying the idea that leadership somehow needs to be shared and is not a single person’s job, has been increasing in the last

two decades of research. Although definitions vary slightly, shared leadership, distributed leadership, collective leadership, co-leadership, team leadership, informal leadership, pluralistic leadership, emergent leadership, and peer leadership have all been advanced as ways to conceptualize and understand how leadership may emanate from, and be shared by, team members (e.g. Morgeson, DeRue, Karam, 2010; Nicolaides, et al., 2014; Pearce, et al., 2014). In these similar definitions, shared leadership and distributed leadership are the most used definitions in the literature. Gronn (2002) named the emerging type of leadership as distributed leadership, and a similar type of leadership is defined as shared leadership by Pearce & Conger (2003). According to Gronn (2008), the additional theory and research on distributed leadership was also linked with the diffusion of leadership functions within groups – published by Benne and Sheats (1948); the distribution of power and influence – published by French and Snyder (1959) and Dahl (1961); substitutes for leadership – published by Kerr and Jermier (1978); sharing leadership – published by Katz and Kahn (1978); and the functions of leadership – published by Schein (1990).

Bolden (2011) in his article showed that shared leadership is more common in US publications. Website statistics also suggest (Bolden, 2011) that distributed leadership is more extensive as an approach within shared, collaborative or collective leadership than as common usage. Bolden points out that distributed leadership has seen a rapid increase in profile since 2000, so that it actually overtook shared leadership as the term of preference for defining such a type of leadership during the three years of the analysis period (2007–09). Interest in distributed leadership as a definition, however, is a recent phenomenon compared with shared leadership. Especially as stated in his study, the proportion of publications on distributed leadership is significantly higher in the UK than in the US, although publications on shared leadership are more numerous in the US. That is a significant trend and shows that the US and UK are divided between the two leadership perspective in literature. Moreover, shared leadership concept is more prevalent within nursing, medicine and psychology; and distributed leadership within the business, management and other areas of social science, followed by shared leadership. While the commonalities between the distributed leadership and shared leadership contexts are noticeable and may add strength to the argument against leader-centric representations, there are some potential dangers in assuming that they are very similar (Bolden, 2011).

According to Bass and Avolio (1993), and as agreed by Pearce and Sims (2002), one of the significant problems in the study of leadership is that there is a tendency to avoid previously existing theories in order to introduce a “new way of thinking.” However, as Hiller

(2001) stated, the concept of shared leadership is not entirely new, since it has roots in the past, but also it is a vital departure from previous views of leadership, especially for the military organizations. The focal point of shared leadership is the interaction of team members so as to lead collectively by sharing leadership tasks, rather than the role of an individual leader. According to Drath (1998), shared leadership is not about the characteristics of the member; indeed, it is about having the entire team, group, or organization participates in the process. In its contemporary form, the perspective that leadership is somehow shared by team members has become known as shared leadership (Nicolaides, et al., 2014). As noted above, shared leadership has roots and practice in the past, but it is only in the last one or two decades that its roots have been gathered into shared leadership terminology.

2.3. Defining Shared Leadership

The idea of "leadership shared by team members" seems, at first glance, like a contradiction and a paradox. How can leadership be shared? For the last two decades, academics who believe that leadership is not just a one-person job have tried to define leadership so as to shed light on this apparent contradiction. Some similar prominent shared leadership definitions are presented in Table 2.1.

Table 2.1. Similar/Synonymous Definitions of Shared Leadership

Named	Author	Definition
Leadership	Locke, (2003)	"The process of inducing others to take action toward a common goal" (p. 271).
Co-leadership	Solomon, Loeffer and Frank, (1953)	"Concerns the division of the leadership role between two people" (Pearce, 2000).
Peer leadership	Bowers and Seashore, (1966)	"leadership may be either "supervisory" or "mutual"; that is, a group's needs for support may be provided by a formally designated leader, by members for each other, or both; goals may be emphasized by the formal leader, by members to each other, or by both; similarly for work

Named	Author	Definition
		facilitation and interaction (p.249).
Functional leadership	Fleishman, Mumford, Zaccaro, Levin, Korotkin, & Hein, (1991)	"Social problem-solving syndrome involving many cognitive capacities in the generation, selection, and implementation of influence attempts" (p. 259).
Distributed leadership	(Woods, Bennett, Harvey, & Wise, (2004). Barry, (1991)	As an emergent property existing in relationships, rather than an activity carried out by an individual or individuals, as a concept is the idea that leadership is a property of groups of people. "A collection of roles and behaviors that can be split apart, **shared,** rotated, and used sequentially or concomitantly" (p.34). Barry (1991) developed a distributed leadership model that is suitable for the study of self-managed teams
Collaborative leadership	(Glew, O'Leary-Kelley, Friggin, & Van Fleet, 1995) (Ardoin, Gould, Kelsey & Fielding-Singh 2015).	"No matter what form the behavioral change may take – be it through participative management, total quality management, or organizational learning – collaborative leadership requires true participation in leadership and decision making at all levels and in multiple decision processes." (p.155)(Raelin, 2006) Collaborative leadership is characterized by joint problem-solving, shared decision-making, and open processes. the notion that open and energetic discussion including critique and mild conflict (especially related to the leaders' ideas)

Named	Author	Definition
		will, within a framework of cooperative interdependence, lead to creativity and innovative problem-solving .
Emergent leadership	(Bass, 1990; Carte, Chidambaram, & Becker, 2006; Guimarães, Rouco, & Borges, 2015)	Emergent leadership can be defined as a process of influence over a group, driven by a person who does not have formal power and who is acknowledged as a leader by his/her peers. Emergent leaders initiating more ideas, expressing more opinions, and asking more questions.
Rotating leadership	(Erez, Lepine, & Elms, 2002)	Rotating leadership is whereby leadership is distributed among team members rather than focused on a single leader and refers to the situation when each and every team member alternately assumes the position of leader for an equal period of time.
Informal leadership	(Neubert & Taggar 2004)	Informal leadership ocur in teams: (a) Team members are ascribed emergent leader status by means of identifiable individual differences; or (b) team members achieve emergent leader status by filling valued roles within the team and/or providing valued contributions.
Collective leadership	(Friedrich, et.al., 2009)	Distributing elements of the leadership role to those that are best adapted to take them on. It is smilarly to human neurological system (networks are structured like neurons within the brain) that the information flows through specific patterns of team members

According to Pearce & Sims (2000), only if two or more people play a role in performing leadership functions can shared leadership exist. Conger and Pearce (2003) provided the most cited definition of shared leadership: "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" (p. 3). Shared leadership can also be described in terms of the degree or amount of leadership in the team and occurs when team members associate similar amounts of influence to one another (Mayo, Meindl & Pastor, 2003). D'Innocenzo, et.al., (2016) defines it as follows: "Shared leadership is an emergent and dynamic team phenomenon whereby leadership roles and influence are distributed among team members" (p. 1968). Table 2.2, based on Park & Kwon's (2013) study, presents the definitions and measures from previous studies of shared leadership.

Pearce & Conger (2003) express that shared leadership recognizes the emphasis of lateral and upward influence processes. Therefore, multiple team members deliver downward, upward, and lateral influence on their fellow teammates in an effort to achieve team goals. The process ensuring team members into decision making, plus knowledge of the whole team are the fundamental distinguishing characteristics of shared leadership. In contrast, vertical team leadership occurs when one leader exerts downward influence on team members in an effort to achieve the team goals. However, a military team success depends on the every team member performance and skills, with the lateral and upward process, team members have chance to display their knowledge and skills for the team goals as it's supporting O'Toole (2002) suggestion that leadership is not only an individual trait but is also an institutional trait. Shared leadership satisfies the military team requirements that military teams have weak lateral/upward communication. Ensley, et al., (2006) claimed that shared leadership, rather than being exerted solely by a single individual, is a team process whereby leadership is carried out by the team as a whole. Shared leadership uses collective knowledge. According to Fletcher and Kaufer (2003), shared leadership plays a vital role in the particular quality and characteristics of the social processes in which leadership occurs. Shared leadership typically engages in social interactions that comprise the idea of providing the outcomes: mutual learning, greater shared understanding, and eventually, positive action. Most crucially, there is an expanding recognition that leadership depends not only on an individual's ability to learn, but also on the capability to create conditions in which collective learning can occur. Those collective learning conditions depend on the conversation style of the teams. Scharmer and Käufer (Kaufer & Scharmer, 2002; Scharmer, 2001) argues that when groups engage in a conversation, the quality of the interaction falls into four phases, each of which has distinctive

characteristics. The first stage, “talking nice,” is a rule-repeating phase in which people keep within the bounds of what is expected. The second stage is “talking tough,” during which people begin to speak their minds, advocate for their own perspectives, and engage in debate. The third phase is “reflective dialogue,” when listeners develop an inner voice that helps them reflect on their perspective in order to be influenced by the perspectives of others. The fourth phase is something they call “generative dialogue,” when the group loses its individual level focus and generates truly co-created ideas. (Fletcher & Kaufer 2003). In this four dialogue phase, according to Fletcher and Kaufer (2003), a generative dialogue is by definition shared leadership. Organizations may create the generative dialogue with the shared leadership that allows the team as a whole to explore new ideas and ways of thinking and to coordinate itself easily. Yukl (1998) argues that a process of communication is a prerequisite for shared leadership. Based on the work of Bohm (1990) and Buber (1970), a dialogue is defined as the “art of thinking together” or as a conversation without a center (Isaacs, 1999). Shared leadership approaches enable the art of thinking together that strengthen the teams unity. In addition, shared leadership is a practical solution to a significant difficulty: No single individual possesses the capacity to effectively play all leadership roles within a group in a complex environment.

As stated in Kocolowski (2010) study, one of the critical benefits of shared leadership is the skill and the knowledge needed to take advantage of the multifariousness of thought and talent of the all team members. If the teams do not perform in generative dialogue, teams may easily fall into groupthink conditions generally, especially for the military teams. Generative dialogue enable the use all the team members skills. Also Kezar (1998) argued that “when members of leadership teams did not fully embrace the principles of fostering differences and encouraging multiple opinions, most teams slipped into groupthink” (p. 68). We think that shared leadership can prevent groupthink. As explained in Breger (2010) study, in 1972, Irving Janis arguably revolutionized social psychology when he published Victims of Groupthink. Groupthink might be well-defined as “a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action.” (p. 9). Janis highlighted that it is the context, not the people, that contributes to groupthink; however, that does not mean that it is a fixed trait of a group, nor is it dependent upon the kinds of personalities that happen to be dominant within the group. A famous example of a fiasco caused by groupthink, and the core inspiration for the theory, was the Bay of Pigs invasion. There are plenty of examples in the military from 21st century that occur military

disasters because of the groupthink which also I have witnessed. One of the impressive examples is stated in Butterworh (2002) study that on 9 February 2001, Commanding Officer of the fast attack nuclear submarine USS Greeneville, ordered his boat to a depth of around 400 feet and directed an emergency blow maneuver. When the USS Greeneville broke the surface of the Pacific she collided with the Japanese fisheries training vessel, the Ehime Maru. The Ehime Maru sank within 45 seconds along with the souls of nine Japanese nationals. Although Commander of the ship was recognized as one of the best in the Navy, Butterworth (2002) explained in the study, groupthink was indeed present and was one of many causal factors of the accident. This kind of accidents and big mistakes may prevent with shared leadership. Also I want to mention an example from the 19th century. When there was a conflict between Russia Empire and Ottoman Empire in 1877, Gazi Ahmet Muhtar Pasha, the general who advised not to join war, was about dismissed from the army because of his thoughts. In the end of the war Ottoman Empire lost two-fifths of its territory and one-fifth of its population, but also brought about a situation where borders were indefensible. Ottoman Empire' biggest lost could have been avoided if general Gazi Ahmet Muhtar Pasha's advice had not been neglected due to the groupthink. Shared leadership may prevent groupthink disasters. When leadership is not shared there are considerable negative consequences such as groupthink. As Quinteiro, Passos, and Curral (2016) stated of Self-Managing teams, we believe that shared leadership will help to develop for military teams a) more positive appraisals of the team's ability to perform well (i.e. collective efficacy) and (b) less dysfunctional group decisions that cause behaviors like groupthink . Therefore, in military teams, patriotism, loyalty and the wish to display courage, can cause the team to fall into groupthink. To prevent such consequences of teamwork and to increase its effectiveness, implementation and enhancement of shared leadership are essential. With structural arrangements of shared leadership, we can enable subordinates to play a role in leadership and prevent groupthink decision-making.

Moreover, shared leadership is appropriate for the zeitgeist of the 2020s; we cannot carry out our work without considering the time we live in, even in military organizations. Pearce (2004) stated that "we need to ask if our traditional models and approaches to leadership are still appropriate – or if they need revising and rethinking" (p. 47). We cannot defend hierarchical leadership in military organizations just because we have been using it for years; we have to adapt our organizations to the character of the generation that we live among. As stated by Strauss, and Howe, (2003), in regard to the millennium generation's characteristics, the Y generations are team oriented. They are group oriented rather than

individualistic, an outlook which is favorable for self-management teams, and they prefer egalitarian leadership rather than hierarchies, which also favors shared leadership. But it's evident that skepticism about the prospects for shared leadership has been around as long as the concept itself. Seers, Keller, & Wilkerson (2003) argued that a team's demographic composition, or the tendency of some individuals to actively seek status, may make shared leadership particularly tricky. Skepticism about shared leadership is even more profound in relation to military organizations, where the leader is the commander. However, the presence of shared leadership does not cancel out the existence of external hierarchical leadership (Pearce & Sims, 2002). Vertical leadership models use centralizing power and influence utilized through a hierarchical leader (Pearce, Manz & Sims 2009). On the other side, shared leadership utilizes decentralization, power-sharing and influence among peers to achieve effectiveness (Pearce, Conger, & Locke, 2008). At the heart of shared leadership is the idea that individual members voluntarily provide their influence on each other with the purpose of generating effective team outputs (Carson, et al., 2007). We are not saying that vertical leadership is the way of the past for military teams, nor do we advocate choosing between hierarchical leadership and shared leadership. Furthermore, Pearce, et al. (2014) noted that shared leadership is a meta-theory of leadership. Therefore, all types of leadership are more or less shared leadership; with some kinds of leadership being shared completely, while in other types it is not shared at all. Thus, the claim is that future thinking about leadership must encompass both vertical and shared leadership and these two essential sources of team leadership should be studied in combination (Day, et.al., 2004; Pearce & Sims, 2002; Kozlowski & Bell, 2003; Ensley, et al., 2006; Waldman, 2014). On the contrary, the two concepts may work in tandem. Nevertheless, it is time to move beyond the top-down perspective on leadership in the age of information and knowledge work (Day et al., 2004; Yukl, 2013). We agree with Zigert (2005) that, in shared team leadership, the formal leader can still perform leadership behaviors; however, this individual is just one of the many team members potentially leading the team, and some military teams could be high in both vertical and shared team leadership, when both the designated team leader and the team members are performing leadership functions. A formal leader officially allocated with managing a certain group of people in the team or an organization and arranging their activities. Team members depending due to their capabilities and personal qualities, are also able to lead people and influence their behavior and may perform the leader tasks. The impact of such a team member may sometimes be even stronger than the formal leader, if the leader does not possess the

qualities necessary for the successful management of the situation due to his personal qualities, knowledge and skills or life experience.

Graça's (2014) Analysis of Leadership Perspectives on team leadership studies shows that shared leadership, as well as e-leadership/virtual leadership, are the subjects with the highest number of studies in the area of team leadership (each with 13 studies). Shared leadership is highly practical in healthcare organizations (Merkens & Spencer, 1998), in the Dell Computer Corporation (Pearce, 2004), in boards team architecture (Vandewaerde, Voordeckers, Lambrechts, & Bammens, 2011), in ERP/Human resource management systems (HRMS) implementation projects (Hoch, 2013), in IT settings (Stanagro & Piotrowski, 2013), and in Herman Miller Furniture (Manz, Manz, Adams, & Shipper, 2010). Also, in several organizations from around the globe, shared leadership is at the forefront of implementation (Pearce, 2009). Pearce, Wood, & Wassenaar, (2018) supported the view that shared leadership is a critical component in enabling the sustainable future of public universities. While leadership from the top is considered imperative, as senior administrators are responsible for the overarching vision, for safeguarding organizational values, and for ensuring the ethical climate, nevertheless they need to practice shared leadership by engaging the faculty in the process if they are to be optimally successful (Pearce, et al., 2018). What about military organizations? This study is unique that studying shared leadership and effectiveness perception relation through self-management and therefore few studies (Lindsay, Day, Halpin, 2011; Shamir, & Lapidot, 2003; Ramthun, 2013) have examined shared leadership in military organizations. Lindsay, et.al., (2011) stated shared leadership appears to be a possibility for the military because of the increasing complexity of missions. For the dangerous environments in military, Ramthun (2013) investigate shared leadership and suggest that shared leadership may be as viable of a leadership framework during extreme situations for military teams.

2.3.1. Working Definition of Shared Leadership

As addressed in some studies (e.g., Vroom & Jago, 1988; Pearce, Conger, & Locke, 2008), shared leadership is still a relatively primitive term, and essential functions of the leadership are not precisely defined in shared leadership studies. Pearce & Sims (2000) claim that shared leadership, by definition, exists when more than one person performs the leadership functions of the team. How team members perform, and the decision-making process of the leadership, are not identified in the literature. However, participative decision-

making is an aspect of shared leadership, and we want the definition to express the importance of the decision-making process. For this purpose, we advocate that "while executing any type of task to achieve organizational goals, the leader – appointed (or not) – prefers to make the decision with at least half of his/her team's approval." Assuming that this holds true, we believe that shared leadership and vertical leadership are not mutually exclusive. Accounts of the decision-making process are lacking in the literature. We define shared leadership with including "Decision-making" process and allowing us to illustrate how shared and vertical leadership can coexist, especially in military organizations.

Table 2.2. Definitions and Measures from Previous Studies of Shared Leadership (based on Park & Kwon, 2013).

Authors	Definition	Measure
Yang & Shao (1996)	Shared leadership is essentially viewed as transformational leadership displayed at the group level in self managed teams	Implementing shared leadership in self-managed teams could be a paradox for managers: a team can gain profit from the diverse leadership roles; contrarily, the differences in roles could cause conflict among team members. To minimize power struggles, it is essential to let team members recognize that: (a) various roles of leadership can exist simultaneously; (b) leadership is a task that must be shared by all team members.
Pearce & Sims (2002, p. 68)	Distributed influence from within the team (p. 172). Lateral influence among peers (p. 176).	Scales for five leadership strategies: aversive, directive, transactional, transformational, and empowering leadership.
Sivasubramanium, Murry, Avolio, & Jung (2002)	Collective influence of members in a team on each other (p. 68).	Team Multifactor Leadership Questionnaire (TMLQ) aggregated to the team level.

Authors	Definition	Measure
Ensley, et.al., (2006)	Team process where leadership is carried out by the team as a whole, rather than solely by a single designated individual (p.220).	Scales for four leadership strategies: directive, transactional, transformational, and empowering leadership.
Mehra, et.al., (2006)	Shared, distributed phenomenon in which there can be several (formally appointed and/or emergent) leaders (p. 233)	Qualitative coding based on visual analysis of leadership network diagrams.
Carson, et.al., (2007)	An emergent team property that results from the distribution of leadership influence across multiple team members (p. 1218)	Density analysis based on leadership sociograms of social network theory.
Hoch, Pearce, & Welzel (2010)	A collective social influence process shared by team members and aimed toward the achievement of one or more common goals (p. 105)	Scales for five leadership strategies: aversive, directive, transactional, transformational, and empowering.
Small & Rentsch (2010)	An emergent team process defined by the distribution of leadership functions among multiple team members (p. 203)	Social Network Analysis (SNA), Team Multifactor Leadership Questionnaire (TMLQ), and Leader Behavior Description Questionnaire (LBDQ).

2.4. Dimensions of Shared Leadership

As shared team leadership is a relatively new approach, researchers must examine how it relates to pre-existing constructs. The antecedents of shared leadership in a team constitutes one of the most important research areas within the category of shared leadership (Bligh, Pearce & Kohles, 2006; Pearce & Conger, 2003; Mayo et al., 2003; Muethel & Hoegl, 2010). Few studies scrutinize antecedent conditions of theory for the development of shared leadership. (Carson, et.al., 2007; Ziegert, 2005; Fausing, Joensson, Lewandowski, & Bligh, 2015).

Yang & Shao (1996) defines team effectiveness in terms of shared leadership with characteristics such as, motivation, commitment and productivity. As Ziegert's (2005) study shows, Pearce and Sims (2000) named three main antecedents: group, task, and environmental characteristics. Among those three, "characteristics of task" consist of components such as complexity, criticality, and urgency. Later, Cox, Pearce and Perry (2003) suggested that the team characteristics of proximity, team size, ability, and maturity would influence shared leadership. Carson, et.al, (2007) investigated the antecedents of shared team leadership as internal team conditions (shared purpose, social support, voice, and mutual inspiration), interacting with external leader coaching, to predict shared team leadership. Wood (2005) noted in the context of churches that shared leadership involves four dimensions: "joint completion of tasks, mutual skill development, decentralized interaction among personnel, and emotional support" (p. 76). Fausing et al. (2015) claimed that empowering the team leader and interdependence are two critical antecedents of shared leadership. Grille & Kauffeld, (2015) include shared task, relation, change, and micropolitical leadership orientation as four shared leadership dimensions into their Shared Professional Leadership Inventory for Teams (SPLIT) studies. Barnett & Weidenfeller, (2016), stated that a supportive environment, task interdependence, and the complexity of the work influence shared leadership's influence on team performance. We have compiled a table (Table 2.3), based on Carson, et al. (2007) study, which includes independent/dependent variables, mediators and moderators of shared leadership derived from previous 22 studies. As presented in Table 2.3, various factors are in relation with effectiveness of shared leadership. 10 of the 22 studies shown in Table 2.3 looked at the moderating effects of variables such as task interdependence, task uncertainty, trust, collectivism and agreeableness, and also several others. Pearce & Sims (2000) and Zigert (2005) investigated the complexity variable as a task

characteristic that impact and form of shared leadership presented within groups. Also Wang, et. al., (2014) found that as shared leadership and team outcomes increase when the work of the team is more complex; however, D'Innocenzo, et al., (2014) support that the more complex the work is, the less shared leadership influence has on team performance. Task interdependence was analyzed by Burke et al. (2006), Nicolaides et al. (2014), Zigert (2005), D'Innocenzo, et al., (2014), Ullah & Park, (2013), and Fausing, et.al., 2015 that support shared leadership was more strongly related to team performance when task interdependence is high. Wegge, et.al., (2010), Ziegert, (2005) and Grille, Schulte & Kauffeld, 2015 investigated empowerment and shared leadership relation supporting that psychological empowerment of each team member facilitates shared leadership. Also, Fausing, et.al., 2015 supported empowerment as a critical component for the development of shared leadership in a group. We have examined the task characteristic antecedents of shared team leadership. In the quantitative study (chapter 4), we discuss how the task characteristics of interdependence, complexity and empowerment relate to shared team leadership.

Table 2.3. Independent & Dependent Variables and Mediators and Moderators of Shared Leadership from Previous Studies

Author	Antecedent studies Independent Variable / Predictors	Mediators	Moderators	Outcome Variable / Dependent Variable
Avolio, et.al., (1996)	Transformational leadership is comprised of idealized influence, individualized consideration, intellectual stimulation, inspirational motivation. Team member satisfaction	-	-	Self-reported ratings of undergraduate project team effectiveness
Pearce and Sims (2000)	**Group characteristics** ability, familiarity, and group size **Task characteristics** complexity, criticality, and urgency **Environmental characteristics** organizational support, reward, and cultural system	Shared Leadership	-	Group Psyche Group Behavior Group Effectiveness
Pearce and Sims (2002)	Self-ratings of effectiveness Five vertical leadership behaviors Five shared leadership behaviors	-	-	Managerial ratings, Internal customer ratings, Team effectiveness
Sivasubramaniam, et.al., (2002)	Transformational, management-by-exception, laissez-faire leadership behaviors	Team potency (self-ratings at times 1 and 2)	-	Group potency. Team grades assigned by instructor (undergraduate project team effectiveness).

Author	Antecedent studies Independent Variable / Predictors	Mediators	Moderators	Outcome Variable / Dependent Variable
Pearce, Yoo, and Alavi (2004)	Shared leadership , vertical leadership directive, transactional, transformational, and empowering leadership .	-	-	Team outcomes Potency, Social integration, Problem solving quality, Perceived effectiveness
Ziegert, (2005)	Team characteristics of size, experience, ability Task characteristics of interdependence and complexity Team Processes (Potency, Cohesion, Conflict) Team Climate (Climate for Service) Team Outcomes (Satisfaction Objective Outcomes)	-	Empowerment Cooperation Helping Climate for Initiative	Shared Leadership
Wood, (2005)	Empowering team behaviors Horizontal team structure	-	-	Shared Leadership
Bligh, et.al., (2006)	Team potency Trust,Team commitment	-	Task complexity Task interdependence	Shared Leadership Knowledge creation
Burke, Stagl, Klein, Goodwin, Salas, Halpin, (2006).	Leadership behaviors	-	Task interdependence	Team performance

Author	Antecedent studies Independent Variable / Predictors	Mediators	Moderators	Outcome Variable / Dependent Variable
Ensley, et.al.,(2006)	Vertical and Shared Directive, transactional, transformational, and empowering leadership	-	Shared leadership	Growth index for new ventures, consisting of the average of firm revenue growth and employee growth rates (new venture TMTs)
Mehra, et.al., (2006)	The structure of a team's leadership network, Visual analysis of network diagrams	-	Distributed leadership and Leader-centered Leadership	Team performance : Team sales, team satisfaction
Carson, et.al., (2007)	Internal Team environment (shared purpose, social support and voice) External team coaching Degree of shared leadership	-	Team coaching	Team performance Project demands, gender diversity ,and race diversity (control variable)
Small, (2007)	Intragroup Trust Distribution of Leadership Degree of Leadership	Shared Leadership	Collectivism and agreeableness	Shared Leadership Objective/subjective Performance Team Viability

Author	Antecedent studies Independent Variable / Predictors	Mediators	Moderators	Outcome Variable / Dependent Variable
Wegge, et al., (2010)	Shared Leadership	Goal commitment / motivation, Emotions and moods, Knowledge exchange (planning), Extra role behavior / identification, Psychological empowerment	Desire for Participation, Task Uncertainty, Trust Supervisors / employees' Self-leadership	High work motivation and employee engagement
Small & Rentsch (2010)	Team Collectivism Intragroup Trust	-	Team Development Period	Team Performance Shared Leadership
Ullah & Park, (2013)	Attitude about shared leadership, Socially Desirable Responses Bias (SDR) Demographic Variables	-	Task Interdependence	Team effectiveness
Ramthun, (2013)	Shared Leadership	-	Dangerous Context, Social power distribution	Team performance

Author	Antecedent studies Independent Variable / Predictors	Mediators	Moderators	Outcome Variable / Dependent Variable
Drescher, Korsgaard, Welpe, Picot, & Wigand, (2014)	Shared Leadership	Trust	-	Group performance
Nicolaides et al. (2014|)	Shared Leadership	Team confidence	Task interdependence Team performance index Team tenure, Team type Shared leadership measurement approach	Team performance
Wang, Waldman, and Zhang (2014)	Shared Leadership		Complexity	Team effectiveness
Grille, et.al., (2015)	Vertical leadership. Psychological empowerment and. fair rewards as predictor.		Perceived Leader Prototypicality	Shared leadership
D'Innocenzo, et.al., (2016)	Shared Leadership	Network density approach, Aggregation approach, Network centralization approach	Observed effect size, Performance measurement, Task characteristics, Team task interdependence, Task complexity	Team performance

2.5 Team Types

2.5.1 Team Types

Teams become fundamental and main blocks of organizational units (Salas & Fiore, 2004; Mathieu, et.al. 2014), organizations are reorganizing work using team-based structures (Hoch, et. al., 2010). Teams have been defined as small groups of interdependent individuals who interact and share common goal(s) or objective(s), and team-based structures play an increasingly important role in organizations (Ilgen, 1999). Organizations acknowledge teams to be effective whereas depend on are highly dependent on the unique skills, knowledge, and backgrounds that their members bring to the table. Researchers and organizations classified teams with much different taxonomy. Primary purpose of classification taxonomies is to reduce the complexity of the natural world to manageable levels by describing or explaining the structure of objects (Wildman, Thayer, Rosen, Salas, Mathieu, & Rayne, 2012). As described in Hollenbeck, Beersma, & Schouten, (2012) study, Sundstrom, et.al., (1990) divided teams into four team types: advice involvement groups, production/service teams, action/negotiation teams, and project/development teams and Cohen and Bailey (1997) developed a different team type system that included project teams, traditional work teams, parallel teams, and management teams. Devine, Clayton, Philips, Dunford, and Melner's (1999) study supported new system identifying four types of teams: ad hoc project, ongoing project, ad hoc production, and ongoing production teams. Whereas Joshi and Roh (2009) distinguished teams on time, but not the nature of the people (strangers) or context (contrived), Peeters, Van Tuijl, Rutte, and Reymen (2006) categorized teams on time and the nature of the people, but not context. Hollenbeck, et.al., (2012) supported that crucial dimensions across many different team type taxonomies, based on skill differentiation, which members have specialized knowledge that make it more or less difficult to substitute members; authority differentiation, which decision-making responsibility is vested in individual members, subgroups of the team, or the collective as a whole; temporal stability, which team members have a history of working together in the past. Other studies have also found different types of teams. For example, Wildman, et.al., 2012 observed that most of the literature was focused on team categorization. Categorizing teams based on task type is problematic as regards the practical usefulness of team classification, when the focus is kept solely on "team function/mission", given that the team's task or function does not describe the unique higher-level properties that make teams distinct social entities. Using task type to categorize teams is parallel to taxonomically classifying animals based on the purposes they

serve for humans (e.g., carrying supplies, being pets, pulling farm equipment, being a food source). For that reason, they focused on team characteristics, using the question "how", as below (p.120):

> "This idea is akin to the distinction between 'what' teams do and 'how' they do it. The core team characteristics go beyond what teams do either individually or together (i.e., task type) to explain how they operate as a whole. In other words, what teams do says little about the manner in which they interact as a single social entity, but how they interact provides a deeper understanding of the higher order traits that make teams unique"

In their study they provided a final list of six core team characteristics: task interdependence, role structure, leadership structure, communication structure, distribution, and team lifespan. Therefore Wildman, et. al., (2012) classify the team types focusing on how, we identify the team types within classification that focusing on "where" by using the taxonomies for military teams as operational and project teams,.

2.5.2 Military Team Types

The military depends increasingly on the ability of individuals to unite quickly into effective teams. The complex nature of military tasks requires knowledge, skills, and abilities apart from a single individual, thus requiring the use of teams. Therefore teamwork has become a critical element for military organizations and many researchers suggested that the emphasis on teams and teamswork (Baker & Salas, 1996). Teams constitute the core units of military organizations and many important military operational tasks rely on the performance of teams, platoons, squads, battalions, etc. (Veestraeten, Kyndt, & Dochy, 2014).

In this part we want to describe the military team categories. So, we define military teams for this study broadly in two categories, military project teams and military operational teams. In the literature team are categorizing vary, also according to DeChurch and Mesmer-Magnus (2010) where they coded into three team types: action, decision-making and project teams;, action teams were those that required high levels of behavioral interdependence for success; decision-making teams required high levels of information exchange; and project teams required high levels of both types of interdependence.

In this study we classify military teams in two categories, military project teams and military operational teams that categorization depending on the where the team perform the task. Military Project teams perform their task in the Headquarters and military operational teams perform the tasks in operation theatre. Therefore, we defined the military teams as:

Military Project Teams – *are involved in both informational–knowledge work and behavioral action; working as a planning officer, working as a coordination officer in a division, member of the intelligence branch, personnel officer in the personnel division, information/communication system repairing/planning officer, or operation watch officer, in any national/international Headquarter.*

Military Operational (action) teams *– perform time-sensitive tasks requiring members to coordinate actions and perform physical tasks such as those of Special Operations/Special Warfare units, Explosive Ordnance Disposal (EOD), Navy SEALs, Army Special Forces, Marine Expeditionary Units, damage control party member on board, Warfare Officer while handling a ship in all conditions, or special infantry platoons.*

CHAPTER 3: HOW DO MILITARY TEAM MEMBERS (MID–SENIOR MULTINATIONAL OFFICERS) PERCEIVE SHARED LEADERSHIP FOR MILITARY TEAMS? A QUALITATIVE STUDY.

3.1. Introduction

The military environment is more complex than ever; each year the field is growing, and the amount of equipment used is increasing. The military playfield is greater than it has been for many years. Besides that, the military environment has changed dramatically as technological capabilities have grown in all spheres. One of the greatest challenges that leaders face today is the need to position and enable organizations and people to adapt in the face of increasingly dynamic and demanding environments (Uhl-Bien, & Arena, 2018). The return of political warfare in line with diffusion of power; growing demand for food, water, and energy; erosion of democracy; protracted wars and conflicts; and cross-cutting networks and ad-hoc alliances among actors at all levels reveal that "humanity at risk" in an unregulated, exclusive and fragmented world. Alarmingly, these emerging challenges have become more complex and prolonged, involving more states, non-states, private and hybrid actors. While the environment and equipment are changing, what about the leadership? Is traditional leadership meeting new requirements and adapting to change? Military organizations need shared leadership approach to deal with this new warfare situation.

As organizations struggle with the need to be updated to remain globally competitive and keep the stakeholders' interest, traditional leadership styles and organizational frameworks are in change (Robbins & Coulter, 2007). Rapid globalization, continuous and huge advancements in technology and socio-cultural differences swapping across borders have complicated organization and leadership challenges (Hoch, et.al.,, 2010; Kennedy, 2017). Military organizations are experiencing fast-changing environments filled with increasing complexity and ambiguity, like the business world, which requires new management strategies as traditional organizational structures depending on vertical leadership. This new "volatile, uncertain, complex, and ambiguous" situation is described as the VUCA world in Kennedy (2017) study, according to Johansen & Voto the terminology was first coined at USA Army War College, today's leaders face the challenge of identifying the ideal leadership style to meet conditional needs (Johansen & Voto, 2014). Shared leadership theory is rising as a style that potentially fits the demands of this new complex environment (Pearce & Conger 2003; Kocolowski, 2010). As teams have become the primary

building-blocks of organizations, and shared leadership, with the objective of leading one another toward the achievement of collective goals (Pearce, & Sims, 2009), facilitates increased teamwork outputs, considerable scientific research indicates that shared leadership positively affects organizational outcomes (D'Innocenzo, et al., 2016; Wang et al., 2014). This implies that leaders must create an environment of shared leadership to enable better decision-making processes and accountability within and across organizations (Kocolowski, 2010; Pearce, Manz, & Sims, 2009).

Asymmetric conflict, technological change, and challenges related to organizational design challenge today's militaries and have dramatically impacted on military decision-making and behaviors: impacts that may not only inform the field of organizational studies but also open up new areas of research. With an increase in the complexity of the task, the probability that all the required skills, knowledge, and abilities to complete it reside in a single person gets smaller (Bligh, et.al., 2006; Pearce & Manz, 2005). In this environment, it's clear that no single leader can handle the complexity. The IT infrastructure essential for the day-to-day running of all military operations often includes a complex set of legacy systems with communication hubs, creating a new layer of complexity in the military environment.

While business and war are often thought of as two separate and distinct activities, analogies abound that business is akin to war and war is akin to business. Classic military theorists such as Sun Tzu and Clausewitz both noted how organizational issues permeate military strategy (Augier, Knudsen, & McNab, 2014). One of the most familiar organizational models for a staff is the traditional function-based model found in the military, according to this area of expertise. Although there are several models, the function-based structure is the most common in NATO Headquarters and usually also forms the bases from which other models are derived. Staff Organizational Structure is comprised of function-based areas of expertise, usually divided into (staff) sections: personnel (1), intelligence (2), operations (3), logistics (4), plans (5), Communications and Information Systems (CIS) (6), training (7), finance (8), and Civil-Military Co-operation CIMIC (9). As an example in the UK, one of the NATO member countries, the Permanent Joint Headquarters (PJHQ) is an adaptable and agile headquarters created to command joint and combined military operations. PJHQ is organized by divisions (numbered J1 to J9). The specific responsibilities of each division are: J1: personnel, J2: operational intelligence, J3: current operations, J4: logistics/medical, J5: crisis and deliberate planning, J6: communication and information systems, J8: finance and human resources, and J9: policy, legal and media operations. This kind of military headquarters

organizational structure is functioning similar to in other counties. Each division is led by a senior officer or senior civil servant and is responsible for a particular area of capability. At the same time, Gulick's (1937) famous components of scientific administration [POSDCORB, P = planning, O = organizing, S = staffing, D = directing, CO = coordinating, R = reporting and B = budgeting] (Chalekian, (2016)) represent a common field of public and private organizations. Organizations have their own various mechanisms for practicing POSDCORB, which are reflected in their organizational structure and depending on teams. This is very similar to those of military organizations headquarters structures as explained above. Both fields – organization studies and military organizations – are interdisciplinary by nature and have essential overlapping intellectual roots (Augier, et.al., 2014). As explained in the literature review shared leadership is highly practical in different organizations (healthcare organizations, public universities, etc.). Augier, et al., (2014) argued that there is a lack of discussion about the challenges facing military organizations today and that we should endeavor to open up avenues for future research into the topic. We agreed that there is a scarcity of discussion on the implementation of shared leadership in military organizations. Shared leadership is an emerging style in organization studies; how can these expectations fit the demands of military organizations? Can shared leadership be implemented in military organizations? The IT infrastructure upgrades the military environment rapidly. Do we have to change traditional leadership to shared leadership as a result of changes in the military field? Is there a way to combine these leadership styles? A more serious attempt at analysis is needed, given the fact that our traditional models of leadership must change in an age of teamwork and knowledge work (Avolio, et al., 1996; Drucker, 2001; Pearce & Sims, 2002; Pearce, 2004; Day, et al., 2004; Osborn, & Hunt, 2007; Shondrick, et.al., 2010; Yukl, 2013).

Though some researches into the relation of shared leadership and effectiveness are positive in conventional contexts (e.g., Avolio et al., 1996; Carson et al., 2007; Ensley, et.al., 2006), scholars have yet to examine shared leadership in military organizations. The lack of scholarly understanding of shared leadership in these organizations highlights an essential gap in shared leadership research. This investigation addresses the phenomenon of shared leadership implementation in military teams through a qualitative study. We hope to inspire contemporary organizational researchers to consider military organizations as valuable sources of insight for leadership studies and the exploration of shared leadership. While businesses and military organizations may differ in terms of their ability to measure effectiveness, these organizations share similarities that are worthy of study. As Kocolowski (2010) stated, shared leadership has its challenges and can be difficult to implement; however,

organizations of all types should take notice of and consider implementing a shared leadership approach. Therefore, we identify shared leadership for military organizations and expect shared leadership implementation in some military teams. The objective of the qualitative study is to explore the military team members' (mid-senior multinational officers') perceptions of shared leadership and to clarify the facilitation of shared leadership in military teams. The study reveals the development and implementation reasons of shared leadership in military organizations. Following data collection and analysis, we found three primary dimensions that describe and explain the shared leadership implementation phenomenon in military project teams. Finally, we addressed theoretical implications, limitations, and recommendations for future directions of research.

3.2. Current Study

The aim of this study is to gain a deeper understanding of the factors influencing shared leadership in military organizations. This study explores possible explanatory factors as to how shared leadership might be developed and implemented in military organizations to meet the emerging demands of future generations and the complexity of the workplace. The purpose of the study is to explore the concept of shared leadership in military organizations. Specifically, the study investigated the organizational factors that might contribute to the successful development and implementation of shared leadership in military teams as perceived by mid-multinational officers. Understanding military leaders' experiences in military teams is essential for determining how shared leadership may occur in a military organization.

Using comprehensive semi-structured interviews and content theme analysis to analyze the perceptions and beliefs of a sample of 20 leaders in a military context, this study explores organizational culture and/or institutional factors that have contributed to the successful development and implementation of shared leadership in military teams as perceived by mid- international officers.

As Augier, et al., (2014) suggested, important topics for future research include a comparative analysis of how business and military organizations adapt to influence a dynamic environment and how the forces of centralization and decentralization influence the evolution of these organizations. First, we want to adapt a vertical and shared leadership combination approach to the changing environment.

Second, this qualitative study is an in-depth exploration of the experiences of 20 executive-level military leaders from an international military organization (NATO). At the heart of this exploration are stories that reveal the challenge of leading change in military leadership from the leader's perspective, creating an opportunity to explore military experts' values and military contexts. The aim of approaching this research from a team perspective is to gain a more realistic view of the issues and challenges that military leaders face during the change, and how they make meaning and respond to today's richly interconnected and largely unpredictable information age.

Third, one of our objectives is to understand the team context (military project teams or military operational teams) in which shared leadership could be more viable. Finally, this study focuses on the lived experiences of mid-international officers by exploring and describing their perceptions regarding the development and implementation of shared leadership for the military team types.

This study has an exploratory character that we propose the following exploratory questions instead of hypotheses formulation. The primary research question is "What are the military team members' perception and military team characteristics that facilitate and hinder the development of shared leadership in military teams?" We want to identify those factors that affect the successful development and implementation of shared leadership in a military organization. Those factors will lead military leaders to explore cultural (organizational) and/or institutional factors that may have contributed to successfully sustaining shared leadership in a military organization. The interest behind the study was to uncover insights into how shared leadership implementation is manifested for military teams.

The current study helped to fill some of the gaps through the use of a qualitative design to study shared leadership and its implementation in military teams. Despite the call for this change, there is a lack of academic empirical evidence in the area of military organizations and shared leadership. The purpose of this exploratory study is to reduce this gap in the literature. The following section presents the methodology used to conduct this study.

3.3. Methodology

We performed a qualitative study to understand the perceptions and outcomes that occur in a specific type of military team (operational and project) and its use of shared leadership. Describing and developing an understanding of shared leadership for project and

operational military teams constitutes the primary purpose of this study. The aim is to find and paint a valid and comprehensive picture of a military member's interpretations and perceptions of shared leadership. This qualitative research investigated elements affecting the successful development and implementation of shared leadership in military organizations. To analyze the data, we used Creswell's (2003) exploratory research methodology and Gioia's thematic analysis methodology (Corley & Gioia, 2004; Gioia, Corley, & Hamilton, 2013). Qualitative research results provide rich, deep, and real description, answering research problems requiring understanding and prediction (Stainback & Stainback, 1988). Also, qualitative research approaches provide proper methods for exploring the nature of a phenomenon with relatively little information and interested in how people interpret their experiences (Hatch, 2002; Merriam, & Tisdell 2015). We want to understand and describe the research problem with a qualitative method that offers the most appropriate approaches for revealing the military members' perceptions accurately.

3.3.1. Sample

The scope of this study was limited to North Atlantic Treaty Organization (NATO) members. The sample size was 20 interviewees. In qualitative research, purposive sampling is using researcher's own judgment to select a sample and small sample population can affect the validity of an observation and its generalizability by introducing the element of subject bias (Cooper, Schidler, & Sun, 2006; Greener 2008). This study, therefore, based the interpretatiton of results on the assumption that the research participants represent mid-rank international officers and military leadership as a whole. The targeted sample criteria were that participants must hold leadership positions at the mid-senior management level and with the rank of Captain& Lt (2), LCDR & Major (6), CDR& Lieutenant Colonel (10), and CAPT & Colonel (2). Besides, participants must have been in military positions for at least eight years. The participants were from NATO member countries such as Canada (1), Greece (1), Italy (2), Poland (1), Portugal (2), Spain (1), Turkey (9), the UK (1) and the USA (2) and all participants in this qualitative study were male. In purposive sampling for qualitative research, it is essential that the selected target population be able to provide the information most relevant to the study and important to select a sample which the most grasped (Merriam & Grenier 2019). Creswell (2003) stated that research findings from a small sample of the population could be applied to a large population. According to Patton (2002), "There are no rules for sample size in qualitative inquiry" (p. 244), whereas Creswell (2003) stated "long

interviews with up to 10 people" (pp. 65-113) as sufficient for a qualitative study. Also there is a qualitative saturation criterion that Guest, Bunce, & Johnson, (2006) explained as the progression of theme identification after successive sets of six interviews, until 60 interviews have been conducted. Ninety-two per cent of all codes were identified after 12 interviews and 97% of the "important" codes (operationalized as the number of individuals expressing the same idea) were identified within these 12 interviews. Guest, et al. (2006) stated that about 12 is a sufficient sample for interview studies analyzed for emergent themes, whereas according to Francis, Johnston, Robertson, Glidewell, Entwistle, Eccles, and Grimshaw (2010), data saturation in theory-based interview studies was achieved after 17 interviews, at which point interviewing ceased. Thus participants were 20 mid-international officers within mid-senior ranks. The NATO members were selected because (a) access to these military leaders was granted more readily; (b) it was a large-scale international military organization, allowing for an appropriate sample to be studied; and (c) NATO members have a similar military team approach based on 69 years of standardization exercises. As part of the protocol for maintaining anonymity, the names of the military leaders selected for the study are not listed.

3.3.2. Procedure and Instrument

Collecting first-hand statements of personal experiences provides a researcher with the opportunity to capture the meaning of the subject in his or her own words (Merriam & Grenier, 2019). Thus, the interview instrument for this study was an open-ended questionnaire (see Appendix 2). A pre-study was made before data collection. We sent a pre-questionnaire to 10 military officers and asking "How do you characterize military team effectiveness regarding the way leadership is applied? ". We tried to identify their perception of the current leadership style and then, based on the pre-questionnaire study outcome, we edited the final interview questions to become more open-ended and less structured, and thus to receive more of the lived experiences of participants. The military teams types was created using information gathered from subjects in a pre-questionnaire. We aimed to explore whether similar or different team requirements exist for military project teams and military operational teams facing demanding tasks. Also, we informed participants about the terminology of shared leadership, to familiarize them all with the same concept, which was an important output. In any research, strictly conforming to guidelines on participants' privacy and confidentiality is critical (Creswell, 2003). A briefing was given to all participants informing

them of the purpose of the study and asking for their voluntary participation, while informing them about anonymity and confidentiality. Data were collected from April 2017 to June 2017.

This study centered on the lived experiences of mid military leaders in military teams by exploring and describing their perceptions of leadership within the setting of a military organizational structure that reflects shared leadership. As this was a qualitative, exploratory study focusing on lived experiences, a thematic analysis approach was used to analyze and explore, through in-depth electronic interviews, the perceptions and beliefs of a purposive sample of 20 military leaders at the selected international military organizations.

We also consider the type of team in this relationship. Accordingly, we define military teams as operational and project teams based on the taxonomy of DeChurch and Mesmer-Magnus (2010). By integrating the kinds of team, we explore the difference between operational and office environments.

In this study, we used an electronic interview for which mid-international officer participants were contacted by email. Electronic interviews are research instruments that use electronic communication facilities to access and communicate with participants. The interviews can be held online, in real time, using the internet, or can be offline, in asynchronous mode, using email communications (Cassel & Symon, 2004). Finally, we felt that participants should have an option to contact us by another method if they wanted to, so we gave them a contact telephone number. Interviews were conducted to obtain both reflective and real-time accounts from those people experiencing the phenomenon of interest (Gioia, et al., 2013). The interview questions were designed to facilitate inquiry into the research question of the qualitative study, and the target was to seek answers directly corresponding to the research question and purpose of the study. Email interviewing is empowering to the participants because it essentially allows them to be in control of the flow of the interview (Bowker & Tuffin, 2004), answering at their convenience and in any manner they feel suitable (Meho, 2006). Table 3.1 provides a recap of the purpose of the interview questions. This grouping of interview questions based on the underlying purpose facilitated the coding process.

The questions of the interview protocol are as presented in Appendix 2. We prepared a brief and very comprehensive definition of shared leadership, due to the diverse definitions of this concept. It also guaranteed that all the respondents gave answers related to the same concept. We adopt to ask broad, open-ended questions, to more profoundly figure out which concepts emerged from the participants, and to avoid directing them toward yes/no answers (Klein, Ziegert, Knight, & Xiao, 2006; Graça, 2014).

Questions	Purpose
1	Provide opening construct to begin the interview and observe military leadership situation
2	Seeking here if the team leader starts to perform a task with "what do you think? This is very prominent behaviour that hierarchical leaders can do to help promote effective shared leadership. (Pearce, Manz, & Sims, 2014).
3, 4, 5, 6	Seek responses to the main research question Perceptions and experiences regarding the factors affecting shared leadership in military organizaitons Perceptions on what is needed for shared Leadership implementation To ask examples of lived experiences that might help explain factors that enable or inhibit shared leadership effectiveness for military teams
7,8	Assess impact of perception of the participants Observe any level of shared leadership experience Designed to help participants focus on concrete examples, rather than abstracted generalities – an important principle in most qualitative interviewing approaches
9,10	Perceptions of tracking and promoting changes in military team leadership

Table 3.1. Purpose of the Interview Questions

The interview questions were constructed around 3 main areas: 1) Introductory questions about the participants' approach to shared leadership and vertical leadership in military teams. 2) Conditions of shared leadership for military teams. 3) Shared leadership perceptiveness on matters such as team performance criteria for project teams and operational teams. A qualitative approach "helps the authors explore a process that has not been examined before and one that displays many complexities" (Creswell, 2003, p. 62). A qualitative thematic analysis design was appropriate for this study because it seeks to explore and understand the issue of shared leadership by considering factors that help shape that phenomenon (Creswell, 2003). A thematic analysis in a qualitative study is used when seeking to identify, analyze, and report themes within data and offers theoratically flexible approach for the data analysis (Braun & Clarke, 2006). Using open-ended questions allowed participants to express, in their own words, their perceptions regarding their experiences. Thus, a researcher was able to derive first-hand descriptions of personal experiences of leaders involved in military teams at international organizations, and we decided on manual coding rather than the use of computers for the analysis, due to the small data pool and our proficiency in literature.

3.4. Research results

3.4.1. Data Analysis

We inductively analyzed the data, adhering closely to the guidelines (Gioia, Thomas, Clark, & Chittipeddi 1994; Corley & Gioia, 2004; Clark, Gioia, Ketchen Jr, & Thomas, 2010; Gioia, et.al., 2013 ; Creswell (2003, 2014) and delineating themes and aggregate dimensions. We started the analysis with the original concepts in the data, grouping them into categories with open coding, including no previously defined categories, so that all the categories emerged and developed from the data. The final data structure is illustrated in Figure 3.1, which summarizes the second-order themes and aggregations that led us to the development of a model of the military leadership change process.

According to Creswell (2003, 2014), the thematic analysis of data includes the following steps: (a) organizing and exploring the data – reviewing the data to assess relevance of responses; (b) coding – to describe the development of the themes; (c) reporting the findings, and (d) interpreting the findings. For this study, the aforementioned steps were done manually. Specifically, thematic data analysis was performed on the data collected in the following process, as recommended by Braun and Clarke (2006), Creswell (2014) and Gioia, et.al., (2013):

1. Organizing and exploring the data: First, we prepared the data by receiving email interviews, transferred them to Word documents and assigned anonymous code numbers to identify participants. Participants were coded 1-20 instead of using their actual names. The Word documents were read and re-read to familiarize ourselves with the data and to begin to identify meaningful text and common themes. According to Creswell (2014), this step gives answers to "What is the impression of the overall depth, credibility, and use of the information?" (p. 197). Only text relevant to the primary research question was highlighted for further meaningful coding and thematic development. Figure 3.1 shows the data structure of our findings.

2. Coding: We used hand coding while analyzing text throughout the entire process. Multiple informant terms, codes and categories emerge early in the research. In the first order concepts coding, we extracted the categories easily from the 20 interviews. Then we sought similarities and differences among these categories. In this manner, an inductive process was established with which to begin searching for themes, and categories were grouped accordingly. We tried to elaborate the constructs and concepts of the study. By concept is meant a more general, less well-specified notion that captures qualities explaining the phenomenon of theoretical interest

and that needs to be discovered for the purpose of theory building. The concept as a precursor to constructs can guide the formation of the constructs (Gioia, et al., 2013).

3. Thematizing: The codes were then further categorized into clusters to form levels of themes. The first-order categories helped unveil vital elements of the informants' meaning systems but not the deeper patterns or relationships in the data. Thus, processing the data by first using inductive analysis was necessary in order to define the themes and validate the codes accurately. To discern themes that might constitute the basis for understanding the Shared Leadership phenomenon in military teams, we used a more structured second-order analysis to investigate the data at a higher level of theoretical abstraction (Gioia, et al., 1994). We again used constant comparison techniques in discerning second-order themes that subsumed the first-order categories (Glaser, Strauss, & Strutzel 1968; Corley & Gioa, 2004). After examining category nestings and overlaps, 15 second-order themes emerged: (1) Generations Gap. (2) Zeitgeist/Spirit of time. (3) Complexity. (4) Requirements and Limitations. (5) Pros of Collective IQ. (6) Specialization/K.S.A. (7) Inappropriateness of Vertical Leaders. (8) Nature of (HQ) Environment. (9) Importance for Planning and Strategy Processes. (10) Shared Leadership in Military Teams. (11) Time Sensitivity. (12) Theatre of Operations. (13) Possibility of Conflict. (14) Unity of Command. (15) Leaders Give Orders.

In the third stage of our analysis, we assembled our 15 major themes into aggregate dimensions. This process involved the relatively straightforward task of examining the relationships among first-order categories and second-order themes that could be distilled into a set of more simplified, complementary groupings.

4. Reporting results: The themes are described, and excerpts from the transcribed interviews are added to provide evidence and validity. The thematic analysis also involves a lot of interpretive work to identify an essential underlying idea or concept related to the research question – it is not necessarily about the frequency of a response but about discovering the hidden meanings captured in the data (Braun & Clarke, 2006). Ultimately, we consolidated the themes into more general dimensions of analysis that captured the overarching concepts relevant to the merger process. Five aggregate dimensions resulted: Driving forces of Change, Triggers to SL, Specific Cases of SL for Military Teams, Operational Environment, and Operational Team Characteristics. Lastly, we use Figure 3.1 for building the grounded theory. Grounded theory focuses more on uncovering phenomena and processes (Länsisalmi, Peiro, & Kivimäki, 2004)

3.4.2. Results

This section highlights the methodology used in the process of data collection, coding, and thematic data analysis for this study. The results and discussion of findings are presented in a narrative of themes and broadly categorized into three sections: factors affecting shared leadership in military project teams, factors affecting shared leadership in military operational teams, and a theoretical conceptualization of Leadership Change Context for Military Teams. Keywords, phrases, and excerpts from quotations from participants are provided as evidence in support of the themes. The overall results revealed that driving forces of change were the major factor affecting shared leadership in military project teams, and the operational environment was the most crucial hindrance to shared leadership in military operational teams. The study also revealed a paradox in the perception of participants about shared leadership for the military teams: it was both an enabler and inhibitor for military teams, as it facilitated collaboration and communication for military project teams, yet on the other hand, it also created conflict.

Figure 3.1 illustrates the structure and order of the data, from first-order categories used by the participants, to more general and author-induced second-order themes drawn from the first-order categories. Then we gathered similar themes into several overarching/aggregate dimensions that make up the basis of the study. The themes arising in this category provide explanations to the research question of the qualitative study. First, the data analysis revealed three dimensions for military Project teams: Driving forces of Change, Triggers to SL, Specific Cases SL for Military Teams, and two dimensions for military operational teams: Operational Team Environment, and Operational Team Characteristics. Aggregate dimensions are the bedrock of the framework theory of Leadership Change Context for Military Teams that is presented in Figure 3.2.

Category 1 (first ten themes) and Category 2 (last five themes) represent typical questions and examples that substantiate the second-order themes we identified. The first ten themes concern direct implementation of shared leadership for military project teams, the latter five themes show that vertical leadership must prevail for military operational themes. Together these themes led to the development of the grounded theory which is articulated in the following section.

Category 1: Factors Affecting Shared Leadership in Military Project Teams

A significant sub-theme that emerged from the data was that participants believed that shared leadership could be implemented for the military Project teams. ("*In a Project team in*

which shared leadership is implemented, the duty can be finished in a shorter time and more efficiently", participant 4). It will facilitate collaborative efforts and enable members to share leadership effectively. ("*The advantages are numerous – from increased ownership and buy-in to the ability to account for team weaknesses or individual lack of depth of knowledge/experiences through collective discussion, a more comprehensive product should be expected",* participant 17). The first aggregation induced from the themes is the Driving forces of Change that impel military teams towards shared leadership.

Driving forces of Change

Driving forces of Change was perceived as a reason why shared leadership must be implemented for military project teams. Four specific themes relating to the origins of shared leadership implementation in military project teams characterized our participants' experiences: (1) Generation Gap, (2) Zeitgeist/Spirit of time, (3) Complexity, (4) Requirements and Limitations. Participants identified many reasons that justify a change in the way leadership happens in the military context. On the one hand, they speak of different expectations from new generations *("And mostly the evolved perception of the new generations force the new leaders of the military to have SL in the modern military contexts",* participant 1), noting that these new individuals may have a role in implementing Shared Leadership, by contrast with their older counterparts *("because older people may have more biases than younger",* participant 9). In relation to the generation gap, participants also mentioned modern time needs, besides which they particularly emphasize the technology and IT upgrading that create the complexity (*"however nowadays beacuse of the technological developments, information pollution"*, participant 1). Participants confirmed the literature findings for other shared leadership environments, such as complexity and ambiguity as predictors (Day et.al., 2004), applying them also to the military context. They ovewhelmingly explained that this complexity and the new information era required change and that with shared leadership they could even change the organizational culture (*"The ability of individuals to work together, critically their willingness to accept criticism and change their views and culture if necessary",* participant 7). The following excerpts provide some insight into these perceptions and beliefs:

Theme 1: Generation Gap

Partcipants expressed the view that new generations' expectations of the leader differed from those of previous generations. Participant 1 explained that the new generations forced the military to adopt shared leadership; for example:

> And mostly the evolved perception of the new generations forces the new leaders of the military to have SL in the modern military contexts.

Participant 9 stated:

> But we should also take into account the relevance of the age of people involved; because older people may have more biases than younger.

P17 emphasized the generation discrepancy:

> Generational differences play an impotant role in facilitating shared leadership.

Figure 3.1. Data structure

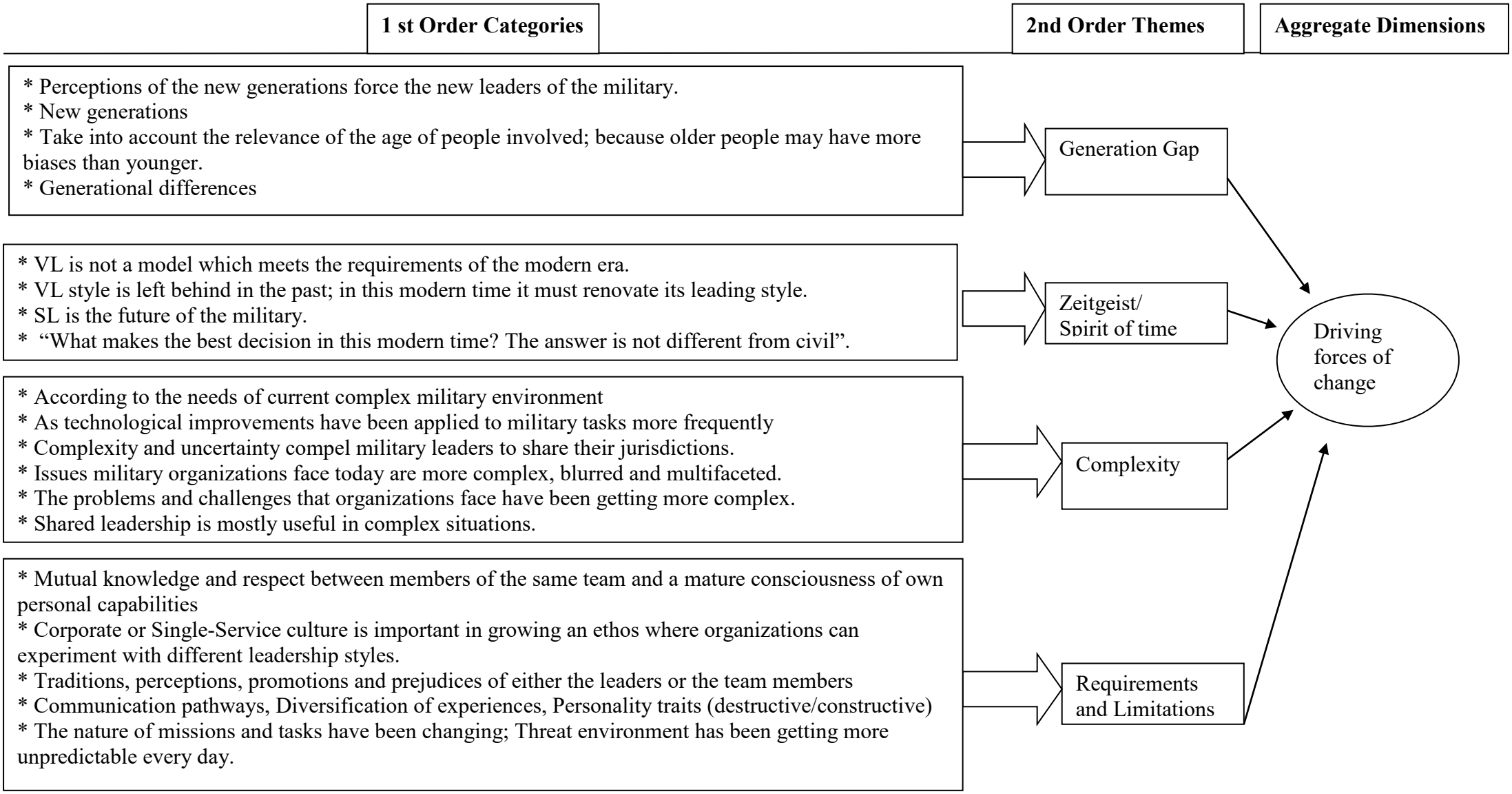


Figure 3.1. Data structure (Continued)

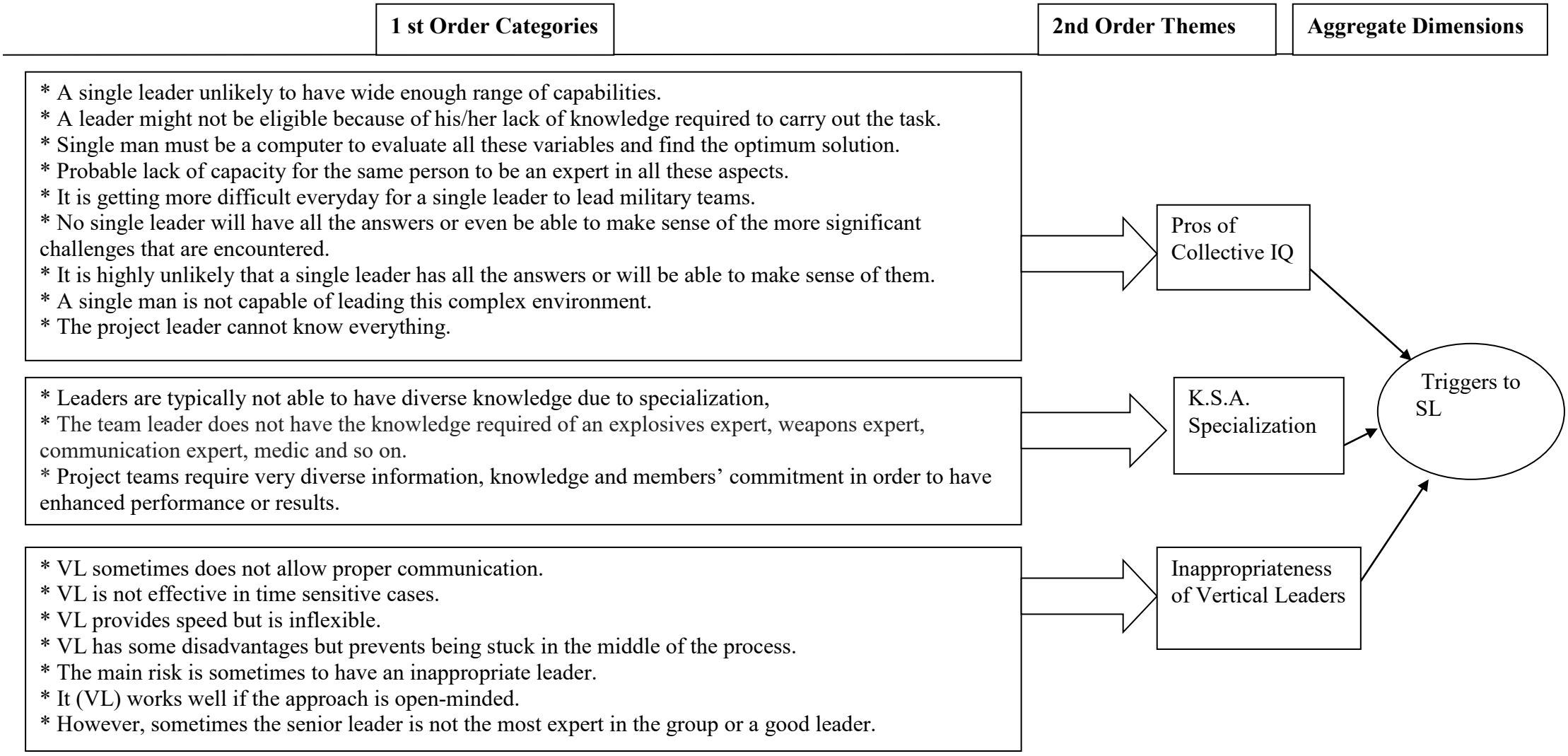


Figure 3.1. Data structure (Continued)

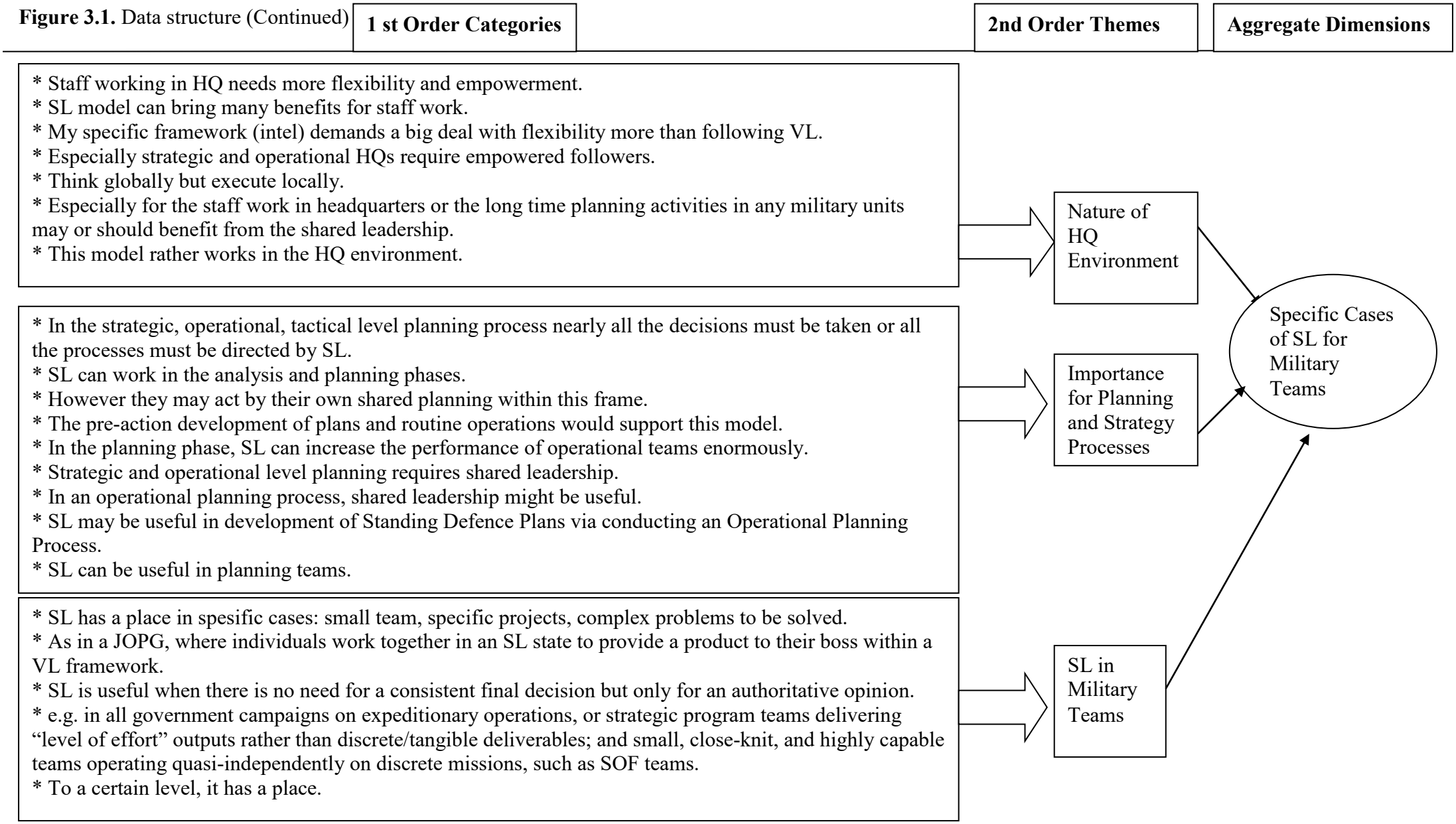
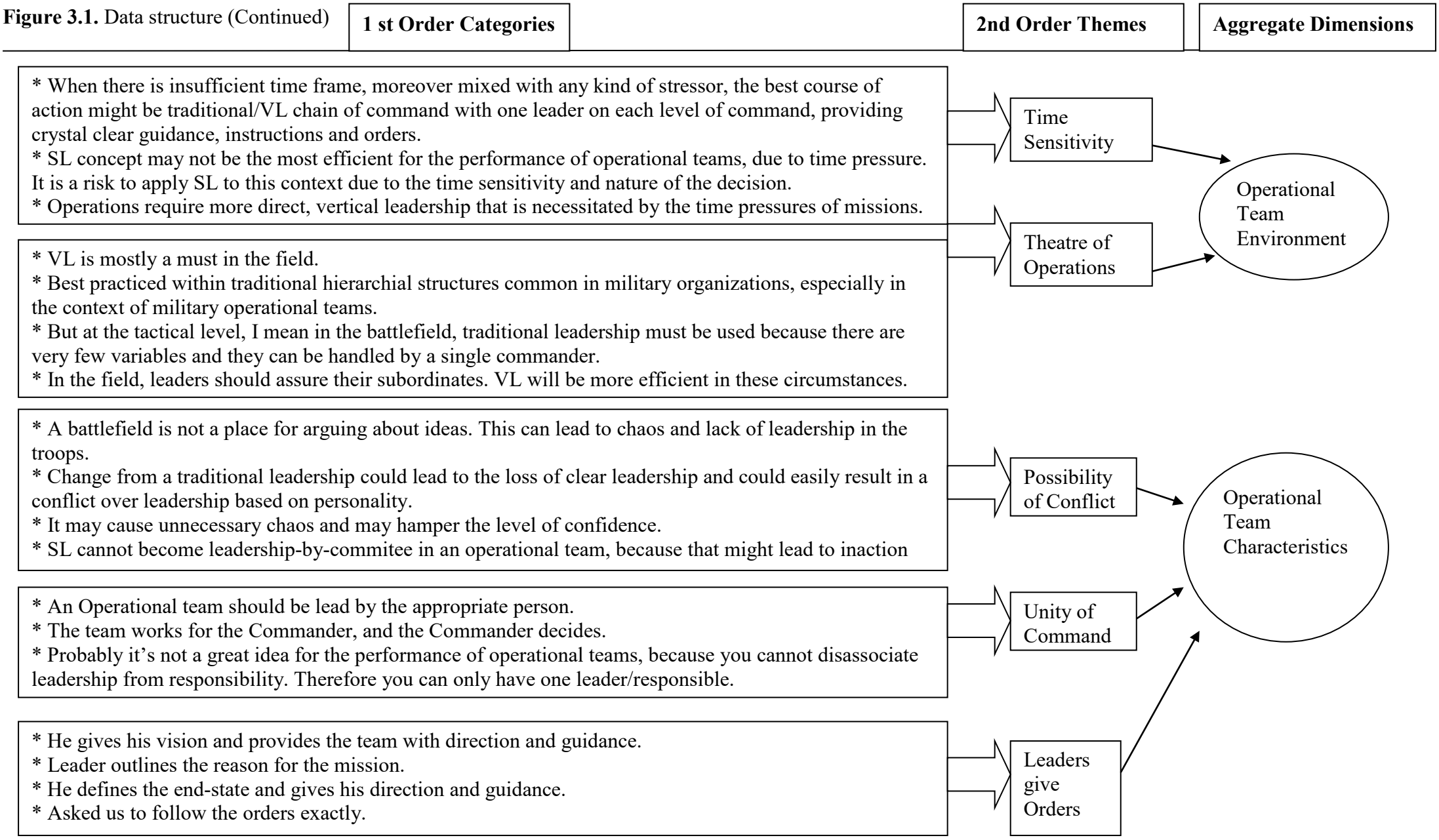


Figure 3.1. Data structure (Continued)



Theme 2: Zeitgeist/Spirit of the Time

Participants explained that shared leadership meets the needs of modern times. In this technological era, shared leadership is appropriate for some military teams. P1 stated:

> Vertical leadership is not a model which meets the requirements of the modern era. SL is the future of the militaries.

P3 explained the needs of modern leadership:

> VL style is left behind in the past; in this modern time must renovate its leading style. The other aspect is the changing nature of mankind. People are more prone to democratic leading styles. If they understood that a kind of dictatorship is prevailing in the decision-making process, they can lose their desire to contribute. At this point for me the question is "What makes the best decision in this modern time?" And the answer is not different from the civil environment.

P19 described this century as an information age:

> The new social configuration initiated by the information age plays an important role in facilitating shared leadership.

Theme 3: Complexity

The participants richly described the important impact of complexity on the implementation of shared leadership in military teams. P3 explained that complexity is the first aspect of shared leadership:

> According to the needs of current complex military environment. Complexity of the modern military environment is the first aspect for me…Shared leadership is mostly useful in complex situations. For example you are planning an operation in an ethnically divided place. There is no state control and ethnic groups are fighting with each other. These kinds of places exist in Africa (Libya, Sudan, Somali etc.) or in other places. So you need to think many things at the same time. These kinds of operations are being done by many armies and these are always seen as the most complex operations. In this kind of planning process Shared Leadership must be established within the planning group. Decisions must be taken by an Executive Board, not by a single Commander.

P1 stated the increase in complexity due to technological developments:

> In the past there were fewer factors and dynamics which have great impact on military operations; however nowadays because of the technological develeopments, information pollution… force the new leaders of the military to have shared leadership in the modern military contexts.

P18 explained the enormous change in complexity in asymmetric warfare:

> Considering the complexity of today's problems and challenges… The missions, tasks, threats and challenges that military organizations face today are more complex, blurred and multifaceted. The complexity of threat has changed from symmetric to asymmetric warfare… The problems and challenges that organizations face have been getting more complex.

P16 affirmed the importance of shared leadership in a complex project:

> In a complex project, shared leadership is important because the recommendations of expert team members will be very important to finish the project.

P2 stated that complexity places compulsion on military leaders:

> Complexity and uncertainty compel military leaders to share their jurisdictions.

Theme 4: Requirements and Limititations

Participants explained the benefits and the aspects of shared leadership for military teams. P6 listed aspects of shared leadership in military teams:

> Mutual trust, confidence, mutual respect, open mind, freedom of expression, complacency/sense of security.

P7 explained the effects of shared leadership on adapting to change:

> The ability of individuals to work together, critically their willingness to accept criticism and change their views if necessary (culture).

P8 commented on the impact of greater openness of thought:

> Notion of responsibility and vision of commitment of the contributors of the organization; greater confidence and ease of dialogue between parties; and greater openness of thought.

P10 described the shared leadership effect on maturity of consciousness:

> Mutual knowledge and respect between members of the same team and a mature consciousness of own personal capabilities. Shared leadership is, first of all, a matter of shared responsibility.

P11 mentioned the importance of cooperation for shared leadership:

> Corporate or single-service culture is important in growing an ethos where organizations can experiment with different leadership styles.

P12 declared that specialization is the critical aspect:

> Specialization is becoming a critical aspect and probably is the fact that makes the modernization process in the military easy and difficult at the same time.

P14 echoed this statement, stating:

> Specialization demanded a broadened palette of military functions.

Triggers to Shared Leadership

Triggers to Shared Leadership were perceived as key in making shared leadership effective for military project teams. Three specific themes related to the origins of shared leadership implementation in military project teams characterized our participants' experiences: (1) Pros of Collective IQ (2) Specialization/K.S.A. (3) Inappropriateness of Vertical Leaders. Participants identified that the military team's situation triggers shared leadership, even sometimes forcing military project teams to adopt it. They brought out the great value of the collective product and IQ ("*I think that shared leadership can help project teams because each person's strengths can help provide a better product to the team's collective product"*, participant 7) for mitigating the incompetency of the single leader ("*No single leader will have all the answers or even be able to make sense of the more significant challenges that are encountered"*, participant 13). Participants noted the single leader's ineffectiveness in dealing with the problems, due to the wide area of specialization. Furthermore they described shared leadership as inescapable because of the specialization in military project teams ("*Shared leadership is a leadership style where there are several leaders who manage different areas of the projects and who must be guided by guidelines previously defined by consensus of the leaders themselves",* participant 8). Morover, all the participants explained the disadvantages of vertical leadership ("*Vertical leadership is vulnerable to the bias of the leader and can be very personality driven – capable of either elevating or*

destroying team", participant 17) that lead military organizations to adopt shared leadership for military project teams. The following excerpts provide some insight into these perceptions and beliefs:

Theme 5: Pros of Collective IQ

As explained in the literature review, the idea that leadership functions cannot be performed by a single leader but need to be performed by team members is not new. A single leader may not successfully carry out all necessary leadership functions (Day et al., 2004), while shared leadership represents mutual influences among team members, which can overcome the limitations of the leadership style of a single leader (Lee, Lee, Seo, & Choi, 2015). It is also richly explained by the participants that no single leader can perform the necessary leadership functions in military teams. P20 described how this situation leads the military organizations into conflict:

> It is becoming tough for a single leader to have a wide enough range of capabilities. Moreover, it becomes more evident and latent for the members of teams to see that a leader might not be eligible because of his/her lack of knowledge required to carry out [tasks], which causes clashes inside organizations.

P3 described this single leader with an imaginative metaphor:

> There are too many variables dominating the battlefield and the planning process. And a single man must be a computer to evaluate all these variables and find the optimum solution. This is impossible. A single man is not capable of leading this complex environment.

P18 described the single leader's difficulty:

> It is getting more difficult every day for a single leader to lead military teams and answer all the questions and find feasible solutions… it is highly unlikely that a single leader has all the answers or will be able to make sense of them.

P13 mentioned the incompetency of the single leader for military teams:

> No single leader will have all the answers or even be able to make sense of the more significant challenges that are encountered.

P12 referred to the lack of capacity of the single leader:

The probable lack of capacity to be an expert on all of those by the same person.

Theme 6: Specialization/K.S.A.

Participants stated that leaders cannot have all the knowledge, skills and abilities needed, due to specialization, so that shared leadership may ensure collective knowledge for military teams. P2 mentioned the lack of diverse knowledge:

> In addition, leaders are typically not able to have diverse knowledge due to specialization, complexity and perpetual change. So, shared leadership practices should find a place in any military context.

P16 mentioned the importance of specialization especially in the HQ:

> Specialization is very important in the HQ. This is valid especially in the strategic or operational level HQs.

P20 explained this knowledge deficency with a military example:

> What I believe is that shared leadership absolutely has a strong place in modern armies. For instance, it is almost impossible for an executive officer of joint force to give the correct commands without knowing all the capabilities and constraints of the components of joint force, such as different types of ground units like tanks, artilleries, missiles; surface units like frigates, submarines, fast patrol boats; aerial units like fighter planes, bombers etc. It is also true for relatively small teams like special forces, because a team leader does not have the required knowledge of an explosives expert, weapons expert, communication expert, medics and so on.

P1 described the importance of knowledge of details for project teams:

> Project teams require very diverse information, knowledge and members' commitment in order to have enhanced performance or results. So, I can't imagine any other type of leadership for project teams.

P12 affirmed the importance of specialization:

> Specialization is becoming a crucial aspect and probably is the factor that makes the modernization process in military easy and difficult at the same time.

Theme 7: Inappropriateness of Vertical Leaders

All the participants stated that the current vertical leadership with an inappropriate and incompetent appointed leader has some disadvantages.P1 referred to VL communication problems:

> There should be a vertical leadership to some degree; however it is too vertical in my military and the vertical relationships are very strict and do not allow sometimes a proper communication among the personnel.

P5 described vertical leadership as rigid:

> Vertical leadership provides speed but is inflexible.

P6 stated the disadvantages:

> Has some disadvantages but it prevents from being stuck in the middle of process due to a team member's inherent personal features (human being's temptation to dominate over a group).

P9 explained the inappropriate leader as a disadvantage of vertical leadership. The possibility of the inappropriate leader suggests a different research area for future studies. P9 stated:

> The main risk is to sometimes have an inappropriate leader.

P10 declared that vertical leadership depends on the leader's mindset:

> Vertical leadership works well if the leader [has an] open-mind approach.

P15 described the lack of creative ideas in vertical leadership:

> In the traditional model, the staff members are unwilling to create new ideas helping to improve the quality of the output. They feel themselves ignored for any critical decision while the leaders take whole load of the decisions and the responsibility of any side effects of the failed actions.

P17 explained the leader's ability to destroy the team in vertical leadership:

> Vertical leadership is vulnerable to the bias of the leader and can be very personality driven – capable of either elevating or destroying team.

Few of the participants insist on vertical leadership, while they accepted the disadvantages. P13 explained this stiuation:

> I think the vertical leadership, it's the most effective and traditional form to lead inside a military organization. However, sometimes the senior leader is not the most expert in the group or a good leader, but nevertheless I believe there is more advantages than disadvantages in using this vertical model than another one instead.

Specific Cases Shared Leadership for Military Teams

Specific Cases Shared Leadership for Military Teams was perceived as key to making shared leadership practicable for military project teams. Three specific themes related to the origins of shared leadership implementation in military project teams characterized our participants' experiences: (1) Nature of (HQ) Environment, (2) Importance for Planning and Strategy Processes, and (3) Shared Leadership in Military Teams. Participants overwhelmingly stated that shared leadership can be implemented for military teams in specific cases where they are working in an office environment, and also during the planning process ("*Shared leadership can work in the analysis and planning phases"*, participant 10). They stated that headquarters availability generated shared leadership in both aspects, as an office environment and also as a site of strategic/operational planning ("*Especially for the staff working in headquarters or the long-time planning activities in any military units may or should benefit from the shared leadership",* participant 15), and explained that there were many specific areas which did not deal with direct operations ("*My specific framework (intel) demands a big deal with flexibility more than following vertical leadership"*, participant 12). These specific areas are extensive for military teams, from the highest teams that decide the command policy ("*Shared leadership is useful – planning staffs; development of command policy, 'planning boards'"*, participant 17) to the smallest teams ("*Shared leadership is useful on scientific type subjects, use of the UAV's out of the battle space",* participant 5) with diverse subjects ("*Small unit training events"*, participant 17). The following excerpts provide some insight into these perceptions and beliefs:

Theme 8: Nature of (HQ) Environment

Participants explained that shared leadership can be implemented for military teams that are working in the Headquarters environment.P2 supported shared leadership in the HQ:

> Staff working in HQ needs more flexibility and empowerment. Especially strategic and operational level headquarters require empowered followers. As you know the term "strategic corporal", any act in tactical may have strategical consequences; thus traditional leadership will suffer certain side-effects.

P8 described the profit from shared leadership for staff working in the HQ:

> SL model can bring many benefits for staff work.

P3 explained that decisions must be taken in strategic level HQs with shared leadership:

> We can say think globally but execute locally. This means in the upper levels all the arguments must be done and the decisions must be taken by a throng of capable persons. As soon as the decision is made, in tactical level, it should be executed by local commanders without hesitation and the upper level must be informed correctly.

P15 explained the effectiveness of shared leadership in the HQ:

> Especially for the staff work in headquarters or the long time planning activities in any military units, they may or should benefit from the shared leadership.

P16 stated that shared leadership can be implemented in the HQ environment:

> I think this model rather works in the HQ environment.

Theme 9: Importance for Planning and Strategy Processes

Nearly all the participants in the study stated that it's better for military teams to implement shared leadership during the planning process. P3 affirmed the importance of strategic planning:

> But not in all levels; I think during the strategic, operational and tactical level planning process nearly all the decisions must be taken or all the processes must be directed by shared leadership.

P17 mentioned that the planning process by the operational teams must be performed with shared leadership:

> A perfect venue to employ the "shared leadership" model is in operational staffs, where plans and policies are researched, created, wargamed, and set. Here, there is less stress and more

time for discussion and deliberation, as opposed to the tactical application of kinetic force. The pre-action development of plans and routine operations would support this model for the operational teams.

P6 described using shared leadership in the planning process to increase effectiveness:

> Shared leadership may be useful in development of Standing Defence Plans via conducting Operational Planning Process, especially in key factors development within PMESII domains when every JOPG (Joint Operational Planning Group) member's contribution may enhance and increase overall quality of an outcome/product.

P18 echoed this statement, saying:

> In the planning phase, shared leadership can increase the performance of operational teams enormously.

P2 stated that strategic and operational planning needs shared leadership where it is generally executed in Headquarters:

> Strategic and operational level planning requires shared leadership.

P13 explained the benefits of planning with shared leadership for military project teams:

> I believe that shared leadership would be useful in the military during the phase of planning project teamwork.

P12 emphasized the improvement of capacity:

> Shared leadership increases quality of planning and following project developments.

P4 repeated the operational planning process benefit:

> In an operational planning process, shared leadership might be useful.

Theme 10: Shared Leadership in Military Teams

Participants explained that in some special cases, military teams may implement shared leadership. P5 described these situations:

> SL has a place in spesific cases: small team, specific projects, complex problems to be solved, continuity of project, irrelevantly from the change of the positions of the persons.

P10 explained the special cases, especially working groups:

> I think shared leadership can multiply the quality of results by working groups and think-tanks works; it is useful when there is no need for a consistent final decision but only for an authoritative opinion or study. When it comes to analyze/study/project something, then a shared leadership gives space to exploit a personal area of expertise.

P14 extended these special cases to expeditionary operations:

> The shared leadership model may work effectively for situations such as: where the objectives/goals are clear and well understood but the diversity of specialized expertise that is needed to be applied is greater than can be adequately planned and controlled by one person effectively – e.g. in whole of government campaigns on expeditionary operations, or strategic program teams delivering "level of effort" outputs rather than discrete/tangible deliverables; and small, close-knit, and highly capable teams operating quasi-independently on discrete missions, such as for SOF teams.

P3 explained the effectiveness of shared leadership for military project teams:

> If applicable, shared leadership has a very good impact on project teams. Because, all the team members carry the responsibility of achieving the task and they direct the team through the highest performance of the task according to their knowledge and experience. Nobody has the power to lead the task in a wrong direction. And everybody can feel as a valuable member of the project which increases individual performance of the team members and consequently increased individual performances contribute to the team performance.

P4 echoed the project teams' availability for shared leadership:

> Shared leadership may fit best for the project teams, because in a project there are different kinds of duties to be done.

P7 explained shared leadership for project teams with its benefit for collectivity:

> I think that shared leadership can help project teams because each person's strengths can help provide a better product to the team's collective product.

P9 echoed the possibility of shared leadership for project teams:

> This concept (SL) may easily apply to project teams, since there is normally enough time to digest the work to be done and wait for all the Subject Matter Expert contibutions.

P17 explained shared leadership for project teams in operational planning:

> I believe that the "shared leadership" model is perfectly suited for managing project teams; the critical enabler will be the ability to mold an effective team of diverse personalities and perspectives – which is no small or easy task. SL is similar to operational planning staffs.

P20 described shared leadership as compulsory in an environment reflecting western ideas:

> For project teams, team members are mostly composed of different disciplines. It is very hard for the leader to apply traditional leadership, especially in environments where freedom of speech, rule of law and free markets are well established. So, a successful team working with traditional leadership sample from Northern Korea is not a good counter argument for my assessment.

P19 explained the opportunity for shared leadership in geographically dispersed military teams:

> In my idea, shared leadership may be useful in the geographically dispersed military teams. In traditional teams, a leader is collocated with his/her team members, and in dispersed teams, the leader must use telepresence via electronic media. Or, in PDTs (a special configuration of dispersed teams), a leader is collocated with some of team members as traditional teams, and must use telepresence with other team members, who collocated at distinct sites, as virtual teams. As we know, leadership is an influence process and due to spatial distances, thus lack of face-to-face interaction among team members and/or sub-teams, this process is challenging in dispered teams, and shared leadership may help leaders to mitigate the negative effects of distances/dispersion.

P18 mentioned that shared leadership can be a remedy for some circumstances that are generally encountered in the military:

> On the other hand, shared leadership works great for a team composed of an inexperienced officer as leader and experienced petty officers as followers.

P8 mentioned the benefit for staff boards:

> SL is useful for staff boards.

P11 stated the benefit of shared leadership for innovation:

SL may be useful in areas using project teams or in areas looking to innovate.

P12 explained that Intel teams' working approach resembles shared leadership:

> In Intel (that has impact and involvement on every military domain) the work quality depends partially on leadership but also on the experience of the products obtained. Many times the decision-making process goes from down to up more than from up to down.

Category 2: Factors Affecting Shared Leadership in Military Operational Teams

A major sub-theme that emerged from the data was that participants believed that shared leadership cannot be implemented in military operational teams during the operation phase. Vertical leadership must prevail for military operational teams. Two aggregated dimensions induced from the themes are the operational team environment and operational team characterisics that impel military teams towards vertical leadership.

Operational Team Environment:

Operational Team Environment was perceived as key to making vertical leadership indispensable for military operational teams. Two specific themes related to the origins of shared leadership implementation in military project teams characterized our participants' experiences: (1) Time Sensitivity and (2) Theatre of Operations. Participants did not support the shared leadership approach in the operational team environment when the team is operating under time limitations ("*Shared leadership may be useful in almost all the contexts. The only exception could be the time-sensitive situations"*, participant 9) or during execution in the operational area ("*SL is not useful, and even dangerous, in fighting/action units at all levels during execution phases",* participant 10). The following excerpts provide some insight into these perceptions and beliefs:

Theme 11: Time Sensitivity

Participants richly described how, in time-sensitive situations, vertical leadership must prevail. They explained that operational teams performing in such situations must work to a traditional model. P6 explained the reason for vertical leadership of military teams when time is limited:

> Shared leadership may be not useful in any kind of activities conducted in time deficiency, for instance CAT (Crisis Action Team) efforts. Nevertheless, when there is insufficient time frame, moreover mixed with any kind of stressor, the best course of action, in my opinion, might be traditional/vertical chain of command with one leader on each level of command, providing crystal clear guidance, instructions and orders. Time often is crucial factor on a battlefield and as a general rule has a tremendously higher relevance than an illusive attempt to develop the best possible solution which might be overdue.

P16 explained the vertical leadership requirement for time-sensitive cases:

> Up-down (traditional model) leadership based on orders will help a lot in a time-sensitive decision-making environment. It really depends on the time allocated for decision-making process. If it is long enough to embed shared leadership, it is ok for shared leadership as well. However, if the time for decision-making is too short then an immediate action is required. In this case tradition leadership models would be more useful in those situations.

P9 stated that shared leadership is not proper for operational teams and described the effectiveness of shared leadership in any conditions other than time-sensitive cases:

> Shared leadership concept may not be the most efficient for the performances of operational teams, due to the time pressure. It is a risk to apply the shared leadership to this context due to the time sensitivity and nature of the decision.

P11 echoed this statement, stating:

> Operations require more direct, vertical leadership that is necessitated by the time pressures of missions.

P20 explained the time limitation effects on shared leadership:

> When the time is too limited for discussion and when the consequences of having no final decision may be irreversible and grave, then shared leadership may be problematic. Because shared leadership requires discussion and ripening of the ideas shared.

P3 clearly defined the importance of seconds in the operational environment:

> They have to hurry. They don't have time to discuss or follow a long decision-making process. Shared leadership requires time for making decisions. People have to discuss and

compromise in many situations. And also there is an urgency to make a decision in the battlefield. This is a dead or alive situation.

P4 described the hindrance posed by shared leadership in an operational area due to time limitations:

> Despite the decision may be taken in shorter time, achievement of the duty is hard because of different thoughts and ideas.

P5 mentioned the difficulty:

> Shared leadership is difficult, as on these occasions we need speedy reactions.

P17 explained that shared leadership is risky in the face of near-peer threats:

> In the event of a near peer, mid-level kinetic engagement, shared leadership is a dangerous policy.

Theme 12: Theatre of Operations

All the participants stated that in the operational environment there must be vertical leadership for military teams; however, they overwhelmingly supported shared leadership for military project teams. P2 supported shared leadership for military project teams, but stated that, in the operational environment, there must be vertical leadership:

> Necessary for those who work in the field to have direct clear-cut directions.
>
> VL is mostly a must in the field. Best practiced within traditional hierarchial structures common in military organizations, especially in the context of military operational teams. In the field, leaders should assure their subordinates. Traditional leadership will be more efficient in these circumstances.

P3 explained that tactical level operations must be directed by vertical leadership which is generally performed in the operational environment:

> But in tactical level, I mean in the battlefield, traditional leadership must be used because there are very few variables and can be handled by a single commander. I don't think that SL is a good idea in operational teams. Because these teams, according to their natures, are established to execute tasks in the battlefield.

P16 also supported shared leadership for military project teams but explained his support for vertical leadership in the operational environment:

> However, in the field the situation is vice versa. For example, in a special operation team the members of the team for sure should be capable of carrying out their own specialty. But at the end of the day, the decision will be the leader's. Others will follow. In the field, in a direct conflict, shared leadership is not very helpful.

P4 asserted the importance of vertical leadership for the operational phase:

> But during the operation (War) it would be not useful, beyond that it would be harmful. There must be only one captain in a ship, otherwise the ship might hit an iceberg anytime.

P8 stated the cons of shared leadership in the operation:

> SL is not useful for combat action.

P10 described the dangers of shared leadership in an operational environment:

> SL is not useful, and even dangerous, in fighting/action units at all levels during execution phases.

P15 emphasized concentration on the task in the operational environment:

> The participation of the members of operational teams in decision-making process may be limited, while they have to focus on the tasks that have been given in a frame. But it would not be true to say the same of shared leadership for the crisis and wartime planning and operations that require a strict command and control mechanism. On the other hand SL has to be avoided when the leader is obliged to give a quick decision as may frequently occur at operation theatre.

Operational Team Characteristics

The factor of Operational Team Characteristics was perceived as key to making vertical leadership essential for military operational teams. Three specific themes related to the origins of shared leadership implementation in military project teams characterized our participants' experiences: (1) Possibility of Conflict, (2) Unity of Command, (3) Leaders give Orders. Participants explained the contradiction between shared leadership and operational team characteristics. They did not approve of the shared leadership approach in operational teams, as it

could cause conflict or even hamper the accomplishment of the mission ("*Shared leadership cannot become leadership-by-committee in an operational team, because that might lead to inaction"*, participant 7). That conflict would spoil the unity of the command, which they all agree is indespensable for operational teams ("*Here, you risk a convoluted chain of command, an inability to communicate direct/concise orders, and the introduction of a potential inadvertent delay in action/execution. Simply put, if an attack is in progress and the decision cycle (of life and death) is reduced to 30 seconds, a civil discussion on options is not effective to neutralize the risk",* participant 17). Above all, operational team members must avoid conflict and falling-out among the team by obeying orders ("*In operational teams there should be stability in order to execute the operation. And that needs unity of command. This will keep the team on track. They will be more focused on the urgent task they are doing",* participant 3). The following excerpts provide some insight into these perceptions and beliefs:

Theme 13: Possibility of Conflict

Participants richly explained that in the operational environment, due to the need for speed and agility, shared leadership can cause conflict in military teams and may even lead to chaos. P3 explained the disadvantages of shared leadership for the operational environment:

> A battlefield is not a place of arguing ideas. This can lead to chaos and lack of leadership in the troops. Second disadvantage of shared leadership for operational teams will be the loss of leadership in the team which will lead the task to failure.

P9 described the disadvantages of shared leadership for the operational team:

> Change from a traditional leadership could drive to the loss of a clear leadership and could easily result in a conflict for leadership based on personality.

P8 pointed out the importance of unity for the operational environment:

> In my point of view, shared leadership should not be applied in the operational context because it can affect the unity of the force.

P18 explained the possibility of chaos and failure for the operational environment:

> Shared leadership might cause loss of seconds of delay in acting which can result in catastrophes and great failures.

P6 described the importance of exact decisions in the operational environment so as not to fall into chaos:

> It may cause unnecessary chaos and may hamper level of confidence. Supporting a catchphrase that any decision is better than no decision at all, it's better to follow precisely a plan with a few weaknesses than continuously amend a plan,

Theme 14: Unity of Command

Participants richly explained that one leader is better in the operational environment. P9 stated the importance of the one leader:

> An Operational team should be led by the appropriate person (the selection is crucial), having the capability to drive the teamwork to a quick solution/decision.

P10 described the commander's special position in the operational environment:

> The team works for the Commander, and the Commander decide (I know it is obvious...but this is my opinion!)

P13 described the leader's responsibility in the operational environment:

> Probably it's not a great idea for the performance of operational teams, because you cannot disassociate leadership from responsibility. Therefore you can only have one leader/responsible (with proper discipline power) for a task/mission to give clear order before/during the execution of a task/mission.

P14 described how shared leadership is impossible in the operational environment:

> I don't think it would be effective even it would be really possible. Again, the potential implications of operational activity (death and destruction) demand accountability through formally delegated chain-of-command (and therefore hierachical) authority.

P18 explained the importance of acting as a single body in the operational environment:

> The operational teams should think, act, react as a single body and that can be achieved through vertical leadership.

Theme 15: Leaders Give Orders

We asked the participants what their leader does first when they start working on a new task/mission – whether the military team leaders start to perform a task by saying "What do you think? " Participants ovewhelmingly stated that military leaders start to perform the task by giving orders and directions. P1 explained how the military leaders begin perfoming the task:

> Rather than sharing the aim of the task, the means and capabilities we have and the other necessary information regarding the mission, the leader first tells what we shall do to satisfy the superior authorities. After that they give orders to prepare for the task. They do not like listening to the problems or talking about the challenges we will encounter. They just want you to prepare for the task ASAP.

P2 mentioned the leaders' expectations from superiors:

> He explains the task details and expectations from superiors. He allocates responsibilities and sub-task. He put the deadlines.

P3 explained the military leaders' detailed explanations of what the members need to do:

> Generally all the commanders give the end state first. They explain to me what they expect from the task. And also sometimes they explain to me how I should handle the task. Many times I feel that commanders want me to handle the task like them. They give me the tasks because they don't have the time to do all the tasks by themselves. They don't want to let me decide in any part of the process.

P6 described the military leaders' directions:

> Provides general overview of a current situation and specifies team's objectives/goals, then directs and delegates tasks to each member of a team.

P9 is the one who just mentioned that his leader organized a meeting to ask his opinion about the task:

> First informing via e-mail, then calling a meeting to discuss the topic together with the other stakeholders and providing Directions and Guidance.

P13 described how the military leaders explain the end-state at the start:

He define the end-state and the objectives that he wants to achieve with that task/mission, and for that he gives his Direction and Guidance.

P18 explained the reality of orders in military teams:

I have worked with more than eight commanders/leaders so far. All but one preferred vertical leadership over shared leadership when working on usual or uncommon tasks. They usually gave specific orders and asked us to follow the orders exactly. Having subordinates or followers to decision-making system in military is not very common, although it is highly encouraged.

Table 3.2. Participants' Representative Quotes before Beginning a New Task

Is it possible to implement "What do you think?" in military teams?
* First ask what shall we do to satisfy the superior authorities. They do not like listening to the problems or talking about the challenges we will encounter. * He puts the deadlines and explains the task details. * All the commanders give the end state first. I feel that commanders want me to handle the task like themselves. They don't want to let me decide on any part of the process. * Assigns persons to carry out the tasks. * Directs and delegates tasks to each member of the team. * Assess the requirements. * Meeting to discuss the topic together with the other stakeholders. * He gives his vision and provides the team with direction and guidance. * Leader outlines the reason for the mission. * Explains in detail his guideline including red limits to follow. * He defines the end-state, gives his direction and guidance. * Clarify objectives, resources, timings, limitations and intent. * Tasked with the leaders' first impressions. Leader does not make necessary explanation and guidance. * Delegate the duties. * Translates and parses the tasks…and deadlines set. * Asked us to follow the orders exactly. * Conducts meeting and briefs team members about the task/mission, gives orders and delegates tasks.

Table 3.3. Shared Leadership Pros for Project Teams

P1- Increased performance, increased ownership, increased trust, resources (cost, time, personnel) savings.
P2- Team members' commitment, trust climate, enhanced performance, innovations
P5- Greater possibility of long-term success of the project.
P6- Helps foresee plausible challenges; increase a product's/outcome quality; increase entire team's perception of a problem/task/objective/appreciation in an operational environment; involves all members, encourages proactive posture.
P7- Consequences would be largely positive, because viewpoints from different areas of expertise would be able to provide inputs, which could improve the final product.
P8- Positive results for the effectiveness of the team as well as team members' satisfaction in a project team.
P9- Not having a designated boss, having a more relaxed atmosphere, sharing different points of view, not having time pressure.
P12- Increased quality of planning following project developments.
P13- Less pressure on a single leader; brainstorming of leader's ideas can facilitate the work during the planning and execution of a project team's work.
P14- Flexible development bringing greater diversity to potential solutions; collaborative approaches that lead to consensus agreement; enhanced personal and professional development among those sharing in leadership responsibilities.
P15- More accurate outputs through allowing various ideas and all potential contributions from all team members. The leader will have a chance to achieve broader flexibility through the decision-making process by benefitting from as much expertise as the team members already have in their backgrounds.
P18- Better decision-making, more initiative; higher level of motivation; improvement in shared knowledge; less likelihood of one person holding critical information.

Table 3.4. Shared Leadership Cons for Military Operational Teams

P1- Abuse, decreased discipline.
P2- Requires more time, may lead to unproductive (deviant) behaviors; for instance some team members may perceive leader as a weak figure, inefficient performance.
P3- More negative consequences than positive consequences. First of all there will be time wasted because of the unnecessary discussions. In this situation time-sensetive operations can fail. If there is no time limit then there is no problem.
The second negative consequence is the instability.
P4- The possibility of conflict increases.
P5- Loss of critical time, ambiguity for the subordinates.
P6- Time-consuming; may hamper team members' confidence; may be chaotic and may turn into unnecessary dispute.
P7- This could lead to a better product if individuals with different backgrounds were able to use their expertise, but could lead to inaction as described above.
P8- I don't think that will be possible, like in a combat operation.
P9- No defined leadership and responsibility; time sensibility; need of time to change the mentality.
P12- Misundertandings, disagreements. My opinion is clear in this way, valid for project teams.
P14- Lack of effective authority and accountability for results/effects, particularly for grievous errors and mistakes; time and effort to make decisions and deliver orders
P15- Shared leadership will for sure have less space in operational teams' working structure with regard to no/very little tolerance of time loss or suspicion over the decisions and following operational steps.
P18- Slowed down decision-making process, task might get fragmented.
P19- A possible negative consequence of shared leadership may be emergence of informal leaders.

Table 3.5. Shared Leadership existing in the military, examples

P2- You can find many SL examples in international military environments such as NATO or UN missions. Strategic planning team leaders employ shared leadership practices.
P3- In NATO, sometimes in some boards or workshops, I have seen the example of Shared Leadership. In these meetings, there were many sides that have to work together and most of the time there wasn't any salient leadership. Every Branch or Division can take the lead when necessary.
P4- In operational planning phase, shared leadership is being implemented.
P5- In some armed forces the Superior Officer's committee serves that purpose (SL).
P6- Some elements of shared leadership may be observed during War Gaming and Brainstorming methods, when everyone is requested, authorized and even encouraged to step out of one's area of expertise or responsibility to provide inputs and feed decision-making or plan the development process.
P10- The best example that comes to my mind is the planning of a complex operation; it is impossible for a single person (the Commander) to analyze and decide on each single aspect of the operations; this is what staffs are for. The overall design of an operation is a Command responsibility, as its approval is needed; but the build-up of the operation plan and each single "small decision" comes from the staff work and this is the result of coordinated/multidisciplinary work, with each subject matter expert being in charge of his own portion of the plan.
P15- In international military organizations shared leadership is highly used to identify the future potential challenges, with varied staff contributions from different domains including intelligence, logistics, finance etc.
P16- SL exists in the military during coordination in the HQ for drafting a formal letter. Also, ad-hoc project teams in the HQ need expert views from other departments.
P17- Shared leadership models abound across all levels of command; from strategic policy development at the National Security Council, to the Planning Board for Training individual surface combatants.
P20- A good example of shared leadership in the military would be its application in joint forces and allied forces. In both cases, specific attributes of each unit require professionalism and leadership. If you look at NATO headquarters, you will see the specific borderlines between different posts/leadership which is a kind of shared leadership.

Leadership Change Context for Military Teams

As illustrated in Figure 3.2, there are five main dimensions to the model of Military Teams Leadership Change Process that emerged from mid-multinational military officers' experience: Driving forces of Change, Triggers to SL, Specific Cases SL, Operational Team Environment, and Operational Team Characteristics. To better understand why each of these aggregate dimensions and their constructive themes emerged, it is essential to identify the military teams. Following DeChurch and Mesmer-Magnus (2010), we coded teams into two types within the military: project and operational teams, as mentioned in the literature review. We informed the participants with a briefing for the military team types that we coded, and all the participants confirmed our definition and answered the questions based on it.

In the case of military project teams which perform tasks in an office environment, rather than rely on individual wisdom, under information age conditions good or even adequate performance of the intended military mission(s) is often as contingent on team and leadership dynamics as it is on the collective skills and knowledge of individuals in the team (Alberts & Hayes, 2003; Yammarino, Mumford, Connelly, & Dionne, 2010). Three dimensions affecting Military Project Teams emerged: Driving forces of Change, Triggers to SL, and Specific Cases SL; these impel military leaders to implement shared leadership. Participants clarified that military project teams using the shared leadership approach have advantages over those using traditional (vertical) leadership ("*There will be more positive consequences than negative. First of all, all sides will be included in the decision-making process which will help to improve the performance and consequently the quality of the product. The second positive consequence will be the contribution to the well-being of the people. Staff officers will be more satisfied and free to express their ideas. Better ideas will arise in this situation",* Participant 3*).*

Participant 16 explained the shared leadership approach's effectiveness for military project teams:

> The more shared leadership is implemented in project teams, the more the members of the team are involved in decision-making. If team members feel that their view is reflected in the decision made, then their performance will be higher to achieve the goals of the project.

Participant 20 described the advantages of shared leadership to some extent for military project teams:

> I was a member of a project team, which was deployed to establish and install a new resource management system. As for resources, it was a broad range of components from human capital to working hours, from inventory in the warehouses to the financials. I was responsible for Supply Chain and Logistics Management issues due to my expertise. What I see is that, since my project leader trusted me and passed some leadership power to me to some extent, of course for the duties related with my responsibility areas, we managed to create a set of requirements; that is, we listed what we want realistically. And that achievement paved the way for us to request the tenders from the technology firms. If my project leader had not shared his leadership and tried to impose his wishes, we might have ended with unrealistic requirements and the project would have a dead start.

The positive perceptions of participants regarding shared leadership for military project teams are presented in Table 3.3. On the other hand, participants explained that somehow shared leadership already exists in military project teams. They declared that shared leadership exists in the planning phase and especially in the Joint Operations Planning Group (JOPG)'s work. ("*JOPGs for operational planning work with shared leadership with subject matter experts and operational analysts working together"*, participant 7).

Participant 8 echoed this statement:

> Shared leadership already exists in the Staff planning process like JOPG.

Participant 9 also explained the presence of shared leadership in planning:

> A typical example of shared leadership is the planning phase, when different departments are contributing with their expertise to the realization of the plan. Since a plan involves several aspects, it is mandatory to have different Subject Matter Experts in order to take into account all the different points of view; missing one aspect could determine a failure.

Participant 18 described his experience of vertical leaders applying shared leadership:

> I have noticed that the less knowledgable and experienced leaders/officers tend to promote shared leadership in their teams and the more knowledgable/experienced

> leaders/officers tend to promote vertical leadership. One of my commanding officers admitted one of his failures during his tour. When he became commanding officer, he didn't know every detail of the gun firing systems of his ship and therefore he preferred to define the objectives and encouraged his officers to take decisions by themselves. The result was outstanding. After that successful drill, with every piece of information and experience he gained, he had interfered more and more, and taken decisions by himself. But the result was frustrating. With his increasing vertical leadership, his ship was doing worse. After six months, he decided to go back to point zero and promote shared leadership.

Additionally, mid-senior officers' perceptions and experiences of shared leadership existing in some form in military project teams are presented in Table 3.5. Military operational teams perform tasks at sea, on land, and in the air, and to be successful and effective in these extreme environments, a primary focus on leadership and team dynamics is necessary for military personnel, including commanders and soldiers, sailors, and airmen (Taylor & Rosenbach, 2005). Two dimensions of military operational teams – Operational Environment, and Operational Team Characteristics – emerged, supporting the idea that vertical leadership must prevail for military operational teams. Participants defined shared leadership as hampering the mission in military operational teams, which may cause conflict ("*The most negative consequence in my opinion, if shared leadership is implemented within the military organizations in operational team contexts, will be the confusion and the difficulty to define the leader/responsible during the execution of a task/mission"*, participant 13).
Participant 16 described shared leadership as tricky for military operational teams.

> In an operation team conducting operations in the field, shared leadership is very tricky. Because in the field if the leader too much asks about his subordinates' recommendations, then his subordinates could think that he is not capable of making decisions. This will make them question every decision made by the leader over time. Finally, they will trust the abilities of the leader. The decisions made in operational teams are not that complicated. Mostly, the only thing that matters is time. If the leader decides quickly and confidently, then team members will accept his lead very easily. If the leader all the time asks for his subordinates' opinions this will not make him a good leader in their eyes. However, in peacetime, operational team leaders also could ask their team members' opinions. This is something different. However, even

> in this situation, exaggerating asking their opinions wouldn't be taken as a virtue but will be taken as an indication of weakness by the team members.

Participants' negative perceptions of shared leadership for military operational teams are presented in Table 3.4. These five key dimensions that support the framework theory of Leadership Change Context for Military Teams depict the implementation of shared leadership and a combination of shared and vertical leadership in military teams. Leadership Change Context for Military Teams supported this leadership combination. Also, even the few participants who support vertical leadership accepted the disadvantages for military teams. Leadership combinations may support the advantageous aspect more strongly. Moreover, in some cases, in response to subsequent questions, those few participants who rejected shared leadership for military teams accepted shared leadership for these teams. As mentioned in the literature review, we do not advocate choosing between hierarchical leadership and shared leadership. On the contrary, the two concepts work in tandem (Wang, et.al., 2014). Nevertheless, it is high time we moved beyond the hierarchical perspective on leadership in this era of knowledge work (Day et al., 2004; Yukl, 2013). P16 provided additional insight into this phenomenon from a research perspective:

> I think shared leadership will increase the performance of the team members. Shared leadership will help the members of the project team to internalize the decision made by the help of all or at least most of the team members. However, project teams in a military environment are generally composed from different departments of the HQ. So not only shared leadership but also traditional leadership model works in this situation. A mixture of both should be implemented.

P11 explained this phenomenon in the context of a real-life event from his military team's experience:

> I could only say that project teams exist with this style (shared leadership) of leadership; that said, there is always a military/civilian hierarchy working above them.

P7 explained the combination of shared leadership and vertical leadership as follows:

> I believe shared leadership should exist within a traditional leadership framework for reasons stated above, such as the ability for the command or organization to effectively make and implement decisions. If leadership is exclusively shared then the organization may be paralyzed.

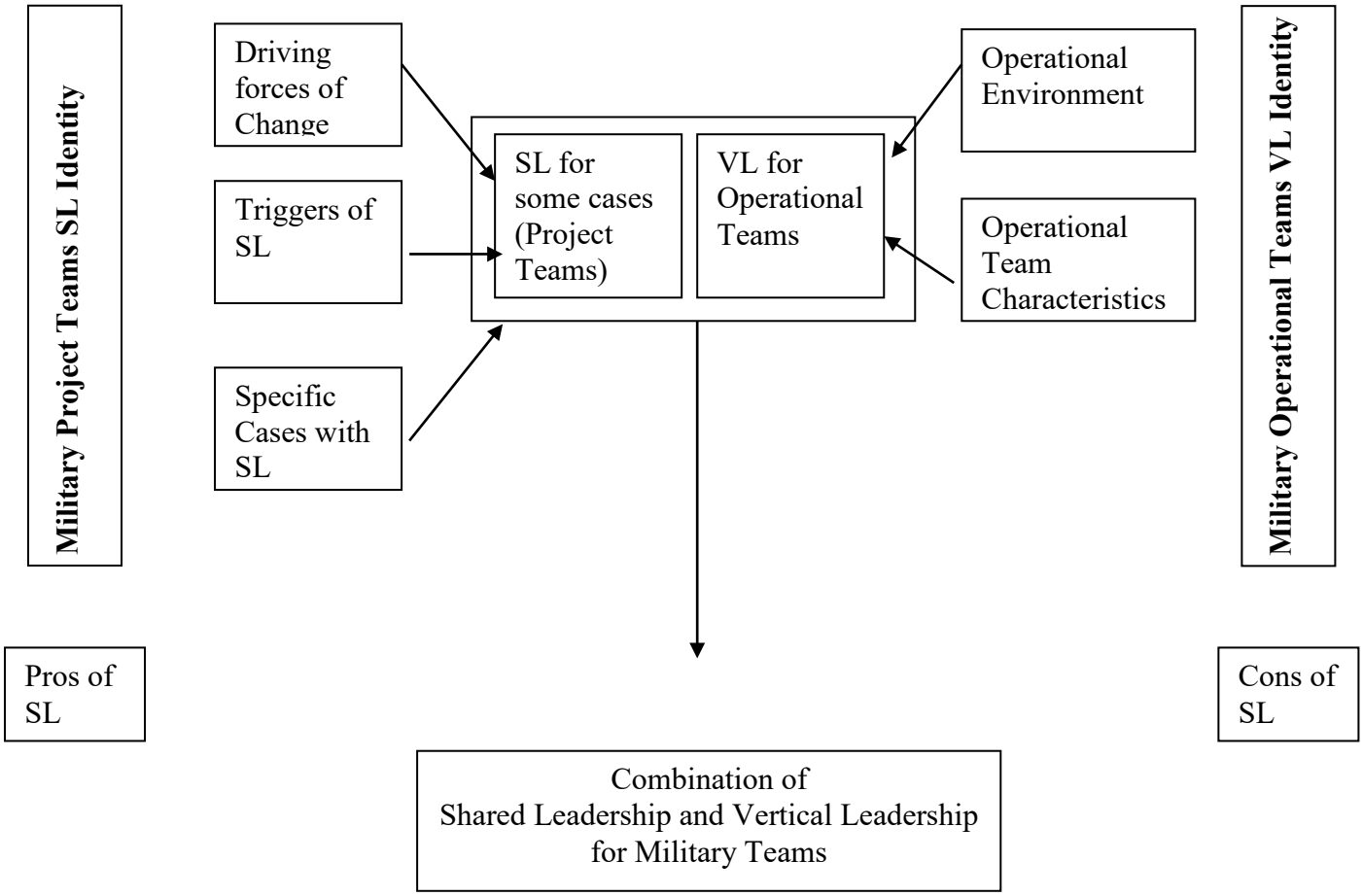


Figure 3.2. Leadership Change Context for Military Teams

3.5. Discussion

In this study, we qualitatively collected, analyzed, and presented the results for shared leadership, military teams, and perceptions about the subject matter from expert interviews. The goal of our study was to explore shared leadership implementation in military teams and identify the perceptions of shared leadership through mid-rank multinational officers.

The overall results revealed that driving forces of change constituted the primary factor affecting shared leadership in military project teams, while the operational environment was the most important hindrance to shared leadership in military operational teams. We found that (a) Complexity and the new information era force military organizations towards the change and that with shared leadership they can even change the organization's culture. (b) Military teams' situation provides the triggers to shared leadership, even sometimes forcing shared leadership for military project teams. Participants brought out the great value

of the collective product and IQ for mitigating the incompetency of the single leader. Constructs were identified that enabled shared leadership in military organizations. (c) The HQ environment (strategic and operational planning) and planning were critical factors in the successful implementation and development of shared leadership in military project teams. (d) Shared leadership for operational teams is perceived as facilitating collaboration and communication, but also as creating conflicts and potentially hampering the mission. Time Sensitivity was the most critical construct regarding shared leadership in military operational teams. Due to the lack of sufficient time in a field, vertical leadership may remain a relevant option for operational teams. Through construct comparison and coding of collected data, Driving forces of Change, Triggers to SL, Specific Cases SL for Military Project Teams, and two dimensions of military operational teams: Operational Team Environment and Operational Team Characteristics emerged as crucial dimensions supporting our model of Leadership Change Context for Military Teams, which depicts the implementation of shared leadership and combined shared and vertical leadership in military teams.

Military project teams given the task of planning, managing, directing and deciding on a new strategy may excel with leadership responsibilities shared among the team. Accordingly, it is essential to consider when and how shared leadership might be most beneficial. A significant sub-theme that emerged from the data was that shared leadership could be implemented for military project teams. There was a consensus that shared leadership would facilitate collaborative efforts and enable them to function effectively for these teams. Specifically, because shared leadership is more complex and time-consuming than traditional leadership structures, it will probably be most useful when tasks are so complicated that they cannot be led effectively by a single individual (D'Innocenzo, et.al.,, 2016). Study results, the benefits of planning with shared leadership approach for military project teams, confirm Choi, Kim, & Kang, (2017) study that shared leadership is positively related to organizing and planning effectiveness. Military project team members felt that their responsibilities entailed working with other people, and that success was only possible because of the relationships with others that were necessary to perform the task. One of the critical factors identified in the study for developing and implementing shared leadership in military project teams was drivers of change. This dimension revealed that new generations' expectations of the leader differ from those of previous generations, so that shared leadership meets the needs of modern times. In addition, the participants perceived complexity as the dominant theme affecting the implementation of shared leadership in military teams.

In contrast, another factor that we believe may contribute to the shared leadership–military teams relationship lies in the characteristics of operational teams and the operational environment. Finally, there was also a consensus that due to the operational environment and characteristics of the operational team, vertical leadership must remain for operational teams. Participants acknowledged that operating in time-limited situations required vertical leadership. While shared leadership can be suitable in some situations, as stated in D'Innocenzo, et al., (2016), it is indeed not a panacea. In their work on shared leadership, they described as an example of US Airways Flight situation that encountered a bird strike minutes after takeoff in 15 January 2009, the aircraft crew needed to act fast as and any delay in action could have been the difference between life and death for passengers and crew. Therefore teams in crisis, with limited time, can fail if leadership is shared between members. In that kind of time-sensitive situation, which characterizes the operational environment most of the time, leadership from a single person was essential to direct others and make a quick decision. The participants mainly described speed as a requirement of operational teams that called for vertical leadership. By contrast, how can it be correct for military project teams to make rapid decisions? In most cases project teams do not need speed; whereas all the participants support traditional (vertical) leadership due to the field/operational environment. Military Headquarters are generally led by two commanders: the Director/Deputy Chief of Staff of Operation is the commander of the following divisions: intelligence (2), operations (3), plans (5), and training (7); while the Director/Deputy Chief of Staff of Support is the commander of personnel (1), logistics (4), Communications and Information Systems (CIS) (6), finance (8) and Civil-Military Co-operation (CIMIC) (9). We can easily begin to implement the shared leadership approach in the divisions in headquarters. Participants described how shared leadership exists in military project teams but is dependent on the vertical leader's permission, so that when the division leader/commander wants to use his/her rank, he/she can easily revert to the exercise of authority. This is the time to adopt shared leadership for project teams as a norm. However, even in the operational teams, shared leadership maybe useful in the planning phase. Sometimes if you miss the change, then accidents or fatal mistakes can teach you that you have to change. We have to change our military organizations by ourselves; otherwise, the new century will teach us to do so through accidents, lack of effectiveness, etc. In civil organizations, lack of effectiveness for companies mostly means losing money, wasting effort, etc. but in military organizations even in peacetime, ineffectiveness can result in deadly accidents or missions.

The study also revealed a "dynamic flexibility" approach in the participants' perception of shared leadership for military teams. It was seen as both an enabler and inhibitor of military teams, as it facilitated collaboration and communication for military project teams, while on the other hand, in the case of operational teams, it created conflict. To solve this dynamic flexibility, the model of Leadership Change Context for Military Teams depicts the implementation of shared leadership plus a combination of shared and vertical leadership in military teams. As mentioned in the literature review, we advocate complementarity of the hierarchical leadership and shared leadership. As well, the two concepts work in tandem (Wang,et.al., 2014). The Leadership Change Context for Military Teams supported this leadership combination.

3.6. Practical Implications

As Augier, et al., (2014) suggested, important topics for future research include comparative analysis of how business and military organizations adapt to the influence of a dynamic environment and how the forces of centralization and decentralization influence the evolution of these organizations. First, we adapted the combination of shared and vertical leadership for the changing environment. We support the idea of doing so, as this combination could be viable within the model of Leadership Change Context for Military Teams.

The study explained that shared leadership will facilitate collaborative efforts and promote their effectiveness for military project teams. As military leaders build shared leadership in these project teams, we can envision shared leadership doing better the things we are currently doing in military teams.

We asked the participants to identify, when they start working on a new task/mission, what their leaders do first – whether the military team leaders begin to perform a task by asking "What do you think?" We were seeking to find out from mid rank-officers whether any would give the "What do you think?" type response. Just one of the participants described meeting and holding a discussion before performing the mission. The remaining participants described the leaders as giving orders and directions, a practice regarded as habitual for the job, as presented in Table 3.2. This presents the military as replicating traditions. Thus, giving orders is a traditional habit of the job and privilege of military leaders. It is one of the major obstacles to shared leadership in military teams. It resembles the situation that arises when you give a gun to children and they start shooting; similarly, if you appoint a human being as a military leader/commander, s/he starts to give orders. Still, there is a very preeminent form

of behaviour that hierarchical leaders can adopt to help promote effective shared leadership (Pearce, Manz, & Sims, 2014). Is it possible, within the respected traditions, for military leaders to ask first "What do you think?" We maintain that it is difficult but not impossible. In addition, military leaders are not interested in sharing ideas with members because they attach importance to superiors' expectations. However, the study shows that, in keeping with the time we live in, we can start to implement shared leadership in military project teams. Also, change is challenging; if we cannot achieve the implementation of shared leadership, then it will be problematic in future to obtain skillful and desirable recruits.

3.7. Limitations and suggestions for future studies

Our research does contain limitations requiring engagement in future studies of shared leadership and military teams. We did not employ additional data collection strategies to include military documents, websites, reports, army accident avoidance documents etc. Multiple methods of data collection approaches may contribute to highly valid findings, using triangulation, comparing and cross checking observations at different times or in different places or follow- up interviews with the same people, to corroborate evidence from different sources, types, or methods of data collection (Merriam, & Tisdell, 2015). Future studies, by employing multiple data collection strategies in a single study, can achieve greater description and explanation. Also, due to geographical dispersion, the interviews were not conducted face-to-face, which may have introduced some concerns about personal interaction with participants. In contrast to face-to-face and telephone interviewing, email interviewing enables researchers to study individuals or groups with special characteristics, or those, such as the geographically dispersed (Meho, 2006), who are often difficult or impossible to reach or interview face-to-face or via telephone. Moreover, email makes it possible to conduct interviews with shy people or those who do not or cannot express themselves as well in speech as they do in writing, especially when the language used in communicating with participants is their second one (Meho, 2006). Moreover, email gives participants time to think about their responses, which are therefore more likely to be rational and filtered by analysis and explanations.

Additionally, we support the idea of implementing shared leadership in some military teams. Thus we coded teams into two groups of military teams, following DeChurch and Mesmer-Magnus (2010): project and operational teams, as mentioned in the literature review. We informed the participants with a brief on the military team types that we coded, and all the

participants confirmed and answered the questions through our military team type definition. This shows that our definition of military teams was acknowledged by the participants. There were no rejections of the definition. To our knowledge, there is no definition of military teams. We emphasized that validation of the definitions of military project teams and military operational teams is another promising avenue for future research.

Finally, many types of team perform as military project teams (Joint Operations Planning Group (JOPG), Information Management Group, Strategic Planning Group (SPG), Defence Crisis Management Organisation (DCMO), Joint Logistics Support Group (JLSG), etc.). However, in our present study, we only investigated the case of military teams in general. Future studies should examine specific cases of military project teams to extend our findings further.

3.8. Conclusion

The study results revealed that driving forces of change were the primary factor affecting shared leadership in military project teams, and the operational environment was the most important hindrance to shared leadership in military operational teams. In military organizations there are definitely times when a vertical (or traditional) “Just do it!” style of leadership is required. These cases often arise in the most demanding of circumstances, when the team needs to react instantly and rely on the operational environment. Most of the time, however, shared leadership is appropriate for military teams and leaders must implement it for these teams – motivating and inspiring the team to achieve through increased ownership, enhanced performance, trust, and comprehensive output. Dimensions in the study supported the framework theory of Leadership Change Context for Military Teams, which depicts the implementation of shared leadership and a combination of shared and vertical leadership in military teams.

CHAPTER 4. STUDY 2- THE EFFECTIVENESS OF TEAMWORK FOR MILITARY TEAMS WITH SHARED LEADERSHIP: A QUANTITATIVE STUDY.

4.1. Introduction

The study is focused on the predictors of shared leadership in the military context as well as on the moderating role of trust and the relation of self-management with effectiveness perception. The purpose of the study is to investigate the relation between shared leadership and self-management and the impact of shared leadership on team effectiveness in military teams. This study aims to commit to the advancement of the theoretical and empirical knowledge of Shared Leadership. It investigates the predictors of shared leadership in military teams and effectiveness perception in the context of multinational officers.

Following the literature review, first, we focused on the shared leadership predictors. Then we examined the relationship between shared leadership and team effectiveness. Researchers have experimented with a number of models for measuring team effectiveness; we examine the shared leadership and self-management relation together with perceived effectiveness. Specifically, we investigate the claim that complexity, team empowerment, and interdependence – the predictors – have a relation to shared leadership, and that thereby, shared leadership impacts on self-management, which in turn affects perceived effectiveness.

Some researchers (DeDreu and West, 2001; Wageman, 2001; Morgeson 2005) have empirically identified relationships between self-management and increased team effectiveness. On the other hand some researchers (Langfred, 2007) supported that the connection between self-managed teams and effectiveness does not always exist in practice and managers observe slow progress in team members' efforts to take on responsibility for decisions that previously belonged to managers (Tata, et al., 2004). Also, we support the idea of the inferred connection between self-management and shared leadership. The notion of shared leadership is closely related to self-management and we expect that shared leadership will impact on and provide the conditions for self-management, and that that will lead to effectiveness. Therefore, identifying predictors of shared leadership represents a vital endeavor for understanding team effectiveness. Some of these predictors are team empowerment, complexity, and interdependence. In the quantitative study, we identify the predictors and shared leadership associated with self-management in the military context and scrutinize the moderating effect of trust within military teams.

How the military leaders perceive shared leadership through self-management and effectiveness perception becomes a unique study for this reason. Thus, the present study is a special contribution to knowledge of shared leadership, self-management and the effectiveness perception relation; and it is also a unique study in relation to military teams. Although there might appear to be a connection between shared leadership and self-management, the idea has been neither tested nor researched for military organizations. Hence, we examine the connection between shared leadership, self-management and their relationships to perceived effectiveness. Exploring these relationships is essential for several reasons. The aim of the quantitative study is to identify shared leadership predictors and whether shared leadership is a mediator of team effectiveness through self-management. First, there is a scarcity of research on the link between shared leadership and self-management for military teams. Second, this study explores shared leadership and effectiveness perception through the lens of self-management. Finally, this study may help military leaders understand the importance of implementing shared leadership as appropriate for some military teams. Thus, this dissertation aims to shed light on the crucial question: What is the relation of shared leadership with effectiveness in military teams?

4.2. Current Study

By analyzing prior work and literature, the following research gaps can be identified: Predictors of shared leadership are not discussed against the background of a relevant military context that might influence relevance and effectiveness, and perhaps most importantly, research on shared leadership predictors in the military context is scarce. The empirical study of shared leadership is still in its infancy and needs further exploration and analysis in relation to antecedents, mediators, moderators, and outcomes of shared leadership (Carson et al., 2007; Hoch, 2013; Small & Rentsch, 2010; Fausing et al., 2015). Pearce and Sims (2000) stated that a form of shared leadership is bound to emerge when there are group characteristics such as ability and group size, task characteristics such as complexity and creativity, and other environmental characteristics. For all these reasons, the factors that facilitate or hinder the display of shared leadership in teams should be investigated in the context of military teams. Accordingly, the question of how shared leadership develops and evolves, especially in military teams, is one of the most critical future issues in leadership research.

Our choice of the predictors' complexity and interdependence is grounded in the development of shared leadership task characteristics. Besides these task characteristics of shared leadership, we choose empowerment, as it examines the transfer of power to team members (Spreitzer, 1996), which we expect is a construct relatively close to shared leadership. We examine the relationship of shared team leadership to the following predictors: team empowerment, interdependence, and task complexity in military teams. Empowerment, Complexity, and Interdependence are proposed as key predictor dimensions of shared leadership, which, in turn, is expected to be positively related to effectiveness perception in a military context.

The following section of this chapter discusses shared leadership predictors in military teams. It draws connections between shared leadership and effectiveness perception through the self-management and moderation effects of trust, and develops the hypotheses tested in the study. We describe the methodology of the research and the findings in the next chapter. Finally, we explain the implications of the study findings.

4.2.1. Empowerment is increased task motivation resulting from an individual's positive orientation to his or her work role (Spreitzer, 1995), and involves the transfer of power to team members (Spreitzer, 1996). Kirkman & Rosen (1999) described team empowerment with regard to potency, meaningfulness, autonomy, and impact and stated that autonomy makes up a significant part of team empowerment. Manz and Sims (1987–1989) have proposed empowering leadership as a participative and self-management focused form of leadership. Rawlings' (2000) model for building shared leadership teams in organizations is structured around collaboration. One of the three conditions that foster collaboration is "empowerment", or the capability of the group to achieve its shared purpose. Team empowerment can be more time-consuming and is best applied to knowledge teams engaged in complex work where tasks are highly interdependent or require a high level of creativity; shared leadership can be considered a demonstration of fully developed empowerment in these teams (Pearce & Conger, 2003; Pearce, 2004; Faraj & Sambamurthy, 2006). A leader can transfer management to his/her team members, thus enable the development of shared leadership by providing them with autonomy, support, increased responsibility, decision-making capabilities, and access to information (Gomez & Rosen, 2001; Hoch & Dulebohn, 2013). Empowerment can be defined as social–structural empowerment and psychological empowerment. Social-structural empoweent that provides employees of lower hierarchical status with information, support, and resources, giving them the means to voice their opinions, make decisions, and take action on processes (Schermuly, Meyer, & Dämmer,

2013; Spreitzer, 2008; Grille, Schulte, & Kauffeld, 2015). Some authors (Yukl & Becker, 2006, p. 210) have defined psychological empowerment in organizations as "the perception that workers can help determine their own work roles, accomplish meaningful work, and influence important decisions". Besides that Carson et al. (2007) define empowerment as the "degree to which a team's members have input into how the team carries out its purpose" (Carson et al., 2007, p. 1222) and note it as an antecedent of shared leadership. We used Kirkman, Rosen, Tesluk, & Gibson,'s (2004) four-dimensional approach to team empowerment, based on members' reports of task autonomy (Mathieu, Gilson, & Ruddy, 2006).

Team empowerment postulates increased team outcomes by increasing team members' sense of ownership and level of initiative in team level conditions whereby team members' experience increases task motivation, based on a collective positive view of the team task. Therefore, team empowerment represents team members' estimates of their collective team task (Spreitzer, Noble, Mishra, & Cooke, 1999; Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Kirkman et al., 2004; Maynard, Mathieu, Gilson, O'Boyle, & Cigularov, 2013). Meta-analytic results (Seibert, Wang, & Courtright, 2011) show that team empowerment is positively related to team performance; also Maynard, et.al., (2013) meta-analytic study also supports the increase in team outcomes. Therefore, coherently with prior team level studies (Chen et al., 2007; Kirkman et.al., 2004; Mathieu et al., 2006; Luciano, Mathieu, & Ruddy, 2014), we concur with the idea that increasing team members' ownership and team members' assessments of their collective team task is positively related to shared leadership.

Faraj and Sambamurthy (2006) claimed that an empowering leader makes collective decisions with team members and delegates responsibilities to them, while empowering leadership played a significant role under conditions of high task uncertainty and high team member expertise. Military teams face different levels of uncertainty about their tasks. They encounter tasks involving new and unexpected events during most of the task completion process, such as enemy unexpected actions. Empowerment facilitates coordination of the team members' actions, so as to apply the appropriate solution-seeking strategies under conditions of great task uncertainty. When teams face high levels of task uncertainty, they have to make sense of their tasks, improvise their work processes, and adjust ways of progressing toward agreed-upon goals of the task. Under such conditions, the ability and willingness of the team members to engage in cumulative sense-making and collaboration are important. For example, an Executive Officer (EXO) on a frigate which is alive 24/7 is

responsible for all administrative work: cooking, cleaning, painting, fitness, health, etc. It is impossible for one human being to check, control and manage all types of activities on a frigate. What defines an EXO as a competent or incompetent officer is whether he/she actually empowers the administrative team, which will then conduct the tasks? Andrews's (2013) study showed that successful leaders had transitioned from traditional command and control functions to a shared leadership structure as their team developed higher levels of work team empowerment; while Wassenaar and Pearce (2012) described empowerment as a critical and imperative factor for the development of shared leadership in a team.

Empowerment is more effective in that it fosters inputs from team members and allows them to participate in the management of the teams' activities (Vroom, 2000; Faraj & Sambamurthy, 2006); hence we advocate that team empowerment is positively related to shared leadership.

Although researchers have sought to understand influences on the success of empowered teams (Kirkman & Rosen, 1999; Chen, et al., 2007; Kirkman, et.al., 2004; Mathieu et al., 2006; Luciano et al., 2014), and defined empowerment as a critical component of shared leadership, empowerment has not been examined within the context of shared leadership. We anticipate that team empowerment will relate positively to shared leadership. Based on the reviewed literature we, therefore, propose that:

Hypothesis 1. Team Empowerment is positively associated with shared leadership.

4.2.2. Task complexity

Wood (1986) described task complexity as the relationship between task requirement and performance outcomes that create demands on the knowledge, skills, and resources of team members. Campbell (1988), using Wood's (1986) basic framework, suggested different types of complexity. A complex task was described by Campbell (1988) in his study as having several interrelated and conflicting elements to satisfy, while complexity was treated as: (a) primarily a psychological experience, (b) an interaction between task and person characteristics, and (c) a function of objective task characteristics.

Work complexity might be described in terms of the extent to which that work is intensely knowledge-based and demands a considerable amount of information sharing and interdependent activities on the part of team members (Hmieleski, Cole, & Baron, 2012; Ensley, et al., 2006; Hoch & Dulebohn, 2013; Hoch & Kozlowski, 2013; Wang et al., 2014). When it is a daily and routine task, leadership, whether shared or vertical, requires little or no

help. As the complexity of the task increases, the probability that all of the necessary knowledge, skills, and abilities to complete the task consist in a single person gets smaller (Bligh, et.al., 2006; Pearce & Manz, 2005). According to Pearce and Sims (2000), task complexity should positively relate to shared team leadership, and Pearce (2004) suggested that the more complex the task, the lower the probability that any single individual can be master of all its components. Definetly, complex tasks require various exchange relationships among team members (Seers, et.al., 2003). Moreover, Morgan, Salas and Glickman (1993) stated that the growing complexity of tasks is the main reason for establishing teams in order to provide competitive advantage.

At the organizational level, one can explore the role of hierarchy the result of the complexiy (Zhou, 2013). Many factors can potentially increase or lower complexity, depending on the situation, whereas the complexity of a task may influence efficiency, effectiveness (Hærem, Pentland & Miller, 2015). Particularly when a team faces high complexity, as well as associated ambiguity in its set goals, there may be increased demands for more than one individual to assume the leader's role (Day et al., 2004). As Dóci and Hofmans (2015) explained the case of complexity as a characteristic of a situation: a task with lower complexity activates the encodings in the leader's mind that the task is not too difficult and that he can handle it. On the other hand, a task with higher complexity activates the encodings that the task is too complicated and that he cannot handle it. The encoding: "This task is too difficult" may trigger the cognition: "I cannot handle it", which may, in turn, activate avoidance behaviors. As with warships in the navy, most of the tools and systems used in the military have been growing more complex every day. In addition to the growing complexity the command and control for a warship is a world of organized complexity, tens of systems (sensors, weapons, command, control, communications, computers, and intelligence, etc.) in the Combat Management system, involving systems span the full technology spectrum, number of elements in these systems, their attributes, the interactions among the functions create this complexity. Combat management system or Combat Information Center (CIC) supporting and collecting informations for Commander of warship to give the effective decision. These functions are carried by with sensors like radars, electro–optical systems and sonar, to be aware of the battle environment at sea which includes surface, subsurface and air. Military teams in the CIC also, convert the informations by interpretation and produce a common operational picture (the air picture, sea surface picture, the undersea picture, and the ground picture) by tracking data from numerous sources, direct weapon sensors and weapons to engage and destroy incoming threats in a rapidly changing

complex battle environment. During these functions, there is contionus sending and receiving internal/external communications is ongoing. Capabilities requires a system-of-systems approach to analyze the impact of making these naval investments across the diverse domains of surface, undersea, air, land, and networks as well as maritime coalition force integration ranging from land attack and air defense to anti-submarine and anti-surface warfare and support for special operations forces. CIC concept is more horizontol than hierarchical. Considering the complexity of the systems in a single warship, it is impossible for officers to have all the required skills and knowledge. The famous saying "A jack of all trades is a master of none" holds true for most of the officers on a frigate. On the other hand, a petty officer is trained for a certain job, conducts the same job for almost his entire career and eventually becomes "a master of one". Furthermore, those complex jobs usually require at least a couple of sailors representing different professions. Thus, for such complex tasks to be done efficiently and soundly, many exchange relations among officers and petty officers are essential. We believe that this situation of complexity's encoding forces teams to implement shared leadership. Additionally, Cox, et.al., (2003) suggested that as task complexity increases, teams should look to leadership structures other than the traditional hierarchy to aid in successful task completion. Accordingly, with the increase in task complexity, the benefits of shared leadership become more apparent (D'Innocenzo et al., 2016).

Based on the reviewed literature, we hypothesize that:

Hypothesis 2: Task complexity is positively associated with shared leadership.

4.2.3. Task interdependence.

Task interdependence is the degree to which goal accomplishment requires the completion of related subtasks, making it necessary for group members to share or exchange information, materials, or expertise to achieve the desired group performance (Van der Vegt, Emans, & Van de Vliert, 1998), and to rely on one another and receive direct support from others to carry out the work (Staples & Webster, 2008). This is a powerful concept in explaining team task characteristics and a probability factor in the emergence and outcomes of many group processes (Kozlowski & Bell, 2003; Gu, Chen, Huang, Liu, & Huang 2018). Pearce (2004) supported the view that the benefits of shared leadership are highest in contexts characterized as interdependent. Increasing task interdependence usually needs more effective mechanisms to coordinate and harmonize the efforts of team members (Cox et al., 2003).

Military teams have sufficient tools to organize and allow the members to unite their efforts. As Aubé and Rousseau (2005) stated, "task interdependence refers to the extent to which team members must actually work together to perform the task" (p. 192). The level of interdependence is an essential task characteristic for many teams (Kozlowski & Bell, 2003). Military teams must perform the task to achieve the goal and performing task together is related to shared leadership. A military team in the Combat-Information-Center (CIC) of a frigate consists of 20 sailors of different professions, such as Air Picture Compiler, Weapon Officer, Surface Warfare Officer, Fire Controller, Communications Officer etc. to fulfill the necessary tasks, while they have to focus on their particular jobs, they also have to act and think and fight as one. As the leader of the CIC, the Commanding Officer should transfer some of his duties while retaining others. The level of duties transfer (level of shared-leadership) usually depends on the threat level. As Pearce and Sims (2000) agreed, when there is high task interdependence, team members will need to work together to a greater degree, which increases the possibility for shared team leadership to establish. Conversely, when tasks are independent, team members are more likely to act as individuals and work alone, preventing shared team leadership from arising. Perry, Pearce & Sims (1999) suggested that the emergence of shared leadership seems unlikely in teams with minimal levels of interdependence between team members. On the other hand, the interaction and coordination, as an innate effect in the interdependence, provide a suitable context for the execution of effectively shared leadership practices (Fausing, et al., 2015). Sharma and Yetton (2007, p. 224) confirmed that "For interdependent tasks, successful implementation depends on effective group performance. Transactive memory provides shared mental models and enables a form of tacit coordination." Accordingly, knowledge sharing can develop shared leadership conditions.

Interdependence can be conceptualized in three ways, including (a) task degree, (b) goals guiding the actions, and (c) outcome of collective actions. Although the three forms of interdependence are conceptually distinguishable, they tend to covary positively in practice, so that shared leadership–performance relationships might exhibit a stronger bond to the extent that teams are performing more interdependent work (D'Innocenzo et al., 2016). Moreover, as suggested in Fausing et al.'s (2015) study, for a functional, shared leadership to emerge, team members must work toward the same goals, interact and depend on each other in solving their tasks and, thus, experience a certain degree of interdependence. Such an increased interdependence will lead to team members' collaborative behaviors that may confirm the importance of shared leadership.

Building on the above arguments, we expect a positive relationship between task interdependence and shared team leadership. We, therefore, propose that:

Hypothesis 3: Task interdependence is positively associated with the shared leadership.

4.2.4. Sequential mediating effects of Shared Leadership and Self-management on Effectiveness Perception

Perceived Team Effectiveness

Team effectiveness and team performance have been studied in terms of several models by researchers, and team literature suggests that there are various criteria for measuring team effectiveness (Cohen & Bailey, 1997; Hackman & Wageman, 2005; Boies et al., 2010; Carson et al., 2007; Hoch, et al., 2010; Pearce & Sims, 2002; Sivasubramaniam, et al., 2002; Small & Rentsch, 2010; Solansky, 2008). In the case of teams, effectiveness is a perception that is used to express team outcomes. Hackman (1987) argues that effectiveness should measure the output of the team, the state of the group as a performing unit, and the impact of the group experience on individual members. Researchers generally determine effectiveness by measuring dimensions of performance and members' attitudes and stance towards the team or the organization (Cohen & Bailey, 1997). In this study, effectiveness is assessed in terms of effectiveness perception. One of the primary motives given by organizations for establishing teams is to build collaboration among employees to achieve an overall competitive advantage for the organization (Day et al., 2004). Andrews (2013) explained that the terms teamwork, team effectiveness, and team performance are sometimes used almost interchangeably in organization studies. Yet, there are several significant distinctions among these three concepts in the literature. Team effectiveness involves a combination of external and internal factors that determine how well the team works as a unit. Team performance generally focuses on the results achieved by the team, regardless of any other factors. Team effectiveness is a multifaceted and complex concept that has significant ramifications for the overall success of an organization. The design, operation, and measurement of effective teams with which to achieve the goals of a business should be a significant focus of both operational and support functions within the organization (Salas, Stagl, & Burke, 2004). Even though vertical leaders continue to play an essential role in maintaining and developing shared leadership, lateral impact among peers within this shared leadership should also play a critical role in describing team dynamics and team effectiveness

(e.g., Avolio, et.al.,, 1996; Pearce et al., 2002; Pearce & Conger, 2003; Pearce & Sims, 2000; Yukl, 2013).

Leadership is an indispensable variable for team effectiveness (Morgeson et al., 2010), rather than leader characteristics & traits, leadership activities may promote team processes which are likely to drive team effectiveness (Santos, Caetano & Tavares, 2015) and we believe that shared leadership relates positively to team performance. We expect that shared leadership will foster positive outcomes for teams in military organizations as well. Similar positive outcomes may achieve, by promoting knowledge exchange among team members and increasing individuals' motivation to take on responsibilities, shared leadership assist and support the team cohesion, team consensus, and satisfaction (Bergman et al., 2012). Besides, as an intangible resource derived from network synergy of team members, shared leadership is probably to be positively related to team performance (e.g., Carson et al., 2007; Pearce & Sims, 2002; Hoch & Kozlowski, 2012) by increasing team coordination and efficiency. Moreover, as noted by Day, et. al., (2004), shared leadership can multiply team effectiveness by increasing the team's social capital, including knowledge, abilities, and skills, through team information-processing and learning (Wang, et al., 2014). For example, one of the commanding officer, in the beginning of the first days at ship, he didn't know very details of the gun firing systems of his ship and therefore he prefered to define the objectives and encouraged his officers to take decisions by themselves. The result was outstanding. After that successful drill, with every piece of information and experience he gained, he had interfered more and more, and taken decisions by himself. But the result was frustrating. With his increasing vertical leadership, his ship was doing worse. After six months, he had decided to go back to point zero and promote shared leadership. Katz and Kahn (1978) suggested that when team members offer leadership, they will bring more resources to the task, share more information, and experience higher commitment among the team. Collectively, these consequences should lead to higher levels of team performance. Additionally, when team members receive influence or are open to the influence of others, it can generate higher levels of team functioning in terms of respect and trust. Teams that exhibit and indicate these characteristics have also shown higher levels of performance (Zaccaro, Rittman, Marks, 2001; Day, et al., 2004). This is supported by empirical evidence (e.g., Carson et al., 2007; Erez, et al., 2002; Pearce & Sims, 2002), and the idea is that when team members offer their leadership to others, they can better promote team functioning and so achieve greater performance. It becomes impractical for a vertical leader to maintain hierarchical control of a team in extreme conditions, a situation that leads to adverse outcomes (Pearce & Conger,

2003; Yammarino, et.al., 2010). On the other hand, the practice of shared leadership may empower teams to meet the challenges encountered and to excel in dangerous contexts (Ramthun, 2013).

Finally, with shared leadership in operation, leaders create a generative dialogue and demonstrate their concern for followers by showing them consideration, offering them support, and treating them fairly. People are more likely express voice they believe that their input will make a difference that leaders will heed their ideas (Greenberg & Edwards, 2009). These forms of behavior facilitate collaboration among team members and help them overcome the fear of confronting complexity, thus leading to greater team effectiveness.

Shared Leadership and Self-Management as a Serial Mediator

Prior studies has supported that shared leadership to be significantly related to team effectiveness in entrepreneurial top management teams, change management teams and virtual teams (Cox, et al., 2003). We would expect this general effect to be similarly important in the context of military teams. Shared leadership impacts on and generates the conditions of self-management, which leads to effectiveness. Self-management arises when members of a team assume roles previously reserved for management (Manz & Sims, 1987). Several aspects of self-management are potentially important. It can be depicted as a process in which a person is faced with immediate response alternatives involving different consequences and the person chooses an apparent low-probability response (Mischel, 1973). Similarly to shared team leadership, with self-management, team members are responsible for decisions within the team. Nevertheless, the theory of self-management does not address the question of how leadership functions are shared by the team as a whole (Pearce & Conger, 2003). While self-management theory usually concentrate on where leadership resides, studies on shared team leadership focuses on how the leadership functions are performed (Morgeson, et.al., 2010). Future studies need to identify antecedents, mediators, and moderators of shared team leadership, such as the influence of self-leadership and self-management (Manz, 1986; Neck & Houghton, 2006).

Considerable research has examined the effects of implementing self-managing teams on team performance outcomes (e.g., Cohen & Ledford, 1994; Wageman, 2001; Tata & Prasad, 2004; Millikin, Hom, & Manz, 2010). Furthermore, it is difficult to demonstrate the concept of shared leadership to team members. Implementing shared leadership in self-managed teams could present a paradox for managers: on the one hand, a team can profit from the dissimilar leadership roles; on the other hand, the differences between roles could cause

disputes and strifes among team members. To reduce power struggles, it is important to let team members realize that: (a) various roles of leadership can exist simultaneously, and (b) leadership is a task that must be shared by all team members (Yang & Shao, 1996). The popularity of self-management teams is partly based on reports from organizations which suggest that self-managed teams can boost performance, improve the quality of products, and increase levels of innovation whereas some researchers have empirically identified relationships between self-management and increased team effectiveness (Tata & Prasad, 2004). At the same time, we support the idea of an inferred connection between self-management and shared leadership. Self-management can directly influence team effectiveness since it brings decision-making authority to the level of operational problems and uncertainties and thus increases the speed and accuracy of problem solving. Teams with high levels of self-management (e.g., self-directed work teams) have a significant amount of decision-making authority. Team members guide themselves with planning, organizing, motivating, and controlling, assign jobs to members; plan and schedule work for setting goals, make product-related decisions, and solve problems (Tata & Prasad 2004). Self-management is paramount for officers on a frigate. While in the harbor, during working hours the commanding officer and executive officer are onboard and available to make decisions and manage crucial activities. On the other hand, outside working hours, junior officers retain almost all the duties of Executive Officer (EXO) and some duties of the commanding officer (CO). They are not restricted by higher ranked officers. Therefore, the level of self-management of junior officers is crucial for that particular ship's performance. Empirical examinations of the connection between self-management and team effectiveness present inconsistent results. Self-management may impact on team effectiveness since it brings decision-making authority to the level of operational problems and uncertainties and, thus, increases the speed and accuracy of problem solving. When self-managed teams maintain and control all the skills required for leadership, they can achieve great success and increase organizational effectiveness (Yang,& Shao, 1996). Some studies suggest that self-management increases effectiveness, whereas others have found negative outcomes (Tata et al., 2004). Also Small (2007) results stated that shared leadership has performance benefits for temporary, self-managing project teams. In theory, self-managed work teams are believed to be effective because of two factors: self-management and teamwork. Self-managed work teams maintain a higher level of autonomy in making decisions. In an ideal team, members plan, organize, control, staff, and monitor their own work. Also, self-managed work teams generate team spirit, which stimulates collaboration. Members are collectively responsible for

their end product and receive feedback and evaluation in terms of team, rather than individual, performance. Team leaders function as facilitators rather than controllers, so that being the head of the team is a nominal post, rather than a power post. In the last decade, there has been increasing interest in application of self-managed work teams' concepts in public agencies like American municipalities' to improve productivity (Yang, & Guy, 2011).

Self-management is the active control by employees over their work environment and themselves that results in productive, goal-oriented behaviors. A leader's role in a self-management situation consists of facilitating the development of self-control by employees so that they can successfully manage their work activities with fewer organizational controls (Cohen, Chen, & Ledford 1997). As part of the shared leadership concept, a member has to be active in the team to participate in the activity and share in the risk; self-management promotes this participation. Also closely related to self-management is the notion of shared leadership, influence between the team members, who lead one another to help achieve organizational objectives (Pearce, 2004; Pearce & Conger, 2003; Pearce & Manz, 2005). Self-management's dimensions, as stated by Manz & Sims (1987), are strongly related to shared leadership. They include promoting self-observation so that the members of a team can gather the information and knowledge required to monitor their performance and encouraging self-criticism so that members of a team become self-critical and discourage poor performance. These are the two dimensions that foster shared leadership. Although there has been disagreement and discussion for shared leadership performance benefits (Locke, 2003; Pearce, Conger, & Locke, 2008), empirical research suggests that shared leadership exists in self-managing project teams and is an important predictor of team outcomes (Bergman, et.al., 2012). For all these reasons, shared leadership in teams and effectiveness perception should be investigated. Accordingly, to us, the answer to the question of how a shared leadership impact on team effectiveness is: through self-management. Thus, with shared leadership and self-management being strong and closely intertwined predictors of team effectiveness, the current research seeks to ascertain those conditions under which their effect on perceived effectiveness is particularly prominent.

Furthermore, we suggest that shared leadership and self-management might exert a sequential mediating effect between complexity and perceived effectiveness. That is, complexity can increase the need for shared leadership, in turn improve self-management, and finally increase perceived effectiveness in military teams.

Hypothesis 4: Shared leadership positively predicts effectiveness perception, through self-management.

4.2.5. Relation of Trust with Self-Management and Team Effectiveness

Findings in the literature on self-management teams raise a question: How do some organizations manage to efficiently implement teams with high levels of self-management, while others do not? To answer this question, we want to focus on what moderates the effectiveness of those teams. One factor that could potentially influence the effectiveness of self-managed teams is the intragroup trust. Although we expect self-management to be positively associated with team effectiveness, we also expect that these effectiveness benefits will be contingent on intragroup trust. In examining the moderating role of intragroup trust, trust is found to be the primary characteristic of any work relationship and one of the most frequently studied elements (Fulmer & Gelfand, 2012). Interpersonal trust can be described as an individual's willingness to accept vulnerability based on positive expectations of the intentions or actions of another (Rousseau, Sitkin, Burt, & Camerer, 1998). Therefore, intrateam trust refers to the aggregate levels of trust that members of the team have in their teammates (Langfred, 2004). In the literature, varieties of definitions of trust have been proposed. Trust is an intragroup phenomenon and intragroup trust plays a vital role in the interpretation phase. Trust has been conceptualized as unidimensional or multidimensional, but has been deeply associated with benevolence, honesty, and competence (Mayer, Davis, & Schoorman, 1995; Simons & Peterson 2000). At the level of the group, trust requires generalized expectations of any team member. Thus, regarding its influence on group discussions, the trust may fall to its lowest common denominator and, through reciprocity, may exhibit "spirals" of enhancement or reduction (Zand, 1972; Simons, & Peterson, 2000). In terms of leadership, trust is often referred to as a hallmark of effective teams (Dirks, 1999) and has been positively related to team effectiveness, either directly or indirectly through group procedures (Dirks, 1999; Simons & Peterson, 2000). Based on the work by Mayer, et al. (1995), Breuer, Hüffmeier and Hertel (2016) define team trust as the shared willingness of the team members to be vulnerable to the actions of the other team members, due to the shared expectation that the other team members will perform particular actions that are essential and significant to the team, regardless of the ability to monitor or control and check other team members. Critical situations are particularly important for the development of trusting relationships in organizations (Neves & Caetano, 2009).

Many different metaphors have been used to describe the importance of trust for teams. When you are a member of a military team, trust could be the multiplier for the team's effectiveness. Trust is like a glue connecting the team members. Trust is the wireless connection between the team members; if there is poor connectivity, then the Smartphone works less effectively, and in keeping with the metaphor, a lower level of trust within self-management creates less effectiveness in the team. A high level of trust increases the team's output. Trust is like visibility at sea: lower visibility entails lower speed, and a lower level of trust among team members decreases effectiveness. Trust fosters self-management; trust among sailors is vital in any work in which they must depend on their colleagues to carry out their duties. But trust is especially crucial for damage control team (DCT) members. When DCT members (the operational team) can trust each other, they are free to focus their attention on the task of extinguishing fires reaching 1000 C. When DCT members cannot trust each other, individual efforts will be focused on self-protective behavior, which will decrease the efficiency of firefighting and risk everyone's life, both on that particular ship and on nearby ships. While promoting trust toward each other enhances cooperation and cohesion (Mathieu, et.al., 2000), lack or a lower level of trust undermines effectiveness and decreases teamwork, leading to less effective teams. While team cooperation is essential for organizations, it is vital for military operational teams, which usually operate in life-threatening situations.

Trust is associated with feelings of group solidarity (Molm, Collett, & Schaefer, 2007), affective commitment (Lawler, Thye, & Yoon, 2009), and social identification (Tanis & Postmes, 2005), among other favorable factors (see also Poteete, Janssen, & Ostrom, 2010). A decrease in trust may accelerate fissures and cracks in the group's structure, making it inefficient and unsteady (Markovsky & Lawler, 1994). With this kind of weakness, military teams may underperform, and even worse, may be unable to achieve their objectives. Research on intrateam trust, where it is the focal predictor of team performance, has yielded diverse and inconsistent outcomes. The size of the effect across these studies deviates considerably in extent and direction, with some providing support for a positive influence of trust on performance, and the rest failing to demonstrate any impact at all, or even suggesting an adverse impact on performance (Langfred, 2004). Consequently, a cumulative body of evidence on the performance implications of intrateam trust is currently lacking (De Jong, Dirks, & Gillespie, 2016). As with self-management, conditions of trust within military teams bode well for organizational effectiveness.

Previous research has already established a link between trust and team effectiveness (Hosmer, 1995; Dirks & Ferrin, 2001; Dirks, 1999; Costa, Roe, & Taillieu, 2001; Costa, 2003), but little has been stated about a potential link between self-management and trust (Langfred, 2007). According to Dave Berkus, chairman of Tech Coast Angels, to unleash team members' leadership potential there must be a permanently trust and confidence in the team (Pearce, 2004). The higher the level of trust between team members, the more likely they are to allow fellow team members to make decisions at specific time points, without being afraid that that person is not considering the best interests of the team. Also, the stronger the trust, the more likely team members are to share their perceptions and opinions without fear of being rejected. Therefore, in teams where trust is high, self-management will be facilitated. Intragroup trust is a willingness to engage in risk-taking behaviors within the team, and one such risk lies in attempting to influence team members and accepting influence in return (Zand, 1972). A high level of intragroup trust is necessary for team members to be willing to make themselves vulnerable by actively influencing and accepting influence from other team members. Therefore, in teams where the trust level is high, risk-taking leadership activity will be facilitated so that self-management will be operating in the team. Considering the life-threatening situations in which military teams operate, risk-taking leadership plays a vital role in mission accomplishment and the safety of the team member himself/herself and every other member of the team. If the team members trust each other, they will be more likely to accept expressed disagreements while performing a task, and less likely to misinterpret conflict behavior by inferring secret agendas or personal attacks as the guiding force behind the behavior. This will impact positively on team effectiveness. If members of the team do not trust each other, they are likely to interpret unclear expressions and even sometimes the job-related behavior of others negatively, with a negative impact on team effectiveness. Therefore, self-management teams increase team effectiveness if the team trust level is high (Simons & Peterson, 2000).

We predict that in teams where self-management is present, effectiveness is strengthened by trust. If so, once the trust is removed, team effectiveness will decrease.
We, therefore, propose that:

Hypothesis 5. Intragroup trust moderates the relationship between self- management and effectiveness perceptions, such that this relationship is stronger when trust is high rather than low.

Regarding the predictors of shared leadership, self-management, and team types, we have designed a conceptual model, here briefly described: Empowerment, Complexity, and Interdependence are critical predictors of shared leadership, and shared leadership has a relation with Self-Management, which is positively related to effectiveness perception in the military context, as presented in Figure 4.1. Trust moderates the relationship between self-management and perceived effectiveness.

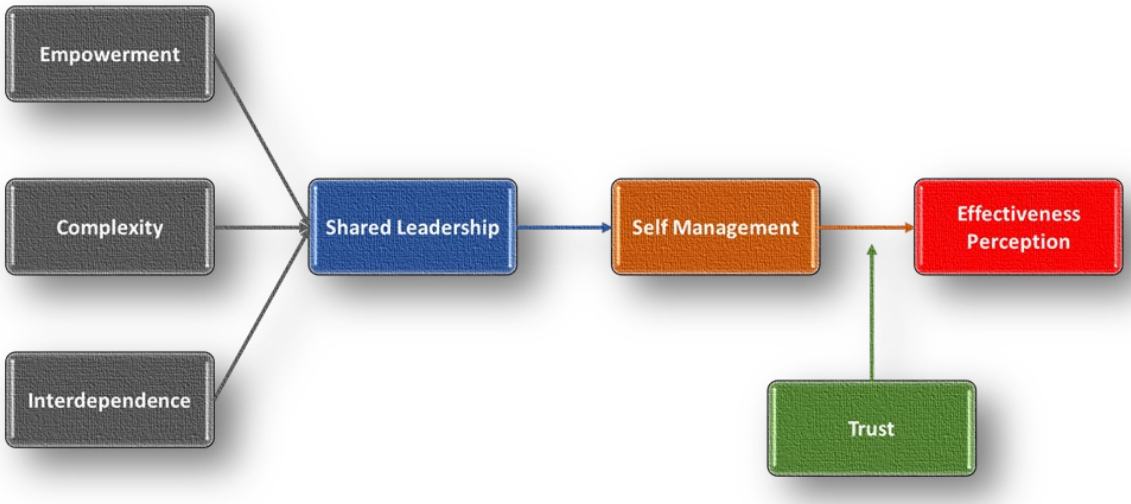


Figure 4.1. Hypothesized model of the study

In sum, we aim to explore whether and how key predictors are related to shared leadership and to investigate effectiveness perception in the context of shared leadership and self- management. We also investigate the effects of trust in the model. By integrating the factor of trust, we argue that the key predictors are positively related to shared leadership, with the mediating role of shared leadership and self-management; and that the above relationships are moderated by trust. Our conceptual model is represented in Figure 4.1, which consists of 3 parts.

In the first and foremost part, we test whether team empowerment, complexity and interdependence affect shared leadership. Drawing on our reasoning from the above literature, we first hypothesize that (1) Team Empowerment will be positively associated with shared leadership. (2) Complexity will be positively associated with shared leadership. (3) Interdependence will be positively associated with shared leadership. In the second part, we hypothesize that (4) Shared leadership is particularly predictive of perceived effectiveness

through self-management. In statistical terms, we thus expect a serial mediation effect such that medium complexity, interdependence, and team empowerment increase shared leadership, which in turn predicts higher self-management. Ultimately, the higher self-management will lead to higher perceived effectiveness as an outcome. Finally, we test the impact of self-management on perceived effectiveness under the condition of trust.

As such, the project is focused on the shared leadership predictors and effectiveness perception in the military context, as well as on the moderating role of trust in relation to shared leadership and self-management. The data were analyzed by utilizing the Statistical Package for the Social Sciences (SPSS) Programme Version 23. Next, descriptive statistics were used to analyze the data consisting of means, medians, and standard deviations. For each of the scales, Exploratory Factor Analysis was conducted to see if similar factors are obtained and to eliminate the items with low loadings. The Kaiser Meyer Olkin measure of sampling adequacy scores and the significance of the Bartlett test were considered for the adequacy of the factor analysis. Moreover, Cronbach alpha coefficients (α) were used to evaluate the internal consistency of the measuring instruments. The Pearson product momentum correlation coefficients were used to specify the relationship between the variables and the effect size is determined according to Cohen's (1988) thresholds. The level of statistical significance was set up as $p \leq 0,05$. Tabachnick and Fidell's suggestions were followed for the sample size adequacy in order to perform analysis (1996, p. 132). Confirmatory analysis was conducted to observe the model fit, using AMOS 23.0 to examine the distinctiveness of our study variables based on chi-square statistics and fit indices of RMSEA, CFI and TLI (Anderson & Gerbing, 1988). Regression analysis was conducted to explore whether the predictor variables held predictive value for criterion variables. Predictor variables were standardized to determine the relative importance of the continuously distributed predictors. To test the hypotheses concerning the serial mediating effects of shared leadership and self-management, we followed the guidelines described by Hayes (2017). This approach has high statistical power and several advantages compared to traditional approaches to testing mediators: First, the approach is considered more rigorous than typical stepwise regression techniques as all paths are measured simultaneously rather than step by step. Secondly, it is a non-parametric test and can be used on small samples (N>25). Thirdly, this approach allows for multiple mediators, statistical control of covariates, and pairwise comparisons between indirect effects, as well as bias-corrected and accelerated bootstrap confidence intervals (Preacher & Hayes, 2008). Preacher and Hayes (2008, p. 881) list several advantages of specifying and testing a single multiple mediation model: It includes multiple mediators

simultaneously: (1) it "purifies" indirect effects by controlling for all the other mediators; (2) it reduces the alpha inflation that would result from using a series of single mediator models; and (3) it allows the researcher to determine which mediators are more successful than others. Statistical analyses were conducted with SPSS 23.0 (IBM, Armonk, NY) and the supplemental "PROCESS" macro script (Hayes, 2017). The level of significance was set to $p < 0.05$.

4.3. Methodology

4.3.1. Sample

A sample of 209 international officers (43 Army, 144 Navy, 22 Air Force), whose average age was 41.46 years old (s.d. = 7.81), participated in the study. Nine of the officers were women, and military ranks ranged from Lieutenant to Captain, including CDR (Lt.Col) and LCDR (Major) as they are the most frequently occurring military rank. In total, 119 officers from the military project teams and 90 officers from the military operational teams participated in this study. Of the 498 participants who received the questionnaire, 209 returned it (17 Belgium, 7 Canada, 1 Denmark, 2 Estonia, 8 Germany, 1 Greece, 17 Italy, 6 Netherlands, 2 Norway, 2 Poland, 37 Portugal, 5 Spain, 3 UK, 19 USA, 82 Turkey), yielding a response rate of 41 percent. We removed one participant because of that person being unengaged, as evidenced by the respondent's giving the same response (3/4) to every single item, the removal thus being entirely justifiable (Aguinis, Gottfredson, & Joo, 2013). Gender was predominantly male for the military team members. The final sample size was 208; we replaced the median for ordinal scales (for the three missing variables) and after that there were no missing data.

4.3.2. Procedure and Instrument

The questionnaire was sent with an email to some participants, and a questionnaire was also created in Google Forms. Most of the participants took part via LinkedIn. The survey instructions included a request that the survey be completed by a member of the defined military team types and giving information about the anonymity and confidentiality of answers. Team members returned their completed surveys to the author by email or by filling in the online questionnaire. The responses were collected for five months.

Measures

Participants were requested to provide demographic information about age, gender, rank, service, and military team type. All items of the questionnaire are shown in Appendix 1. It consists of 46 questions rated on five-point scales from 1 (Disagree Strongly) to 5 (Agree Strongly) measuring intragroup trust, team empowerment, self-management, complexity, interdependence, shared leadership, and perceived effectiveness. A principal component analysis was conducted to test whether all scales were measuring the expected constructs. The Cronbach alphas are shown in Table 4.1.

Team Empowerment. To measure team empowerment, we adapted the empowerment scale developed by Kirkman, et.al., (2004). The scale, which consists of 9 items, is a condensed version of Kirkman and Rosen's (1999) original empowerment scale. Items were reworded to reflect the unique context of the military teams. The nine items assessed three dimensions: meaningfulness, autonomy, and impact. One example of the items is "Together, team members here determine how things are done in the command". 6 items from the original scale were dropped as a result of exploratory factor analysis. The last 3 item scale Cronbach's alpha was 0.86.

Complexity. To measure task complexity, we adapted the five-item scale from Podsakoff and MacKenzie (1994). Items were reworded to reflect the unique context of the military teams. The scale measures the routine nature of tasks and assesses task complexity when reverse-scored. One of the items given as examples is "My job does not change much from one day to the next". The Cronbach's alpha was 0.88.

Interdependence. We adapted the five-item scale by Van Der Vegt, Emans, and Van De Vliert (1999) to assess interdependence. Items were reworded to reflect the unique context of the military teams. One example of these items is "I depend on other team members' work for the help and support that I need to do my job". The Cronbach's alpha was 0.88.

Shared Leadership. To measure shared leadership, we adapted the scale developed by Small (2007). Participants' attitudes about shared leadership were measured with three items from the 13-item scale developed by Small (2007), for reasons of parsimony. Items were reworded to reflect the unique context of the military teams. High scores indicated a positive attitude toward shared leadership and low scores indicated a negative attitude. One example of the items is "In my team, it would be chaotic if multiple people took on leadership responsibilities of the team" (reverse scored). The 3-item scale had acceptable internal consistency reliability of 0.78.

Self-Management. We adapted the three-item scale by Campion, Medsker, & Higgs (1993) to assess self-management. Items were reworded to reflect the unique context of the military teams. One example of the items is "Team members are responsible for determining the methods, procedures, and schedules with which the work gets done". The Cronbach's alpha was 0.68.

Trust. To measure the intragroup trust, we adapted the Intragroup Trust scale developed by Simons and Peterson (2000). The scale consists of 5 items designed to measure team members' perceptions of team-wide trust, and their perceptions of the team's expectations of honesty. Items were reworded to reflect the unique context of the military teams. One example of the items is "We expect the complete truth from each other". Survey participants answered by stating the extent to which they agreed with each statement. The Cronbach's alpha was 0.82.

Effectiveness Perception. To measure the perception of team effectiveness, we adapted the scale by Lemieux-Charles, Murray, and Baker (2002). Items were reworded to reflect the unique context of the military teams. The scale consisted of 4 questions. One example of the items is "I believe the team's overall performance met (my) expectations". A higher score indicates a higher level of perceived effectiveness. The Cronbach's alpha was 0.89.

4.4. Research results

Descriptive statistics and correlations of variables

Table 4.1 presents the means, standard deviations, and variance and presents all variables correlations in the study. As shown in Table 4.1, means of all scales with the exception of shared leadership were larger than 2.5 which is the mid-point of the absolute scales using the 5-point Likert format. The largest was perceived effectiveness (4.06). The mean of shared leadership is slightly lower than 2.5 (2.37). The results in the correlation table show that a small, but significant, correlation was found between shared leadership and self-management whereas a positive correlation was found between self-management and perceived effectiveness. However, no relationship is found between shared leadership and perceived effectiveness. Trust is positively correlated with empowerment and self-management and perceived effectiveness. Positive associations are found between complexity and empowerment and between complexity and shared leadership.

Table 4.1. Mean, Std. Deviation, Pearson's correlation of variables

	N	Mean	SD	1	2	3	4	5	6	7
1 Trust	208	4.02	0,62	1.000						
2 Empowerment	208	3,89	0,69	.525**	1.000					
3 Complexity	208	3,15	0,84	.171*	.192**	1.000				
4 Interdependence	208	3,63	0,80	0,077	0,03	-0,042	1.000			
5 Self Management	208	3,12	0,78	.273**	.223**	-0,042	0,012	1.000		
6 Shared Leadership	208	2,37	0,86	0.008	-0.051	.220**	-0,060	.183**	1.000	
7 Perceived Effectiveness	208	4,06	0,63	.543**	.523**	.167*	.154*	.385**	0.30	1.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Exploratory factor analyses. The first exploratory and confirmatory factor analyses were performed, starting with the 46 items. At the start, exploratory factor analyses (EFA) using principal components factor extraction (eigenvalue > 1) with orthogonal rotation (Varimax, delta = 0) were done in SPSS. Then exploratory factor analyses (EFA) using principal components factor extraction (Factors to extract: 7) with orthogonal rotation (Varimax, delta = 0) were done in SPSS. The criteria used in EFA for the reduction consisted of removing the items with high factor loadings (more than .30) on more than one factor and the items with multiple high factor loadings with a difference lower than .20. After we performed item analysis on all measurement scales to ensure internal reliability and to identify the items that do not contribute to the internal description of the latent variables, 14 items from the original scale were dropped as a result of explanatory factor analysis. The results of these (46 minus 18) EFAs and the reliability indices of each of the variables created are shown in Table 4.2.

Table 4.2. Exploratory Factor Analyses

	1	2	3	4	5	6	7
Factor 1: Interdependence (α = .877)							
I depend on other team members work for help and support that I need to do my job.(I3)	**0.891**	-0.004	-0.012	0.083	-0.011	0.01	0.004
I depend on other team members in order to benable to do my work well.(I4)	**0.86**	-0.055	-0.01	0.121	-0.038	-0.061	-0.001
I depend on other team members work for material that I need to do my job. (I2)	**0.852**	-0.011	0.036	-0.035	0.036	-0.084	0.101
My job performance is strongly affected by other team members job performance.(I5)	**0.791**	0.104	-0.035	0.046	0.065	-0.032	-0.027
My own performance depends on receiving information and advice from otherteam members.(I1)	**0.694**	-0.126	0.127	0.044	-0.031	0.071	-0.091
Factor 2: Complexity (α = .882)							
I perform the same types of activities every day in my job.(CR2)	-0.065	**0.856**	0.058	0.053	-0.02	0.042	-0.084
My job does not change much from one day to the next.(CR3)	-0.017	**0.826**	-0.008	0.072	0.202	0.098	-0.033
My job is rather simple and routine.(CR4)	0.02	**0.819**	0.082	0.124	0.042	0.007	0.039
To perform most of my work, I follow the sameseries of steps.(CR5)	0.028	**0.792**	0.044	-0.085	-0.042	0.076	0.061
Most of the work I do in my job is somewhat repetitive in nature.(CR1)	-0.066	**0.77**	0.097	0.098	0.124	0.162	-0.107
Factor 3 - Intragroup Trust (α = .823)							
We are all certain that we can fully trust each other.(T4)	-0.005	0.097	**0.79**	0.145	0.309	0.057	-0.022
We count on each other to fully up to our word.(T5)	0.064	0.06	**0.712**	0.164	0.287	-0.032	0.091
Every team member present shows absolute integrity.(T2)	0.006	0.095	**0.701**	0.095	0.306	0.024	0.072
We expect the complete truth from each other.(T3)	0.159	0.061	**0.688**	0.277	-0.016	-0.084	0.166
We absolutely respect each other's competence.(T1)	-0.065	0.002	**0.665**	0.21	-0.007	0.023	0.089
Factor 4 - Perceived Effectiveness (α = .895)							
I am satisfied with my experience as a team member.(PE1)	-0.01	0.055	0.286	**0.814**	0.175	0.027	0.14
I feel positive about my experience in the team.(PE2)	0.167	0.085	0.276	**0.807**	0.072	-0.01	0.19
I am willing to work in a similar team in the future.(PE3)	0.05	0.065	0.218	**0.796**	0.247	0.054	0.13
I believe the team's overall performance met (my) expectations.(PE4)	0.117	0.085	0.166	**0.742**	0.316	-0.04	0.14
Factor 5 - Team Empoverment (α = .867)							
Team members here feel that their work is meaningful.(E1)	0.013	0.055	0.205	0.248	**0.814**	-0.07	0.1
Team members here feel that their tasks are worthwhile.(E2)	0.006	0.124	0.263	0.237	**0.797**	0.004	0.02
Team members here believe that their projects are significant.(E3)	-0.007	0.092	0.232	0.185	**0.788**	-0.07	0.13

Table 4.2. Continued

Factor 6: Shared Leadership (α = .782)							
In my team, it would be chaotic if multiple people took on leadership responsibilities of the team. (SL2R)	-0.014	0.208	-0.046	0.056	0.134	**0.842**	-0.01
My team's performance will be at risk if everyone participates in the leadership role(SL3R)	-0.101	0.04	0.025	0.006	-0.071	**0.841**	0.08
My team will be vulnerable when everyone takes responsibility for leading the team. (SL10R)	0.035	0.106	0.011	-0.045	-0.162	**0.777**	0.16
Factor 7 - Self Management (α = .683)							
Team members rather than leaders decide who does what tasks within the team.(SM2)	0.089	-0.1	0.086	0.2	-0.018	0.181	**0.78**
Team members are responsible for determining the methods, procedures, and schedules with which the work gets done.(SM1)	-0.003	-0.062	0.087	0.155	0.169	0.13	**0.73**
Most work-related decisions are made by team members rather than by leaders.(SM3)	-0.095	0.038	0.124	0.095	0.058	-0.04	**0.73**

Confirmatory factor analyses

Following Anderson and Gerbing's (1988) recommendation, we examined the construct validity of the variables before testing the hypotheses. We conducted a series of confirmatory factor analyses (CFA) using AMOS 23.0 to explore the distinctiveness of our study variables based on chi-square statistics and fit indices of RMSEA, CFI and TLI (Anderson & Gerbing, 1988). The confirmatory factor analyses (CFA) were implemented using AMOS with maximum likelihood estimation for the model's 7 factors, 6 factors, and 4 factors. The results of the model tested are shown in Table 4.3. The 7-factor model yielded a better fit to the data than the 6 and 4-factor models, which indicates that our variables are distinguishable. In this table, several indexes are presented that allow us to check the adjustment of the models tested in the sample. The $\chi 2$/ df index (chi-square fit index divided by degrees of freedom) is considered acceptable when the value is less than 2 (Ullman, 2001). The criterion for acceptance varies across researchers, ranging from less than 2 (Ullman, 2001) to less than 5 (Lomax & Schumacker, 2004). In any case, it is highly sensitive to sample size. According to Hu and Bentler (1999) and Schreiber, Nora, Stage, Barlow, and King (2006), CFI (Comparative Fit Index) values should be higher than .95 to be accepted. But Schumacker and

Lomax (2010) indicate that values close to .90 or .95 reflect a good model fit. Also according to these authors, RMSEA (Root Mean Square Error of Approximation) values between .05 and .08 indicate a close fit. Also, it has been common also to present the SRMR (Standardized Root Mean Square Residual), where values under .05 indicate a good model fit (Schumacker & Lomax, 2010) and values under .08 are acceptable (Schreiber et al., 2006). The model can be compared based on these indexes.

Table 4.3. Alternative model test results for the study

Model	CMIN ($\chi 2$)	DF	P	$\chi 2/df$ CMIN/DF	RMSEA	CFI	Standardized RMR
7 Factor (Proposed model)	484,767	328	,000	1,478	,048	,946	,0589
6 Factor (Self-management and SL merged)	630,128	334	,000	1,887	,065	,897	,0858
4 Factor (SM&SL + IN&CP&EM merged)	1,562,579	343	,000	4,556	,131	,577	,1791

4.5. Hypotheses testing

As stated above, to test the hypothesis we focused on three parts of the model. H1, H2, and H3 are tested with the first part of the model (Fig. 4.1, Predictors), H4 is tested in the second part of the model (Fig.4.2, Serial Mediated Model) and H5 is tested in the third part of the model (Fig 4.4, Moderated Model). The results from the model analyses are summarized in Table 4.8, the proposed model is presented in Figure 4.6, and they are outlined as follows.

First Part of the Analysis: Testing the Shared Leadership Predictors

Multiple regression analysis was used to investigate whether complexity, interdependence, and empowerment could significantly predict shared leadership for the first part of the model as presented in Figure 4.2. Results of the regression analysis are shown in Tables 4.4, 4.5 and 4.6. Data show that the predictors Interdependence, Team Empowerment, and Complexity

account for % 6 of the variance in Shared Leadership. Overall the regression model is not significant: F (3, 204) = 4,3, p< 0.006, R2= 0,059.

Hypothesis 1. Team Empowerment will be positively associated with shared leadership. The regression results show that (β= -.118), which is not significant in the p-value level. Analysis results indicate that H1 is not supported. Also, the direction of the relationship was the opposite of what was hypothesized. Empowerment is not significant at p = 0.174, therefore H1 is not supported.

Hypothesis 2. Complexity will be positively associated with shared leadership. The regression results show that (β= .244), which is significant in the p-value level. Analysis results indicate that **H2 is supported**. Complexity is significant, p=0.001; H2 is supported.

Hypothesis 3: Interdependence will be positively associated with shared leadership. The regression results show that (β=-.051), which is not significant in the p-value level. Analysis results indicate that H3 is not supported. Also, the direction of the relationship was the opposite of what was hypothesized. Furthermore, Interdependence is not significant, p = 0.491; therefore H3 is not supported.

The results show that only complexity is a significant predictor of Shared Leadership.

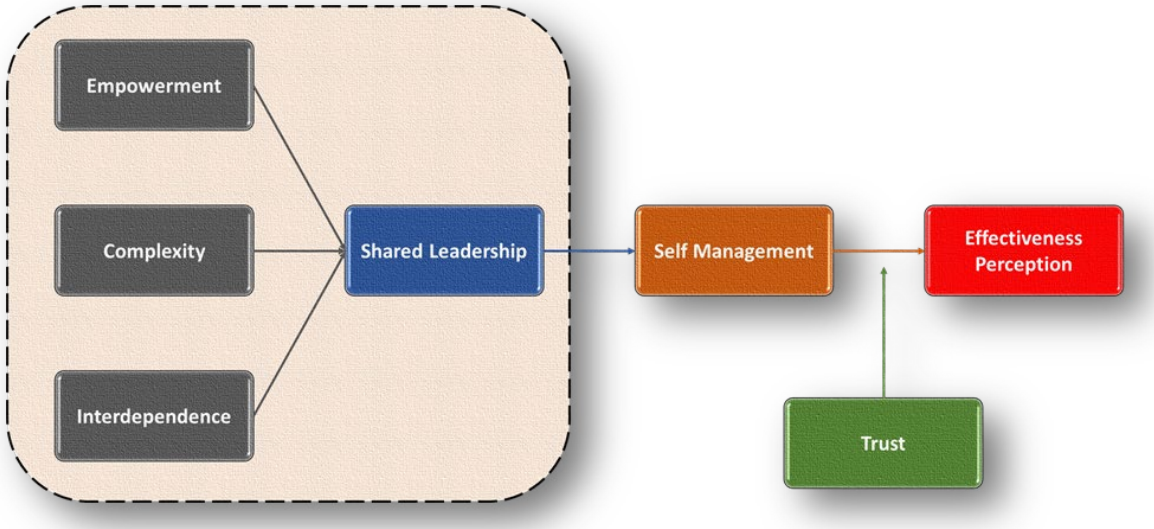


Figure 4.2. First Part of the Model – Predictors

Table 4.4. Regression Analysis, Overall Model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.244[a]	0.059	0.046	0.84507

a. Predictors: (Constant), Empowerment, Interdependence, Complexity

Table 4.5. Regression Analysis, ANOVA Results.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.211	3	3.07	4.299	.006[b]
	Residual	145.686	204	0.714		
	Total	154.897	207			

a. Dependent Variable: Shared Leadership

b . Predictors: (Constant), Empowerment, Interdependence, Complexity

Table 4.6. Regression Analysis, Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.239	0.457		4.904	0
	Complexity	0.244	0.072	0.236	3.407	0.001
	Interdependence	-0.051	0.074	-0.047	-0.69	0.491
	Empowerment	-0.118	0.087	-0.095	-1.366	0.174

a. Dependent Variable: Shared Leadership

Second Part of the Analysis: Testing a sequential indirect effect on SPSS using the Process Macro

To examine whether shared leadership and self-management mediate the relationship between complexity and perceived effectiveness, we performed serial mediation analysis using Model 6 in the PROCESS tool (Hayes, 2017). PROCESS is an SPSS macro for mediation, moderation and conditional process modeling. It allows one independent variable,

one dependent variable, and more than one variable at the same time, with our study containing two mediator variables. We created serial multiple mediation models (Hayes, 2017) using shared leadership and self-management as mediators. Serial mediation is "a causal chain linking the mediators, with a specified direction of causal flow" (Hayes, 2012, p. 14). In the first part, we found complexity as a predictor of shared leadership; therefore, in the second part of the analysis as presented in Figure 4.3, the focus is only on complexity as an antecedent.

In serial mediation, mediators are assumed to have a direct effect on each other (Hayes, 2017), and the independent variable (complexity) is assumed to influence mediators in a serial way that ultimately influences the dependent variable (perceived effectiveness). As illustrated in Figure 4.3, a total effect (c) refers to the relationship between complexity and perceived effectiveness without controlling for mediators; a direct effect (c′), on the relationship between complexity and perceived effectiveness after controlling for mediators; a total indirect effect (ab), on the role of two mediators in the relationship between complexity and perceived effectiveness; and a specific indirect effect (a1b1 and/or a2b2), on the role of a particular mediator in the relationship between complexity and perceived effectiveness. From our serial multiple mediation models involving shared leadership and self-management as mediators, we obtained three specific indirect effects through (1) shared leadership (a1b1), (2) shared leadership and self-management (a1a3b2), and (3) self-management (a2b2) (Fig. 4.3).

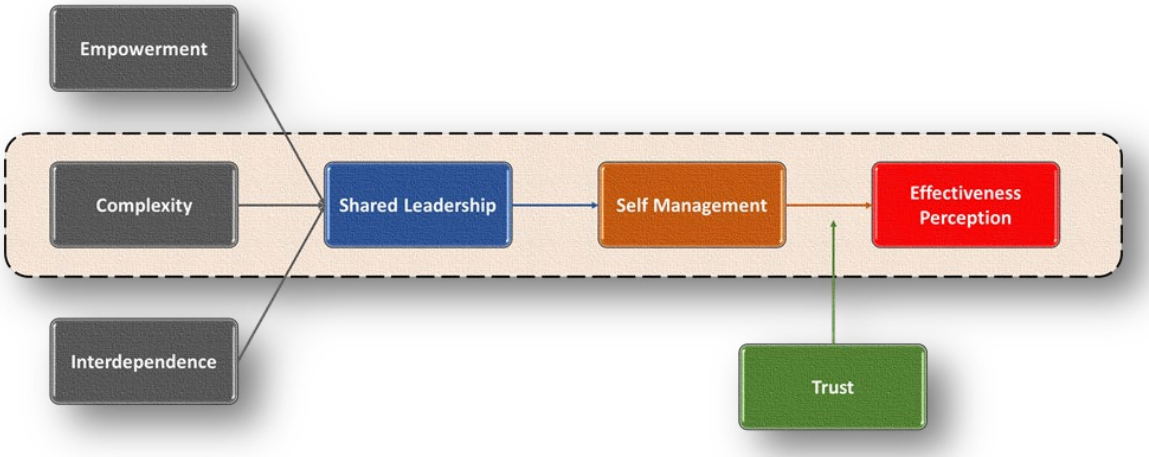


Figure 4.3. Second Part of the Model – Serial Mediators

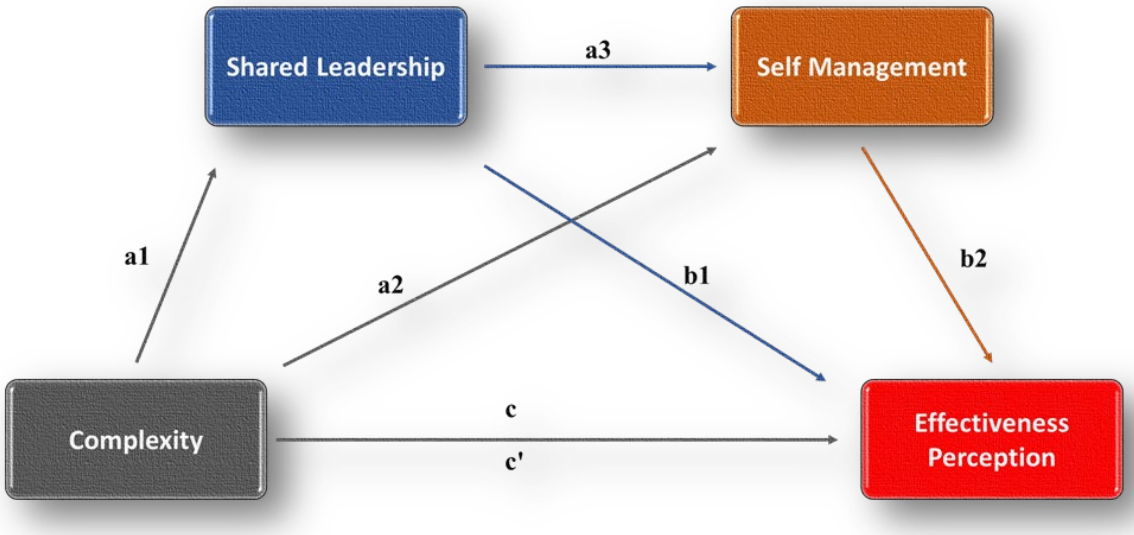


Figure 4.4. The indirect effects model for Serial Mediation

The results showed significant total (c) or direct effects (c′) of complexity on perceived effectiveness (Table 4.7). The total indirect effects of complexity were statistically significant, since the 95% confidence interval (CI) of the point estimate did not cross zero. There is one significant indirect effect found for complexity through shared leadership and self-management (a1a3b2). Greater complexity was serially associated with higher shared leadership and self-management, self-management being associated with perceived effectiveness. The results are significant for the sequential mediation: the more complexity in

teams, the more shared leadership is required; the more shared leadership, the more effectiveness perception via self-management. Shared leadership influences effectiveness perception by increasing self-management. This is a very thought-provoking result in itself. For military organizations, having shared leadership and self-management helps with complex tasks. According to the results presented in Table 7, H4 is supported.

Table 4.7. Direct effect, indirect effect of complexity on perceived effectiveness

	Path	Effect	SE/Boot SE	T	P	LLCI	ULCI
Total effect		,1255	,0517	2.4259	,0161	0.0235	0.2274
Direct effect		,1533	,0488	3.1387	,0019	0.057	0.2495
Indirect effect							
	CX→ SL→PE	-0.0197	0.018			-0.0601	0.0122
	CX→ SL→SM→PE	0.0182	0.0097			0.002	0.0227
	CX→ SL→PE	-0.0355	0.0296			-0.0941	0.0227

Bootstrapped 95% confidence intervals are derived from 5,000 replications. SE standard error, CI confidence interval, LL, lower limit; UL, upper limit, CX Complexity, SL Shared Leadership, SM Self-Management, PE perceived effectiveness

Third Part of Analysis: Test the moderation effect of trust between self-management and effectiveness perception

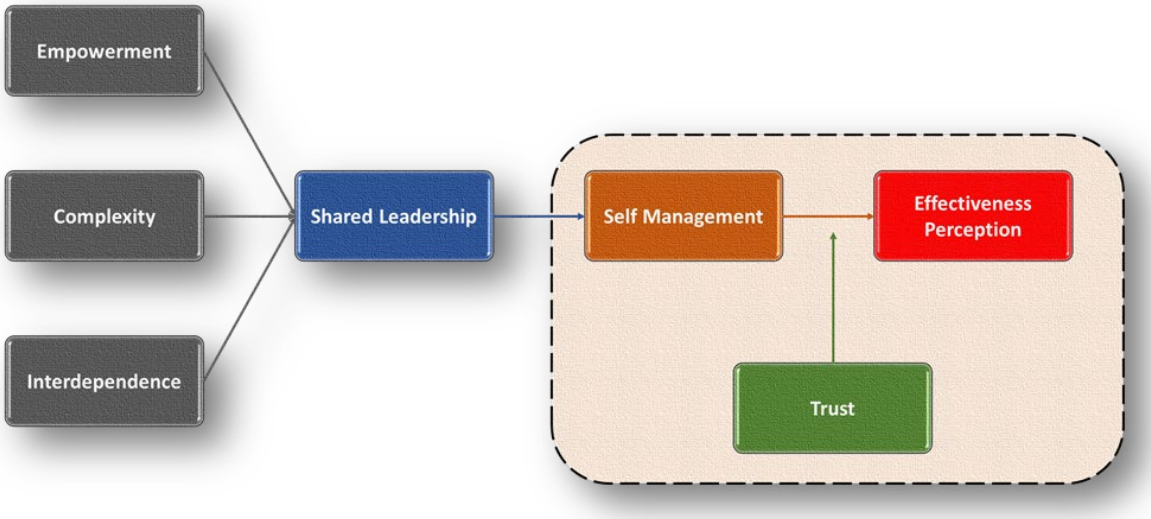


Figure 4.5. Third Part of the Model – Moderation Effect

The third step yielded a significant interaction between self-management and trust, implying that the relationship between self-management and perceived effectiveness is moderated by trust (Figure 4.5). We plotted this interaction following Hayes (2017) as shown in Figure 4.6. The figure illustrates the moderating effect of trust on the relationship between high, average and low levels of self-management and perceived effectiveness. This graph provides high, average and low levels of trust by drawing 1 SD above and 1 SD below the mean. The result is F (3,204) = 40,64, $p<0,001$ and R2 = 37,41. Main effect: self-management B = 0,21, t (204) = 4,47 and $p< 0,001$ is significant predictor of effectiveness. Interaction B = -, 1567, t (204) = -2,44 and p=0,01. Addition of the interaction was a significant change to the model: F (1, 204) = 5,96, $p<0,001$ and R2 change = 0,018. Simple slopes – 1SD below mean Trust = 6,2 below mean b=0,30, t (204) =4,95 and $p<0,001$ is significant, for low trust self-management predicts perceived effectiveness. This means that, so far as perception of effectiveness is concerned, trust compensates for the lack of self-management when self-management is low. Therefore, when self-management is low, it is important to develop trust for the perception of effectiveness. Hypothesis 5 was thus supported as well.

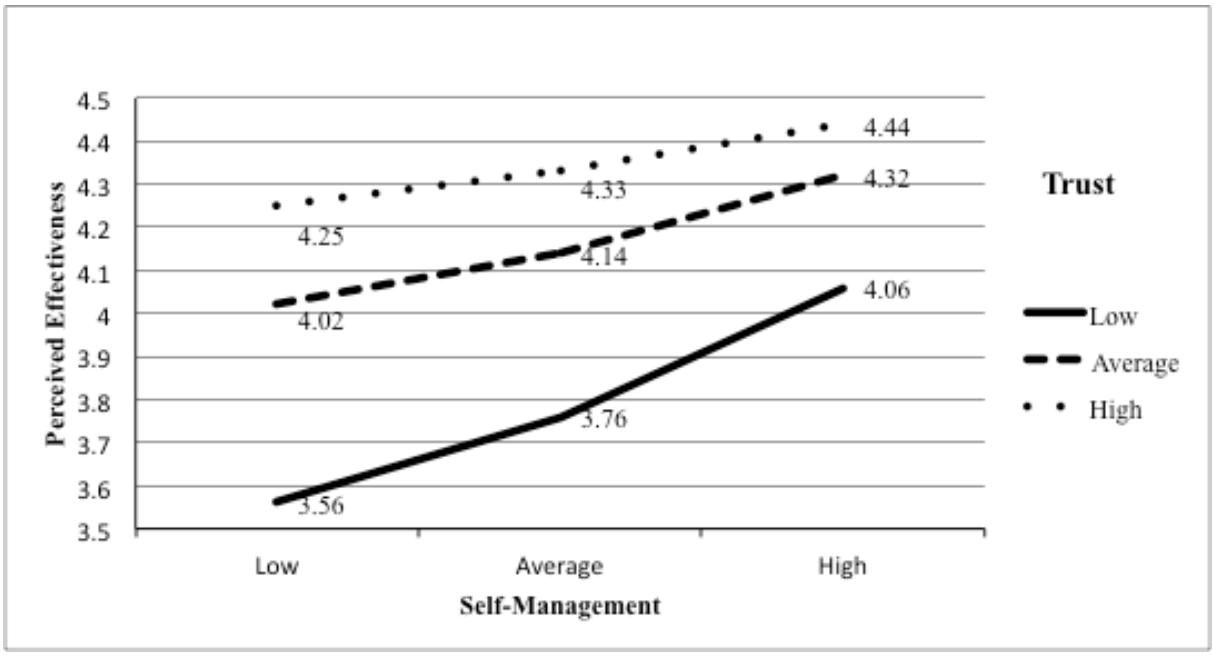


Figure 4.6. Moderation effect of Trust on the relationship between Self-management and Perceived effectiveness

4.6. Discussion

In this study, we investigated the association between the predictors and shared leadership. First, we wanted to identify the shared leadership predictors for military teams. Then the goal was to find a significant, positive relationship between team effectiveness and shared leadership. However, regression results indicated that there is an association between shared leadership and team effectiveness through self-management in a military team context. We found that shared leadership has a positive relationship with self-management, and self-management has a positive relationship with perceived effectiveness. Finally, contrary to our expectations, the findings of this quantitative study suggest that team empowerment and interdependence do not have a significant association with shared leadership in the military-team context, when complexity is accounted for. Other findings show that one can strengthen the relationship between self management and perceived effectiveness by developing trust, when self-management is low in military teams.

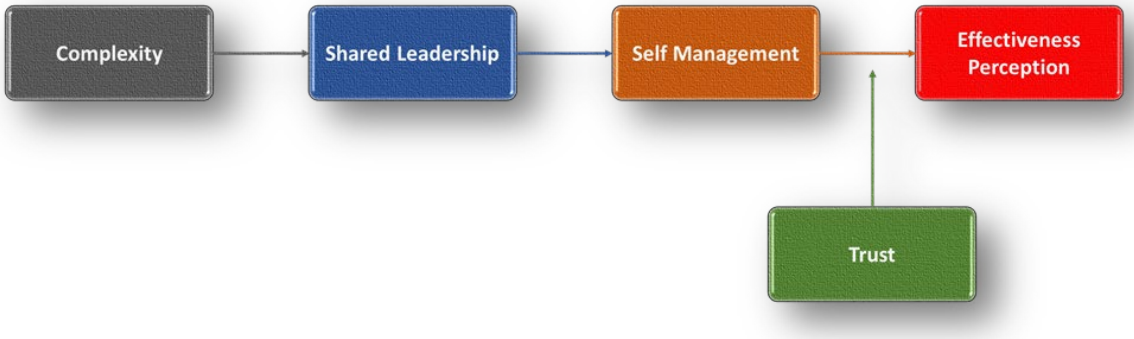


Figure 4.7. The Proposed Model

Our study makes at least three contributions. First, concerning Hypothesis 2, results supported a positive association between complexity and shared leadership in a military context. As explained in theory, one of the main reasons for integrating vertical leadership to shared leadership is complexity. Our results also corroborated previous evidence on the role of task complexity in the relationship between shared leadership and team performance (Wang et al., 2014; Müller et al., 2018).

Second, as stated in the theory, self-management is related to shared leadership. Regarding Hypothesis 4, results show that self-management has a positive association with shared leadership. Also, self-management has a positive relationship with perceived team effectiveness. Results indicate that there is an association between shared leadership and team effectiveness through self-management in a military team context.

However, contrary to our expectations, a positive direct relationship between shared leadership and perceived effectiveness was not found. Our study supported the shared leadership and perceived effectiveness relation through self-management.

Third, trust compensates for the lack of self-management when self-management is low. Therefore, we found that when self-management is low, it is essential to develop trust. These findings provide important theoretical and practical implications for military organizations.

√ = Supported Hypothesis X = Rejected Hypothesis	
Hypothesis 1: Team Empowerment is positively associated with shared leadership.	X
Hypothesis 2: Complexity is positively associated with shared leadership.	√
Hypothesis 3: Interdependence is positively associated with shared leadership.	X
Hypothesis 4: Shared leadership positively predicts effectiveness perception, through self-management.	√
Hypothesis 5: Intragroup trust moderate between effectiveness perception and self- management such that this relationship is stronger when trust is high than when it is low	√

Table 4.8. Overview of Supported and Rejected Hypotheses in this Study

4.7. Theoretical Implications

Currently, the term "shared leadership" is applied too broadly, because it has several meanings and refers to very different situations. This study clarifies the definition of shared leadership. We support the idea of a combination of shared leadership and vertical leadership. This combination could be viable in the decision-making process. Therefore, we have added a decision process to the definition. However, the extent to which vertical and shared leadership are interconnected has yet to be clarified (Hoch, 2013; Pearce & Sims, 2002; Grille, et.al, 2015). For this purpose, we advocate that when executing any type of task aimed at organizational goals, the appointed (or unappointed) leader should make the decision with at least half of his/her team's approval. By adding this decision-making definition, we maintain that the combination of shared leadership and vertical leadership can be viable. For future

studies, a model for the decision process under shared leadership needs to be defined. This model may be developed on the basis of the following starting points:

Our results showed that complexity and shared leadership have a positive association. We found significant influence of the level of task complexity on shared leadership. As expected, this influence supports the assertion that teams performing tasks with higher levels of complexity exhibit higher levels of shared leadership. As Pearce and Manz (2005) have suggested, "the more complex the work being performed is, the more likely it is that shared leadership will be needed"; this statement is confirmed within military organizations. Furthermore, our study supported the finding that "task complexity increase – shared leadership increase" (Wang et al., 2014). However, we could not find any direct effect of shared leadership on team effectiveness. Organizations and military teams increasingly rely on knowledge-based teams operating in complex environment. Future research on shared leadership might focus on military teams involved in such complex work, since they operate in a context that is pragmatically related.

We supported the idea explained in Lindsay, et.al., (2011) study, which investigates the shared leadership relation in the military context, that shared leadership has a place in military teams despite the presence of a rigid hierarchy. However, there are some barriers to shared leadership (rank and military culture) in military organizations. Considering all these barriers, future leaders could raise the question of whether shared leadership has any place in the military at all. Our position is that, in certain cases, shared leadership does indeed have a place in military teams, even given the rigid hierarchy within them.

4.8. Limitations and suggestions for future studies

There is no "one best way" to measure shared leadership, as stated in Hoch's (2013) study. We used Small's (2007) questionnaire to assess shared leadership. The concept is still in its infancy (Avolio, et.al., 1996; Carson, et.al., 2007; Mayo, et.al., 2003; Mehra, et.al., 2006; Pearce & Conger, 2003). As defined in D'Innocenzo, et.al., (2016) study, shared leadership can be measured using aggregation, whereby members rate the team's overall level of shared leadership or social networking, with each team member required to evaluate all other members in terms of their respective leadership influence. Thus, a challenge for researchers is to find a way to measure shared team leadership. Gokcel & Werth, (2011) in their study, provided an overview of shared leadership measures. D'Innocenzo, et.al., (2016) suggested that scholars have turned to network approaches, which, their results suggest, may

be a more explanatory way to study shared leadership approach. Future studies may consider implementing a social network approach to the military context.

We investigate empowerment, complexity, and interdependence as predictors of shared leadership. Future research needs to identify antecedents, mediators, and moderators of shared team leadership with a different variable (Manz, 1986; Neck & Houghton, 2006).

We adopted for team empowerment (e.g., Kirkman & Rosen, 1999) a four-dimensional study that focused on autonomy; other researchers (Mathieu, et.al., 2006) have used the two-dimensional approach of team empowerment focused on collective perceptions of authority and responsibility for work. Future research should consider the relative advantages and disadvantages of the two approaches and, perhaps, conduct comparison studies.

Moreover, shared leadership is related to zeitgeist, even in military organizations, as we cannot perform our work in detachment from the time we live in. We cannot defend hierarchical leadership just because we have been using it for years; we have to adapt our organization to the generation we live among. Future studies may include only cadets and newly graduated officers.

Despite continued assertions that shared leadership does not work for military teams, we believe that there are enough successful examples of such combinations that we can reject this skepticism with some confidence. Skepticism surrounding the prospects for shared leadership seems to have been around ever since the concept itself was stated in theory. Furthermore, doubt about the association between shared leadership and team effectiveness in the military context is great and deep. Many military personnel and even some civilians are very skeptical about this kind of leadership, as my empirical pre-analyses show. The very first verbal and nonverbal reactions of most military personnel and some civilians consisted of astonishment followed by skepticism. We believe that one of the fundamental factors responsible for skepticism about shared leadership in military organizations is the military culture. We also think that further qualitative study needs to be conducted to identify skepticism about shared leadership in military organizations. Skepticism and resistance to the shared leadership approach can make its implementation in military organizations extremely difficult.

Pearce (2004), supporting the view that vertical leadership has not reached its autumn years, mentions the importance of the question: How does one utilize both vertical and shared leadership to leverage the capabilities of knowledge workers? These knowledge workers can be identified as self-management teams. We advocate that this is viable within the decision-

making process. By adding decision-making to the definition, we advocate that the combination of shared leadership and vertical leadership can be viable. For future studies, a model needs to be defined for a decision-making process with shared leadership. Additional empirical and theoretical researches are indeed required for the implementation of a shared leadership theory that involves the decision-making process, and to establish a firm definition of shared leadership for military teams. This study draws attention to the decision-making process and shared leadership with a model applied to military teams for future studies. A model that includes the decision-making process could combine the vertical and shared leadership which Kozlowski and Bell (2003) argued would be stimulating for military organizations.

Although recent empirical work has demonstrated the positive influence of shared leadership on team performance, the literature remains silent about the conditions under which shared leadership plays a stronger or weaker role in shaping team members' attitudes (Liu, Hu, Li ,Wang, Lin, 2014). How can we foster the process of shared leadership in military teams? For all these reasons, the factors that facilitate the use of shared leadership in military teams should be investigated. We suggest that in future studies with different variables, researchers examine precisely formulating theoretical models of the relation between shared leadership and teamwork effectiveness. As stated in Seibert, Sparrowe, & Liden (2003), shared leadership supports group performance only under particular conditions. Do these specific conditions exist for military project teams or military operational teams? We support the idea of implementing shared leadership in some military teams. Thus, we coded teams into two groups in the case of military teams, following DeChurch and Mesmer-Magnus (2010). We emphasized that validation of the definition of military project teams and military operational teams is also a promising avenue for future research.

We have proposed that a vertical leader can facilitate effective shared leadership among team members. Military project teams' working environments are suitable (time conditions, etc.) for its effective implementation. Also, the military teams' requirements (complexity, knowledge workers, etc.) inevitably call for shared leadership. There are many examples of military project teams' success. This field needs to be scrutinized for future research. Thus, we feel that it is imperative for researchers to explore the structure of shared leadership and determine which other variables moderate between shared leadership and self-management.

The result that shared leadership was related to team effectiveness through self-management in this study calls for more research, especially empirically, on this topic.

Because results for the team effectiveness and shared leadership relation are not entirely consistent with previous empirical work, future research should focus on identifying conditions and investigating contexts in order to determine how shared leadership styles can be most appropriate or effective in the military context. For this purpose, it would be proper to conduct a qualitative study to identify how the shared leadership style would be effective for military teams. Qualitative research results provide rich, deep, and real description, answering research problems that require understanding to arrive at prediction (Stainback & Stainback, 1988).

4.9. Conclusion

As complexity within military organizations increases, teamwork becomes more critical and the question arises as to how to deal with this complexity, meet the expectations of Y generation, and develop the most effective teamwork style in terms of team leadership. The present study found that one of the predictors of shared leadership is complexity, which is related to perceived effectiveness through self-management. As such, shared leadership is crucial in implementing self-management. Also, when self-management is low, it is essential to develop trust for the perception of effectiveness. Thus, shared leadership can be especially important in military teams whose situations imply complex tasks involving high risks, and it is absolutely necessary to meet the Y generation's expectations. Future research should further specify the tools needed to create military teams, foster shared leadership and implement it in military organizations.

CHAPTER 5. GENERAL DISCUSSION AND CONCLUSIONS

The literature review, both qualitative and quantitative studies conducted in this study aimed to understand relation of shared leadership with effectiveness in military teams. The qualitative study explores the military team members' perceptions of shared leadership and clarifies the facilitation of shared leadership in military teams. The quantitative study identifies shared leadership predictors and shared leadership and team effectiveness relation through self-management.

5.1. Main theoretical, empirical and practical implications

Currently, the term "shared leadership" is applied too broadly, as it has several meanings and refers to very different situations. This study clarifies the definition of shared leadership. Some researchers indicate that they would combine shared leadership with vertical leadership (Cox, et al., 2003; Mayo, et al., 2003; Pearce, 2004). We support the idea of a combination of shared leadership and vertical leadership. This combination could be viable for the decision-making process. Therefore, we have added the decision process to the definition. However, the extent to which vertical and shared leadership are interconnected has yet to be clarified (Hoch, 2013; Pearce, & Sims, 2002; Grille, et al., 2015). The literature lacks examination of the decision process and relations with the appointed leader in shared leadership. The literature explains and supports the appointed leader's position as a manager or monitoring member of the team. However, this is not obviously applicable to the decision process in a shared leadership approach, as the decision has to be given in the end and the most skillful member cannot give the decision individually. The decision is the upfront trait of the leadership. The shared leadership approach can promote and encourage the team members to offer a pathway for the task or a solution to the problem; however, that offer must be evaluated by the other team members as well. For this reason, we support the principle that the appointed leader must give a decision with the approval of half of the team members. This will confirm the shared leadership and also guarantee that the task will be performed with collective knowledge. The leader has a prominent role in any organization. In most leadership theories the leader has to give a decision in the end, so the decision process is very important for any organization. For that reason, the decision process becomes the indispensable main activity in leadership theories. Locke (2008) criticizes shared leadership theory in his letter about the difficulty of making the final decision and establishing specific rules on consensus.

At this point, our working definition that requires the approval of half of the team members may act as a specific rule in making the final decision. Locke (2003) noted that without a clear (and shared) group mission, nothing can be accomplished; Kozlowski (2010) supported this idea and stated it as a limitation of shared leadership. First, an irrelevant group mission which is directed by a single leader can be clear, but when a knowledgeable team member takes the lead and clarifies the mission during decision making, a better way may be found to reach the goal. Even if the task is performed through skillful team member leadership without this decision process, we support the claim that that approach is not shared leadership. For this purpose, we advocate that while executing any type of task aimed at organizational goals, the appointed (or not) leader should prefer to give the decision with at least half of his/her team's approval. By adding this decision-making definition, we maintain that the combination of shared leadership and vertical leadership can be viable. For future studies, a model for the decision process with shared leadership needs to be defined. Also, a combination of shared leadership and vertical leadership could be viable according to the Leadership Change Context for Military Teams framework. The study explained that shared leadership will facilitate collaborative efforts and enable them to be effective for military project teams. As military leaders build shared leadership in these project teams, we will be able to do better the things we are currently performing in military teams.

We support the idea of implementing shared leadership in some military teams. Thus we coded teams into two groups of military teams, following DeChurch and Mesmer-Magnus (2010): project and operational teams, as mentioned in the literature review. We informed the participants with a brief on the military team types that we coded, and all participants confirmed and answered the questions according to our military team type definition. This also shows that our definition of military teams was acknowledged by the participants. In the first study, participants (mid-senior officers) were interviewed in terms of our military-team definition, and there were no rejections of the definition. In the second study, participants also commented with numerous points for the survey, and all of them responded in terms of our definition of military teams. To our knowledge, there is no definition of military teams. We maintained that this classification is unique and establishes a special field for future researchers. We emphasized that validation of the definition of military project teams and military operational teams offers a promising avenue for future research.

With the qualitative study, we investigated the perceptions of mid-senior military officers on shared leadership. That study made it explicit that shared leadership is not a dream or an inappropriate approach for military teams. In some military teams, shared leadership

was applied already. Results of the qualitative study confirmed that driving forces of change comprised the primary factor affecting shared leadership in military project teams. We found the following: (a) Complexity and the new information era force military organizations to change and with shared leadership, they can even change the organization's culture. (b) The military team's situation triggers shared leadership, sometimes even forcing shared leadership for military project teams. Participants brought out the great value of the collective product and IQ in mitigating the incompetency of the single leader. (c) The HQ environment (strategic and operational planning) and planning were critical factors for the successful implementation and development of shared leadership in military project teams. Thus, military organizations could easily implement the shared leadership approach in the military research teams, planning teams, Joint Operations Planning Group (JOPG), Information Management Group, Strategic Planning Group, Defence Crisis Management Organisation (DCMO), Joint Logistics Support Group (JLSG) teams, etc. We could initiate creation of the shared leadership approach in Project teams within international military organizations like NATO. Thus, multicultural organizations are better able to adapt to change and exhibit more organizational flexibility (White, 1999). Project teams with shared leadership are expected to carry out highly complex cognitive tasks efficiently. After shared leadership is implemented in project teams, the output will lead military leaders and researchers to consider transferring the shared leadership approach to operational teams.

What we have learned in the academy and during our military education was that the commander as a hero knows everything, is a great leader, full of skills and abilities, etc. But the reality varies considerably from the definition of "leader". The main purpose of this definition is to give commanders the right to maintain discipline during the operation in the operating environment. However, HQs are similar to the office environment, and here the leader does not need those rights. Participants used the Collective IQ theme to explain this phenomenon. A single leader may not be able to successfully carry out all necessary leadership functions that shared leadership represents mutual influences among team members, which can overcome the limitations of a single leader's leadership style (Lee, Lee, Seo, & Choi, 2015). This is richly described by the participants who also point out that no one leader can perform all the necessary leadership functions in military project teams.

For military operational teams, the operational environment was the most important hindrance to shared leadership. Therefore, (d) Shared leadership for operational teams is perceived as facilitating collaboration and communication, but also as creating conflicts and potential for hampering the mission. Time Sensitivity was the most critical construct for

shared leadership in military operational teams; due to the lack of sufficient time in a field, vertical leadership may remain for these teams. Military team members wear a different uniform in the field/on board from that worn in the office (HQ) environment. Using vertical leadership for military project teams is like wearing your boots in the office, thus decreasing speed and being unsuitably dressed for the office. Since the study revealed that vertical leadership is a requirement of operational environments, why are we still insisting on applying operational needs to the office environment? We are offering to set aside the "ranks" along with the operational uniforms.

Through construct comparison and coding of collected data, Driving forces of Change, Triggers to Shared Leadership, and Specific Cases Shared Leadership were applicable to Military Project Teams, while two dimensions of military operational teams: Operational Environment and Operational Team Characteristics, emerged as crucial dimensions that supported a framework of Leadership Change Context for Military Teams (Figure 3.2, which depicts the implementation of shared leadership and a combination of shared and vertical leadership in military teams). Leadership Change Context for Military Teams supports this combination in some military teams. Any military team member who reads this study might wonder: if shared leadership is in some way applied in some military teams, what's this study supporting? First, where and when applied in the military leaders' favour, what we support is its implementation as a norm in military project teams. This study, while explaining the answers to what (shared leadership) and where (in Military Project Teams) questions, also defines how (the implementation and establishment) and gives advice (decision process model) for future studies.

In the quantitative study, we investigated the association between predictors and shared leadership. After conducting the literature review and analyzing antecedents of shared leadership from 22 studies, first, we wanted to identify the shared leadership predictors for military teams. Various constructs exist in relation to shared leadership; whereas we investigated empowerment, complexity and task interdependence in relation to shared leadership in the second study. Our study showed that complexity and shared leadership have a positive association. We found that the level of task complexity had a significant influence on shared leadership. As expected, this influence supports the view that teams performing tasks with higher levels of complexity exhibit higher effects of shared leadership. Organizations and military teams increasingly rely upon knowledge-based teams that engage in complex work. Future research on shared leadership might focus on military teams involved in complex work since they operate in a context that is pragmatically related. Next,

the goal was to find a significant, strong, positive relationship between team effectiveness and shared leadership for military teams. However, regression results indicated that there is an association between shared leadership and team effectiveness through self-management in a military team context. We found that shared leadership has a positive relationship with self-management and self-management has a positive relationship with perceived effectiveness. Finally, contrary to our expectations, the findings of the present study suggest that team empowerment and interdependence do not have a significant association with shared leadership in the military team context. At the end, in addition, we investigated the trust relation with the self-management and perceived effectiveness relation inasmuch as trust is an indispensable construct for military teams. Our findings show that one can increase perceived effectiveness by developing trust when self-management is low in military teams. Therefore, when self-management is low, it is essential to develop trust for the perception of effectiveness. Quantitative study results supported a positive association between complexity and shared leadership in a military context and indicated that there is an association between shared leadership and team effectiveness through self-management in a military team context.

Our findings provide important theoretical and practical implications for military organizations. Finally, this study may help military leaders to understand the importance of implementing shared leadership as appropriate to some military teams.

Most of the time military teams' tasks include life-or-death situations. In these cases, we cannot place a team member's life in the leader's hands. Decision outcomes force us to share leadership. For example, in one year in the 1990s during a sail, a sailor fell into the sea. He had no life jacket and could hardly swim. Although it was very difficult to spot, nevertheless the rear watchman saw what happened and directly reported to the bridge. At the same time, he turned on the "man overboard" switch. Thus the whole crews were alerted, so there was no delay. The Commander wanted to execute a direct maneuver by the ship in order to rescue the sailor, but the experienced Master Chief warned the Commander against this risky maneuver, advising him instead to stop the machines and rescue the sailor by the zodiac boat which was ready to use and attached to the crane at all times. He explained that the direct maneuver would cause waves which could drown the man. But the Commander rejected this advice and made a circle around the sailor by means of a fast, sharp turning maneuver. The waves caused by the frigate panicked him and he drowned without ever returning to the surface. Everybody on board lost visual contact with him after the maneuver. A week-long rescue operation by 10 surface ships and 2 helicopters proved useless at finding him. We acknowledge that, in that kind of time-limited situation, it's difficult to implement shared

leadership on the bridge for navy ships. However, if we do not incorporate 15/20 team members' knowledge into the decision, why we are positioning these members in the team? We have to find a leadership approach which enables us to benefit from the collective knowledge. That's shared leadership. The current leadership situation depends on the Commander's favour to include the team members' knowledge in the decision process. Also, in most stressful situations, team members hesitate to disclose their ideas. The shared leadership approach dispenses with the leader's favour when including collective knowledge; it's implemented as a norm, enabling team members to include their knowledge in the decision process.

Military teams always have an enemy or target and have to be unified; shared leadership will strengthen this unity by collecting ideas. Thus shared leadership improves unity, and we need it to glue the spirit. Most of the time military teams perform their tasks under stress, with the stress coming from the senior leader. This senior leader "causes the storm", so military team members need unity in the face of the storm. One participant gave an example that explains the benefit of the shared leadership approach for team unity:

"When I was a Commanding Officer of a ship, I received a personal request from my Commodore which will also have effects on daily life in my ship. I gather my senior crew around and ask their opinion about it. If we give a negative reply it will have an adverse effect on all the ship and crew etc. When we all decided that the request was totally personal and unacceptable I gave the negative reply to the seniors. From then, as expected, the unfair pressure started on us and we have sent to deployments more than (nearly triple) the other ships and all the other auxiliary task, inspections, selective performance checks etc. happened. Depending on the fact that the senior crew and I decided all together and were aware of the great adverse effects which would befall, we connected together. No matter how unfair and hard were the missions and the inspections we became a perfect example in our squadron. We all knew that a storm was coming and filled all the gaps, even the smaller ones, to avoid any drippage. When I look back, the cornerstone of the success and the team spirit originated from the collective decision we made at the beginning."

In these kinds of stressful situations, the shared leadership approach has enabled team unity for military teams. In peacetime, team members need unity against higher-level storms; in wartime shared leadership enables team unity against the enemy.

In civil terminology, when an example concerning the military is given, most of the time it is assumed that the military leader gives an order and the task is done. However, the reality is different. Military teams perform their tasks in an environment like that of any

company or in the same way as teams in civilian organizations. In some cases the instruments are different, but the team characteristics and relations are similar.

Following the qualitative study we expressed our opinion, in the discussion part, on the importance of shared leadership in military teams, that sometimes if you miss the change, then accidents or fatal mistakes can teach you that you have to change. We have to change our military organizations by ourselves; otherwise, the new century will teach us to do so through accidents, lack of effectiveness, etc. In civil organizations, lack of effectiveness for companies mostly means losing money, wasting effort, etc. but in military organizations even in peacetime, ineffectiveness can result in deadly accidents or missions. While we were drafting the general conclusion, we realized that USS John S. McCain (DDG-56)'s collision with a merchant ship off Singapore in August 2017 provides an example overlapping with our qualitative results. The commander of the guided-missile destroyer (USS John S. McCain) that collided with a merchant ship pleaded guilty to a single charge of negligence for his role in the incident that killed 10 sailors. In the court-martial, the commander admitted that he acted against the recommendation of his operations officer, navigator and executive officer (LaGrone, 2018). This result supported our study in respect of three points.

First, we place emphasis on the decision-making process and support the principle that the leader can give the decision with at least half of the team members' approval. Further study is needed on the decision-making process. Second, we must implement shared leadership to prevent accidents of the kind described, which can sometimes lead to thousands of deaths. How we can give this kind of power or rights to any single individual? When even the president is not given unlimited rights and powers, but instead these powers are distributed, why do we give such full powers in the military, considering that a military leader's decision may cause thousands of deaths? On the other hand, when there was a crash in the ocean involving a navy ship, it did not damage the ship so much as the country's image, causing many young people to avoid joining military organizations. Therefore the outcomes, such as accidents of decisions by strategic units like military organizations affect all of the country's citizens. Third, after the accident, the USA Naval Sea Systems Command commander mentioned complexity and recommended simplicity. He said that as industry and government anticipate bringing new capabilities to the fleet, they often seek to cram in as many bells and whistles as possible, and cautioned "that complexity causes us problems." He mentioned the need for simpler systems, whereas in fact complexity is increasing, with directed energy technologies, cyber tools, advanced missiles, unmanned systems and artificial intelligence-enabled tools. We cannot stop the increase in technological complexity, but we

can change our leadership approach. It's very similar to the situation whereby, when problems of information leakage arise in some military organizations, generals/admirals blame the system. They resist using computers and other technologies for information security reasons. A similar mistake is made in accident result assessments. In order to cope with increasing complexity, we need to implement a shared leadership approach in military teams and stop blaming the technological systems. Military technologies have shifted from Industrial Age to Information Age technology. However, today's militaries still operate by administration of the Industrial Age's organizational evolution, character and associated leadership processes. The world is different now and will be different in the future and our leadership style needs to change with it. Military organizations have to adapt their leadership approach to meet the demands of the Information Age. Unfortunately, this evolutionary process has not been quick enough to keep pace with the rest of the world. As such, it is important for leaders of military strategy not only to understand environmental dynamics but also to recognize and develop understanding of the relationships between organizational design, organizational processes, and the attributes of leadership needed to enable success in this area (Hicks, 2008). The results of this study explicitly show the need for a change in leadership style for military teams and the importance of implementing shared leadership in military organizations. At the start of the Ph.D., I was planning to do quantitative studies, and was far from intending to do a qualitative study. However, I realized that the qualitative study revealed, through the interviews, that which I wanted to research. Obtaining first-hand statements of personal experiences provides a researcher with the opportunity to capture the meaning of the subject in his or her own words (Merriam, & Grenier, 2019). Thanks to the qualitative study that reveals my ideas, participants' perceptions broadened and deepened my views about shared leadership. It is difficult to write about what you thought and experienced in the past. Participants help you to identify and remember all those experiences from different angles. The qualitative study looks into military teams and describes project teams in ways that will enable us to implement shared leadership effectively. Although qualitative inductive studies offer the possibility of generating rich theoretical and imaginative insights, they depend heavily on the researcher's judgment and interpretation (Clark, et al., 2010). In developing our framework, we emphasized that military project teams have helped military organizations to implement and activate the shared leadership approach. Often high-ranking military leaders are old and have lost the ability to find creative ideas and solutions; hence, teams depend on shared leadership. And if shared leadership is not implemented in military project teams, not much improvement is possible. Participants' descriptions may elicit positive discussions

around important themes among the members, and thus form a basis for positive organizational development trends (Länsisalmi, et al., 2004). The study provides a look at the military in terms of the shared leadership approach and demonstrates how that approach is utilized by military teams to support the demands of 21st-century military organizations.

5.2. Limitations and recommendations for future research

Researchers have used several different methods to measure shared leadership. We used Small's (2007) questionnaire to assess shared leadership. As defined in D'Innocenzo, et.al., (2016) study, scholars have turned to network approaches, for example team members were asked to nominate other team members whom they considered a leader (Grille & Kauffeld 2015), in which their results suggest, may be a more informative way to study shared leadership approach. Future studies can consider a social network approach for the military context.

We investigate predictors of shared leadership and future research needs to identify antecedents, mediators, and moderators of shared team leadership with a different variable (Manz, 1986; Neck & Houghton, 2006). Also we adopted a four-dimensional approach of team empowerment study that focused on autonomy. Other researchers (Mathieu, et.al., 2006) have used the two-dimensional approach of team empowerment focused on collective perceptions of authority and responsibility for work. Future research should examine the relative advantages and disadvantages of the two approaches.

Our qualitative study contains limitations requiring engagement in future studies of shared leadership and military teams. We did not employ additional data collection strategies to include military documents, websites, reports, army accident avoidance documents etc. Multiple methods of data collection approaches may contribute to highly valid findings using triangulation to corroborate evidence from different sources, types, or methods of data collection-interviews, observations, and documents (Merriam, & Tisdell, 2015). We believe that, also a lot of military documents supported the shared leadership approach. Future studies may find greater description and explanation by employing multiple methods of data collection strategies in a single study. Also, due to geographical dispersion, the interviews were not conducted face-to-face, which may have introduced some concerns about personal interaction with participants.

Despite continued assertions that shared leadership does not work for military teams, we believe that there are enough examples of such successful combinations to enable us to

reject the skepticism with some confidence. Skepticism regarding the prospects for shared leadership seems to have existed ever since the concept itself was stated in theory. Also, doubt about the relation between shared leadership and team effectiveness in the military context is intense and deep. Many military personnel and even some civilians are very skeptical of this kind of leadership, as my empirical pre-analyses confirm. The very first verbal and nonverbal reaction of most military personnel and some civilians was astonishment followed by skepticism. We believe that one of the fundamental factors leading to skepticism about shared leadership in military organizations is the military culture. We also think that further qualitative study needs to be conducted to identify skepticism about shared leadership in military organizations. Resistance and skepticism about the shared leadership approach can make its implementation in military organizations extremely difficult. However, we support the idea that, as the qualitative study revealed, shared leadership exists in some situations and is highly practical in military project teams, as the nature of these teams requires considerable shared leadership. As we concentrated on shared leadership in our study, future researchers could provide different results by examining other leader behaviors, such as empowering leadership.

Additionally, we support the idea of implementing shared leadership in some military teams. Thus we coded teams into two groups of military teams following DeChurch and Mesmer-Magnus (2010): project and operational teams, as mentioned in the literature review. We informed the participants with a brief on the military team types that we coded, and all of the participants confirmed and answered the questions according to our military team type definition. That also shows that our definition for military teams was acknowledged by the participants. There were no rejections of the definition. To our knowledge, there is no definition of military teams. We emphasized that validation of the definition of military project teams and military operational teams offers another promising avenue for future research.

Finally, many types of teams perform as military project teams (Joint Operations Planning Group (JOPG), Information Management Group, SPG Strategic Planning Group, Defence Crisis Management Organisation (DCMO), Joint Logistics Support Group (JLSG), etc.). However, in our present study, we only investigated the case of military teams in general. Future studies should examine the case of teams from the military project team areas to extend our findings further. Also, we focused on teams in military organizations; thus, our results may not be applicable to other types of teams or to organizations in other sectors.

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APPENDIX 1. QUESTIONNAIRE - STUDY 1

SHARED LEADERSHIP QUESTIONNAIRE- Study 1.

* Having in mind the following two kinds of military teams type (project and operational) and answer questions with your team type.

* Please choose your team type and answer questions as a one type of team member.

* Respond to each of the statements by circling the appropriate number on a scale of 1 (you strongly disagree with the statement in relation to your thought to the relevant statement) to 5 (you strongly agree with the statement in relation to your thought to the relevant statement).

* Data gathered through this questionnaire will be treated as confidential and will not be linked to your organization or to you as a respondent in any way.

***Military Project Teams**, is involved in both informational– knowledge work and behavioral action; working as a planning officer, working as a coordination officer in division, member of the intelligence branch, personnel officer in personnel division, information/communication system repairing/planning officer, operation watch officer etc. in any national/international Headquarter.*

***Military Operational (Action) teams**, performing time-sensitive tasks requiring members to coordinate actions and perform physical tasks such as those in Special Operations/Special Warfare units, Explosive Ordnance Disposal (EOD), Navy SEALs, Army Special Forces, Marine Expeditionary Units, damage control party member on board, special infantry platoons, as a Warfare Officer while handling a ship in all conditions, etc. in any national/international command.*

*** I am filling below questionnaire (3 parts) as a member of**

☐Military Project Team

☐Military Operational Team

PART I

Intragroup Trust

Select the number that best describes how frequently each of the following statements reflects what occurred on your team as you worked together.

		Disagree Strongly	Disagree	Neither agree nor agree	Agree	Agree strongly
1	We absolutely respect each other's competence.	☐1	☐2	☐3	☐4	☐5
2	Every team member present shows absolute integrity.	☐1	☐2	☐3	☐4	☐5
3	We expect the complete truth from each other.	☐1	☐2	☐3	☐4	☐5
4	We are all certain that we can fully trust each other.	☐1	☐2	☐3	☐4	☐5
5	We count on each other to fully live up to our word.	☐1	☐2	☐3	☐4	☐5

Team Empowerment

Please circle the number that indicates how much you agree or disagree with the following statements.

		Disagree Strongly	Disagree	Neither agree nor agree	Agree	Agree strongly
1	Team members here feel that their work is meaningful.	☐1	☐2	☐3	☐4	☐5
2	Team members here feel that their tasks are worthwhile.	☐1	☐2	☐3	☐4	☐5
3	Team members here believe that their projects are significant.	☐1	☐2	☐3	☐4	☐5
4	Team members here can select different ways to do their work.	☐1	☐2	☐3	☐4	☐5
5	Together, team members here determine how things are done in the command.	☐1	☐2	☐3	☐4	☐5
6	Team members here make their own choices without being told by senior/management.	☐1	☐2	☐3	☐4	☐5
7	Team members here have a positive impact on this command's superior.	☐1	☐2	☐3	☐4	☐5
8	Team members here perform tasks that matter to this command.	☐1	☐2	☐3	☐4	☐5
9	Team members here make a difference in this command.	☐1	☐2	☐3	☐4	☐5

Self-Management

Please circle the number that indicates how much you agree or disagree with the following statements

		Disagree Strongly	Disagree	Neither agree nor agree	Agree	Agree strongly
1	Team members are responsible for determining the methods, procedures, and schedules with which the work gets done.	☐1	☐2	☐3	☐4	☐5
2	Team members rather than leaders decide who does what tasks within the team.	☐1	☐2	☐3	☐4	☐5
3	Most work-related decisions are made by team members rather than by leaders.	☐1	☐2	☐3	☐4	☐5

Complexity

Please circle the number that indicates how much you agree or disagree with the following statements

		Disagree Strongly	Disagree	Neither agree nor agree	Agree	Agree strongly
1	Most of the work I do in my job is somewhat repetitive in nature.	☐1	☐2	☐3	☐4	☐5
2	I perform the same types of activities every day in my job.	☐1	☐2	☐3	☐4	☐5
3	My job does not change much from one day to the next.	☐1	☐2	☐3	☐4	☐5
4	My job is rather simple and routine.	☐1	☐2	☐3	☐4	☐5
5	To perform most of my work, I follow the same series of steps.	☐1	☐2	☐3	☐4	☐5

Interdependence

Please circle the number that indicates how much you agree or disagree with the following statements

		Disagree Strongly	Disagree	Neither agree nor agree	Agree	Agree strongly
1	My own performance depends on receiving information and advice from otherteam members.	☐1	☐2	☐3	☐4	☐5
2	I depend on other team members work for materials that I need to do my job.	☐1	☐2	☐3	☐4	☐5
3	I depend on other team members work for help and support that I need to do my job.	☐1	☐2	☐3	☐4	☐5
4	I depend on other team members in order to be able to do my work well.	☐1	☐2	☐3	☐4	☐5
5	My job performance is strongly affected by other team members job performance.	☐1	☐2	☐3	☐4	☐5

PART 2- Shared Leadership Survey

Please circle the number that indicates how much you agree or disagree with the following statements.

		Disagree Strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
1	In my team, high team performance is most likely to occur when a single person is in charge. (R)	☐1	☐2	☐3	☐4	☐5
2	In my team, it would be chaotic if multiple people took on leadership responsibilities of the team. (R)	☐1	☐2	☐3	☐4	☐5
3	My team's performance will be at risk if everyone participates in the leadership role(R)	☐1	☐2	☐3	☐4	☐5
4	To ensure that a team will be effective, the leadership role should rotate among team members in my team.	☐1	☐2	☐3	☐4	☐5
5	My team will run more smoothly if only one person is in charge of important team decisions. (R)	☐1	☐2	☐3	☐4	☐5
6	It would be unwise for my team to make single person accountable for the team's performance.	☐1	☐2	☐3	☐4	☐5
7	It is efficient to have one person in charge of for my team. (R)	☐1	☐2	☐3	☐4	☐5
8	My team productivity will suffer if all team members are involved in the leadership responsibilities. (R)	☐1	☐2	☐3	☐4	☐5
9	It is usually best for my team to appoint the most capable person as the leader. (R)	☐1	☐2	☐3	☐4	☐5
10	My team will be vulnerable when everyone	☐1	☐2	☐3	☐4	☐5

	takes responsibility for leading the team. (R)					
11	Putting a single person in control detracts from my team's potential to succeed.	☐1	☐2	☐3	☐4	☐5
12	A team is most productive when everyone contributes something to leading the team.	☐1	☐2	☐3	☐4	☐5
13	It is beneficial to utilize every team member's leadership capabilities to the fullest in my team.	☐1	☐2	☐3	☐4	☐5
14	My team members and I work together and discuss what my performance goals should be.	☐1	☐2	☐3	☐4	☐5
15	My team members encourage me to develop myself.	☐1	☐2	☐3	☐4	☐5

Perceived Effectiveness

Please circle the number that indicates how much you agree or disagree with the following statements

		Disagree Strongly	Disagree	Neither agree nor agree	Agree	Agree strongly
1	I am satisfied with my experience as a team member	☐1	☐2	☐3	☐4	☐5
2	I feel positive about my experience in the team.	☐1	☐2	☐3	☐4	☐5
3	I am willing to work in a similar team in the future	☐1	☐2	☐3	☐4	☐5
4	I believe the team's overall performance met (my) expectations	☐1	☐2	☐3	☐4	☐5

PART 3

* Which country are you from?

☐ Albania	☐ The Netherlands	☐ Italy
☐ Belgium	☐ Norway	☐ Iceland
☐ Bulgaria	☐ Poland	☐ Romania
☐ Canada	☐ Portugal	☐ Slovakia
☐ Croatia	☐ Estonia	☐ Slovenia
☐ Czech Republic	☐ France	☐ Spain
☐ Denmark	☐ Germany	☐ Turkey
☐ Latvia	☐ Greece	☐ The United Kingdom
☐ Lithuania	☐ Hungary	☐ The United States
☐ Luxemburg		☐ Other…….

*What is your age?

☐20-25 ☐30-35

☐25-30 ☐35-40

☐40-45 ☐50-55

☐45-50 ☐55-

* What is your rank?

☐Enlisted

☐CPO/MCPO

☐Ensign&1st Lieutenant or equivalent

☐LTJG&2nd Lieutenant or equivalent

☐LT &Captain or equivalent

☐LCDR &Major or equivalent

☐CDR &Lieutenant Colonel or equivalent

☐CAPT &Colonel or equivalent

If other, please specify:_____

* What is your gender?

☐Male

☐Female

* What is your service?

☐Army

☐Navy

☐Air Force

☐Marine Corps

☐If other, please specify:_____

* What is your functional area in your organization?

☐Personnel

☐Intelligence

☐Operations

☐Logistics

☐Planning

☐Policy, Transformation

☐Doctrine and Concept Development, Lessons Learned

☐Training, Exercises, Education

☐If other, please specify:_____

* How long have you been working with your organization?

☐…… year

* How long have you been working with your team?

☐……year

* Do you have a leadership role?

☐Yes ☐No

Thank you very much for your co-operation and valuable time.
Without your response this research will not be possible.

References:

Intragroup Trust (Adapted from Simons et al., 2000)
Empowerment (Adapted from Kirkman et al., 2004)
Self-Management (Adapted from Campion et al., 1993)
Complexity (Adapted from Podsakoff & MacKenzie, 1994).
Interdependence (Adapted from Van Der Vegt et al., 1999)
Shared Leadership Survey (Adapted from Small, 2007)
Perceived effectiveness (Adapted from Lemieux-Charles, 2002)

APPENDIX 2. INTERVIEW QUESTIONS - STUDY 2

1. What do you think about traditional models (vertical leadership) of military leadership style?

2. When you start working on a new task/mission, what does your leader do first?

3. Do you think shared leadership has a place in the modern military team contexts? Why or why not? Please provide and describe examples.

4. Please describe what do you think about shared leadership for the performance of **project t**eams?

5. Please describe what do you think about shared leadership for the performance of **operational** teams?

6. What do you think are the aspects that play an important role in facilitating shared leadership?
(Complexity, 21th century, culture, etc...)

7. Please describe a situation or a context where you believe that shared leadership would be useful/not useful in the military?

8. Please describe the shared leadership practices already exist in the military? Please provide and describe examples

9. What will be the positive/negative consequences if shared leadership be implemented within the military organizations **in Project team** contexts? Please provide and describe examples

10. What will be the positive/negative consequences if shared leadership be implemented within the military organizations **in operational team** contexts? Please provide and describe examples.