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# ENHANCING KNOWLEDGE WORKER CREATIVITY IN BUREAUCRATIC ORGANIZATIONS: A GROUNDED THEORY STUDY

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ENHANCING KNOWLEDGE WORKER CREATIVITY IN BUREAUCRATIC  
ORGANIZATIONS: A GROUNDED THEORY STUDY

By

JAIME MACIAS

A doctoral dissertation submitted to the  
College of Education  
in partial fulfillment of the requirements  
for the degree Doctor of Education  
in Organizational Leadership

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April 2020

ENHANCING KNOWLEDGE WORKER CREATIVITY IN BUREAUCRATIC  
ORGANIZATIONS: A GROUNDED THEORY STUDY

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JAIME MACIAS

Dissertation Approved:



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Dr. Sarah Yates, Ed.D., Dissertation Chair



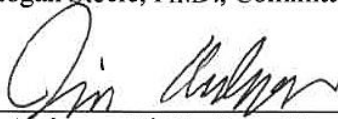
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## DEDICATION

Over my lifetime, I have encountered many creatives. Whether our paths crossed in school, the military, or church, each of you inspired me to think differently – thank you!

I dedicate this dissertation to all the creative professionals who see the world differently and experience life uniquely. Continue to push boundaries and force people not to settle for “this is the way it has always been” mentality. Guard yourselves against those who tell you, “this will never happen” or “it is too hard.”

I also dedicate this dissertation to the families and friends of creatives. It takes a special person to listen, accept, and encourage those who are often called “dreamers.”

Lastly, I dedicate this dissertation to God, who is the CREATOR of all things. You designed me to think differently and have been with me through every step of my journey.

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A special thank you to the men and women of the United States Marine Corps. Thank you for what you do every day for our Nation. But specifically, thank you for the research support. Your perspectives were instrumental in my doctoral studies—Semper Fidelis!

Last, to my wife, thank you for allowing me the time to complete my studies; to my son, thank you for serving our Nation while finding the time to pursue your education; and to my daughter—a fellow doctoral student—thank you for being my intellectual sparring partner.

## ABSTRACT

Through a grounded theory qualitative study consisting of interviews, observations, and document reviews, this study examined a mid-sized military organization to answer two questions: (1) How does the military organizational design (i.e., bureaucracy) influence the creative process? and (2) How do leaders amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process? The data suggest that the perceived tension between organizational hierarchy and creativity is mitigated by the immediate supervisor's behavior and ability to navigate the bureaucratic landscape. This study added to the existing body of research on creativity in the workplace in two ways. First, the researcher assessed the interaction between the supervisor and worker through the four stages of creativity: preparation, incubation, illumination, and verification (Sadler-Smith, 2015). Second, the study focused on the influence of bureaucratic conditions on the creative process. The study findings suggest that supervisor behavior is paramount in enabling creativity; organizational hierarchy and creative autonomy can coexist; trust relationships increased the expectancy of creative support; and immediate supervisors who leverage bureaucracy enable an environment that promotes creative thinking.

*Keywords:* knowledge worker; knowledge workplace; creativity; creative process; organizational hierarchy; bureaucratic organizations; military bureaucracy; organizational design; organizational leadership; trust relationships; enabling behavior; psychological safety

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## CHAPTER 1: INTRODUCTION

As the business work environment evolves at a rapid pace, leaders will be required to develop and embrace novel organizational management practices. The Information Age has shaped a more connected, borderless, and information-rich world where knowledge-based organizational work is necessary to maintain a competitive advantage (Caniëls, De Stobbeleir, & De Clippeleer, 2014). The corporate world's shift from Industrial Age manufacturing to knowledge-based assets has led to the emergence of knowledge workers and importance of creativity and innovation (Caniëls, 2018; Zarraga & Bonache, 2003). Peter Drucker asserted that knowledge organizations demand "creativity, research, and the abilities of the mind more than any common craft and skills" (Amar & Hlupic, 2016, p. 239). Although an interdependent relationship exists between creativity and innovation, creativity is a "subset or a sub-process of organizational innovation" (Damanpour & Aravind, 2012, p. 487). A leader's ability to foster a climate that promotes the creation of novel and useful ideas provides organizations an advantage in today's knowledge-based competitive environment (Lassk & Shepherd, 2013).

The literature on creativity is abundant, but researchers have not been consistent in their conclusions as to what conditions enhance or detract from workplace creativity. This research aimed to advance the literature on creativity in the workplace in two ways. First, the researcher assessed the interaction between the supervisor and worker through the four stages of creativity: preparation, incubation, illumination, and verification (Sadler-Smith, 2015). Second, the study focused on the influence of bureaucratic conditions on the creative process.

### **Background of the Study**

Whether in academia, business, or government institutions, an organizational culture where novel and useful ideas can flourish enhances the leader's ability to achieve institutional

goals. In contrast, organizational leaders who fail to grasp the value of creativity can find themselves at a disadvantage in a highly competitive knowledge environment. Hemlin, Allwood, and Martin (2004) referred to the characteristics of creative knowledge environment as exerting “a positive influence on human beings engaged in creative work aiming to produce new knowledge or innovations, whether they work individually or in teams, within a single organization or in collaboration with others” (p. 2). Leader and worker interaction enhance follower job satisfaction (Northouse, 2016). Furthermore, Northouse (2016) asserted that “leaders can help followers along the path to their goals by selecting specific behaviors that are best suited to followers’ needs and to the situation in which followers are working” (p. 116).

## **Creativity**

The production of useful and novel ideas in any domain is the widely accepted definition of creativity (Amabile, Conti, Coon, Lazenby, & Herron, 1996). Creativity occurs at individual, group, and organizational levels. For instance, individuals demonstrate creativity through the functions of environmental conditions, cognition, personality, motivation, and personal knowledge (Woodman, Sawyer, & Griffin, 1993). Organizational leaders nourish group creativity through team diversity, group characteristics, emotional cohesiveness, and the supportive workplace. However, Woodman et al. (1993) warned that group creativity is not the aggregation of creative individuals to produce novel and useful ideas. Organizational creativity is the result of group creativity including the exchange of knowledge with the external environment (Woodman et al., 1993).

Amabile et al. (1996) identified five principles to assess the creative environment. First, the supervisor, group, and organization play a role in encouraging creativity. Second, workers who have relatively high levels of autonomy are more likely to be more creative. Third,

organizational leaders who appropriately resource their workers and create a perception of management support develop a psychological condition that leads to higher levels of worker intrinsic creative motivation. Fourth, work challenges and workload create pressure that can have negative or positive influences on creativity. Fifth, workplace rigidity, worker internal strife, and formal management structures have a physical and psychological influence on creativity (Amabile et al., 1996). These creativity principles provide a framework to examine the supervisor and worker interaction throughout the creative process.

Preparation, incubation, illumination, and verification are the most recognized stages of the creative process (Sadler-Smith, 2015). The preparation and verification stages are similar in that they both are conscious efforts and the supervisor can systematically manage the steps through education. The incubation stage could be the most challenging to understand and measure. Researchers on the incubation stage have asserted that, during the incubation period, the worker should set the problem aside and perform mental relaxation (Sadler-Smith, 2015). Other researchers suggested that an “interpolated incubation activity of a dissimilar nature to the target task led to stronger benefits for incubation as compared to an interpolated activity which was similar to the target task” (Gilhooly, Georgiou, & Devery, 2013, p. 145).

Everyone inherently possesses a creative mode, but creativity is often inhibited by internal and external influencers and by those who set the rules (Allahar, 2018). In the area of creativity, over-restrictive control systems, over-reliance on standard operating procedures, and time can influence creativity, but these conditions are neither positive nor negative (Lassk & Shepherd, 2013). For instance, early researchers claimed that time pressure negatively impacted creativity, but according to Ohly and Fritz (2010), one’s focus and motivation to succeed fosters positive pressure that leads to daily creativity. Thus, managers need to be aware of what

conditions influence creativity and develop an environment where workers have common goals, resources, structure, and skills to accomplish the organization's mission. Essentially, managers develop a climate where organizational pressures and obstacles are addressed and create a path for worker success (Drucker, 1993).

### **Knowledge Worker**

In 1959, Drucker coined the term *knowledge worker* to categorize an employee who primarily works with information and creates knowledge in the workplace (Frick & Drucker, 2011). While managers are responsible for ensuring the creation, retention, and transfer of organizational knowledge, knowledge workers know more about their work than their managers and are the principle actors in knowledge creation (Allahar, 2018). Therefore, understanding how internal and external factors influence knowledge worker creativity is an essential element of organizational leadership.

### **Bureaucratic Organizations**

Although the efficiency of the bureaucratic organization remains a topic of debate in management academia, Max Weber's bureaucracy theory provides a starting point to advance the discourse on what is and what is not a bureaucratic organization (Weber, Henderson & Parsons, 1997). Bureaucratic organizations can be categorized along five principles:

- Principle 1: A manager's authority is derived from the position assigned.
- Principle 2: Bureaucracies assign positions based on performance and not social standing or personal contacts.
- Principle 3: The organization's manager governs by a set of general, formal, explicit, exhaustive, and largely stable rules for each position.

- Principle 4: Organizations arrange positions hierarchically to establish clear lines of reporting.
- Principle 5: Managers establish a well-defined system of rules, procedures, and cultural norms (Jones, 1999).

In the Industrial Age, organizations were hierarchical, bureaucratic, centralized, slow in decision-making, multileveled, and not overly dependent on information systems. Furthermore, leaders and managers in hierarchical organizations ensured adherence to norms through the exercise of strict rules, formal structures, standard operating procedures, and set schedules (Nuñez Ramírez, Wendlandt Amezaga, & Álvarez Medina, 2016). Today's knowledge-based environment calls for organizational leaders who are less driven by regulations and who empower workers, support faster decision-making, and rely more on information systems for data collection and distribution (Kotter, 2012). According to Lee and Edmondson (2017), modern-day organizational leaders are seeking to change and become less hierarchical to increase the development of novel ideas and improve the work environment. Specifically, the authors recommended "less-hierarchical organizing as a means of enabling organizations to survive in a new post-industrial environment in which knowledge creation and innovation serve as the key drivers of success" (Lee & Edmondson, 2017, p. 41). Three trends are driving the need for less-hierarchical organizations. First, rigid hierarchical organizations pose a threat to the knowledge based organization that must cope with the faster flow of information. Second, the business world is experiencing an increase in organizations that work in the knowledge environment where the creation and sharing of ideas make up the market commodity. Third, the market is demanding improvements in the workplace (Lee & Edmondson, 2017). To address these trends, Lee and Edmondson (2017) advised that organizational leaders should increase



worker participation and employee empowerment to reduce the pressure on the hierarchical managerial organization.

The Department of Defense is by design a bureaucracy. With its top-down hierarchical command system, mass conformity through strict adherence to doctrine, and an unwavering duty to follow precise orders, military leaders can mobilize and deploy large military formations in an expeditious manner (Vego, 2013). These control attributes are necessary and should continue to be the hallmark of operational combat commands, but not all military organizations fit this paradigm. Following World War II, Department of Defense leaders viewed the U.S. global military presence as a counter to communist expansion through geographically focused joint commands. Joint military command headquarters are responsible for creating novel ideas that support strategic planning to meet global security requirements (Department of Defense, 2017). Military service component commands (e.g., Army, Navy, Air Force, Marines) support the joint command headquarters and are predominately staffed by mid-senior officers on a temporary hiatus from operational commands. When the convergence thinking of officers from operational units is introduced to the joint commands, the divergent thinking necessary for creativity is challenged. Vego (2013) described this tension as the “antitheses of creative thinking” (p. 85).

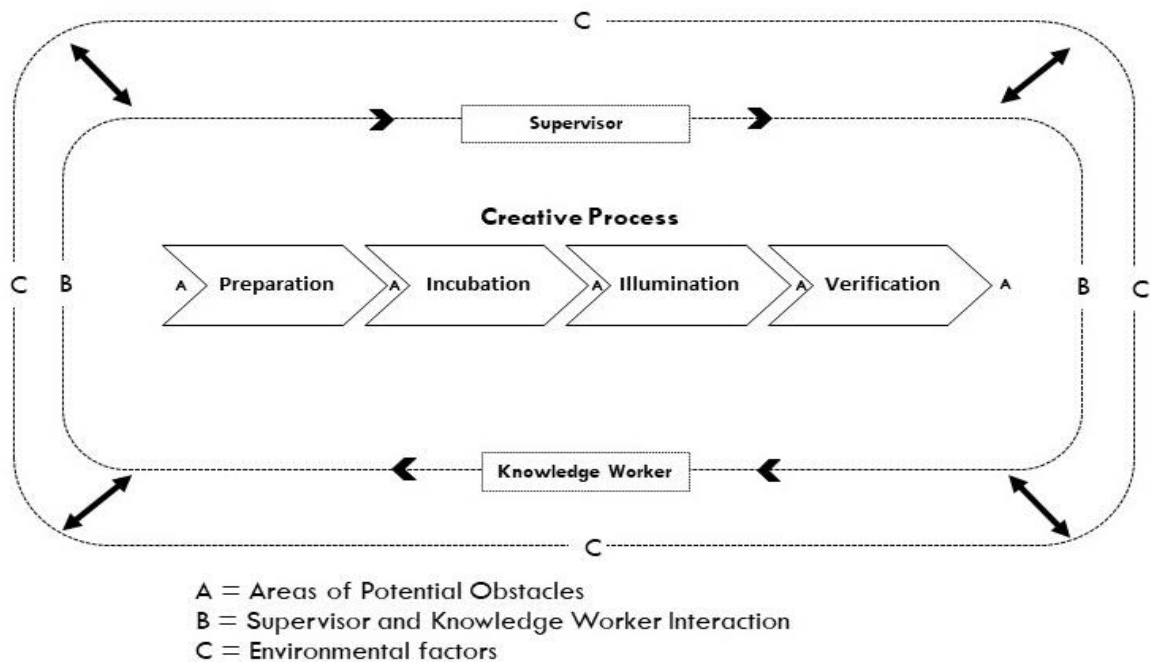
### **Conceptual Framework**

This study examined the interactions among supervisor, employee, and environment (bureaucratic obstacles) throughout the following four steps of the creative process: preparation, incubation, illumination, and verification (Sadler-Smith, 2015). The research data collection focused on the following: (1) How does the military organizational design (i.e., bureaucracy) influence each step of the creative process? and (2) How do leaders enable or inhibit the creative process?

Understanding the interaction of the supervisor and knowledge worker and the internal and external environmental influences on the creative workplace led to the development of a theory that mapped the supervisor and knowledge worker path throughout the creative process. Figure 1 illustrates the supervisor and knowledge worker interactions throughout the creative process, areas of potential obstacles, and environmental influences on creativity.

Figure 1

*Supervisor and Knowledge Worker Path throughout the Creative Process*



### Significance of the Study

Workplace creativity is no longer limited to Internet-based industry giants such as Google, Apple, Facebook, and Amazon. Advancements in technology, knowledge systems, and cloud computing have increased the creative potential of both for-profit and non-profit bureaucratic organizations (Walton, 2012). Therefore, all managers and organizational leaders will benefit from an increased understanding of how to enable creativity in the workplace.

## **Purpose Statement**

The purpose of this grounded theory study was to understand how the military design (i.e., bureaucracy) influences creativity and how leaders enhance or mitigate knowledge worker creativity throughout the creative process in bureaucratic organizations.

## **Overview of Methodology**

This study utilized the grounded theory approach to analyze the collected data on the role the supervisor and knowledge worker interaction and bureaucratic environmental factors had in enhancing or detracting from workplace creativity. The qualitative research design method was selected, as “the intent of grounded theory study is to move beyond description and to generate or discover a theory” (Creswell, 2013, p. 83). Additionally, grounded theory was critical to this type of research, as “participants in the study would have all experienced the process, and the development of the theory might help explain the practice or provide a framework for further research” (Creswell, 2013, p. 83).

## **Research Design**

This research examined the experiences of the United States Marine Corps Forces Central Command’s (MARCENT) knowledge workers. MARCENT knowledge workers are responsible for the development of Marine Corps contributions to plans and strategy that support over 90,000 Soldiers, Sailors, Airmen, Marines, Coastguardsmen, and civilians stationed throughout the United States Central Command area of responsibility that spans more than 4 million square miles in an area populated by more than 550 million people from 22 ethnic groups (U.S. Central Command, n.d.). MARCENT is comprised of the following staff divisions (G-Codes):

G1 – Administration

G2 – Intelligence

G3 – Operations

G4 – Logistics

G5 – Plans and Strategy

G6 – Communications

G7 – Training (Not applicable. MARCENT combined training under the G5 division)

G8 – Budgets

The MARCENT divisions are staffed with military and civilian planners responsible for participating in the development of novel and useful ideas for the organization. Study participants were selected from across the MARCENT staff. Based on the size of the MARCENT organization, the study consisted of 20-25 participants to achieve data saturation (Creswell, 2013).

### **Research Questions**

This grounded theory study explored two specific questions: (1) How does the military organizational design (i.e., bureaucracy) influence the creative process? and (2) How do leaders amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process?

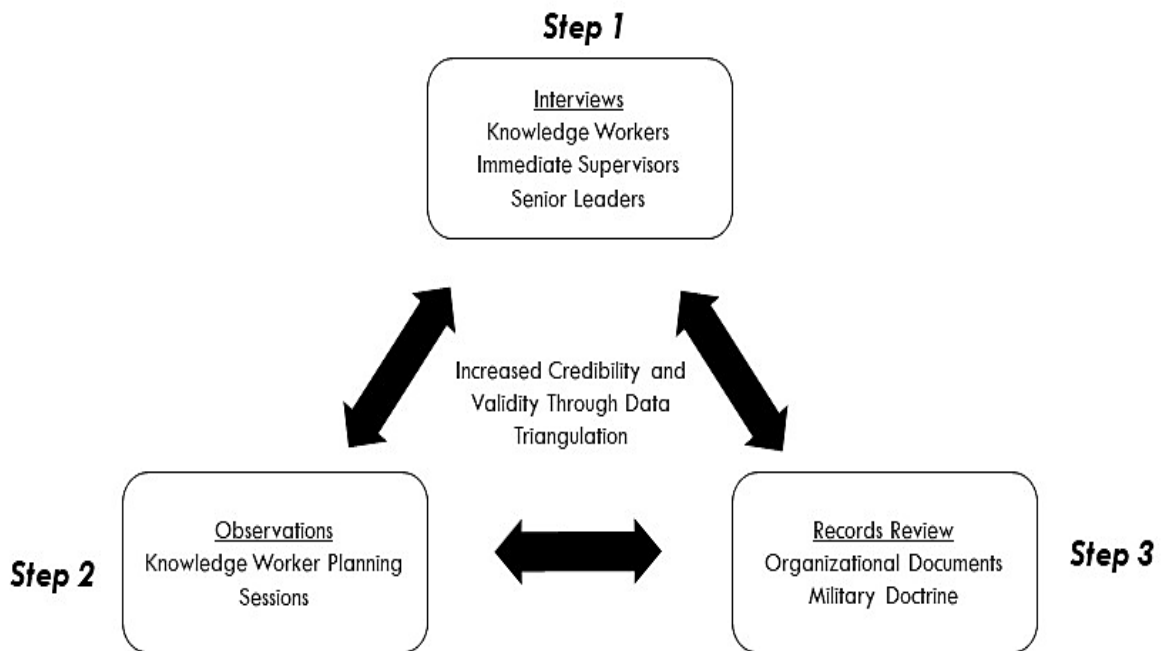
### **Data Collection**

The data were collected through three efforts: the observation of knowledge worker sessions, leader and worker interviews, and examination of organizational information. The planning session observations focused on how the knowledge worker and immediate supervisor interacted and applied divergent and convergent thinking in support of the creative process. Additionally, the desired goal of each observation was to identify what organizational obstacles or enablers influence creativity.

The interview data collection sessions consisted of a 30 to 45-minute discussion centered on questions that helped to identify the influence of the bureaucratic organization on the creative process. The final data collection method was a review of organizational documents. Figure 2 illustrates the three diverse types of data collection. Through this multi-method collection, the study allowed for a credible and valid examination of the creative process in bureaucratic organizations.

Figure 2

*Data Collection Model*



**Procedures**

Of the two popular approaches to grounded theory—systematic and constructivist—the systematic was used because, in a systematic approach, “the investigator seeks to systematically develop a theory that explains the process, action, or interaction on a topic” (Creswell, 2013, p. 86). Data were collected through a theoretical sampling process that includes interviews, observations, and review of organizational documents. Once the data were collected, three

phases of coding were followed—open, axial, and selective. Through open coding, the data were analyzed to create categories that summarized what was occurring. Next, axial coding was performed to identify the relationships among the open codes. Last, selective coding was performed to determine the core category that served as the basis of the grounded theory.

### **Limitations**

This study was based on the qualitative grounded theory and used an inductive analytic methodology to examine the knowledge workers as they developed novel and useful ideas. Consistent with qualitative methods of research, the outcomes from this study are not generalizable to a universal population (Creswell, 2013). Limitations included the following:

1. A possible study limitation was the introduction of research bias based on the examiner's familiarity with the studied organization.
2. Due to operational sensitivity concerns and security classifications constraints of the work performed by the MARCENT knowledge workers, the study did not report on the developed products.
3. Findings were limited to the leaders and knowledge workers' perception of creativity and not the actual examination of the creative material.
4. Limitations may also exist due to the homogenous culture of the participants (e.g., strong ties to military, can-do attitude, high organizational loyalty) that can lead to biases in the interview responses.

### **Definition of Key Terms**

The following definitions provide a common understanding of terms that are used throughout the research study.

1. Creativity: the production of novel and useful ideas by individuals in any domain (Amabile et al., 1996).
2. Innovation: the introduction of new products and processes (Damanpour & Aravind, 2012).
3. Change: the shift in behavior, process, or technology from those currently in use (Damanpour & Aravind, 2012).
4. Divergent thinking: the mental work that generates a number and variety of responses to a situation, thus producing different responses (Smith, 2001).
5. Convergent thinking: the mental work that uses the information to arrive at one correct answer (Smith, 2001).
6. Preparation: the activity when the creative person does all the preliminary work and becomes immersed in the issue, problem, need, and opportunity (Nath, 2007).
7. Incubation: the period, ranging from a few minutes to months or years, which elapses between the period of preparation and that of illumination where through little or no conscious effort the individual organizes information, ideas, and data (Nath, 2007).
8. Illumination: the result that occurs when the creative person sees the solution to his problem. The “aha” moment (Nath, 2007).
9. Verification: the conscious stage of evaluation through the use of other examples, analytics, and other recognized methods (Nath, 2007).

### **Summary**

Through a grounded theory approach to analyze the collected data on MARCENT’s knowledge workers, this study sought to understand the role leader and worker interaction and bureaucratic environmental factors had on enhancing and detracting from workplace creativity

and, more specifically, the creative process. Data were collected through the observation of knowledge worker sessions, interviews, and examination of organizational information. This research aimed to advance the literature on creativity in the workplace through the following:

1. Assessing the relationship between the supervisor and worker through the four stages of creativity—preparation, incubation, illumination, and verification (Sadler-Smith, 2015).
2. Examining the influence of the bureaucratic hierarchical organization on the creative process.

The significance of this study is that the workplace is advancing at a rapid pace and technology, knowledge systems, and cloud computing have increased the creative potential of academic, business, and government organizations. Therefore, all managers and organizational leaders will benefit from an increased understanding on how to enable creativity in the workplace in today's knowledge-based competitive environment.



## CHAPTER 2: LITERATURE REVIEW

The evolution from Industrial Age production to Information Age knowledge work has increased the focus and importance of the creative organizational work necessary to maintain an organizational competitive advantage (Caniëls et. al., 2014). Organizations today are operating in a more connected, borderless, and information-rich world, and Information Age advances have led to increased importance of intangible assets – i.e., tacit and explicit knowledge – over traditionally valued tangible assets such as machinery (Han, Chiang, & Chang, 2010). Kotter (2012) claimed that the speed at which the corporate world is changing is not expected to diminish. Thus, the 21<sup>st</sup> century with its high demand for knowledge workers requires an organizational paradigm shift in the view of employee creativity and innovation.

According to Zarraga and Bonache (2003), developed countries have instituted structural changes to gain a viable advantage over their competitors. The organizational change was a shift from the traditional focus on physical assets to knowledge assets (Zarraga & Bonache, 2003). Management expert Peter Drucker (Frick & Drucker, 2011) declared that information technology advances have moved organizations toward the production of intangible knowledge assets over the production and distributions of tangible assets. The shift from manufacturing to knowledge work has led leaders to the realization that knowledge work such as creativity is crucial to maintaining a competitive advantage (Caniëls, 2018).

However, the literature on creative work has predominately focused on the creative person instead of processes and how leaders enable or inhibit creativity (Caniëls, 2018). According to Zhou and Pan (2015), “creativity researchers have noted that creativity as a process has received little attention in the creativity literature” (p. 409). Furthermore, research is limited in examining the factors that enhance or detract from stages of the creative process, and current

research has produced inconsistent findings (Caniëls et al., 2014). Thus, this study aims to advance the literature on creativity with a focus on how mid-level leaders interact with knowledge workers to enhance or detract from the creative process in bureaucratic organizations. Specifically, the literature review examined creativity, knowledge work, and the bureaucratic organization.

## **Creativity**

**Defining the creative process.** Amabile (2013) described the creative process as “the elements that can combine to create possible responses, and the expertise against which the individual will judge the viability of response possibilities” (p. 3). According to Ou, Chen, Li, and Tang (2018), “the creative process engagement is defined as individuals’ involvement in creativity-relevant processes or methods” (p. 101). Ou, Chen, Li, and Tang (2018) summarized the creative process as problem identification, information searching and encoding, and idea and alternative generation. The most widely accepted starting point in discussing the creative process is Wallas’ 1926 *Art of Thought* description of the four stages of creativity: preparation, incubation, illumination, and verification (Sadler-Smith, 2015). The preparation step is a voluntary, conscious step where the knowledge worker collects information and begins to make connections, identify critical variables, and formulate a hypothesis (Wallas, 1926/2018). In the incubation step, two activities occur. The first activity is the voluntary act of not consciously thinking about the problem. The second activity is the unconscious or involuntary cognitive actions that occur toward problem definition (Wallas, 1926/2018). During the incubation step, an individual must abstain from consciously thinking about the problem by either working on another task or relaxing (Wallas, 1926/2018). For more difficult creative projects, Wallas (1926/2018) recommended total relaxation to achieve complete separation from the project.

However, Gilhooly, Georgiou, and Devery (2013) argued that an incubation activity of a nature different than the project task may lead to stronger benefits for incubation as compared to an activity that is similar to the project task. Wallas (1926/2018) described the illumination step as the instantaneous or unexpected revelation of the creative idea. The creative step of illumination is intimately linked with the step of incubation. Sadler-Smith (2015) defined the step of intimation as the linking step between illumination and incubation where actions occur on the periphery of consciousness. However, attempts to quantify the illumination step are challenging. According to Sadler-Smith (2015), the illumination step is an “elusive phenomena” (p. 349). The last step in the creative process is verification. Verification is the creative step where the validity of the creative product is tested (Wallas, 1926/2018). In the verification step, field experts validate the novel and usefulness of the creative product and serve as implementation gatekeepers (Sadler-Smith, 2015).

According to Botella, Zenasni, and Lubart (2018), the creative process can be examined from both a macro and micro level. The macro level constitutes the actual creative steps while the micro level covers the moderating factors such as convergent or divergent thinking. Botella et al. (2018) conducted a study to determine the nature and steps in the artistic creative process to capture and build a creative process report diary. The protocol consisted of a qualitative research of visual arts students ( $n = 28$ ). The data collections protocol consisted of two semi-structured interview questions to identify the stages of creativity: (1) “How does your creative process take place?” and (2) “How would you name the stages that you have mentioned?” (Botella et al., 2018, p. 5). After comparing the student responses, Botella et al. (2018) identified 17 stages in the creative process: immersion, reflection, research, inspiration, illumination, trials, assembly, ideation, selection, technique, specification, realization, finalization, judgment, presentation,

break, and withdrawal. Several of the 17 stages correspond with Wallas' (1926/2018) four-stages of the creative process. For instance, immersion, reflection, and research correspond to Wallas' stage of preparation; break corresponds to Wallas' stage of incubation; illumination is a stage in both constructs; and judgment corresponds to the Wallas' stage of verification (Botella et al., 2018). However, a step that merits future research is the step of inspiration. Inspiration occurs when a creative idea slowly manifests itself. Inspiration is the step where instinct, impression, and feelings support creativity (Botella et al., 2018). A subject in the study described inspiration as "Sometimes you feel that you have a lot of data and from that, you can start to grab something" (Botella et al., 2018, p. 7).

The significance of the Botella et al. (2018) study is that it reaffirms a lack of scholarly consensus on the creative steps. For instance, Sadler-Smith (2015) identified five steps: preparation, incubation, intimation, insight, and verification; Wallas (1926/2018) identified four-steps, Botella et al. (2018) recommended 17 steps, and Caniëls (2018) binned the creative process into three general categories: problem identification, information search, and idea generation. Botella et al. (2018) warned that an attempt to limit the creative process to fixed steps may detract from creativity, as creative methods vary depending on the organization.

**Supervisor support.** Leaders play an essential role in knowledge worker proactivity throughout the creative process (Caniëls, 2018). Caniëls (2018) defined supervisor support as the "extent to which supervisors provide their employees with helpful feedback about their behavior" (p. 3). Appropriate help from a supervisor enables worker development and job performance (Caniëls, 2018). In a quantitative study of high-tech employees ( $n = 747$ ), Caniëls (2018) examined the moderating role of knowledge worker productivity and supervisor support. The creative process was measured using eleven items and supervisor support using four items

(Caniëls, 2018). Caniëls (2018) examined how an individual and organizational context influence each step of the creative process. Supervisor support had a significant negative moderating effect on the relationship between knowledge worker information search and problem generation ( $p < .01$ ). However, supervisor support did not moderate the relationship between problem identification and information search (ns) (Caniëls, 2018).

Caniëls's (2018) study reinforced the notion that when supervisors convey to their workers that mistakes will not detrimentally affect the employee's well-being, a supervisor and worker trust relationship is established, which leads to proactivity. Trust is a positive aspect of most business literature, and trust is accepted as a positive element of leadership and management (Langfred, 2004). According to Caniëls (2018), supervisors who work to remove obstacles and allow the worker time to collect information, positively impact creativity that leads to idea generation. However, Caniëls (2018) indicated that supervisors may need to understand when to involve themselves in the creative process. Specifically, supervisor support does not harm the problem identification stage, but supervisors should give their workers space during the idea generating step of the creative process to avoid negatively affecting the creative process (Caniëls, 2018).

According to Frick and Drucker (2011), leaders should create an environment and remove obstacles to enable worker success. Fisher, Pillemer, and Amabile (2018) conducted a qualitative study of Glow, a design consultancy organization, to examine how teams working on complex problems receive help. Glow was selected based on the company's culture of helping its workers, their nonhierarchical structure, and their creative work (Fisher et al., 2018). The study concentrated on three rounds of data collection. The first round consisted of 36 hours of onsite observations and 26 interviews of project team members. Round two consisted of analysis

of 401 daily diary entries from four project teams, 84 weekly interviews from 13 team members, and 25 other weekly interviews (Fisher et al., 2018). Round three consisted of 25 follow-up interviews.

From their research, Fisher et al. (2018) introduced the idea of path-clearing and deep-help as ways of guiding workers across difficult terrain in support of creativity. Deep help is the “intensive repeated assistance in which givers (typically high-status leaders) devote considerable time to helping teams with especially difficult problems” (Fisher et al., 2018, p. 1525).

According to Fisher et al. (2018), path-clearing leaders provide their workers deep-help versus brief interactions. Fisher et al.’s (2018) research finding denoted the value of identifying the issue, adopting a rhythm, establishing a helping frame, mapping, reinforcing the helping frame, ranging, ending, and process deviation. As the necessity for knowledge work increases and workers encounter difficult terrain, Fisher et al. (2018) implied that guiding and path-clearing aid in the way organizations respond to complex problems.

**Psychological safety and creativity.** Mainemelis, Kark, and Epitropaki (2015) categorized three components of creativity leadership: directing (vision), integrating (collaboration), and facilitating (climate). The supervisor's leadership interaction with the employee can influence the creative process through worker motivation enhancement, removal of obstacles, and the development of an environment that promotes creativity (Zhou & Pan, 2015). The term *climate engineers* suggest that leaders play a vital role in developing climates that influence worker behavior (Zhou & Pan, 2015). Zhou and Pan (2015) asserted that leaders interact with workers on a social level, and through social interactions, the supervisor and worker engagement enhance or detract from the creative process. The authors argued that leaders and workers’ social interactions have a moderating influence of psychological safety on the

correlation between the creative process and knowledge worker creativity (Zhou & Pan, 2015). Zhou and Pan (2015) indicated that workers require a climate that promotes psychological safety to engage in effective creative processes.

Edmondson (1999) defined psychological safety as “a shared belief held by members of a team that the team is safe for interpersonal risk taking” (p. 354). The proposal of novel ideas is not absent of risk (Zhou & Pan, 2015). Researchers have claimed that creative ideas induce conflict and often lead to tension and adverse effect on workplace relationships (Ou et al., 2018). A safe psychological environment promotes divergence of thought, tolerance for different opinions, and a supportive environment (Zhou & Pan, 2015). Psychological safety is a mediating factor of worker creativity, as safety enables individuals to openly communicate new and novel ideas (Castro, Anseel, Kluger, Lloyd, & Turjeman-Levi, 2018).

Zhou and Pan (2015) conducted a quantitative study of information technology employees ( $n = 126$ ) and supervisors ( $n = 342$ ) to examine how leaders facilitate the creative process through a climate of safety. The study measured creativity using three items, leadership using twenty items, psychological safety using seven items, and process engagement using eleven items (Zhou & Pan, 2015). Zhou and Pan (2015) claimed that leadership is positively related to psychological safety ( $p < .001$ ) and that a psychologically safe environment is positively associated with the creative process engagement ( $p < .001$ ). Furthermore, the findings suggest that psychological safety has a significant moderating relationship between the creative process and creativity ( $p < .05$ ; Zhou & Pan, 2015). Zhou and Pan’s (2015) research expanded the literature on the moderating effect between psychological safety and the creative process. Zhou and Pan’s (2015) findings reaffirmed the role of the supervisor in fostering a workplace that promotes a safe environment that promotes divergent thinking.

**Listening and creativity.** Active listening is a leader soft-skill that results in employee psychological safety, and psychological safety promotes creativity (Castro et al., 2018). Castro et al. (2018) defined listening as “behavior that manifests the presence of attention comprehension and good intention toward the speaker” (p. 490). Through active listening, supervisors create a safe space for workers to express their ideas and convey to the workers that the organization values their contributions (Castro et al., 2018).

Castro et al. (2018) conducted a quantitative study of undergraduate students ( $n = 102$ ) to examine the effect that listening has on worker creativity. Castro et al. (2018) measured listening using eight items and psychological safety using three items. Castro et al. (2018) measured creativity through a combination of categories that examined fluency, originality, flexibility, coder’s subjective rating, an aggregated measure of creativity, and managers’ rating of employee creativity. Castro et al.’s (2018) findings suggested a significant correlation between psychological safety and fluency-creativity measure,  $r = .32$ , 95% CI [.14, .50]. Additionally, there was a significant indirect effect of supervisor listening on worker creativity ( $p < .04$ ; Castro et al., 2018). Castro et al.’s (2018) study advanced the creative literature by highlighting the effect of listening on creativity, explicitly the mediating role of psychological safety on the creative process.

**Controversy and creativity.** Ou et al. (2018) examined the creative process through a framework of the theory of *constructive controversy*. Constructive controversy infers that “effective management of conflicts benefits individuals on both relational and cognitive ways” (Ou et al., 2018, p. 102). Ou et al. (2018) argued that conflict leads to worker curiosity that stimulates thinking, promotes contradictory viewpoints, and moves the collective toward goal achievement and new ideas. A mediating factor in addressing creative conflict is the individual’s



cognitive flexibility (Ou et al., 2018). Cognitive flexibility is the “extent to which individuals think and deal with different perspectives in flexible ways” (Ou et al., 2018, p. 103). Again, the level of psychological safety plays a moderating role in the relationship between conflict and the creative process (Ou et al., 2018). In an environment where psychological safety is high, constructive controversy increases. In contrast, when psychological safety is low, personal risk is high and workers are not likely to step out of the accepted paradigms (Ou et al., 2018). Constructive controversy promotes open discourse that enables the creative process (Ou et al., 2018).

Ou et al. (2018) conducted a quantitative study of research development and personnel working in a high technology company ( $n = 239$ ) to examine the effect constructive controversy has on creativity. Eight items were used to measure constructive controversy, positive conflict using three items, cognitive flexibility using six items, psychological safety using seven items, and creative process engagement using eleven items (Ou et al., 2018). The Ou et al.’s (2018) study results indicated a positive correlation between constructive and creative process engagement ( $p < .01$ ); constructive controversy was positively related to positive conflict value ( $p < .01$ ); and cognitive flexibility was also positively related ( $p < .01$ ; Ou et al., 2018). Of note, the positive relationship between positive conflict value and psychological safety was stronger when psychological safety was high (simple slope 5.45,  $p < .01$ ) than when safety was low (simple slope 5.18,  $p < .05$ ). In contrast, the positive relationship between cognitive flexibility and creative process engagement was weaker when psychological safety was high (simple slope 5.22,  $p < .01$ ) than when safety was low (simple slope 5.41,  $p < .01$ ; Ou et al., 2018).

Ou et al.’s (2018) research advanced the creative literature by demonstrating the relationship between constructive conflict and cognitive flexibility on creative process

engagement. Psychological safety strengthens the relationship between conflict value and the creative process while psychological safety weakens the relationship between cognitive flexibility and the creative process (Ou et al., 2018). The significance of Ou et al.'s (2018) study is that it reaffirmed that psychological safety influences supervisor and employee relations throughout the creative processes. Also, supervisors should not fear workplace controversy but rather encourage and value constructive discourse as a means to enhance the creative process (Ou et al., 2018).

### **Knowledge Work**

**The knowledge worker.** Knowledge is a critical commodity that workers gain through experience, intuition, and a stimulating work environment. A knowledge worker is an employee who works with information in contrast to a worker who produces goods or services (Frick & Drucker, 2011). Leading knowledge workers requires an approach that is no longer focused on product or service management but rather on developing an environment that fosters creativity and initiative (Mládková, 2012). Unfortunately, knowledge resides in the minds of workers, making it difficult for organizational managers to assess how well their managerial programs are helping knowledge workers in their positions (Jayasingam & Yong, 2013). In the article "Motivating the Knowledge Worker," Frick and Drucker (2011) opined that the top three negative motivation factors in leading knowledge workers are insufficient resources, bad managers, and lack of management support. Additionally, Jayasingam and Yong (2013) contended that "knowledge workers are distinct from traditional workers, hence entail eccentric management practices" (p. 3916). Similarly, Mládková (2011) asserted that the "management of knowledge workers is a tricky business" (p. 630) because knowledge workers often know more than their managers.

**Knowledge sharing.** The value of tacit knowledge is that it is an important organizational resource that can become a primary source of competitive advantage” (Han et al., 2010, p. 2223). A necessary factor that leads to creativity and innovation is accumulated team knowledge shared within the organization that leads to idea generation (Kremer, Villamor, & Aguinis, 2019). Team and organizational knowledge sharing is a necessary process to foster creativity (Carmeli & Paulus, 2014). According to Ahmed, Shahzad, Aslam, Bajwa, and Bahoo (2016), a collaborative culture positively influences worker knowledge sharing, and knowledge sharing enables employees creativity. However, knowledge workers are not always open to the idea of sharing their knowledge with other members of the team (Zarraga & Bonache, 2003). Davenport (2005) argued that, as knowledge is a commodity that knowledge workers possess, “knowledge workers value their knowledge, and don’t share it easily” (p. 21).

Through a sense of organizational commitment and a sense of belonging, Vandewalle, Van Dyne, and Kostova (1995) suggested that employees are more likely to participate in acts that are outside of what is expected. Therefore, it is the leader’s responsibility to foster a climate of organizational ownership and commitment that promotes the employee sharing of personal tacit and explicit knowledge. Zarraga and Bonache (2003) claimed that an empowered self-managing team is the ideal organization for the establishment of a workplace environment for knowledge sharing. Therefore, to achieve organizational success, the right culture is necessary to promote knowledge sharing. Zarraga and Bonache (2003) proposed that specific psychological variables such as climate and rewards impact organizational knowledge creation and transfer.

Kremer et al. (2019) asserted that “knowledge sharing positively predicted team performance, cohesion, member satisfaction, and knowledge integration” (p. 67). The first

element in establishing a culture of sharing is the influential role of team leaders (Zarraga & Bonache, 2003). According to the authors, team leaders' "function is to serve as models to the collaborators, openly sharing their information, putting themselves in others' shoes, providing feedback and showing all those attitudes and behaviors associated with a climate of 'high care'" (Zarraga & Bonache, 2003, pp. 1232–1233). The second component of a culture of sharing is the reward system (Zarraga & Bonache, 2003). Organizations need to consider a cultural change in reward systems. In hierarchical organizations, rewards are achieved by those who produce above their peers not necessarily those that share (Zarraga & Bonache, 2003). For instance, Zarraga and Bonache (2003) argued that employees in traditional organizations are rewarded for how much more they know than their peers, and workers are reluctant to share their knowledge in this paradigm. Zarraga and Bonache (2003) claimed that the sharing of tacit and explicit knowledge is aided through informal relationships.

Through their research, Zarraga and Bonache (2003) found that the most significant aspects of knowledge sharing were mutual trust, access to help, and leniency in judgment. Mutual trust and access to help were based on the presence of a team leader, and empathy and leniency in judgment were fostered through social events in the company (Zarraga & Bonache, 2003). Zaragoza and Bonache (2003) did not find any significant findings that supported the hypothesis that reward systems influenced knowledge sharing. Zarraga and Bonache's (2003) study provided a psychological perspective to knowledge sharing versus the assumption that knowledge sharing is a "technical problem solved by the mere introduction of an efficient information system" (p. 1238). Organizational leaders at all levels of the organization are responsible for promoting an environment that encourages the sharing of tacit and explicit

knowledge (Kremer et al., 2019). According to Kremer et al. (2019), creativity will not occur in the absence of knowledge sharing.

In the generation of ideas, knowledge sharing is fundamental as it facilitates the access to the team's broad experience and expertise, specifically that teams should: (1) search their collective knowledge base and share relevant information; (2) combine varied elements from different knowledge domains; and (3) identify subject experts based on relevant knowledge (Carmeli & Paulus, 2014). Carmeli and Paulus (2014) conducted a quantitative study of senior executives ( $n = 77$ ) to examine the effect constructive controversy has on creativity. The study examined information exchange and new ideas within the top management team (TMT) using four items, knowledge sharing among the TMT using three items, and creativity as an exploratory measure using four items (Carmeli & Paulus, 2014). Carmeli and Paulus (2014) observed that the senior executive's leadership was significantly associated with knowledge sharing ( $p < .01$ ). Also, knowledge sharing was significantly related to team creativity ( $p < .01$ ; Carmeli & Paulus, 2014). Carmeli and Paulus' (2014) research expanded the literature of creativity by demonstrating that knowledge sharing among teams can positively influence creativity.

### **Bureaucracy and Creativity**

**Foundations of bureaucracy.** Max Weber, the German sociologist, is the "most formative intellectual progenitor of the theoretical framework in which bureaucracy has been studied and approached during the past century" (Rubinstein & Von Maravic, 2010, p. 21). Weber's bureaucracy theory provides a starting point to advance the discourse on what is and what is not a bureaucratic organizational theory. As such, Weber's theory remains the fundamental framework for research in the field of bureaucracy (Constas, 1958). Weber's theory

of bureaucracy falls into two groupings. The first group is bureaucracy based on institutional charisma. The second group is bureaucracy based on legal-rational staff action with an emphasis on impersonality, technical skills, and a set of fixed rules (Constas, 1958). Weber did not view these two representations as different forms of bureaucracy, but rather Weber regarded the institutional charisma and legal-rational bureaucracies as evolutionary (Constas, 1958).

Kotter (2012) wrote that in the 20<sup>th</sup> century, organizations were bureaucratic, centralized, slow in decision-making, multileveled, and not overly dependent on information systems. In comparison, 21<sup>st</sup> Century organizations are less driven by rules, empower workers, support faster decision-making, have fewer levels (i.e., flat), and rely more on information systems for data collection and distribution. Lee and Edmondson (2017) argued that modern-day organizations are seeking ways to change to become less hierarchically to increase innovation and improving the work environment. Specifically, the authors claimed that “less hierarchical organizing are enabling organizations to survive in a new post-industrial environment in which knowledge creation and innovation serve as the key drivers of success” (Lee & Edmondson, 2017, p. 41).

In support of their argument, Lee and Edmondson (2017) discussed three trends that are driving the need for less-hierarchical organizations. First, rigid hierarchical organizations pose a threat to the 21<sup>st</sup> century organization that must cope with the faster flow of information; second, the number of organizations that work in the knowledge environment where the creation and sharing of ideas make up the market commodity has increased; and third, organizational leaders demand a higher demand for improving the workplace (Lee & Edmondson, 2017). To address these trends, the authors proposed that organizations should increase worker participation and employee empowerment to reduce the pressure on the hierarchical managerial organization (Lee & Edmondson, 2017). Lee and Edmondson (2017) defined self-managing organizations as

“those that radically decentralize authority in a formal and systematic way throughout the organization” (p. 39).

Bureaucratic control is “control by means of a comprehensive system of rules and standard operating procedures (SOP) that shape and regulate the behavior of divisions, functions, and individuals” (Jones, 1999, p. 328). Bureaucratic control within itself is neither good or bad. Organizations turn to SOPs and rules to oversee employee operations and manage behavior. Through regulatory measures, managers standardize actions and make worker behavior predictable through formalization (Jones, 1999). Formalization includes rules, regulations, and procedures that define Weber’s bureaucratic principles (Alder & Borys, 1996). Predictability allows managers to gain efficiencies and reduce the need for direct supervision.

Through standardized rules, workers are better equipped to deal with routine tasks and problems. Most importantly, bureaucratic control allows organizations to manage by exception. According to Jones (1999), “When employees follow the rules that managers have developed, their behavior is standardized—actions are performed in the same way time and time again—and the outcomes of their work are predictable” (p. 329). However, bureaucratic control can moderate certain employee behavior and reduce organizational effectiveness. Jones (1999) asserted that creating roles is always easier than altering them. Overly bureaucratized organizations are often plagued with red-tape, and bureaucratized organizations are lethargic impacting the introduction of new ideas and change (Jones, 1999). Also, strictly defined rules and regulations standardize behavior to increase efficiency and predictability (Jones, 1999). However, the danger exists that workers may “become so used to automatically following rules that they stop thinking for themselves” (Jones, 1999, p. 330), which often leads to lack of

creativity and innovation. According to Weber, the purest form of legal authority is achieved when the staff operates according to the following set of criteria:

1. Bureaucratic officials are subject to authority only with respect to their official duties.
2. Bureaucratic officials are organized in a clearly defined hierarchy of offices.
3. Each office has a clearly defined sphere of legal responsibility.
4. The office is filled by free contractual relationship.
5. Candidates are selected based on technical qualifications.
6. Bureaucratic officials are paid by fixed salaries in money. The salary scale is primarily graded according to rank in the hierarchy.
7. The office is treated as the sole, or at least the primary, occupation of the incumbent.
8. The office constitutes a career. Officials are promoted through a system according to seniority or to achievement, or both. Promotion is dependent on the judgment of superiors.
9. The official is not the owner of the means used to execute the assigned duties.
10. The official is subject to strict and systematic discipline in the control of the office (Constas, 1958, pp. 403-404).

Similarly, Jones (1999) identified five bureaucratic principles:

1. A manager's authority is derived from the position assigned.
2. Bureaucracies assign positions based on performance and not social standing or personal contacts.
3. The organization's manager governs by a set of general, formal, explicit, exhaustive, and largely stable rules for each position.
4. Organizations arrange positions hierarchically to establish clear lines of reporting.



5. Managers establish a well-defined system of rules, procedures, and cultural norms (pp. 46-47).

Bureaucratic organizational practices enable centralization, uniformity, and control in the performance of routine and repeatable tasks (Alder & Borys, 1996). The hierarchical and centralized construct of bureaucratic organizations impact individual creativity (Hirst, Chin-Hui Chen, Van Knippenberg, & Sacramento, 2011).

**Two types of bureaucracy.** Alder and Borys (1996) discussed their bureaucratic formalization research findings through the lenses of enabling and coercive bureaucracy. According to Hirst et al. (2011), organizations develop process and procedures to “ensure consistency, efficiency, and control” (p. 624). Hirst et al. (2011) warned that rigid bureaucratic constructs may stifle the creative process. Thus, there is a tension between bureaucracy and creativity.

From the negative perspective, high levels of bureaucracy reduce creativity, lead to dissatisfaction of inner work life, and lead to demotivation. Alder and Borys (1996) stated that bureaucratic formalization undermines worker satisfaction and limits innovation, especially when faced with non-routine complex tasks. From the positive outlook, high levels of bureaucracy provide focus through guidelines and clarifying responsibilities. High levels of formalization can have positive results in environments where the employee and organization have common goals, and the employee views his efforts as contributing to a common goal (Alder & Borys, 1996). According to Alder and Borys (1996), high formalization has a positive relationship with attitudinal outcomes through the reduction of stress. Reduction of stress and role ambiguity leads to increased work satisfaction (Alder & Borys, 1996). Alder and Borys (1996) argued that the discussion of bureaucracy directly through the variants of formalization

does not account for the middle manager's role in enabling or detracting nor the role of specialized workers play on influencing innovation and creativity.

**Two core dimensions of bureaucracy.** Hirst et al. (2011) described bureaucracy in two core dimensions: centralization and formalization. Centralization is how the organization's leadership distributes power and authority. Additionally, centralization describes how decision-making occurs (Hirst et al., 2011). In a low centralized organization, employees are an integral component in the decision-making process while in a highly centralized organization decisions are made under a hierarchical construct (Hirst et al., 2011). Formalization is how an organization utilizes rules and standard operating procedures to complete tasks. High levels of formalization reduce an employee's freedom to apply new ways of doing standardized tasks (Hirst et al., 2011).

Hirst et al. (2011) conducted a quantitative study of Taiwan Customs Bureau knowledge workers ( $n = 330$ ). Through an examination of goal orientation, the study aimed to investigate how individuals regulate effort in success situations (Hirst et al., 2011). Hirst et al. (2011) examined the influence that factors such as learning orientation, performance prove-goal orientation, and performance avoid-goal orientation have on creativity. Prove-goal orientation was measured using three items, centralization using four items, and formalization using three items. Learning orientation workers are self-motivated to seek out tasks and challenges because these endeavors provide greater opportunities for growth and advancement. Hirst et al.'s (2011) research suggested a positive correlation between employee creativity when the centralization was low and learning orientation was high ( $p < .01$ ) but no significant difference existed significance when centralization is high (Hirst et al., 2011).

Prove-goal orientated workers derive motivation from the belief that their supervisors will recognize their work and that they will receive a reward for the performance (Hirst et al., 2011). Hirst et al.'s (2011) research was not significant in its finding that prove goal orientation influences creativity when bureaucratic centralization is high or low. However, the interaction of formalization and prove orientation on worker creativity was significant when both formalizations were high and low ( $p < .05$ ,  $p < .01$ ; Hirst et al., 2011). Lastly, performance avoid orientation workers will avoid challenging tasks that support creativity based on fear of failure (Hirst et al., 2011). Hirst et al. (2011) claimed a negative correlation between employee creativity when centralization is high and performance avoid orientation is high when centralization is high ( $p < .05$ ), but no significance when centralization is low. In the context of avoiding orientation, the study found a negative correlation in employee creativity when formalization is low and avoid creativity is high ( $p < .01$ ). However, no significant correlation existed when formalization was high (Hirst et al., 2011). Hirst et al.'s (2011) research supported the literature that bureaucracy can suppress creativity. However, Hirst et al. (2011) argued that the tension between creativity and bureaucracy is moderated by personal motivators such as learning, proving, and avoiding orientation in individuals with performance avoid orientation where less formalization negatively impacts creativity.

**Structure and creativity.** A widely accepted belief is that creativity is enhanced by environments that promote spontaneity and that conventional creativity thinking asserts that highly structured systems and processes cannot be creative (Rietzschel, Slijkhuis, & Van Yperen, 2014). However, Rietzschel et al.'s (2014) study on structure suggested that the type and mode of structure can lead to enhanced creativity. The three foundational modes of structure are: specialization, hierarchy, and formalization. Specialization and hierarchy deal with the division

of labor. Specialization is the horizontal division of labor based on roles and responsibilities. Hierarchy implies a vertical division of labor based on supervisor and worker roles. The formalization structure centers on process, procedures, and regulations that govern work (Bunderson & Boumgarden, 2010). In Industrial Age organizational administration, structure was viewed as a more efficient form of worker force management (Bunderson & Boumgarden, 2010). However, as organizations evolve towards knowledge-based work environments, research now questions whether highly structured management is the best form of worker administration to enhance creativity and innovation. Bunderson and Boumgarden (2010) stated that “the conditions within bureaucracy are found to be determined by a drive for productivity and control, and inappropriate for creativity” (p. 612).

Bunderson and Boumgarden (2010) conducted a quantitative study that included a survey of individuals ( $n = 228$ ) across 40 teams to examine the effect of team structure on a team's engagement in learning and continuous improvement. Team structure was measured using five items, information sharing using four items, psychological safety using four items, conflict frequency using one item, and team learning orientation using three items (Bunderson & Boumgarden, 2010). The results suggest a positive and significant relationship ( $p < 0.01$ ) between individual learning orientation and psychological safety and a negative and significant relationship between team structure and conflict frequency ( $p < 0.001$ ). Bunderson and Boumgarden (2010) suggested that the relationships between team structure and team learning orientation were positive and significant ( $p < 0.001$ ) after controlling the following conditions: team size, team tenure, team tenure heterogeneity, and average individual learning orientation. Also, team structure influences team learning through both information sharing and conflict frequency ( $p < 0.05$ ; Bunderson & Boumgarden, 2010).

In their findings, Bunderson and Boumgarden (2010) suggested that self-managed work teams can promote learning and process improvement through the mediating factors of knowledge sharing, psychological safety, and conflict frequency (Bunderson & Boumgarden, 2010). First, Bunderson and Boumgarden (2010) asserted that through team structure, team members are aware of their positions and expertise that facilitate collaboration and knowledge sharing. The benefit of information sharing is that knowledge transfer increases idea generation (Bunderson & Boumgarden, 2010), and idea generation is a critical step in the creative process (Wallas, 1926/2018). Second, the team structure provides clarity in positional roles and responsibilities. This level of positional understanding and authority distribution supports role congruity that enables psychological safety (Bunderson & Boumgarden, 2010). Third, team structure influences conflict frequency. The establishment of clearly defined lanes and the assignments of tasks results in less friction and less confusion in self-managed teams. According to Bunderson and Boumgarden (2010), team structure “makes clear to each team member who should be doing what as well as how and when they should be doing it” (p. 613).

Bunderson and Boumgarden (2010) asserted that their findings challenge accepted thinking that bureaucratic structure limits learning. Self-managed structured teams create a psychologically safe environment where information transfer increases and conflict frequency decreases (Bunderson & Boumgarden, 2010). Furthermore, Bunderson and Boumgarden (2010) warned that “dismissing structure as a matter of course when learning or innovation is the goal overlooks the very real learning benefits that might be gained in certain team settings from structuring activities” (p. 621).

Rietzchel et al. (2014) examined the influence of Personal Need for Structure (PNS) has on creativity. PNS is the preference for structure and order in the performance of tasks

(Rietzchel et al., 2014). Tasks were divided into two categories: strategy relevant and goal related. Rietzchel et al. (2014) argued that strategy relevant tasks stimulate creativity while goal related tasks are non-creative (Rietzchel et al., 2014). Rietzchel et al. (2014) described creative task as heuristic versus algorithmic. Heuristic tasks are less bounded by rules, and algorithmic tasks follow specified processes (Rietzchel et al., 2014). The level of creativity also varies based on the mode of worker thinking. Knowledge workers with systematic thinking mode are more creative in a structured task environment while workers with an intuitively oriented thinking mode are more creative when working with unrestricted tasks (Rietzchel et al., 2014).

Furthermore, the authors described the dual pathway to creativity model where the "flexibility" pathway is linked to the diversity of thought, and the "persistence" pathway is associated with a cluster of ideas. Flexibility pathway emphasizes the notion that less structured, flexible thinking enhances creativity, while persistence pathway supports the perception that individuals with high PNS will lead to higher creativity (Rietzchel et al., 2014). A central position of the authors is that the manner of task structure will influence the creative process, specifically strategy relevant heuristic tasks versus goal related algorithmic tasks (Rietzchel et al., 2014).

Rietzchel et al. (2014) examined the moderating effect of high and low task structure and PNS on creativity. The study participants included ( $n = 41$ ) undergraduate students. PNS was measured using 12 items and creativity using two independent raters (Rietzchel et al., 2014). The Rietzchel et al.'s (2014) study results suggested a negative relation ( $p = .003$ ) between PNS and creativity in low structure tasks, but in the high structure tasks, the relation between PNS and creative work was not significant ( $p > .2$ ; Rietzchel et al., 2014). In a second study, Rietzchel et al. (2014) examined the impact of cognitive load and structure on creativity. The study

participants included ( $n = 79$ ) psychological students. This study was similar to the first study except in cognitive load manipulation. Under high cognitive load, participants in the high structure condition performed more creatively ( $p = .015$ ). Under low cognitive load, the difference between the high and low structure conditions was not significant ( $p = .39$ ). Rietzchel et al. (2014) concluded that high cognitive load enhanced creativity when working in highly structured tasks. Thus, Rietzchel et al. (2014) argued that task structure when focused on strategy only enhanced creativity when the knowledge worker had a high need for structure. Of note, workers with high levels of PNS were more satisfied with the execution of the structured task than workers with low PNS (Rietzchel et al., 2014). Therefore, the study found that organizational leaders should be aware of the negative impact loosely structured tasks has on workers high preference for structure, especially in organizations under high work cognitive workloads such as the military and academia (Rietzchel et al., 2014).

Organizational controls such as rigid and formal management structures influence creativity (Amabile et al., 1996). Foundational research on the subject of creativity indicates that constraints are organizational impediments that negatively affect the creative environment (Amabile et al., 1996). However, recent research contradicts this observation. Medeiros, Steele, Watts, and Mumford (2018) conducted a quantitative study of ( $n = 331$ ) of undergraduate psychology students to study the moderating role of constraints during the creative process. Medeiros et al. (2018) examined the timing of constraints, the number of constraints, and the number of resources as a constraint throughout the defined steps of the creative process. Medeiros et al. (2018) randomly assigned the subjects to a role for a fictional restaurant and injected constraints through e-mails to examine the timing of the constraint and the type and number of constraints. The researchers examined constraint across five creative steps: problem

identification, conceptual combination, idea generation, idea evaluation, and the overall creativity of the final product (Medeiros et al., 2018). The timing of constrain introduction entailed the delivery of e-mails during one of the five creative steps. Students were instructed to read the e-mail immediately before beginning the designated creative step. The type and number of constraints consisted of no constraint, three-goal constraints, three resource constraints or three goal and resource constraint (Medeiros et al., 2018). Medeiros et al.'s (2018) study findings for the first creative step – problem identification – suggest significant effects were found for problem quality ( $p < .05$ ) and for problem narrowness ( $p < .01$ ). For the second step and third step – conceptual combination and idea generation – no significant effects were observed. For evaluation quality, the fourth step, a significant effect of constraint timing was observed ( $p < .05$ ). In the research final step, proposal quality, a significant relationship existed ( $p < .05$ ; Medeiros et al., 2018).

Medeiros et al. (2018) found that “constraints positively influence creative problem solving by improving the quality of problem definition” (p. 484). These findings are important because they provide increased understanding of the influence of constraints throughout the creative process. More importantly, the timing of when leaders introduce constraints has positive or negative effects on creativity. Medeiros et al.'s (2018) study provided relevancy to leaders' ability to create a path through the timing of constraint introduction. Furthermore, Medeiros et al. (2018) added to the debate on the influence of constraints on the creative process.

Caniëls et al. (2014) discussed the importance of understanding the role the antecedents of personality, rewards, co-worker composition, leadership style, and organizational resources play on organizational creativity. The influence of antecedents played a varied role in the different stages of the creative process, which Caniëls et al. (2014) defined as idea generation,



idea promotion, and ideas implementation. Caniëls et al. (2014) argued that few creative ideas successfully transition from idea generation to implementation due to a lack of understanding antecedents play in each phase of the creative process. To examine the influence of antecedents on the stages of the creative process, Caniëls et al. (2014) conducted a qualitative study that included interviews ( $n = 36$ ) of knowledge worker and individuals working in the field of art, design, and media, input from experts in the field of creativity and innovation, and 22 case studies. The protocol consisted of semi-structured interviews ranging from 60-90 minutes. The data collection focused on knowledge workers because “coming up with solutions to ‘non-routine’ problems is an essential part of their job. This requires a combination of convergent, divergent and creative thinking” (Caniëls et al., 2014, p. 100).

The study findings supported the five propositions Caniëls et al. (2014) sought to investigate. Proposition 1 focused on the antecedent of an individual mindset. Caniëls et al.’s (2014) findings suggest that having a creative mind is critical in idea generation. Psychological freedom was a common responder theme when speaking to idea generation (Caniëls et al., 2014). Furthermore, the subjects reported that in the step of idea generation a personality that does not sway from the cause nor the idea is vital (Caniëls et al., 2014). Lastly, the task-focused and organized individual mindset were beneficial in the idea implementation step (Caniëls et al., 2014). Proposition 2 focused on the antecedent of external rewards. Caniëls et al. (2014) argued that external rewards constrain creativity. The introduction of extrinsic rewards leads to a pressure that induces the knowledge worker toward a bias to meet external expectations. Limiting the lure of external awards leads to a purist approach of idea generation with an emphasis on an intrinsic reward of pleasure or satisfaction (Caniëls et al., 2014). Speaking of knowledge workers, according to Caniëls et al. (2014), “it is the process of creation that

fascinates them and compels them to keep working” (pp. 101-102). Similarly, idea promotion is associated with intrinsic motivation. Idea promotion requires a belief that the idea is worth the effort. To effectively promote the idea, the knowledge worker must have a sense of ownership in the cause. According to the researchers, “without an unconditional faith in the idea, they could not successfully defend and sell it to the stakeholders and acquire the resources needed for implementation” (Caniëls et al., 2014, p. 102).

In contrast, idea implementation benefits from an external extrinsic motive. An external reward following idea implementations was viewed by the responders as a motivator to stay the course (Caniëls et al., 2014). Proposition 3 focused on the antecedent of group composition. To enhance idea generation, the survey subjects indicated that group diversity aided in the stage of idea generation through the introduction of varied viewpoints and experiences (Caniëls et al., 2014). Specifically, diverse groups led to divergent ideas crafted to coherent concepts that demonstrated “cross-fertilization of knowledge and expertise” (Caniëls et al., 2014, p. 102). The antecedent of group composition on idea promotion and idea implementation is best achieved when these steps occur along complementary networks and as a group effort. For instance, having members from diverse departments promoting and implementing the idea leads to greater success (Caniëls et al., 2014). Proposition 4 focused on the antecedent of leadership. Leaders play a significant role in the creative process. In idea generation, the leader plays a facilitating role, not a hierarchical position (Caniëls et al., 2014). A common idea shared by the responders focused on the concept of equality in the process of idea generation (Caniëls et al., 2014).

Similarly, managers interviewed echoed this sentiment and recognized that their hierarchical position could hinder creativity (Caniëls et al., 2014). However, in idea promotion, a leader that is in tune with the organization’s decision makers is vital in promoting the team’s

idea. Lastly, in the step of idea implementation, leaders should assume a formal and hierarchical position to ensure that deadlines, priorities, and regulations are met (Caniëls et al., 2014).

Proposition 5 focused on the antecedents of resources. During idea generation, organization resources are best used to stimulate idea generation – having the right people, at the right meeting, at the right time, with the right tools (Caniëls et al., 2014). To enhance idea promotion, a key organization resource is an organizational strategy and policies that promote and encourage creativity. These organizational resources serve as mandates for overcoming organizational barriers that often resist change (Caniëls et al., 2014). Lastly, to implement the idea, the responders indicated the need for organizational resources of time and money to allow for the ideas to gain traction and achieve implementation (Caniëls et al., 2014).

Through this research, Caniëls et al. (2014) suggested that the role of antecedents not only differ based on the antecedent itself but also differ in each step of the creative process (Caniëls et al., 2014). Thus, organizational leaders will need to recognize what phase of the creative process their team is engaged in, and accordingly, they will need to adjust the level of organizational support necessary to enhance creativity through the understanding of facilitating and limiting antecedents (Caniëls et al., 2014).

### **Summary**

The literature review discussed in this chapter explored the subjects of creativity, knowledge work, and bureaucracy. The presented study of the literature provided information that reveals that many variables and conditions mediate and moderate the creative process. The literature research underlines a lack of consensus on what constitutes the creative process, the role of the leader in creating a climate that enhances creativity, and what antecedents effect creativity. The lack of standardization is not necessarily an adverse finding, as Botella et al.

(2018) warned that limiting the creative process may detract from creativity, as creative methods vary depending on the organization.

In today's information-based workplace, organizational leadership has evolved from an Industrial Age to a knowledge based model, increasing the importance of leader and worker interaction in support of the creative process (Caniëls et al., 2014). Organizational leaders work to remove employee obstacles, positively impacting creativity that leads to idea generation (Caniëls, 2018). Also, leaders guide and create paths to help workers deal with complex problems (Fisher et al., 2018). Leaders who promote a psychologically safe environment and are active listeners create an organizational climate that enhances trust and enable creativity through open communications of new and novel ideas (Castro et al., 2018). Furthermore, the literature review suggests that psychological safety fosters a trust environment where constructive controversy is promoted to stimulate divergent thought and new idea development (Ou et al., 2018).

The intangible asset of worker knowledge has gained value over tangible assets such as machinery, and knowledge is an organizational resource that leads to a competitive advantage (Han et al., 2010). Leading knowledge workers requires a model no longer focused on product or service management but rather on developing an environment that fosters creativity and innovation (Mládková, 2012). A key finding of the literature review is the importance of knowledge sharing in the creative process, and the responsibility of leaders at all levels of organizations to promote an environment that encourages the sharing of tacit and explicit knowledge (Kremer et al., 2019). Additionally, organizational knowledge sharing is a necessary process to foster creativity (Carmeli & Paulus, 2014).

Bureaucratic organizations operate under centralized constructs that emphasize institutional charisma and legal-rational staff action with an emphasis on impersonality, technical skills, and a set of fixed rules (Constas, 1958). According to Jones (1999), bureaucratic control is “control by means of a comprehensive system of rules and standard operating procedures” (p. 328). Furthermore rigid and formal management structures influence creativity (Amabile et al., 1996). Although, earlier research claims that constraints are organizational impediments that negatively affect the creative environment (Amabile et al., 1996), more recent research suggests that “constraints positively influence creative problem solving by improving the quality of problem definition” (Medeiros et al., 2018 p. 484). Thus, these findings provide a broader perspective and understanding of the influence of constraints throughout the creative process.

Chapter II analyzed the existing research and literature appropriate to the subject of this study. The next chapter, Chapter III, describes the methodology for this research study, the population, instrumentation, data collection, and data analysis contained in the study.

## CHAPTER 3: METHODOLOGY

### **Introduction/Statement of Problem**

Grounded theory is a useful methodology that allows the development of a data-based theory and presentation of the findings in a manner that “explains and predicts and thus is useful for practitioners. It goes beyond description and is recursive in nature” (Neff, 1998, p. 132). The purpose of this grounded theory study was to understand how the military design (i.e., bureaucracy) influences creativity and how leaders enhance or mitigate knowledge worker creativity throughout the creative process in bureaucratic organizations. Specifically, the investigator examined the interactions among the immediate supervisor, employee, and environment (bureaucratic obstacles) throughout the creative process in military organizations. The rationale behind the research was the necessity of studying the evolving information environment and the growth of creativity in knowledge-based organizations.

The data collection centered on examining the phenomenon of creativity in a mid-sized military organization principally responsible for the development of knowledge-based products. The researcher developed a theory on how immediate supervisors help knowledge workers create novel and useful products in bureaucratic organizations. The literature on creativity is abundant, but studies have varied in their findings of what conditions enhance or detract from the creative process (Acar, Tarakci, & van Knippenberg, 2019; Rosso, 2012). Therefore, this study advanced the literature on creativity in the workplace in two ways. First, the examiner assessed the interaction between the immediate supervisor and worker through the four stages of creativity: preparation, incubation, illumination, and verification (Sadler-Smith, 2015). Second, the study examined the influences of bureaucratic conditions on the creative process.

## **Description of Research Design**

### **Participants**

Purposeful theoretical sampling was used to select study participants. According to Creswell (2013), in a grounded theory study, “the participants interviewed are theoretically chosen (called theoretical sampling) to help the researcher best form the theory” (p. 86). To support the grounded theory methodology that “participants in the study would have all experienced the process, and the development of the theory might help explain the practice or provide a framework for further research” (Creswell, 2013, p. 83), the investigator used theoretical sampling to interview participants who have shared a collective experience and been part of a similar process. Personnel from the MARCENT G-5 Plans and Strategy Directorate were purposefully solicited.

The G-5 is the staff section responsible for the development of organizational knowledge that supports strategic plans and key leader engagements. In a grounded theory study, Creswell (2013) recommends interviewing 20-30 participants or interviewing until reaching data saturation. The examiner selected 25 participants but reached data saturation at 20 participants. Two additional participants were interviewed to validate that the data collection had achieved saturation. To gain understanding and develop a theory grounded in the data, the examiner purposely selected both military and civilian subjects. The interviews were comprised of knowledge workers responsible for the development of novel and useful products, immediate supervisors responsible for overseeing the creative process, and senior leaders who are the consumers of the creative product. Figure 3 represents the interview sample by work category. The research participants in this study included 22 MARCENT personnel. Figure 4 represents the interview sample by military or civilian grouping.

Figure 3

*Participant by Worker Category*

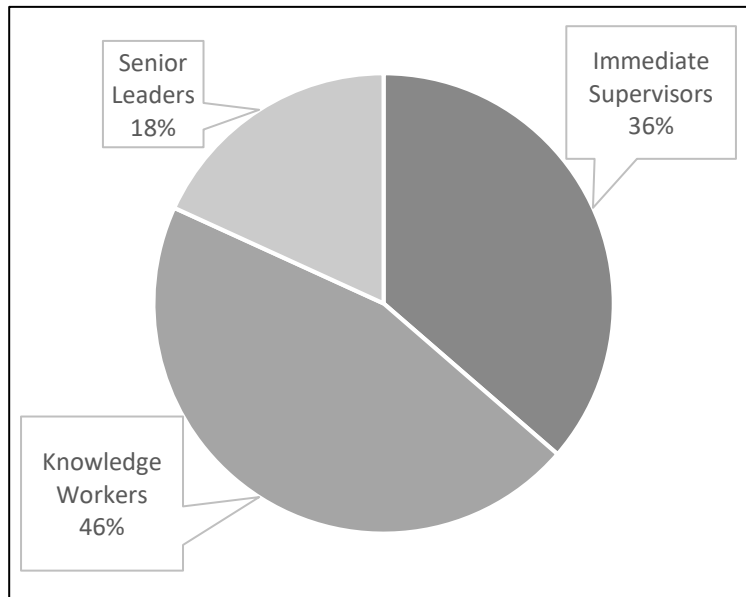
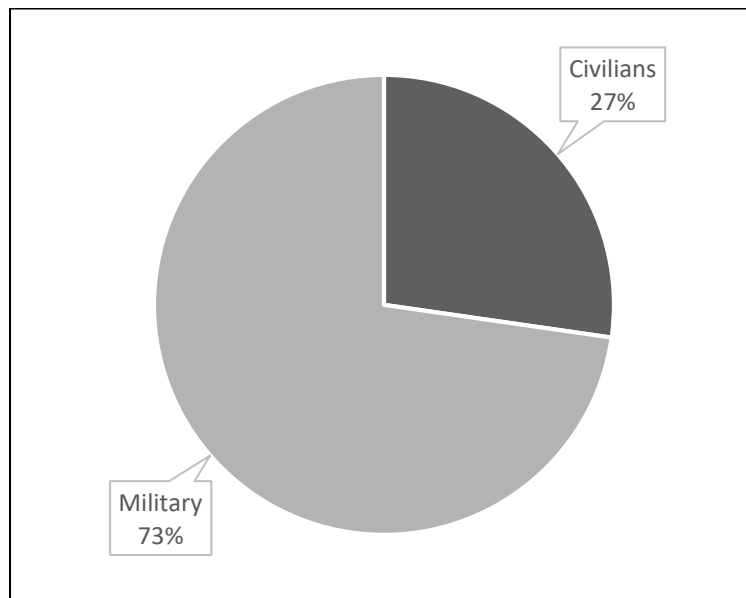


Figure 4

*Participant by Worker Grouping*





The study design consisted of 10 knowledge worker, eight immediate supervisor, and four senior leader interviews. The interview sampling consisted of 16 military and six civilian personnel. The 22 study participants represented the population of the G-5. To ensure confidentiality, the examiner assigned a pseudonym and a number to each participant. Numbers were assigned based on the order the interviews were conducted.

All subjects interviewed were active duty or retired military officers. The population included both men and women. To examine the level of creative process exposure, the investigator collected the number of years the participants worked for the Department of Defense and the number of years the participants worked at MARCENT. Additionally, to assess the level of experience and exposure to knowledge work, data were collected on the number of years the subject served as a military planner or the number of times the participant served in a planning command.

Lastly, the investigator examined the participants' military education and the highest level of civilian schooling. However, for subject anonymity, the examiner did not capture the participant's gender nor billet assignment. Table 1 represents the key demographics of the interview sample.

Table 1

*Knowledge Worker (KW), Immediate Supervisor (IS), Senior Leader (SL) Attributes*

#	Pseudonym	Category	Military or Civilian	DoD Service (Years)	Time Unit (Years)	KW Experience (Years)	Formal KW Training	Highest Civilian Education
1	Allen	KW	Civilian	25-30	5-10	5-10	No	BA
2	Bob	KW	Civilian	25-30	0-3	15-20	Yes	BA
3	Carlos	KW	Military	25-30	5-10	5-10	No	BS
4	Denis	KW	Military	15-20	0-5	0-5	Yes	MA/MS
5	Edgar	KW	Civilian	35-40	10-15	10-15	No	MBA
6	Frank	KW	Military	15-20	0-5	5-10	Yes	MA/MS
7	George	KW	Civilian	30-35	15-20	20-25	No	BA
8	Henry	KW	Military	15-20	0-5	0-5	Yes	MA/MS
9	Ian	KW	Military	10-15	0-5	0-5	No	MA
10	Jack	KW	Military	15-20	0-5	0-5	Yes	MA/MS
11	Keith	IS	Military	25-30	0-5	0-5	No	BA
12	Larry	IS	Military	25-30	0-5	5-10	Yes	MA
13	Monty	IS	Military	25-30	0-5	10-12	Yes	MBA
14	Nick	IS	Military	30-35	0-5	0-5	No	MA
15	Omar	IS	Military	25-30	0-5	6-10	No	BA
16	Patrick	IS	Military	20-25	0-5	0-5	No	MS
17	Quincy	IS	Military	25-30	0-5	0-5	No	MA
18	Rich	IS	Military	25-30	0-5	10-15	No	BA
19	Steve	SL	Civilian	25-30	10-15	20-25	Yes	MA
20	Tim	SL	Military	30-35	0-5	10-15	No	MA
21	Ulysses	SL	Military	25-30	5-10	15-20	No	MA
22	Victor	SL	Military	35-40	0-5	20-25	No	MA/MS

*Note.* The researcher assigned all participants a male pseudonym in alphabetical order. The study participants included both males and females. The researcher interviewed knowledge workers, intermediate supervisors, and senior leaders in random order.

## **The Researcher's Role**

In this qualitative study, the researcher was the principal instrument. A grounded theory approach was utilized due to the methodology's emphasis on inductive data collection to address and understand a phenomenon and the development of the theory (Creswell, 2013). The researcher had worked in the organization, but at the time of the study, the investigator was not an employee of the organization nor a member of the military. The study focused on the creative process and the interaction between the knowledge worker and the immediate supervisor. The researcher conducted all the participant recruitment, interviews, observations, organizational document review, and data analysis. An independent transcriptionist transcribed the 22 interviews, and the researcher reviewed the products for accuracy.

## **Measures for Ethical Protection**

A methodology that reduced physical, social, psychological, legal, and economic risk to study participants was followed. Only a minimum risk was assessed for study participants. No personal identifying information about the subjects was made public. The names of all parties involved were kept confidential throughout the analyses. The investigator assigned each participant a pseudonym and a random number to help protect subject identity. All written results discussed only group findings and did not include information that could be used to identify individual participants. The examiner kept the aggregate interview data in a password-protected database accessible only by Institutional Review Board approved committee members. Participants in the study did not receive any form of compensation.

The Southeastern University Institutional Review Board approved this study. The investigator also worked with Headquarters Marine Corps' Office of Human Research Protection and the Survey Program Manager Manpower Studies and Analysis Branch for institutional

review approval. The President of Marine Corps University and the Commanding General of MARCENT provided permission to examine the target Marine Corps organization. Lastly, the investigator provided each participant an informed consent document (See Appendix A), and the researcher reviewed the form with the participants and discussed the potential risk and benefits for each research participant before each interview.

### **Research Questions**

The research questions focused on the immediate supervisor's role in enhancing the knowledge worker's ability to develop novel and useful products throughout the creative process. In a qualitative study, observations, interviews, document review, and audiovisual materials are approaches to data collection (Creswell, 2013). In this study, the examiner collected data through observation of knowledge worker sessions, leader and worker interviews, and examination of organizational information. The data collection helped to answer the following research questions: (1) How does the military organizational design (i.e., bureaucracy) influence the creative process? and (2) How do leaders amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process?

Question One explored the effect of military bureaucracy on the creative process. The scope of question one was to understand how the effects of hierarchy, strict adherence to orders, doctrine, and established paradigms affect the knowledge workers' immediate supervisors, and senior leaders' ability to be creative. Question Two examined the ways that immediate supervisors cultivate an environment and support the creative process that advances or hinders the knowledge worker's ability to develop novel and useful ideas that support a senior leader's decision making. The investigator pursued an increased understanding of workplace conditions that led to intrinsic and extrinsic motivation during the creative process.

## **Data Collection**

### **Instruments Used in Data Collection**

Interviews, observations, and document reviews occurred between May and August 2019. In accordance with grounded theory methodology, a constant comparison of the data collected was conducted throughout the process (Neff, 1998). The principal instrument used in grounded theory to collect data was the interview (Creswell, 2013). As such, the investigator conducted 22 interviews until reaching data saturation. The interview protocol consisted of open-ended questions developed to stimulate reflective thinking in knowledge workers, intermediate supervisors, and senior leaders. The interview protocol for knowledge workers and immediate supervisors initially consisted of six open-ended questions, and for senior leaders, the protocol was four open-ended questions (Appendix C).

Resulting from the constant comparison methodology, a seventh question emerged that focused on the participants' observation of creative process successes or failures. The examiner developed the knowledge worker and immediate supervisor interview protocol to stimulate conversation and collect data along the four steps of the creative process: preparation, incubation, illumination, and verification. These four stages are the most recognized stages of the creative process (Sadler-Smith, 2015). To gather data, the investigator asked open-ended questions, as depicted in Table 2.

Table 2

*Knowledge Worker and Immediate Supervisor Protocol*

#	Focus Area	Question
1	Creative Environment	Thinking about the military culture and organization, how does bureaucracy (e.g., doctrine, chain of command, structure) help or reduce creativity?
2	Creative Process Step: Preparation	Describe for me the role your supervisor [you as the immediate supervisor] played in generating the requirement for a new idea or problem that needed to be addressed?
3	Creative Process Step: Preparation	How did your supervisor [you as the immediate supervisor] help the team define the problem or goal?
4	Creative Process Step: Incubation/Illumination	How did you or the team [you as the immediate supervisor help the team] reach the new idea (the “aha moment”) to address the problem or goal?
5	Creative Process Step: Verification	Tell me the role your supervisor played [you played as the immediate supervisor] in the evaluation of the new idea.
6	Creative Environment	What could your immediate supervisor do to help [you as the immediate supervisor do to help] the team enhance the creative process in your organization?
7*	General Question	Please describe a time that you witnessed a success or failure of the creative process.

*Note.* Question 7 was not part of the original interview protocol. The researcher added Question 7, following interview number 2 as participants wanted to share either a positive or negative creative experience.

The focus of the senior leader interview was to examine the decision-makers’ understanding of the creative environment. The researcher also wanted to gather data on the senior leaders’ assessment of organizational creativity, as seen in Table 3.

Table 3

*Senior Leader Supervisor Protocol*

#	Focus Area	Question
1	Creative Environment	Thinking about the military culture and organization, how does bureaucracy (e.g., doctrine, chain of command, structure) help or reduce creativity?
2	Assessment of Organizational Creativity	How would you assess the development of novel and useful ideas in your organization based on the products your team develops?
3	Assessment of Organizational Creativity	From your observation of planning and the products you receive, what would you characterize as the chief cause of enabling or limiting creativity and novel ideas?
4	Creative Environment	If you could give one piece of advice to incoming planners/knowledge workers, what would it be?

In addition to interviews, the investigator conducted field observations and a review of organizational documents. Based on a constant comparison of the data and interview references to the MARCENT Planning Group (MPG) and the Marine Corps Planning Process (MCP), the investigator attended two MPG sessions to gather data on the organization’s creative process. The MPG is MARCENT’s principal forum for the cross-functional development of ideas and the sharing of planning products. The MPG meets weekly or as required by MPG chair. Marine Corps Planning Process (MCWP 5-0; Department of the Navy [DON], 2018), is a six-step planning process that entails problem framing, course of action (COA) development, COA wargaming, COA comparison and decision, orders development, and transition (Department of Defense [DON], 2018).

## **Validity and Reliability**

Creswell (2013) asserts that validation is “an attempt to assess the ‘accuracy’ of the findings, as best described by the examiner and the participants” (pp. 250-251). Triangulation, peer review, member checking, external audits, and clarifying investigator bias are examples of validation strategies (Creswell, 2013). First, through a multi-method collection of interviews, observations, and organizational document review, the data were triangulated from diverse sources. Second, a Ph.D. expert on the subject of creativity served as third reader to ensure the data supported the study. Also, an expert qualitative methodologist reviewed the interview protocol. Third, in the limitations, the investigator acknowledged that his experience as a knowledge worker and intermediate supervisor might have shaped research findings. Prior to the coding process, biases and preconceived notions were bracketed.

Furthermore, to increase reliability, detail field notes were taken during the observation sessions to ensure verbal cues were documented. To ensure consistency in the data, the interviewer audio-taped the interviews and had an external source transcribe all files. Also, each transcript was verified with the audio file three times. Lastly, the examiner used both a manual process and NVivo 12 qualitative analysis software during the coding process.

## **Procedures**

This study centered on a grounded theory methodology through the examination of data collected from interviews, observations, and organizational document review. Personnel from the MARCENT G-5 Plans and Strategy Directorate were purposefully solicited because of their positional responsibilities. The criteria for selection were that the subject had to have served as a knowledge worker, a knowledge worker supervisor, or a knowledge consumer decision-maker. Through e-mail solicitation, the investigator recruited the study participants.



Over two weeks, recruiting e-mails were sent to 25 members of the G-5. Of the 25 members, 22 agreed to participate. The participants were provided a background on the research study, consent form, and demographic data request sheet (Appendix A). Upon completion of the demographic data worksheet and acknowledgment of research consent, the examiner scheduled an interview.

**Interview.** Interview sessions were recorded using iTalk software and assigned a specific code based on the interviewee's organizational position. For instance, the investigator assigned the first knowledge worker, immediate supervisor, and senior leader interviewed the code of KW1, IS1, SL1, respectively. The codes allowed for complete anonymity of the interview subject.

The examiner conducted 19 of 22 interviews via phone. Interview SL1 was conducted face-to-face and IS4 and IS5 was conducted via paper submission based on communication challenges. The investigator also took notes during each interview. The interview process commenced on 1 May 2019, and the last interview was conducted on 15 July 2019.

**Observation.** The study methodology also consisted of two observations of the MARCENT knowledge worker. The purpose of the observations was to gather data on a knowledge worker planning event to allow for data comparison between the interview sessions and an actual knowledge worker session. MARCENT has three knowledge worker planning sessions. First, the MARCENT Synchronization Group (MSG) is the venue for cross-functional synchronization of current and future planning information among action officers across the staff. Second, the MARCENT Planning Group (MPG) is the cross-functional knowledge worker group established to develop organizational plans. Third, the MARCENT Planning Board

(MPB) comprised of the organization's decision-makers is where the MPG Chief of Plans presents knowledge-based products for decision.

The investigator selected the MPG as interviewees referenced this session, and the MPG is where knowledge workers develop and review novel and useful products. On 23 July 2019 and 5 December 2019, the examiner attended MPG sessions. In accordance with MARCENT's weekly schedule, the MPG was held on Tuesday in a MARCENT conference room. MPG members in attendance consisted of knowledge workers from the G-1 (Admin), G-2 (Intelligence), G-3 (Operations), G-4 (Logistics), G-5 (Plans and Strategy), G-6 (Communications), Staff Judge Advocate Office, and Surgeon's Office.

**Data collection.** The last method used to collect research data consisted of the review of knowledge worker documents. A wide-ranging sample of military documents based on the following criteria was selected: publication dates, different service perspectives, and varied document sources (e.g., doctrine, pamphlets, and handbooks). Table 4 contains descriptions of Marine Corps and Joint Service documents relevant to the development of creative products examined by the researcher.

Table 4

*Relevant Knowledge Worker Department of Defense Documents*

#	Document	Purpose	Publication
1	Marine Corps Planning Process	Planning doctrine and six steps of the process	Headquarters USMC, 2018
2	Information Management	An overview and definition of the concept of information management	Headquarters USMC, 2016
3	38 <sup>th</sup> Commandant's Planning Guidance	USMC Commandant's strategic direction for the Marine Corps.	Headquarters USMC, 2019
4	Planning (MCDP 5)	A theory and philosophy of military planning as practiced by the U.S. Marine Corps	Headquarters USMC, 1997
5	Command and Control (MCDP 6)	A theory and philosophy of command and control for the U.S. Marine Corps.	Headquarters USMC, 1996
6	Joint Planning 5-0	Guides the Armed Forces of the United States in planning joint campaigns and operations.	CJCS, 2017
7	Red Teaming Liberating Structures Handbook	Provides frameworks that make it possible for people and organizations to create, to do new things, to be innovative.	Department of the Army, TRADOC, No date
8	The Applied Critical Thinking Handbook	Education on biases and behavior that prevent planners from real positive change.	Department of the Army, TRADOC, 2015
9	UFMCS Group Think Mitigation Guide	Tools, techniques and liberating structures designed to stimulate critical conversations, liberate the full potential of any group to create conditions for people to work at the top of their intelligence and creativity.	Department of the Army, TRADOC, 2014
10	Techniques for Effective Knowledge Management	Doctrine on principles, techniques, and procedures necessary to integrate knowledge management into the operations	Department of the Army, TRADOC, 2015

*Note.* Documents reviewed consist of Marine Corps Warfighting Publication (MCWP), Marine Corps Tactical Publication (MCTP), Marine Corps Doctrinal Publication (MCDP), Joint Publication (JP), Field Manual (FM)

### **Methods to Address Assumptions**

Creswell (2013) identified four philosophical assumptions relating to quantitative studies: ontological, epistemological, axiological, and the methodological assumptions. The ontological assumption deals with the nature of reality, as seen by the examiner, the subjects, and the

readers. In the application of the epistemological assumption, the investigator tries to get as close as possible to the subjects. The axiological assumption requires that the examiner acknowledges that biases may exist based on personal values. Through the methodological assumption, the investigator recognizes that the researcher's experiences influence inductive and emerging understanding during data analyzing (Creswell, 2013). Neff (1998) asserted that, in grounded theory studies, "all research is based on assumptions. What is critical in grounded theory is the researcher's obligation to closely examine those assumptions as the research progresses" (p. 128). The Marine Corps defined assumptions as "suppositions about the current situation or about future events assumed to be true in the absence of facts to continue planning" (MCWP 5-10, DON, 2018, pp. 2-5). Furthermore, MCWP 5-10 (DON, 2018) stated that a valid assumption should meet two criteria: the assumption must be logical, and the assumption must be realistic.

In this study, four assumptions were identified. The first assumption was that the sample population had an interest in improving the creative process of the organization. The investigator asserts this supposition because all the participants volunteered and did not receive any compensation for their participation. The study partakers were intrinsically motivated to participate. The second assumption is that the individuals who were interviewed were truthful and candid during their interview. The investigator based this assumption on the fact that all study participants received written and verbal reassurance that the study findings would be generalizable and that comments would not be associated with any participant. The third assumption is that the study participants had worked in or witnessed creative environments. The examiner affirms this assumption as interviewees all worked in MARCENT G-5 Plans and Strategy Division. The G-5 is the MARCENT Division responsible for developing novel and

useful products that support commander decision making. Furthermore, the study participants had attended military education where planning is part of the curriculum. The fourth assumption is that the individuals who were interviewed were familiar with the organization's process for developing products. The researcher believes this assumption to be valid, as contributors have all participated in the MARCENT Planning Group (MPG).

### **Data Analysis**

Interviews and audio file transcription occurred synchronously. An independent third-party transcribed two to three audio files at a time. The investigator reviewed the transcripts for accuracy and made minor corrections. Once amended, the examiner conducted a preliminary open coding analysis of the available data to develop categories and commenced the constant comparison methodology. The transcribed data were uploaded to the NVivo 12 qualitative analysis software. The investigator also loaded the observation transcripts and the organizational data to the NVivo 12 qualitative analysis software. As recommended in the grounded theory literature, through a constant comparison methodology the interviews, observations, and organizational documents were analyzed and the data were examined for similar conditions and concepts were compared until a theory emerged (Neff, 1998). The researcher conducted line-by-line coding using NVivo 12 qualitative analysis software to identify lower level concepts (Corbin & Strauss, 2015). The examiner performed axial coding and identified the relationships among the open codes. Finally, the researcher conducted selective coding and determined the core category that served as the basis of the grounded theory.

### **Summary**

A grounded theory methodology was selected because “grounded theory gives writing its due as a knowledge making process” (Neff, 1998, p. 129). The purpose of this grounded theory

study was to understand how the military design (i.e., bureaucracy) influences creativity and how leaders enhance or mitigate knowledge worker creativity throughout the creative process in bureaucratic organizations. Through the collection of interviews, observations, and organizational data examination, the investigator utilized an inductive approach to develop a theory grounded in data that answer the two research questions: (1) How does the military organizational design (i.e., bureaucracy) influence the creative process? and (2) How do leaders amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process?

To ensure the emergence of a theory, the examiner performed a constant comparison of the data and followed the open, axial, and selective coding processes. A purposeful sample selection was used to ensure the 22 participants met the study criteria, and the interview sessions resulted an information-rich data collection. The Southeastern University Institutional Review Board and the Headquarters Marine Corps Office of Human Research Protection guidance was followed. The risk to participants was minimal. Data were collected through observing a knowledge worker planning sessions and reviewing 10 organizational documents. The triangulation of three distinct data sources increased data reliability (Creswell, 2013). The study results are outlined in Chapter IV.

## CHAPTER 4: RESULTS

### **Introduction/Statement of Problem**

The purpose of this grounded theory study was to understand how the military design impacts creativity and how leaders enhance or mitigate knowledge worker creativity throughout the creative process in bureaucratic organizations. Research on what processes, leadership actions, and cognitive conditions within the workplace influence creativity vary. Steele, Hardy, Day, Watts, and Mumford (2019) assert that a tension exists between the paradox of developing an original product while ensuring that the product is identifiable, useful, and appropriate to the field of interest. Likewise, the military organizational design grounded on directives, processes, and hierarchical chain of command creates a perception paradox between the military need for order and the knowledge worker's desire for cognitive freedom. Leaders who recognize, understand, and navigate the bureaucratic and creative tension will enable their organization's knowledge workers to create products that are novel and useful.

### **Methods of Data Collection**

In the qualitative grounded theory research design, researchers generate a theory grounded in data (Creswell, 2013). The method included an interrelationship between data collection and analyses with a focus on developing a theory grounded on "data collected during the research process and not chosen prior to the beginning of the research" (Corbin & Strauss, 2015, p. 7). Interviews, observations, and examinations of organizational publications were used to collect data to answer the two study questions:

1. How does the military organizational design (i.e., bureaucracy) influence the creative process?

2. How do leaders amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process?

The data collection encompassed interview and observation data from knowledge workers, immediate supervisors, and senior leaders who have participated in the creative process within a military organization. Additionally, the researcher reviewed organizational data to expand the interview and observation data findings. The selected interview subjects were from the G-5 Plans and Strategy section of the target organization. The instrument used to collect interview data was an interview protocol consisting of seven semi-structured questions. All interviewees had served either as a knowledge worker, a knowledge worker supervisor, or a knowledge consumer decision-maker. Creswell (2013) recommends interviewing 20-30 participants or interviewing until reaching data saturation. Over 60 days, 22 participants were interviewed, reaching data saturation at 20 interviews. An additional two participants were interviewed to validate that the data collection had achieved saturation. Observations included two knowledge worker planning sessions. During each observation period, notes focusing on the interaction between the immediate supervisor and the members in attendance were taken. Lastly, organizational document review consisted of 10 military documents that focused on the planning process and the development of knowledge-based products. The analyses of the interviews, observations, and military documents were focused on the supervisor and knowledge worker interaction and the influence of organizational design factors on knowledge worker creativity.

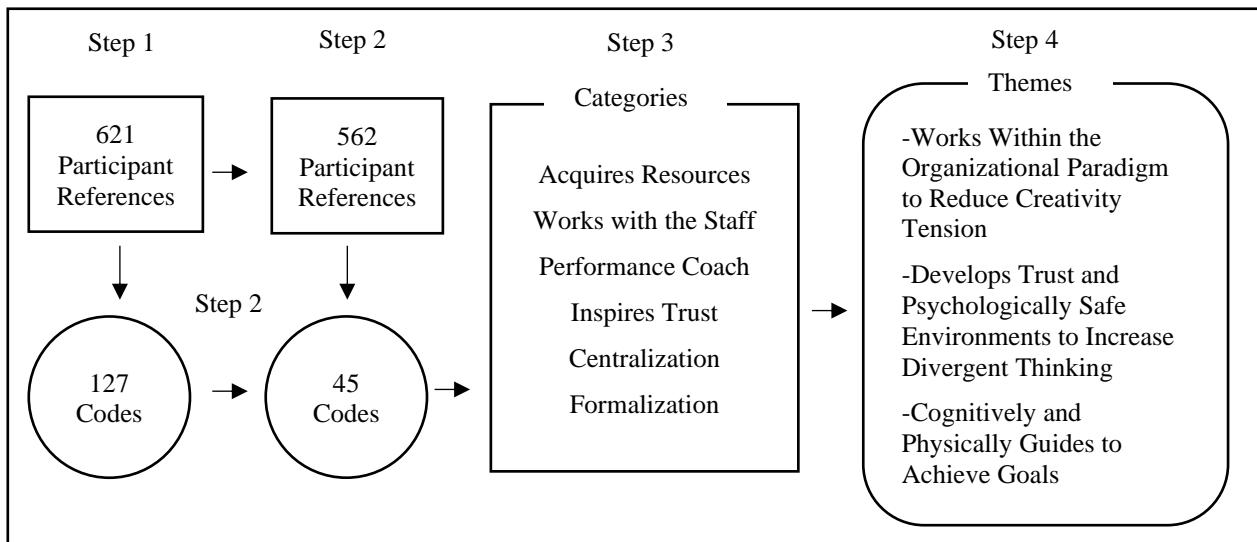
Using NVivo 12 software, the grounded theory process aimed at developing an initial appreciation of the interview data and forming categories and themes. As shown in Figure 5, step one of the line-by-line coding of the interview data led to the identification of 621 participant references. Through the open coding of the 621 references, 127 codes were



identified. Step two was the examination and constant comparison of the 127 codes, which resulted in the elimination of redundant codes and the merging of similar codes from 127 codes to 45 codes. Additionally, the 621 participant references were reduced from 621 references to 562 references. Corbin and Strauss (2015) described constant comparison as breaking down data “into manageable pieces with each piece compared for similarities and differences” (p. 7). During step three, axial coding and constant comparison of the data for commonality resulted in the grouping of the 45 codes and 562 references into six categories. Lastly, in step 4, the selective coding of the six categories, 45 codes, and 562 participants references led to the development of three themes.

Figure 5

*Detail Steps of the Data Analysis*



*Note.* Describes the four steps used to develop an initial appreciation of the interview data to form categories and themes.

Creswell (2013) recommends the constant comparison examination of the research data to identify categories and sub-categories of information. The examination for patterns and commonality of the 562 participant references and the 45 reference codes led to six categories. The six categories were: *performance coach, inspires trust, acquires resources, formalization,*

centralization, and works with the staff, as shown in Table 5.

Table 5

*Codes Grouped by Category*

Leader Specific				Bureaucratic Specific	
Acquires Resources	Works with Staff	Performance Coach	Inspires Trust	Centralization	Formalization
Allocates time	Understands consumer requirements	Guides the Team	Exhibits competency	Effects of Personality	Bounds the process
Connects with experts	Builds team consensus	Empowers the team	Builds rapport with the team	Impacts of hierarchical position	Explains process flexibility
Allocates resources	Challenges status quo	Serves as a product filter	Establishes common understanding	Aligns thinking	Identifies constraints
Provides space to think	Advocates for the team	Aids the team without stifling	Encourages discourse	Stifles contributions	Results in product rigidity
Gathers perspectives	Protects workers	Encourages brainstorming	Provides feedback	Limits risk taking	Creates institutional bias
Finds trusted advisors		Embraces diversity	Creates a safe environment	Inhibits new ideas	Starves out creativity
Gathers critical reviewers		Demonstrates patience	Listens to workers	Provides job security	Drives organizational routine
		Applies Pragmatism	Encourages risk	Creates cylinders of excellence	
			Challenges the team	Protects staff equities	

**Research Questions**

To gather useful and relevant data, each interview protocol question was scripted with a specific creative stage focus. Appendix C contains the full interview protocol.

**Research Question 1: How does the military organizational design (i.e., bureaucracy) influence the creative process?**

The data suggest that the bureaucratic nature of the military organizational design has positive, negative, and neutral (neither positive nor negative) influences on the creative process. Through open and axial coding of the research data, the centralization and formalization categories emerged. Centralization is how the organization's leadership distributes power and authority and how the organization makes a decision. Formalization is how an organization utilizes rules and processes to meet its objectives (Hirst et al., 2011).

**Centralization.** The nine codes related to the *centralization* category provided positive, negative, and neutral (neither positive nor negative) sentiments on the effect of bureaucracy on creativity. Of the nine centralization codes, *effects of personality*, *impacts of hierarchical position*, and *aligns thinking* emerged as the principal participant codes in the *centralization* category.

**Effects of personality.** The *effects of personality* code encompasses how the distinct character of the knowledge worker, immediate supervisor, or senior leader influenced the creative process. When asked to recall a positive or negative example of creativity, Edgar (knowledge worker) stated that “bad examples usually go back to the personality of the supervisor or the personality of the director.” Bob (knowledge worker) discussed how a positive personality is viewed by knowledge workers saying, “Not everyone is a gregarious back slapper, but if you're going to run an organization, you have to do it with a happy heart so that people want to be able to be there.”

Describing the influence of bureaucracy on creativity, Victor (senior leader) commented that “bureaucracy and process are neutral. It is the people in the bureaucracy—the people in the

process—that can make it good or bad.” Similarly, Patrick (immediate supervisor) pointed out that institutional processes such as the Marine Corps’ planning process coupled with personality influence creativity. Patrick added that the creative process is hindered “when the leaders don’t embrace, embody, and encourage individuality and creativity.” Personality can also influence the creative process. When asked about the influence of bureaucracy on the creative process, Ian (knowledge worker) commented that the influence is “personality driven based on the commander who is in charge.” Ian added that some commanders are more comfortable with the creative process and direct their knowledge workers to “take the initiative, explore the space, do what you can, just go off command-type orders,” while other commanders are more restrictive. Speaking about the diversity of personalities, Frank (knowledge worker) commented that equally trained workers could view bureaucratic centralization differently. Frank stated that some knowledge workers are well educated in doctrine but remain open to new ideas, while others “are so restrictive and ingrained with the process that they fail to see that you are supposed to be creating a creative product.”

***Impacts of hierarchical position.*** The *impacts of hierarchical position* code include how the knowledge worker, immediate supervisor, and the senior leader’s rank or positional authority influences the creative process. Henry (immediate supervisor) articulated that hierarchical position helps to provide order and a framework because everyone understands the process and who is in charge. Understanding who the gatekeepers are and who has the authority to approve or disapprove the creative product reduces uncertainty and stress. Larry (immediate supervisor) remarked that knowing who the gatekeepers are in the organization helps the knowledge worker navigate the creative process “because you know who can say yes and you know who can say no.” According to Larry (immediate supervisor), what makes formal organizational structure

beneficial is the common military experience shared by the knowledge worker, immediate supervisor, and senior leader. Larry stated that from second lieutenants all the way up to colonels “everybody knows what information is needed” for planning, and the benefit of a shared institutional planning framework is that “the bureaucracy helps keep us focused.” An additional beneficial impact of hierarchical position is the ability to use rank or position to provide thinking space to the knowledge worker. Patrick (immediate supervisor) stated that his role was to shield the team from the “encumbrances of bureaucracy that would hinder or stifle them.” Patrick also commented that his hierarchical position in the organization provided a unique perspective that he could bring to the knowledge worker. Patrick called his experience “a perspective from the boardroom.”

Some participants highlighted the negative impacts of hierarchical position. Nick (immediate supervisor) commented that “bureaucracy stifles creativity by introducing hierarchy, and hierarchy hinders creativity.” Nick added that knowledge workers “are often reluctant to vocalize new ideas in front of their boss or potential future bosses due to fear of embarrassment.” Quincy (immediate supervisor) pointed out perceived differences between civilian and military organizations’ willingness to embrace creativity. When comparing the civilian and military organizations, Quincy argued that the military organization is not “a bunch of civilians dressed in pajama bottoms sitting around a room with couches and diversionary piles of Legos.” Quincy explained that the civilian model of open creativity would “never happen in the Marine Corps.” According to Quincy, civilian organizations “do it a little more from the standpoint that everybody has an idea and a voice, and everybody gets to be heard.” While in the military organization, Quincy argued that idea development is comparable to “hey, dammit, this is what the [boss] wants, so shut up and make it happen. Paint those rocks gold...he wants them gold.”

Keith (immediate supervisor) pointed out that often a good idea does not get through the gatekeeper. Keith commented that getting an idea through the gatekeeper can be difficult because a major might have a great idea that a colonel does not like, and the colonel might want to go in a different direction. Likewise, George (knowledge worker) noted that rank often influences the creative process even unintentionally:

It is way too easy, especially if you have like a lieutenant colonel to captain relationship for that lieutenant colonel to influence the courses of action [being developed]. A simple comment such as “this is a no-brainer” is really going to be one valid COA [course of action]. So, you have to be careful about setting the tone at the start of any OPT [operational planning team], because there could be some really good ideas out there that get stifled in that first opening statement.

Hierarchical position is often relative to the situation and unpredictable. Quincy (immediate supervisor) commented that his position affords him the opportunity to listen, evaluate, and understand the implications of the bureaucracy. Henry (knowledge worker) spoke about the fluid nature of hierarchical position impact commenting that tension between bureaucracy and freedom of action “can exist within the same relationship with a leader, within the same relationship with a supervisor, and I guess they could probably exist within the same problem set based on different echelons.” Henry described the tension as existing “within the same fluid space, and it's just a matter of where you are in the cycle that could ebb or flow.” Finally, according to Edgar (knowledge worker), the influence of impacts of hierarchical position depends on where the leader sits within the creative process. Edgar points out that there are “different levels of the hierarchy” and those at higher levels have more organizational influence.

***Aligns thinking.*** The *aligns thinking* code includes how bureaucratic elements (e.g.,

doctrine, procedures, hierarchy) influence the creative process. When asked about the influence of bureaucracy on creativity, Ian (knowledge worker) stated that doctrine and military publications support divergent thinking and could help the creative process if the knowledge worker “followed a number of our key publications that talk about really opening up and thinking outside the box and taking the initiative.” Similarly, Patrick (immediate supervisor) suggested that when faced with uncertainty, the knowledge worker should seek out subject matter experts with the most recent knowledge who can help refresh the group’s thinking. Patrick warned that some knowledge workers “go back to a job they had five or ten years ago, and they will base all their guidance or information to their boss based on what they knew, which is no longer current.”

An additional aspect of the military design that aligns thinking is classroom training balanced with experience. Ian (senior leader) commented that the doctrine taught in formal schools informs our thinking, but doctrine is “a jump off point versus what is going to happen pragmatically.” George (knowledge worker) stated the military organization purposefully tries to align the thinking of its members through training toward a common goal. George said, “bureaucracy is positive because I don't think in a lot of industries you get that training aspect. You get a lot of teaching, but here [Marine Corps] we also couple it with training because we are trying to mold a Marine to be part of a team and part of a cohesive unit.”

***Additional centralization themes.*** *Risk adversity* was a commonly cited participant sentiment. Keith (immediate supervisor) spoke to what he perceived as the reluctance to speak outside of accepted norms, especially ideas that implicated a change, saying, “bureaucracies are resistant to change.” Keith added that bureaucracies create “an environment that is risk averse,” as some workers “are concerned about upward mobility.” However, other participants had a

different perspective. Allen (knowledge worker) commented that bureaucracies increase job security:

I think it [bureaucracy] helps in that most of us, particularly when in uniform, have the freedom to say your opinion. You're not worried about job security. You have job security so that bureaucracy gives you that security and that security allows creativity.

Likewise, Quincy (immediate supervisor) commented that in bureaucracies the decision rests with the senior leader and “the worker does not own the decision, so he or she is able to be as creative as necessary.” Quincy added that “the staff often does not appreciate the luxury that the bureaucracy actually protects them and frees them to be creative.”

When asked what a supervisor should do to enhance creativity, Larry (immediate supervisor) spoke to the importance of assuming risk. Specifically, Larry commented that a supervisor might need to go against the status quo to create an environment that promotes creativity. Larry said, “A supervisor has to assume professional and emotional risk. The more they do that, the more their people will be comfortable in being creative.” Also, Victor (senior leader) stated that “we need younger officers to be more risk takers, especially when it comes to creativity.” Victor added that leaders should “not penalize people who do take risks [and] that don't succeed or suffer some consequence for it [failure]...I would say be bold and audacious.”

*Stifles contributions* was also a common code. Bob (knowledge worker) stated that a supervisor often creates environments that inhibit creativity. According to Bob, “There is nothing more inhibiting to creative thinking than someone who is so doctrinal that they stifle anybody who steps off and colors outside the lines.” Henry (knowledge worker) spoke to a specific time when he was part of a creative team, and their contributions were met with organizational resistance:



"What are you doing?" I was like, "Well, Sir, we're trying to really get after the problem." We had spoken to some folks who did design thinking, and we were really getting far afield of the traditional ways the Marine Corps solves problems and looking at industry, looking at creative arts, and how they go after prototyping solutions for large organizational problems, and he was like, "What are you guys doing?"

Quincy (immediate supervisor) commented that at times to enhance creativity, immediate supervisors had to leverage small teams and "do things under the radar that we knew were right, that we didn't talk about to other more senior officers" to keep the process moving. Another negative aspect is that hierarchical organizations are rooted in their way and are reluctant to change. Edgar (knowledge worker) declared, "We have thought about things in a particular way for so long that sometimes it is a little harder to do some out of the box thinking and take a different perspective or embrace new ideas."

**Formalization.** The seven codes related to the *formalization* category provided positive, negative, and neutral (neither positive nor negative) sentiments on the effect of bureaucracy on creativity. Of the seven formalization codes, *bounds the process*, *explains process flexibility*, and *identifies constraints* emerged as the principal participant codes in the *formalization* category.

***Bounds the process.*** The *bounds the process* code includes how bureaucratic processes and organizational leaders' actions influence the knowledge worker and creative process. Keith (immediate supervisor) commented that military bureaucracy helps the creative process because through orders and processes, bureaucracy provides a framework for the planning team to work through the creative process. Keith commented that the immediate supervisor bounds the creative process by visiting the planning team and providing guidance. Patrick (immediate

supervisor) agreed that military bureaucracy provides a framework, but Patrick added that “what you do inside of that framework really is based on the creativity that your leader or commander allows.” Patrick went on to say that “I think that the bureaucratic process at MCPP [Marine Corps Planning Process] is a good one, it really is if you have the right leader leading that specific process.” Omar (immediate supervisor) added that bureaucracy provides boundaries such as, “you must do this, and you cannot do this” within the planning process. Henry (knowledge worker) argued that military bureaucracy negatively impacted creativity in that immediate supervisors are bounded by organizational expectations and thus limit creative input. Additionally, Henry commented that his immediate supervisor’s job is “first and foremost making sure you represent the institution while you're solving the problem.” According to Omar (immediate supervisor):

Bureaucratic culture helps creativity by providing a ‘box’ or set of boundaries in which to work solutions. Without the boundaries of knowing what restraints and constraints I have to work with, creativity is merely wishful thinking.

Edgar (knowledge worker) remarked that the immediate supervisor plays a vital role in the military bureaucracy. Edgar stated that “the supervisor has got to give good left and right lateral limits.” Bounding the process helped the knowledge worker by balancing “between being creative to find a solution that works, and not being so far outside the realm of possibility that you are proposing infeasible solutions.” Edgar added that the immediate supervisor acts like a “rheostat (equilibrium)” that keeps the creative team on track by balancing creativity with keeping the team working “in a direction where you are going to get some concrete results.” Henry (knowledge worker) described the value of the military bureaucracy as a safety rail between what is feasible versus what is acceptable. Henry called this phenomenon the “Jurassic

Park” model and referenced a scene where Dr. Ian Malcolm—a fictional character in Jurassic Park—stated “your scientists are so busy figuring out whether or not they could do something, but they did not figure out whether they should.” As such, Henry commented,

I think the good thing about military bureaucracy is it gives us a good baseline for what we should or shouldn't do. And then you can kind of figure out what you can do, and you might run into a bureaucracy that says well, that might be possible—it might be possible to use a flame thrower; it might be possible to use a certain weapons system; it might be possible to do something, but it might not be ethical or it might not be feasible or it might not be fiscally responsible.

***Explains process flexibility.*** The *explains process flexibility* code includes how the knowledge worker, immediate supervisor, and the senior leader assessed the rigidity of the bureaucracies. A sentiment echoed by several participants was that bureaucracy impacts creativity by narrowing options. Carlos (knowledge worker) commented that bureaucracy limits creativity “because you have to stay within certain boundaries.” George (knowledge worker) complained that the bureaucratic process resulted in very directed actions that did not provide the knowledge worker with the freedom of original thought and said, “We basically had blank slide presentations. There was no original thought whatsoever, and I thought the plan lacked originality.” The military bureaucracy also stifled creativity through the cumbersome decision-making process. Bob (knowledge worker) groaned about the time it took to navigate the bureaucratic maze:

It could be two weeks between input you get from a colonel to two weeks later after doing nothing essentially; you finally get an audience with a general who is going to say either “Yep, that's great,” or he's going to say “No, what were you thinking?” I think in

that aspect, the bureaucracy can be stifling.

The common sentiment by the participants was that an immediate supervisor who was overly product and process driven smothered creativity. Jack (knowledge worker) remarked that the military design stifled creativity based on the common sentiment that “this is how we have always done it; therefore, we should just keep doing it this way” mentality. Frank (knowledge worker) added that some immediate supervisors are doctrinally rigid and unwilling to break from the process. According to Frank (knowledge worker), “You have your doctrinaire chaps that are like, ‘No, well it has to be this way,’ or ‘Our problem statement must be in the frame of a problem, and it must only be one sentence, and it can't be a paragraph or a narrative.” Frank described an interaction with an immediate supervisor where the product had so many doctrinal corrections that it appeared as if “a goat was sacrificed on it in red pen.” Frank lamented, “that makes me not ever want to write.” Henry (knowledge worker) described a similar situation when his immediate supervisor stifled creativity based on an excessive desire to follow the process. Henry described the knowledge worker and immediate supervisor interactions as the “seagull visit where the boss flies in and poops on your idea.”

Denis (knowledge worker) pointed out that for knowledge workers to increase divergent thinking, the knowledge worker should always be in a state of “constant creation and destruction.” A knowledge worker should dismiss limiting processes and create new processes to gain a wider understanding of the situation. Denis stated,

If you have a format that has streamlined your knowledge uptake to the exclusion of other methodologies to learn or to understand the environment, you are really limiting yourself. You don't get to see other ways. You never go through the cycle of creation and destruction; you are just in perpetual creation, and perhaps you are limiting yourself

to not understanding other contexts, other nuances, other perspectives.

***Identifies constraints.*** The *identifies constraints* code includes how constraints such as resources, time, and funding influence creativity. Omar (immediate supervisor) pointed out that constraints allow employees to know “what is realistic and what is not based upon a host of other competing factors.” Victor (senior leader) expressed the potential loss of creativity based on organizational constraints. Victor said, “I think on those rare occasions when we have tended to step back and say, ‘Hey, what if we were unconstrained in terms of time or even the product itself. What could we do, what could we think of?’” Quincy (immediate supervisor) reiterated that the potential for creativity could be increased if organizational constraints were removed. Quincy said, “Man, this would be so easy if we could get rid of some of the parochial hindrances and encumbrances that are preventing us from working together and generating a synergy.” However, Edgar (knowledge worker) suggested that, at times, organizational constraints can lead to greater creativity. According to Edgar, “You can do things when you're in an austere location, and you are a lower priority, but you still have to pull together to be creative in getting things done.”

Time as an organizational constraint was also a recurrent sentiment. The amount of time provided to the creative process depends on the supervisor and the task. Larry (immediate supervisor) pointed out that with enough time “there is no such thing as a wrong answer or a bad idea.” Rich (immediate supervisor) cautioned that to enhance creativity the supervisor must allow time for open dialogue and not shut down ideas. However, Larry warned that time is a limitation, so the supervisor must “set timelines and deadlines. You have to make sure you keep them on track.” Another factor of time is the timing of the creative idea, specifically the organization’s readiness to accept the new concept. Henry (knowledge worker) explained,

The hardest thing is when you get a bunch of creative people together, and they have a great idea, but it is just not feasible. You know, there are organizational constraints.

There are fiscal constraints. There are cultural constraints. Kind of like the classic right idea at the wrong time. You think, “Boss, we have this great idea; this is going to work; this is the course of action we think you should go with.” I think, yeah, it is a great idea, but institutionally we are not ready for it, or fiscally it is not responsible, or it is not the world that we live in, and it won't be acceptable.

***Additional themes.*** Several participants mentioned that overly prescriptive supervisors influence creativity. Denis (knowledge worker) recalled a time when his supervisor came to him with a problem and the solution and asked him to provide the background. Denis conceded that “at that point, I was not trying to generate unique critical thinking; I was just trying to support the foregone conclusion.” Henry (knowledge worker) related a similar situation when he was attempting to present the team’s creative idea, but his immediate supervisor was not willing to entertain his recommendation:

I argued a little bit and finally, you know, it got to the point where we were not going to win, and I felt at that point like someone had told me, there is no Easter Bunny, there's no Santa Claus, and your work is for not. And that was one of those things where the advocacy wasn't there, and I think there was a better way to do that. We went back like whipped dogs.

Participants also cautioned against being overly prescriptive in guidance. Carlos (knowledge worker) commented that “too many people come and tell us exactly what to do.” Henry (knowledge worker) discussed a time when his boss told him, “If the boss wants a ham sandwich, we will make him a ham sandwich. I know you guys think you know you are grand

chefs, but here is ham, here is bread—you know what to do.”

Bureaucracy can also lead to a parochial bias. Henry suggested that certain supervisors work toward staying within their priorities and not seeking a creative solution. Henry said, “Sometimes they direct the creative process away from what might be the right way and more toward the easy way, more toward the convenient way, or more toward the simple way.” Victor (senior leader) affirmed this sentiment in that organizations have priorities and at times, “definitely stifle creativity because of their focus.” From a positive perspective, Henry (knowledge worker) commented that bureaucracy serves to organize the creative effort. According to Henry, bureaucracy organizes “people in a way that makes them know what their position is relative to the organization, or what their professional roles are in reference to the organization.”

**Research Question 2: How do leaders amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process?**

The research data suggest that leaders both amplify and mitigate the development of new and novel ideas by their actions throughout the creative process. Through open and axial coding, four categories emerged: *inspires trust*, *performance coaching*, *works with the staff*, and *acquires resources*. The category of *inspires trust* includes the way a leader encourages, supports, enables, and protects knowledge workers to create an environment where divergent thinking can grow. *Performance coaching* includes the way a leader defines the problem, sets expectations, guides the team, and assesses the knowledge worker throughout the creative process. The category *works with the staff* includes the way the leader gathers information from the customer, reduces organizational tension, protects the knowledge worker, and provides feedback to the customer. Lastly, *acquires resources* includes the way a leader aids the knowledge worker

throughout the creative process by obtaining physical resources and providing cognitive support.

**Inspires trust.** The nine codes relating to the *inspires trust* category provided positive, negative, and neutral (neither positive nor negative) sentiments on the effect of bureaucracy on creativity. Of the nine inspires trust codes, *exhibits competency*, *builds rapport with the team*, and *establishes common understanding* emerged as the principal codes in the *inspires trust* category.

**Exhibits competency.** The *exhibits competency* code includes how the knowledge workers, immediate supervisors, and senior leaders' view of the leader's personality, qualifications, and experience influenced the creative process. A common sentiment among participants was that during the preparation stage of the creative process, supervisors must demonstrate the willingness and competency to make decisions in order to establish trust with the knowledge worker. For instance, Henry (knowledge worker) commented that "supervisors have to know what they want." Additionally, the supervisor should be decisive and not settle for the least confrontational answer. Frank (knowledge worker) grumbled:

Don't be wishy-washy. That is the most frustrating thing. So, make a decision. Tell me what you like, what you don't like. If you need more information, tell me that you need more information before you make a decision but be more specific about what more information you need. The worst thing that happens to us as planners is that you put a bunch of stuff on the wall, and then you say, "Well, I don't know what the right answer is, but it's not that - keep trying." That's just the worst. So, get out, let us do our job, and then make a decision when we give you something.

Participants commented that the supervisor's experience was a necessary component of demonstrating competency, especially when working with less experienced knowledge workers.



Quincy (immediate supervisor) acknowledged that “experience, competence, awareness, and understanding” are vital when helping the team enhance the creative process. Furthermore, Quincy commented that the immediate supervisor’s responsibility is to see the problem from the perspective of “a young major with what he thinks is a great idea” and guide the major toward the acceptable solution.

Another way the immediate supervisor exhibits confidence was demonstrating knowledge of the environment. Bob (knowledge worker) expanded on the importance of knowledge of the environment in that a “supervisor has to have enough experience within the community to have a greater understanding than his subordinates, ideally, of what might be implied in the task” that has been assigned. George (knowledge worker) reinforced the importance of understanding the environment stating that the immediate supervisor’s role is “like a shepherd” guiding the knowledge worker through the environment and ensuring that the knowledge workers “are contributing to their maximum amount and capability.”

Providing guidance to the knowledge worker was another way the immediate supervisor demonstrated competency. Henry (knowledge worker) stated that he desires that his supervisor provides guidance and subject matter expertise during the preparation stage of the creative process. Henry stated that his supervisor needs to demonstrate “professional confidence in the processes and the subject matter.” These elements were critical to an inexperienced Henry who said, “As a new knowledge worker, I need to gain cultural clues rapidly. I think those are some things that my boss needs to bring to me to facilitate my creative process.” Frank (knowledge worker) commented that demonstrating competency is dependent on your boss’s level of understanding.

Participants commented that immediate supervisor experience was a factor in indicating

competency. Frank recalled an assignment when he experienced the change of immediate supervisors and the impact it had on the creative process, saying “It was different being a planner with a supervisor who understood planning inherently and who understood what tools were needed to be able to have a productive and creative process.” Frank bragged about an immediate supervisor who had a profound impact on his outlook on creativity:

He liked to look at problems in the sense of layered context and multi-dimensionality.

He looked at all the dimensions of things. I felt like, Wow, this is great! We came up with all these great ideas.

Similarly, the participants raised the importance of the knowledge worker’s experience in the creative process. Steve (senior leader) commented that “creativity grows with experience” and stated that he routinely emphasizes that “they [knowledge workers] should have confidence in their ability.” When asked what advice he gives to new knowledge workers, Steve stated that he cautioned his knowledge workers that school prepared them for the job, but they still have much to learn. Steve added that he would communicate to his knowledge workers that “you have the tools, but you are not the expert yet.” Frank (knowledge worker) agreed that knowledge workers gain competence with experience. Frank commented that “I know what I’m supposed to be doing. I know what I need to produce. Part of this is that it is my third year [as a knowledge worker].” Likewise, Tim (senior leader) acknowledged that experience matters. He said,

I think another aspect of it was the experiences of the planners. In other words, majors and above who have been around a little bit tended to have opinions on things, and they can take those opinions and turn those into courses of action.

***Builds rapport with the team.*** The *builds rapport with the team* code includes how the knowledge worker, immediate supervisor, and the senior leader viewed the interaction between

the knowledge worker and supervisor. Participants remarked that in the preparation stage of the creative process, building rapport starts with knowing your workers. Keith (immediate supervisor) articulated that, “I think the number one [thing] you have to do as a supervisor goes back to knowing your people. Remember, this is a people business.” Steve (senior leader) affirmed this perspective when he said, “Supervisors that get to know their people on a personal basis—beyond the basic information in their record books—are better able to show that they care and motivate their workers to be more creative.” In addition, immediate supervisor encouragement was a key factor in building rapport. Patrick (immediate supervisor) added that he tried to encourage his knowledge workers and to “learn what they do from their perspective because if I do not understand their perspective or how they think, I can't give them good guidance, and we'll be out of synch.” Patrick built a rapport with his knowledge workers by encouraging open communications. Patrick commented that in the incubation and illumination stages of the creative process,

the worst thing I can do is come in there and say this is what I think about this. I've let them come to conclusions and encourage them to say what they want to say, and I encourage them to debate me when I try to play devil's advocate.

Additionally, if Patrick did not agree with his knowledge workers, he would encourage them to speak frankly, but to “do it with tact.” Knowledge workers acknowledged the value of encouragement. Ian (knowledge worker) acknowledged that if a planner perceives “that the supervisor is willing to stop and hear, something that is a little outside of the box, that novel concept,” the knowledge worker is going to feel comfortable bringing diverse ideas forward. Bob (knowledge worker) commented that he valued situations when the supervisors encouraged the team to present diverse ideas:

Even if it doesn't help, if someone came up with the idea that is off the page, something that is unexpected, a new way of looking at things, but ultimately it might be discarded, the leader would say, "You know, that didn't work, but I'm glad you're thinking that way; nice effort."

A prevailing participant sentiment was trust as a means of building rapport. Participants spoke of both a physical and cognitive space of trust. George (knowledge worker) spoke about the Commander's Planners Update time as a safe space and an intimate opportunity to build rapport with the organization's leadership:

Planner's Updates are kept small on purpose and steer away from very formal briefs and are more of a dialogue. They are done more to help our planning and put everybody at ease. You are comfortable; you are almost joking with the supervisor and the general, but you are getting a lot of serious work done, and you are getting their intent.

Equally important was finding a location where the knowledge worker developed a rapport with the supervisor. Bob (knowledge worker) spoke about a time when the supervisor took all the knowledge workers to an offsite location for four days to work on a problem. Bob stated that the knowledge workers presented the product to the immediate supervisor several times and "he didn't endorse it, but he didn't discount it." The immediate supervisor's response was "Keep working; we do not have to see the boss until next week, so just keep plugging away." The immediate supervisor and knowledge worker rapport resulted in a safe environment for creative thinking.

Denis (knowledge worker) remarked that the benefit of a safe environment where the immediate supervisor builds rapport with the team is that "you can have a crazy idea and not feel personally ostracized." Denis specifically noted the responsibility of the supervisor pointing out,

“The only way that you're going to get there is by having a boss who is willing to set that environment, so there is no intellectual bullying going on within the workspace.” Denis confessed that if a knowledge worker does not have rapport and trust with his supervisor during the preparation stage of the creative process, it is unlikely the knowledge worker will be creative:

As a knowledge worker, if I'm not comfortable working with you, then I'm not going to open up. Creativity is easily stifled in an environment where there is no trust. Because to be creative, you have to be willing to step outside norms, and you have to know that by stepping outside the norms that you've got the backing of your leader, and you have the green light to think that way. I think that's probably one of the most important things.

Bob (knowledge worker) reinforced this aspect when speaking of his supervisor when he said, “The guy [supervisor] was trusting enough of us that we were going to deliver the right product, and, you know, ultimately we did.”

Participants also spoke to the negative impacts of lack of knowledge worker and supervisor rapport that led to fear. Keith (immediate supervisor) commented that “excessive yelling crushed some spirits, maybe not just creative work but all work.” George (knowledge worker) discussed situations where fear of the leader impacted creativity. George said, “People were literally afraid of the [senior leader], so nobody would dare to go and ask questions.” Denis (knowledge worker) witnessed a negative creative planning situation when knowledge workers feared that if they “came up with an idea in an area that was not their forte that they were afraid of being ostracized or being discounted because they had suggested a dumb idea.” Similarly, Steve (senior leader) acknowledged that “the problem with bureaucracy is that in a hierarchy, there is too much fear of telling the boss what he or she doesn't want to hear.” When asked what advice he would provide to his knowledge workers, Tim (senior leader) responded:

It is okay to explore new territories; otherwise, we would still be using smoothbore muskets, and we would still be talking about box formations if people did not think outside of that paradigm. Do not be afraid, and I would never question anyone for taking the initiative and coming up with something that was way outside of the normal.

***Establishes common understanding.*** The *establishes common understanding* code referenced how the knowledge worker, immediate supervisor, and the senior leader viewed the establishment of a common framework for creative work. Immediate supervisor involvement throughout the creative process is vital for establishing a common understanding. Quincy (immediate supervisor) commented that “you [the immediate supervisor] have to be the face of the process, and you have to put yourself into positions where you are gathering and gaining the insights and information from higher and adjacent units.” A common participant sentiment was that immediate supervisors that leveraged the bureaucratic processes established a common understanding by helping the knowledge worker frame the problem. Bob (knowledge worker) expressed that bureaucracy driven planning during the preparation stage of the creative process helps the knowledge worker “figure out what needs to be done, and the bureaucracy is good in that there is a common understanding.” Additionally, Bob suggested that the planning process provides a context and an end state for creativity. Bob went on to say that “you have to have a framework by which to produce something that can be used; a step-by-step process that is going to lead to something that can help the commander make a decision.” Keith (immediate supervisor) provided a similar sentiment. Keith commented that,

We will frame the problem first. Figure out what needs to be done, and then sit down with them [knowledge workers] and talk about it. We will say, "Here is what we want our end state to be - what do we have to do to get there?" Then [we would] figure out

what products we have to make, or people we have to go to talk to, or information that we have to find.

Ian (knowledge worker) also commented that the bureaucratic planning process establishes a common understanding and helps “to frame the problem and helps them [knowledge workers] to communicate their thoughts and allow an open sharing of ideas.” Additionally, knowledge workers gain a common understanding by meeting and gaining guidance from the commander. The bureaucratic process provides the knowledge worker with designated times to meet with the supervisor and the senior leader. George (knowledge worker) acknowledged the importance of access to the commander through all phases of the creative process. George commented that having access to the commander “eliminated a lot of discovery learning.”

***Additional themes.*** A common participant sentiment was the importance of encouraging discourse among knowledge workers to pollinate new ideas and promote positive disagreement while in the illumination stage of the creative process. Ian (knowledge worker) commented that the supervisor must balance the open flow of ideas “without going too far down a rabbit hole,” enabling the knowledge worker to feel comfortable brainstorming. Ian argued that “allowing that [brainstorming] to happen a lot of times will spark a creative thought in someone else.”

An important part of encouraging discourse is to form a collaborative team as part of the preparation stage of the creative process. Monty (immediate supervisor) argued that “the first thing you do is you make sure you get the right people in the room.” The immediate supervisor must also create a safe environment for sharing of ideas while maintaining civility in the group:

You can't have people in the room who are going to have thin skins. You can't have people who are going to be offended. At the same time, you can't let people treat people poorly; you have to have camaraderie on the team. You have to be able to turn to the guy

or the gal next to you and not be afraid that you are going to say something that's going to make them angry or upset.

Creating opportunities to provide feedback is a benefit of the bureaucratic process and creative thinking. Denis (knowledge worker) noted that his supervisor routinely provides “critical feedback chipping off all the nicks and burrs in the idea until you get that fine and polished outcome.” Edgar (knowledge worker) spoke to the importance of internal group feedback. Edgar suggested, “I think there is real value in what some of us call ‘murder-boarding [critical review],’ and others would call ‘red teaming [external challenge of findings]’ to refine the creative product.” Additionally, immediate supervisors who seek to understand first and actively listen to the knowledge workers set conditions for creativity while in the incubation and illumination stages of the creative process. Patrick (immediate supervisor) added that immediate supervisors should not go to the planning team and say, “This is what I think about this.” Patrick commented that the immediate supervisor must provide the knowledge worker with the time to “come to a conclusion and encourage them [knowledge worker] to say what they want to say.” Lastly, Patrick stated that if you “know your Marines or Sailors and you want them to be creative, you have to engage them.”

**Performance coaching.** The eight codes relating to the *performance coaching* category provided positive, negative, and neutral (neither positive nor negative) sentiments on the influence of bureaucracy on creativity. Of the eight performance coaching codes, *guides the team*, *empowers the team*, and *serves as a product filter* emerged as the principal codes in the performance coaching category.

***Guides the team.*** The *guides the team* code captures how the knowledge worker, immediate supervisor, and senior leader viewed the importance of setting expectations and



focusing the team throughout the creative process. During the preparation stage of the creative process, the immediate supervisor guides the team by setting conditions for the knowledge worker to gain access to the senior leader's intent and to understand the expectation from the bureaucratically hierarchical chain of command. Carlos (knowledge worker) described the role of his immediate supervisor as responsible for getting "information, guidance, and direction straight from the person that I directly support." Edgar (knowledge worker) provided two immediate supervisor requirements: (a) setting expectations and getting initial guidance and (b) getting continual commander updates during the creative process. Furthermore, Jack (knowledge worker) commented that getting the guidance upfront directly from the commander is very important, especially during the preparation stage of the creative process:

I think hearing it from the horse's mouth can add a lot of validity and strengthen [the process]. Having that commander come in, or supervisor, and provide that guidance upfront for you and explain what you are trying to achieve and foster that environment of, we-are-trying-to-think-of-something-completely-outside-of-the-box, I think, is very important upfront.

The immediate supervisor helps guide the team by expediting the knowledge workers access to the commander without having to follow the hierarchical chain of command. According to Carlos (knowledge worker), the immediate supervisor provides a direct link to the senior leader. Carlos added that as a knowledge worker, he does not have to follow the standard: "I am a corporal, and I have to go through a sergeant to go through a lieutenant, to go through a captain to get to the commander" military hierarchical model. According to Jack (knowledge worker), hearing directly from the senior leader "this is my vision; how I want to go forward;

what I am trying to accomplish; and my timeline,” helps the knowledge worker understand the leader’s intent.

The immediate supervisor’s access to both the senior leader and the knowledge worker throughout the creative process allows the immediate supervisor to act as a connector between the knowledge worker and the senior leader to ensure continuous guidance alignment.

According to Denis (knowledge worker), the knowledge worker, immediate supervisor, and senior leader interaction serves as a way “to stimulate more reflective thought, more critical thought, but also to drive distillation of some of these ideas.” Rich (immediate supervisor) discussed the importance of establishing guidelines but not being overly prescriptive. Rich commented that he and his knowledge workers would “talk through the initial information given about the problem.” Rich avoided comments such as “this is my way, and this is the way it is going to be.” Rich understood that the knowledge workers were the subject matter experts and were “a lot smarter than me, so I may have great ideas in my mind, but that doesn't mean that other people's ideas aren't just as good, if not better.”

George (knowledge worker) acknowledged that with the right parameters and right commander's intent and guidance, the creative team could “run with different ideas and understanding” to produce a novel product. George described a successful planning session when having access to the commander to gain firsthand guidance and support led to creative success. George commented that the knowledge workers “knew what he [the commander] wanted” and the commander assisted the team with the necessary guidance and resources. In the end, George felt that “we [knowledge workers] put a lot of things together that I thought worked well.”

When asked to discuss if bureaucracy influenced creativity, Henry (knowledge worker) stated that commanders' guidance helped to reduce the tension between bureaucracy and creativity by defining bureaucratic constraints. Henry suggested that the commanders' guidance helped to define the bureaucratic structure:

Military bureaucracy gives you a structure that bounds your ability to be effective in the use of creativity; because if you are too creative, you are perceived as the typical "hippy-dippy flower child" who just stares at the sky and dreams.

Edgar (knowledge worker) reiterated the importance of open and constant communications with his immediate supervisor throughout the creative process. Edgar stated that the knowledge workers and immediate supervisor talked and collectively assessed if the creative product was "feasible, acceptable, sustainable, and distinct." Additionally, Edgar commented that the immediate supervisor acted as a safeguard against losing creative objectivity. Edgar argued that "if the planner is inside the problem, he may fall in love with the proposed solution."

Immediate supervisors guided the team through personal leadership. Larry (immediate supervisor) stressed that enhancing creativity relies on leadership. Larry elaborated that it was not just the leader's presence, but rather the leader's ability to maintain an open mind when providing guidance and hearing the knowledge worker's ideas. According to Larry, what is required is "leadership being engaged, but leadership being engaged with an open mind and clearly communicated broad requirements. Because if you have narrow requirements, creativity and narrow requirements—it's a misnomer." Keith (immediate supervisor) also spoke about leadership presence without over managing the knowledge worker, particularly within the incubation and illumination stages of the creative process. For example, Keith described a

specific knowledge worker in the examined organization as “the most creative one of all” workers. Keith commented that this particular knowledge worker “works really well with little intent; I think if you micromanaged him, it wouldn't turn out too well. You're not going to get much creativity by trying to draw some parameters around him.”

Setting expectations through commander guidance is another way the immediate supervisor guides the team to enhance creativity. Allen (knowledge worker) stressed that “sometimes just the expectation of creativity is also good” when commencing the creative process. In addition, Bob (knowledge worker) stated that the immediate supervisor’s role is to ensure that the creative team remains true to the senior leader’s guidance throughout the creative process. Bob commented,

The supervisor, who should have some greater interaction with the ultimate boss, should be able to determine if the solution that was arrived at is going to meet the ultimate authority's expectations. If not, then he can go tell them, "Hey listen, you have done really great work; you did everything that I asked you to do, but this needs to meet the expectations of all of our bosses.”

In the course of the verification stage of the creative process, the immediate supervisor guides the team by providing a safe environment where knowledge workers can present nascent ideas to the senior leader. Monty (immediate supervisor) responded that you must allow the knowledge worker to go to the senior leader with raw ideas. Monty stated, “You have to be willing to go to the boss with some scabs on there [the product] and say, ‘Hey boss, this is not perfect but this may address some of that;’ or ‘Hey boss, this is going to have warts on it.’”

***Empowers the team.*** The *empowers the team* code references how the knowledge worker, immediate supervisor, and senior leader viewed the importance of acknowledging the

team's contributions. When forming the creative team in the preparation stage, the immediate supervisor must empower all members of the planning team through the distribution of creative talent. Nick (immediate supervisor) cautioned that often in creating teams, the members of the team differ to the formally trained knowledge worker, limiting group discourse. Therefore, Nick suggested that "if a team knows that they have a stud 0505 [formally trained military planner], they will defer to him for the lead and heavy lifting. Time permitting, the 0505 may be better suited to teach, coach, and mentor the other members as they take the lead." Similarly, Henry (knowledge worker) provided the following recommendations when forming the creative team: "You have to make sure they [planners] are distributed effectively so that one is not pulling too much of the load." Empowering all the knowledge workers allows for deep thinking within the creative team. Nick added that immediate supervisors "may be surprised at some of the great ideas that come out when our introverts and soft-spoken partners find their voice."

Providing the creative team with autonomy and developing trust also empowers the team. Allen (knowledge worker) commented that providing the knowledge workers with "right tools and then trusting them" and allowing the knowledge workers the time to "figure out some things by themselves instead of sitting on top of them during the whole process" empowers the team and enhances creativity. Edgar (knowledge worker) reaffirmed the importance of autonomy throughout the creative process:

Empowerment is critical, and if the supervisor does not understand that or embrace it and does the opposite kind of thing by trying to take over the process or not act as a facilitator or be a micromanager, if the supervisor does those kinds of things then it is going to cause the team to doubt whether they can be creative; "hey if I am too creative, I am just going to get shot down because my boss has already made up his or her mind."

Immediate supervisors who empower the team to develop the ideas on their own enhance creativity. According to Monty (immediate supervisor), the immediate supervisor needs to guard against jumping too quickly toward the answer and allow the creative team to work toward the creative solution. Monty commented that the immediate supervisor must make sure that the lead knowledge worker “is not so motivated to get to the answer too fast” but takes the time to hear all perspectives. Monty added that during the verification stage of the creative process, the immediate supervisor needs to allow all voices to be heard, regardless of their military position. Monty added that “when a new captain or a passed [for promotion] captain is giving you advice, you can't be like, ‘Hell, what do you know?’ They have their various expertise and you incorporate it.” Henry (knowledge worker) reinforced the importance of including all voices throughout the creative process:

The big thing that I think is important is that you have to make everyone, in any work environment, you have to make everyone feel valued, even the people you think do not provide a lot of value or the people who are maybe a little toxic, or the negative people.

Finally, allowing the knowledge workers to receive the credit for their work fosters trust and empowers the team. Larry (immediate supervisor) commented that during the verification stage, the immediate supervisor must give credit to the creative team: “I know this sounds cliché, but...number one is giving credit [to the team] but assume blame, assume responsibility” for failures. Steve (senior leader) recommended that when possible, “allow them [knowledge workers] to brief the commander. You just need to set the setting—they are the speaker. This will increase their confidence and result in creativity.”

***Serves as a product filter.*** The *serves as a product filter* code illustrates how the knowledge worker, immediate supervisor, and senior leader viewed the immediate supervisor’s

role in product refinement. As part of the verification stage of the creative process, a necessary role of the immediate supervisor is to serve as the creative product filter to ensure that the creative product meets the senior leader's expectation. Henry (knowledge worker) recommended that the immediate supervisor review the creative team's product to "validate the work of the group in reference to the [commander's] vision." Additionally, Denis (knowledge worker) suggested that the responsibility of the immediate supervisor is to "force you to rehearse" before the knowledge worker presents the creative group's findings. Denis stressed that the "best idea will die quickly if you cannot precisely articulate it, and you cannot do it in the way that everybody can understand easily." Larry (immediate supervisor) explained that the role of the immediate supervisor is to set expectations, identify product requirements, and prioritize the work. Larry inferred that he served as the product filter and that during the verification stage he would ask his knowledge workers the following,

OK, you brought me this thing. Does it do "A?" Yeah it does. Good. Do we have the resources to do "A?" Yes, we do - check. Does it do "B?" And to me, what you do is that you weigh that against previously and constantly communicated expectations and limitations, restraints, and constraints.

Another way the immediate supervisor served as the product filter was gathering external examiners. Ian (knowledge worker) recommended the assignment of an independent mediator to serve as a filter, "assigning one individual of the group to critically think about how they [the team] are thinking about things so that we can refine and strengthen whatever solution the team comes up with before they take it to the boss."

***Additional themes.*** Ian (knowledge worker) discussed the importance of having the immediate supervisor aid the knowledge worker while not stifling creativity. Ian described the

creative tension as “a balance because if you are too prescriptive, you're going to limit the team based on your own inherent biases, but you don't want to be so laissez-faire with it that they go off the rails.” Also, Denis (knowledge worker) discussed the balance between being told what to do and the autonomy to work independently commenting: “My boss doesn't need to tell me how to run my group. What I think my boss needs to do is to give me the green light to go out and see what needs to be seen to build the correct context.”

Additionally, Frank (knowledge worker) commented that knowledge workers require guidance, but likewise, need time and space to be creative. When asked specifically what the immediate supervisor can do to enhance creativity, Frank responded:

Get out of the room, and let people actually do their jobs and actually conduct the planning. Come in, give us a little bit of guidance and then leave. So, I think getting to the “ah-ha” moment takes time and then takes understanding from the boss to say, “OK, come in; this is good; this is bad; I'm going to nudge you in this direction; I'm going to nudge you in that direction” and then leaving and then letting people actually do the work. So not micromanaging is very helpful.

Immediate supervisors who took a pragmatic approach to planning enabled creativity. Tim (senior leader) commented that when assessing the creative product as part of the verification stage, the immediate supervisor needs to consider “what makes the most sense pragmatically.” Additionally, Steve (senior leader) stated that “planners also need to find a balance between creativity and the basics. You cannot be all creativity without understanding the basics, or you will not survive the bureaucracy.” Another way the participants viewed the immediate supervisor's role in the creative process was as a leader who encourages



brainstorming. Tim (senior leader) remarked that immediate supervisors should seek out “sideways, fresh thinkers” to address creative problems.

Participants also discussed demonstrating patience as a necessary immediate supervisor trait. Rich (immediate supervisor) mentioned that the immediate supervisor needs “to get people to step back and look at a problem from a wider lens.” Lastly, encourages brainstorming was described by participants as a way to “stumble into the eureka moment.” Tim (senior leader) argued that to encourage brainstorming, the immediate supervisor should not allow “anyone above the rank of lieutenant colonel in the room” if you want sideward thinking.

**Acquires resources.** The seven codes relating to the *acquires resources* category provided positive, negative, and neutral (neither positive nor negative) sentiments on the effect of bureaucracy on creativity. Of the seven *acquires resources* codes, *allocates time*, *connects with experts*, and *allocates resources* emerged as the principal codes in the *acquires resources* category.

**Allocates time.** The *allocates time* code referenced how the knowledge worker, immediate supervisor, and senior leader perceive the impact of time on the creative process. A common participant view when discussing the importance of allocating time to the creative process was providing the knowledge workers uninterrupted time to think while in the incubation and illumination stages. Time is a resource that immediate supervisors need to manage to enable and encourage creativity. Participants commented that given time to discuss divergent ideas aids creativity. Jack (knowledge worker) commented that his immediate supervisor provided the knowledge workers the “time and space to think,” enabling the development of creative products. Jack acknowledged the tension and competition for time and commented that “everyone is busy, and everyone has got tons of stuff on their plate; everyone has a day job, so

coming up with some of these creative ideas sometimes can be taxing on the staff.” Steve (senior leader) commented that “supervisors who set time aside to think about the problem provide an environment that helps the overall creative process by allowing the team the time to develop everyone’s input.” Additionally, Monty (immediate supervisor) added that “the first thing you do is you free them [knowledge worker] from all other distractions.” When asked how the immediate supervisor supports the creative process, Bob (knowledge worker) commented that “the supervisor provides you the time to answer the question that needs to be answered.”

Another immediate supervisor consideration is to schedule uninterrupted time for creative planning to allow for idea incubation and illumination. Frank (knowledge worker) argued that if knowledge workers only meet for a few hours and they return to their daily tasks, then the creative process is hampered:

When you have an OPT [operational planning team], that's like, ‘OK, we're going to meet for two hours on this day in the morning, and then three hours in the afternoon on this day in the same week, but we are only going to go to the conference room down the hall nobody is focused on the problem.

Participants also spoke to the challenges of bureaucratic hierarchy consuming time necessary for creative thinking. Larry (immediate supervisor) stressed that in a bureaucracy, “you lose any freedom to create a timetable,” as the hierarchy controls the timetable for product development. According to Larry, “control of the clock within a bureaucracy is associated with those who can say ‘yes or no,’ and never more so than a bureaucracy as you climb up the ranks.” Larry argued that in a bureaucracy “creativity and time are linked—are inextricably linked.” Larry expanded that in a bureaucracy “you have to reconcile time with options,” but time is exhausted when “you have to pre-brief the boss before he pre-briefs his boss, blah, blah, blah.”

Lastly, Larry stated that “with time permitting, there is no such thing as a wrong answer or a bad idea.”

Immediate supervisors who understand the organization’s tempo and the tension of allocating uninterrupted time for creative work reduce tension among the staff. Denis (knowledge worker) stated that “your boss needs to know the tempo in the environment.” Denis cautioned that if the immediate supervisor has “everybody churning super hard, then they [knowledge worker] are just going to be, you know, answering questions, and they are not going to be thinking stuff through.” Quincy (immediate supervisor) discussed a situation when he attempted to provide his knowledge workers with time to develop creative products that were met with bureaucratic pushback by senior leaders:

"Where is everybody?" "Why is the branch empty?" It is like listen, everyone has got to be out on the job working for people that we need to work with, or we are getting nowhere. "Aww, everybody's just out goofing off." Well actually no, they're not goofing off. This is where they are, this is why they're there, and this is what they're doing. You know, it's very important.

The data suggested that immediate supervisors who allocate time by protecting the knowledge workers from daily distractions enhance creativity. Steve (senior leader) stated that “a key role of the supervisor is to remove busywork that stifles creativity and the creative process.” Allen (knowledge worker) explained that to aid in the creative process, immediate supervisors need to “set aside a specific time with the expectation that this time is to be used for problem solving and being creative.” Allen commented that preparing for the creative process requires time: “I think it is really helpful if you have the luxury of time to get the preparation done so that you ensure people are primed” to commence the creative process. Finally, Quincy

(immediate supervisor) argued that a key responsibility for the immediate supervisor “was fencing off the time and the resources and the opportunities for them [knowledge worker] to go forth and do the things that they saw fit.”

A participant sentiment was that bureaucracies often rush to failure when it comes to creativity. Bob (knowledge worker) commented: “I see it all the time for expediency reasons or just for adherence to doctrine reasons that people will slam someone who is trying to think about something in a new way.” Similarly, George explained that in his organization:

We were always under a timeline, which a lot of times was necessary, but even when it was not necessary, we were under a timeline—seemed like artificial timelines. So in that toxic environment, we did not do what I would consider the best planning. The planning was adequate, but it was not the best. It was not innovative. It was not creative.

Additionally, Denis (knowledge worker) described the negative impact of not allowing enough time to fully develop the creative product. Denis argued that when the immediate supervisor ends the creative process prematurely, the senior leader suffers. Victor (senior leader) remarked, “I think that our process leaves little time for creativity” and that “we do not give people time to go off and do these sorts of things. There is always a rush. It is always, you know, gosh we have to have it now! And when you want it bad, you get it bad.”

***Connects with experts.*** The *connects with experts* code referenced how the knowledge worker, immediate supervisor, and senior leader perceive the role of the immediate supervisor in gathering external experts and information. Within the preparation stage of the creative process, immediate supervisors who connect the knowledge workers with subject matter experts establish group diversity to enhance divergent thinking and the development of novel ideas within the creative team. According to Jack (knowledge worker), “having a diverse set of individuals on

your planning team is important.” Jack warned that knowledge workers need to maintain an open mind and be willing to bring in an external perspective to the creative team:

You know, in the military, we feel like we can come up with our internal answers without outside guidance, but there are a lot of resources within the military and the government that, you know, sometimes you can leverage...especially if you are trying to come up with something completely outside of the box, you have to start from somewhere where you don't normally start from.

Denis (knowledge worker) commented that bringing diversity to the creative team is the responsibility of the immediate supervisor. Denis added that enhancing diversity is a way “the boss can help you to get to the ‘ah-ha’ moment, I think, is to help build your team.” Denis stated that it is the “boss’s responsibility to surround you with people who are suitably thoughtful and rationally argumentative to bring you through the difficult stages of the creative process.” Denis argued that the members of the creative team should not be of the same mind, but knowledge workers should help challenge groupthink:

One of the things I like is friction; if there is no friction, there is no traction. You keep slipping. I think when you build your team, you have to build a foil to whoever is leading. An individual who can help generate that kind of grist of the creative process. It is up to the leader to assign those people to those teams.

Keith (immediate supervisor) acknowledged that the role of the supervisor is to reach out to experts and gather the information that helps the creative team. Omar (immediate supervisor) viewed his role as a “negotiator to try and get as much of the desired capabilities to the scenario” to help the creative process. Similarly, Quincy (immediate supervisor) stated that as the immediate supervisor “you are gathering and gaining the insights and information from higher

and adjacent units that are at least pursuing similar goals.” Quincy cautioned that the immediate supervisor’s responsibility is to bring forth the creative idea, understanding that there may be some opposition:

New people bring new ideas and new perspectives, and that was happening, and then you bring that information back to your command, and they go, “that is dumb; that is not relevant; we are not doing that; we do not need to do that.”

***Allocates resources.*** The *allocates resources* code referenced how the knowledge worker, immediate supervisor, and senior leader perceived the role of the immediate supervisor in the creative process for gathering people, time, and information. Providing the team with resources is a must role for the immediate supervisor during the preparation stage of the creative process. Omar (immediate supervisor) commented that his role was to be both the “negotiator to try and get as much of the desired capabilities to the scenario and salesman to attempt to bring appropriate manpower and gear to the exercise so that the team can work through the concepts that they brainstormed.” Bob (knowledge worker) articulated that his immediate supervisor has to provide “the time and the resources to help deliver the product, so I think the primary role of the supervisor is resource allocation.” Allen (knowledge worker) reaffirmed the role of his immediate supervisor as the individual who “gives him the tools to think creatively a then also having that process manager who mentors you through that process.” Allen described specifically the resources he expects his immediate supervisor to help gather:

Make sure they have got the right tools to do it [creative process]; you know, that would be the people, the time, even whatever IT [information technology] systems you might need to create—whiteboards, or paper, whatever you might need. Make sure those are all available, and then stepping away and giving them the space to do it [creative process],

and then trusting them to come up with something creative.

Quincy (immediate supervisor) recognized that the role of the immediate supervisor was not to be the smartest individual in the room, but rather the role of the supervisor was to enable the knowledge worker through all stages of the creative process through the provision of resources. Quincy argued that the role of the immediate supervisor is to provide the “time and the resources and the opportunities for them [knowledge workers] to go forth and do the things that they saw fit.” Furthermore, Quincy stated his goal was to listen to the knowledge workers to help identify the requirements, assist them in gathering the necessary resources, and then allow the knowledge workers to “approach the problem from the best way that they saw it based on their intimate knowledge.”

***Additional themes.*** An additional sentiment among the participants was that the immediate supervisor plays an important role in providing the knowledge worker space—cognitively and spatially—to think during the incubation and illumination stages of the creative process. Edgar (knowledge worker) commented that knowledge workers need time to think and are the most creative when working “outside of your normal environment.” Edgar added that “just being able to go into a space and concentrate solely on one problem is so important to being able to focus and work through that creative process.”

Participants also commented on the way the immediate supervisor gathers perspectives to encourage divergent thinking. Monty (immediate supervisor) argued that during the preparation stage of the creative process, the immediate supervisor is responsible for gathering subject matter experts with different perspectives. Monty argued that an internal knowledge worker “may not be the best guy because he is marinated in the problem.” Therefore, Monty articulated that immediate supervisors should gather other knowledge workers who are “not enmeshed already in

the problem. Because people who are marinated in the problem are going to give you the same counsel.” Furthermore, Omar (immediate supervisor) warned that “bad creativity always seems to occur when planning in a vacuum, with unclear or conflicting guidance and no cross-checking.” Likewise, Jack (knowledge worker) suggested that to enhance creativity, immediate supervisors should “insert some new flavor in this [creative process] and maybe they [planning team] can come up with something completely outside the box and completely new.”

Creating an environment where divergent thinking can occur is necessary throughout all creative stages is another way the immediate supervisor enabled creativity. Henry (knowledge worker) commented that the creative “environment is about the attitudes being created and the right attitudes are always going to be enabled or exhibited by the person who is in charge.” Henry suggested that to build genuine trust, the immediate supervisor must develop a creative climate outside of the planning team stating that “if it is about creativity and it is about respecting everyone's opinion, then he [immediate supervisor] has to be the [creative] person even when not in that environment.”

Ian (knowledge worker) discussed some practical ways that the immediate supervisor can create an environment for divergent thinking during the incubation and illumination stages of the creative process: “You don't want a schoolroom-like setting; you want a more collaborative, cooperative environment...I think it is the supervisor's role [to ensure] the higher ranks in the room are not dominating the conversation just because of their rank.” Physical conditions also influence the creative environment. Additionally, Frank (knowledge worker) spoke to the value of a relaxed and playful creative environment:

Creating an atmosphere where you're not going to get told to erase funny and silly and creative things, because a comfortable atmosphere where you can still joke around, where



people can be free to put whatever they want on those whiteboards within, you know, professional limits—yeah, to be able to joke around and have that freedom of discussion.

Frank proposed that the immediate supervisor consider all aspects to create a positive environment. Frank suggested, “I am always a big advocate of snacks. Whenever there are snacks involved people are much more willing to chat.”

While in the verification stage, immediate supervisors also play a significant role in examining the creative product through an independent group (e.g., red team) and finding trusted advisors who can examine the knowledge team’s product. Jack (knowledge worker) remarked that “making sure you have a very strong red team that can play devil’s advocate and be that very smart enemy.” Nick (immediate supervisor) commented that he “leaned upon trusted agents for feedback and scrutiny.” When asked what the immediate supervisor should do to help the knowledge worker validate the creative product, Quincy (immediate supervisor) commented that the immediate supervisor should use personal experience, competence, and awareness to “vet it [product],” and seek “advice from other people who had been around for quite a while.”

**Works with the staff.** The five codes relating to the *works with the staff* category provided positive, negative, and neutral (neither positive nor negative) sentiments on the effect of bureaucracy on creativity. Of the five works with the staff codes, *understands consumer requirements*, *builds team consensus*, and *challenges status quo* emerged as the principal codes in the works with the staff category.

***Understands consumer requirements.*** The *understands consumer requirements* code referenced how well the knowledge worker understood the senior leader’s requirements and how the immediate supervisor aided the knowledge worker in validating and presenting the creative product. Omar (immediate supervisor) commented that the immediate supervisor aides the

creative process in the preparation stage by finding out the consumer requirements and investing time to “research on the front end to figure out what exactly the question, problem, dilemma is and what can be reasonably ‘thrown against it’ in terms of capabilities, time, and desired end state.” Steve (senior leader) added that in the preparation stage, “planners need to feel the commander out and sense his wants” when starting to frame the problem.” Keith (immediate supervisor) added that the immediate supervisor needs to “track down the people who talk to the boss the most to figure out if he [the senior leader] needs anything else.” Patrick (immediate supervisor) described a time when he sat in a planning team, and witnessed the creative process operating outside of the senior leader’s guidance:

I do not know how things work here, but I know that is not [the commander’s direction].

They are not going to get to any of the conclusions that I think the commander wants because they are not using the guidance that was initially given.

Understanding how the senior leader prefers to receive and processes information is a cognitive component of understanding the consumer requirements and vital during the verification stage of the creative process. Keith (immediate supervisor) stated that the immediate supervisor needs to facilitate the knowledge worker's interaction with “the person or organization that is laying out that requirement to understand how the person [senior leader] likes to receive the information.” Monty (immediate supervisor) explained that knowledge workers are not always skilled at final product presentation. Monty elaborated that knowledge workers get to detail and “want to build a house, and the boss does not need that. He [senior leader] needs to understand what you are accomplishing.” Keith explained how he approached refining the creative product during the verification stage to meet the senior leader’s decision making style:

I figured out how he [senior leader] liked to receive information; how he did not like to

receive information, and then what we did is we said, “OK, whose strengths and weaknesses within our group can provide the best options to meet that requirement.”

Responding to how he preferred to receive the creative product, Victor (senior leader) commented that the product “may not be the most creative idea, but if you can explain it well and you can articulate it well, it is probably going to pass.” Furthermore, Victor commented that a well explained idea “can be valuable in steering creativity, as opposed to a perfect idea poorly explained.”

***Builds team consensus.*** The *builds team consensus* code illustrates how well the knowledge worker understood the senior leader’s requirements and how well the knowledge worker and the immediate supervisor worked with the organization’s stakeholders before the verification stage of the creative process. The creative process in bureaucratic organizations requires consensus building, especially as part of the verification stage. According to Denis (knowledge worker), “the bureaucratic process is inherently a consensus building process. Instead of just one bright person who can run the ball all the way down the field, you have to gain consensus from all the other players to make progress.” Quincy (immediate supervisor) describes the immediate supervisor’s role as “trying to walk that narrow lane of advocacy that didn't alienate or create animosity” within the organization. Quincy elaborated that as an immediate supervisor “you are always trying to facilitate a middle ground that people can embrace rather than shun and generate some momentum that allows you to move your ideas forward.” Additionally, Patrick (immediate supervisor) added that to build consensus, he would:

Take the information, incorporate it, send it back out, take a cut, and then if you [the staff] are happy, you do not need to reply. If you [the staff] have questions or concerns, come see me. So, before I turn anything in, I let the staff take a look at it.

*Challenges status quo.* The *challenges status quo* code captures how well the knowledge worker, the immediate supervisor, and senior leaders questioned organizational thinking and doctrine during the incubation and illumination stages of the creative process. Carlos (knowledge worker) recommended that in the incubation and illumination stages, the knowledge worker must “get away from rote thinking” and challenge the status quo to promote creativity. Carlos stated that the immediate supervisor needs to identify “someone who challenges the traditional understanding to guide people to think about something in a new way.” Patrick (immediate supervisor) added that he would encourage the knowledge workers to debate him and that he would “play devil's advocate” to increase deep thinking. Similarly, Tim (senior leader) gave his new knowledge workers the following guidance: “Do not be afraid, and I never would question anyone for taking the initiative and coming up with something that was way outside” the institutional paradigm. Furthermore, when asked to characterize the chief cause of enabling or limiting creativity, Ulysses (senior leader) commented:

I think they [knowledge workers] are unique. They challenge the system. So, we have a doctrine on how you are supposed to do things. The Marine Corps has the Marine Corps Planning Process. They [knowledge workers] will challenge that [military doctrine] all the time. They are not afraid to challenge senior leaders, and I think that is probably the most important thing. They are not afraid to challenge senior leaders, and not in a disrespectful way, but in a way where people think about the problem set.

Lastly, when asked what single piece of advice, he would give a new immediate supervisor joining his command, Steve (senior leader) commented that he would tell the supervisor “not be intimidated by your talented team,” and to “accept that some of their people will be smarter than they are in a given subject.”

*Additional themes.* An additional sentiment among the participants was the importance of the immediate supervisor as someone who advocates for the team. Omar (immediate supervisor) commented that during the verification stage of the creative process once the team has developed the product, the immediate supervisor's role is to "act the part of the salesman to attempt to gain the commander's concurrence." Quincy (immediate supervisor) commented that the immediate supervisor's responsibility is to advocate for the team to "show that there is loyalty and support, regardless of how hostile the bureaucracy might be." Lastly, Patrick (immediate supervisor) noted that even if he had a different opinion from the knowledge workers, he would advocate for the team and say "Sir, this is what I think, but this is what the staff came up with." Patrick argued that if the knowledge workers believed that the immediate supervisor was supportive, the knowledge workers will "continue to engage me and give me their full opinion."

Another sentiment among participants was that the immediate supervisor protects the knowledge workers. Larry (immediate supervisor) stated that the role of the immediate supervisor during the verification stage of the creative process is to "protect your planners and protect their initiative." Quincy (immediate supervisor) added that to advance the creative process, the immediate supervisor needs to provide knowledge worker "top cover" and "show good faith" by taking the product to the senior leader. Quincy added that even if the senior leader rejects the product, the message to the knowledge worker is "I am your advocate; I am in your corner; and I support you."

### **Themes**

Creswell (2013) states that "themes in qualitative research (also called categories) are broad units of information that consist of several codes aggregated to form a common idea" (p.

186). Through open and axial coding, the researcher examined data collected from 22 interviews for patterns and commonality, leading to 45 codes. The data driven analysis of the 45 codes resulted in the emergence of three themes relevant to the two research questions: (1) How does the military organizational design (i.e., bureaucracy) influence the creative process? and (2) How do leaders amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process? The three themes describing how military design and the immediate supervisor influence creativity were: (a) works within the organizational paradigm to reduce creativity tension, (b) develops trust and psychological safety to increase divergent thinking, and (c) cognitively and physically guides to achieve goals.

### **Theme 1: Works within the Organizational Paradigm to Reduce Creativity Tension**

Research participants asserted that hierarchical chains of command, strict adherence to orders, and doctrine led to tension between creativity and military cultural norms. Jack (knowledge worker) and Frank (knowledge worker) remarked that military design stifled creativity. Jack added that a common sentiment in the organization was that “this is how we have always done it; therefore, we should just keep doing it this way.” Frank added that some immediate supervisors are doctrinally rigid and unwilling to break from the process, stating that “you have your doctrinaire chaps that are like, ‘No, well it has to be this way,’ or ‘Our problem statement must be in the frame of a problem, and it must only be one sentence, and it can't be a paragraph or a narrative.’”

Participants alluded to the effect bureaucratic centralization, specifically hierarchical position had on the creative process. Monty (immediate supervisor) stated that the immediate supervisor must be willing to use his position and access and take the raw product to the senior leader for guidance and say, “Hey boss, this is not perfect,” when presenting the creative team’s

product. Additionally, Omar (immediate supervisor) commented that the immediate supervisor's role is to "act the part of the salesman to attempt to gain the commander's concurrence" on the creative product. Within the organizational paradigm of centralization, some participants viewed leaders as gatekeepers who were enablers or barriers to creativity. From the enabler viewpoint, Larry (immediate supervisor) remarked that knowing who the gatekeepers are in the organization helps the knowledge worker navigate the creative process "because you know who can say yes and you know who can say no." In contrast, some participants viewed gatekeepers as risk adverse and suppressors of creativity. For instance, Keith (immediate supervisor) argued that bureaucracies create "an environment that is risk averse." Keith added that some leaders are reluctant to speak outside of accepted norms, especially when presenting ideas that suggest a change, saying, "bureaucracies are resistant to change."

Organizational bureaucracy aligns the creative team's thinking and provides creative freedom. George (knowledge worker) stated the military organization purposefully tries to align the thinking of its members by training toward a common goal. Ian (senior leader) remarked that the doctrine taught in formal schools informs our planner's thinking, but doctrine is "a jump off point versus what is going to happen pragmatically." Additionally, some participants commented that bureaucratic centralization provides job security that provides the knowledge worker creative freedom. According to Allen (knowledge worker), bureaucracies increase creativity because "you have job security so that bureaucracy gives you that security and that security allows creativity." Also, Quincy (immediate supervisor) commented that in bureaucracies the decision rests with the senior leader and "the worker does not own the decision, so he or she is able to be as creative as necessary."

Complementing bureaucratic centralization, formalization also impacted organizational creativity. Study participants commented that the military bureaucracy provided boundaries and a framework that helped to define the knowledge worker's creative space. Keith (immediate supervisor) stated that the immediate supervisor bounds the creative process by visiting the planning team and providing guidance. Patrick (immediate supervisor) asserted that military bureaucracy provides a framework, but Patrick added that “what you do inside of that framework really is based on the creativity that your leader or commander allows.” Additionally, Edgar (knowledge worker) opined that immediate supervisors acted as a creativity “rheostat [equilibrium]” balancing the knowledge workers’ findings and recommendations with the organization’s appetite for new and novel products.

Several participants stated that bureaucratic formalization influenced process flexibility and led to creativity constraints. Carlos (knowledge worker) commented that bureaucracy limits creativity “because you have to stay within certain boundaries.” Also, George (knowledge worker) argued that the bureaucratic process resulted in directed tasks that did not provide the knowledge worker with the freedom of original thought. Regarding the influence of constraints, Victor (senior leader) said, “I think on those rare occasions when we have tended to step back and say, ‘Hey, what if we were unconstrained in terms of time or even the product itself. What could we do, what could we think of?’” In contrast, Omar (immediate supervisor) commented that constraints allow employees to know “what is realistic and what is not based upon a host of other competing factors.”

## **Theme 2: Develops Trust and Psychologically Safe Environments to Increase Divergent Thinking**

Critical to increasing divergent thinking was inspiring trust and psychological safety with the knowledge worker. A way the immediate supervisor inspired trust was by exhibiting



personal competency. According to Bob (knowledge worker), a “supervisor has to have enough experience within the community to have a greater understanding than his subordinates, ideally, of what might be implied in the task” that has been assigned. Quincy (immediate supervisor) commented that the immediate supervisor’s “experience, competence, awareness, and understanding” are vital when helping the team enhance the creative process. Also, the immediate supervisor inspired trust through building rapport with knowledge workers by getting to know the workers as individuals and not forgetting that creativity is a human endeavor. Steve (senior leader) affirmed this perspective when he said, “Supervisors that get to know their people on a personal basis—beyond the basic information in their record books—are better able to show that they care and motivate their workers to be more creative.” Patrick (immediate supervisor) added that he built rapport with his knowledge workers by encouraging them and learning “what they do from their perspective because if I do not understand their perspective or how they think, I can't give them good guidance, and we'll be out of synch.”

Immediate supervisors developed trust by coaching their knowledge workers, providing access to the commander to gain guidance, and empowering the creative team. Carlos (knowledge worker) described the role of his immediate supervisor as responsible for getting “information, guidance, and direction straight from the person that I directly support.” Jack (knowledge worker) commented that “having that commander come in, or supervisor, and provide that guidance upfront” is critical when trying to develop something new or “something completely outside-of-the-box.” Furthermore, through team empowerment and providing autonomy, the immediate supervisors enhanced trust with the knowledge worker to increase divergent thinking. Edgar (knowledge worker) commented that:

Empowerment is critical, and if the supervisor does not understand that or embrace it and does the opposite kind of thing by trying to take over the process or not act as a facilitator or be a micromanager, if the supervisor does those kinds of things then it is going to cause the team to doubt whether they can be creative; “hey if I am too creative, I am just going to get shot down because my boss has already made up his or her mind.”

Lastly, Steve (senior leader) recommended that when possible empower the team and “allow them [knowledge workers] to brief the commander. You just need to set the setting—they are the speaker. This will increase their confidence and result in creativity.”

Immediate supervisors enhanced knowledge worker psychological safety by encouraging open and unfettered discourse among the creative team and creating a safe environment where the knowledge worker openly presented divergent ideas that challenged organizational paradigms. Denis (knowledge worker) remarked that the benefit of a safe environment where the immediate supervisor builds rapport with the team is that “you can have a crazy idea and not feel personally ostracized.” Denis noted that the only way you are going to create a safe setting for creativity is “having a boss who is willing to set that environment, so there is no intellectual bullying going on within the workspace.” Ian (knowledge worker) commented that the supervisor must balance the open flow of ideas “without going too far down a rabbit hole,” to enable the knowledge worker to feel comfortable brainstorming. Ian argued that “allowing that [brainstorming] to happen a lot of times will spark a creative thought in someone else.”

Additionally, Monty (immediate supervisor) stated that “the first thing you do is you make sure you get the right people in the room” and create a safe environment for sharing of ideas while maintaining civility. Monty argued that “you can't have people who are going to be offended. At the same time, you can't let people treat people poorly; you have to have camaraderie on the

team.” Lastly, Tim (senior leader) encouraged his new knowledge workers with the following guidance: “Do not be afraid, and I never would question anyone for taking the initiative and coming up with something that was way outside” the institutional paradigm.

### **Theme 3: Cognitively and Physically Guides to Achieve Goals**

Through experience, hierarchical position, and access to resources, immediate supervisors guided the knowledge worker toward achieving organizational goals.

Quincy (immediate supervisor) commented that the immediate supervisor uses personal experience, competence, and awareness to “vet it [product],” and seek “advice from other people who had been around for quite a while.” Omar (immediate supervisor) commented that the immediate supervisor aides the creative process by using his hierarchical position to find out the consumer requirements and investing time to “research on the front end to figure out what exactly the question, problem, dilemma is and what can be reasonably ‘thrown against it’ in terms of capabilities, time, and desired end state.” Additionally, Quincy (immediate supervisor) described the immediate supervisor’s role as “trying to walk that narrow lane of advocacy that didn’t alienate or create animosity” within the organization. Finally, Omar commented that his role was to be both the “negotiator to try and get as much of the desired capabilities to the scenario and salesman to attempt to bring appropriate manpower and gear to the exercise so that the team can work through the concepts that they [creative team] brainstormed.” Allen (knowledge worker) reaffirmed the role of his immediate supervisor as the individual who “gives him the tools to think creatively a then also having that process manager who mentors you through that process.”

The immediate supervisor provides cognitive support to the knowledge worker by allowing the creative team space to think. Jack (knowledge worker) commented that his

immediate supervisor provided the knowledge workers the “time and space to think” to enable the development of creative products. Steve (senior leader) commented that “supervisors who set time aside to think about the problem provide an environment that helps the overall creative process by allowing the team the time to develop everyone’s input.” Also, Monty (immediate supervisor) added that “the first thing you do is you free them [knowledge worker] from all other distractions.” Knowledge workers described being the most successful when working outside of their everyday work environment. In such cases, the immediate supervisor created space for knowledge worker creativity by sheltering the creative team from the strains of bureaucracy. A key aspect of cognitive space was the provision of uninterrupted time when the knowledge workers could collaborate without being distracted. Steve (senior leader) stated that “a key role of the supervisor is to remove busywork that stifles creativity and the creative process.” Allen (knowledge worker) explained that to aid in the creative process, immediate supervisors need to “set aside a specific time with the expectation that this time is to be used for problem solving and being creative.”

Equally important, the immediate supervisor enabled the creative process through the acquisition of physical resources. The resources included subject matter experts who provided diverse ideas. Denis (knowledge worker) commented that bringing diversity to the creative team is the responsibility of the immediate supervisor. Denis added that enhancing diversity is a way “the boss can help you to get to the ‘ah-ha’ moment, I think, is to help build your team.” Denis stated that it is the “boss’s responsibility to surround you with people who are suitably thoughtful and rationally argumentative to bring you through the difficult stages of the creative process.” Finally, Allen (knowledge worker) commented that he expects his immediate supervisor to help gather the people, information technology systems, and supplies necessary for the creative team

to function. Frank (knowledge worker) added that creating an environment “where you're not going to get told to erase funny and silly and creative things” enables a comfortable cognitive and physical environment where creativity grows.

### **Evidence of Quality**

Throughout the dissertation process, the grounded theory methodology was followed as described by Corbin and Strauss (2015) aimed at establishing credibility, transferability, dependability, and confirmability. Furthermore, Creswell’s (2013) recommendation of triangulation was applied as a form of data collection.

- **Credibility.** To ensure credibility, verbatim quotes were used where possible to ensure the participants’ words and sentiments added credibility to the research findings.
- **Transferability.** The participants represented knowledge workers from the organization’s strategy and plans division. All interviewees were active duty or retired military officers. Additionally, a non-experimental data collection methodology was followed adhering to the organization’s standing procedures. As the studied organization was a standard mid-level Marine Corps headquarters, the research methodology and findings are transferable to similar military organizations.
- **Dependability.** The 22 interviews, the observation of two knowledge worker planning sessions, and a review of 10 organizational documents contributed to the study’s dependability. The data collected from the three varied sources allowed for data triangulation and an assessment of dependability. Understanding the potential for research reflexivity and to maintain a self-critical account, the investigator acknowledged that his experience as a knowledge worker and intermediate supervisor

might have shaped research findings. Before initiating the coding process, biases and preconceived notions were bracketed.

- **Confirmability.** Three independent professors reviewed the methodology and findings. A subject matter expert on the subject of creativity served as a third reader. An expert qualitative methodologist reviewed the interview protocol and assisted in the coding, and the committee chair served as the final reviewer to ensure research confirmability.

### **Summary**

Through a grounded theory approach to analyze the collected data on MARCENT's knowledge workers, the researcher examined the influence between the immediate supervisor and the knowledge worker throughout the creative process. Specifically, the study examined the influence of military organizational design on the creative process and how leaders enable knowledge worker creativity within the military bureaucratic paradigm. Data from the interviews were collected and cross referenced with data collected from the knowledge worker observations and organization document review. Using a semi-structured, seven question interview protocol, 22 members who had been solicited to participate in the study were interviewed. Two knowledge worker planning sessions were observed, and 10 military knowledge worker publications were reviewed.

Using NVivo 12 qualitative analysis software, the preliminary data coding led to the assignment of 127 codes which had been referenced 621 times during the interview process. Through a constant comparison methodology, the researcher consolidated the codes from 127 codes to 45 codes and aligned the 45 codes into six categories. The six categories were: *performance coach, inspires trust, acquires resources, formalization, centralization, and works*

*with the staff.* The data were examined for patterns and commonality, resulting in the emergence of three themes describing how military design and the immediate supervisor influence creativity: (a) works within the organizational paradigm to reduce creative tension, (b) develops trust and psychologically safe environments to increase divergent thinking, and (c) cognitively and physically guides to achieve goals. The research findings, study limitations, implications for future practice, and recommendations for future research are discussed in chapter V.

## CHAPTER 5: DISCUSSION

### **Introduction/Statement of the Problem**

Although creativity remains essential to the way organizations operate, a tension exists between the desire to develop new products and the bureaucratic organizational design (Florida, 2011). Organizations that provide resources and create environments that enable worker creativity “will have an edge in attracting, managing, and motivating creative talent” (Florida, 2011, p. 26). This study was aimed to advance the literature on creativity in the workplace through an examination of the military design and knowledge worker creativity. Specifically, the purpose of this grounded theory study was to understand how the military design (i.e., bureaucracy) influences creativity and how leaders enhance or mitigate knowledge worker creativity throughout the creative process in bureaucratic organizations.

### **Methods of Data Collection**

The grounded theory approach was used to develop a theory and to present the findings in a manner that went beyond problem description and toward a practitioner’s theory (Neff, 1998). The study consisted of interviews, observations, and document reviews. The interview participants were from the MARCENT G-5 Plans and Strategy Directorate. The G-5 is the staff section responsible for the development of organizational knowledge-based products that support strategic plans and key leader engagements. Through purposeful theoretical sampling, 25 members were solicited, resulting in 22 respondents who agreed to participate. Of the 22 participants, 10 knowledge workers, eight immediate supervisors, and four senior leaders were interviewed.

The study methodology also consisted of observations of the MARCENT knowledge worker planning sessions. The purpose of the observations was to gather data on knowledge



worker planning events to allow for data comparison between the interview session findings and the knowledge worker sessions. Two MARCENT planning group sessions were observed. The MARCENT planning group sessions consisted of knowledge workers from the G-1 (Admin), G-2 (Intelligence), G-3 (Operations), G-4 (Logistics), G-5 (Plans and Strategy), G-6 (Communications), Staff Judge Advocate Office, and Surgeon's Office. Lastly, the data collection included 10 military and organizational documents comprised of military doctrine and planning directives.

To ensure data credibility, verbatim quotes were used to capture the participants' sentiments. Additionally, subjects who were active duty or retired military officers were purposively solicited to allow for research transferability to similar organizations. Using data triangulation comprised of interviews, observations, and document reviews, research reliability was increased. Lastly, throughout the research process, three independent professors reviewed the methodology and findings.

### **Summary of Results**

NVivo 12 qualitative analysis software was used to analyze the data. The open coding sessions led to the assignment of 127 codes that had been referenced by participants a total of 621 times during the interview process. Through a constant comparison methodology, the study codes were consolidated, which resulted in a reduction from 127 codes to 45 codes. Additionally, the code references were reduced from 621 to 562 code references. The remaining 45 study codes and 562 references were aligned according to six categories: *performance coach*, *inspires trust*, *acquires resources*, *formalization*, *centralization*, and *works with the staff*.

*Performance coaching* includes the way a leader defines the problem, sets expectations, guides the team, and assesses the knowledge worker throughout the creative process. The

category of *inspires trust* characterizes the way a leader encourages, supports, enables, and protects knowledge workers to create an environment where divergent thinking can grow. The category *works with the staff* contains the way the leader gathers information from the customer, reduces organizational tension, protects the knowledge worker, and provides feedback to the customer. The *acquires resources* category comprises the way a leader aids the knowledge worker throughout the creative process by obtaining physical resources and providing cognitive support. According to Hirst et al. (2011), *formalization* is how an organization utilizes rules and processes to meet its objectives, and *centralization* is how the organization's leadership distributes power and authority and makes decisions. Lastly, the way the leader gathers information from the customer, reduces organizational tension, protects the knowledge worker, and provides feedback to the customer characterizes the *works with the staff* category.

An examination of the 45 study codes and six categories for patterns and commonality gave rise to three themes: works within the organizational paradigm to reduce creativity tension, develops trust and psychologically safe environments to increase divergent thinking, and cognitively and physically guides to achieve goals. The three themes demonstrate how military design and the immediate supervisor influence creativity. Immediate supervisors who worked within the centralization and formalization paradigms and understood military design constraints were able to identify obstacles, tension points, and opportunities which enabled knowledge worker creativity throughout the creative process. Also, immediate supervisors who effectively coached and built trust relationships with their planners increased open discourse among the creative team and with senior leaders. The open discourse led to a perception of knowledge worker trust and psychological safety that increased knowledge worker divergent thinking

necessary for creativity. Last, immediate supervisors who used their experience and hierarchical position guided and provided their knowledge workers cognitive support and physical resources.

### **Discussion by Research Question**

The purpose of this grounded theory study was to understand how the military design (i.e., bureaucracy) influences creativity and how leaders enhance or mitigate knowledge worker creativity throughout the creative process in bureaucratic organizations. Research question one was an inquiry on how the military bureaucracy influenced the creative process; specifically, the study examined how hierarchy, strict adherence to orders, doctrine, and established paradigms affected the interaction between the knowledge worker, immediate supervisor, and senior leaders throughout the creative process. Research question two was a study on how immediate supervisors influenced the workplace environment and amplified or mitigated the effects of bureaucracy on the creative process.

#### **Research Question 1: How does the military organizational design (i.e., bureaucracy) influence the creative process?**

The data suggest that the military organizational design (i.e., bureaucracy) both positively and negatively influences how the knowledge worker conducts the creative process. Specifically, knowledge workers, immediate supervisors, and senior leaders commented that the military organizational designs of hierarchy, strict adherence to orders, doctrine, and established paradigms affected the creative process. Leaders who were able to navigate the bureaucratic landscape (e.g., centralization and formalization) influenced the creative process.

**Finding 1.1: Supervisor behavior is paramount in enabling creativity.** The data suggested that the behavior of the immediate supervisor and senior leader was the leading influencer that aided the knowledge worker through each stage of the creative process. When asked to recall a positive or negative example of creativity, participants commonly responded

that the immediate supervisor's behavioral response, not the bureaucracy, was the dominating factor during the creative process.

*Discussion 1.1.* A senior leader commented that “bureaucracy and process are neutral. It is the people in the bureaucracy—the people in the process—that can make it good or bad.” The influence of the leader's behavior was evident during all four stages of the creative process. First, in the preparation stage, immediate supervisors who possessed social awareness and recognized the senior leader's intent and vision were able to provide the appropriate level of guidance to the creative team. When asked to explain what knowledge workers expect from the immediate supervisor during the preparation stage of the creative process, a knowledge worker stated that the immediate supervisor is responsible for “setting expectations and getting initial guidance” from the commander. Responding to the same question, an immediate supervisor commented that the immediate supervisor's responsibility is “giving them [knowledge worker] the end state and not telling them this is how I want you to do it [solve the problem], but this is what we need to get in the end.”

Second, in the incubation and illumination stages, immediate supervisors who possess the self-awareness to recognize that the knowledge workers are the subject matter experts enable creativity. A knowledge worker commented that “any supervisor who assumes that they know everything is probably going to be problematic for a subordinate team.” Another knowledge worker stated that his immediate supervisor provided the knowledge workers “an open-ended problem” and the immediate supervisor provided the team “a week to think about it.” Additionally, immediate supervisors who provide the knowledge workers with the commander's guidance and the time for divergent thinking, enable creativity. A knowledge worker commented that what the knowledge worker requires from his immediate supervisor is guidance

but not micromanagement. The knowledge worker stated that the immediate supervisor needs to “get out of the room and let people do their jobs.” The knowledge worker added that “getting to the ah-ha moment takes time,” and a supervisor who is willing to guide you, “nudge you” along, and provides the time to do the work, enables creativity.

Third, in the verification stage of the creative process, immediate supervisors who maintained the social awareness to recognize the staff’s concerns and acted as the creative team’s sponsor facilitated the creative process. An immediate supervisor commented that the supervisor’s responsibility is to “facilitate a middle ground that people [the staff] can embrace.” To build staff consensus, another immediate supervisor stated that he would send the creative product out to the staff for review before the final presentation with the following guidance, “If you [the staff] have questions or concerns, come see me.” Last, the military doctrine review and the observations of the knowledge workers supported the finding that supervisor behavior is paramount in enabling creativity. According to *The Red Team Handbook* (Department of the Army [DOA], n.d.), leaders who are self-aware and understand their team’s personality better enable collaboration and idea creation.

Additionally, the observations of the MARCENT planning group validated the findings that immediate supervisors who possessed self-awareness and recognized the expertise of the knowledge worker promoted open discourse and divergent thinking. Specifically, during the observation of the MARCENT planning group, the researcher noted that the immediate supervisor encouraged knowledge worker participation and urged the members to challenge his position.

**Finding 1.2: Organizational hierarchy and creative autonomy can coexist.** The military organizational design is grounded on strict adherence to the chain of command. The

chain of command is the formal way the senior leader exercises organizational authority and makes decisions. The research participants were all part of the examined organization's chain of command, and as such, the participants were governed by the organization's rules, regulations, and customs. Despite Amabile et al.'s (1996) contention that workers who have relatively high levels of autonomy are more likely to be more creative, the military chain of command and knowledge worker autonomy are not mutually exclusive. Participant comments, observation data, and doctrinal reviews suggest that adherence to the military chain of command and divergent thinking are complementary and, if properly nurtured, can promote creativity.

*Discussion 1.2.* When asked if bureaucracy positively or negatively influences creativity, a knowledge worker inferred that the relationship between bureaucracy and the perception of creativity depends on a leader's rank and position (i.e., chain of command). The knowledge worker commented that "it just depends on where you sit within the process." The influence of the chain of command was evident during all four stages of the creative process. In the preparation stage, immediate supervisors who used their position and organizational tenure were able to gather the appropriate resources necessary to support the creative process. A knowledge worker discussed time as a critical resource and commented that immediate supervisors who make creativity a priority and provide their knowledge workers with time to think enable the creative process.

Another way the immediate supervisor uses military rank and position to help the preparation stage of the creative process is gathering subject matter experts to encourage divergent thinking. A knowledge worker commented that there are many resources within the military and the government that the immediate supervisor can leverage "if you are trying to come up with something completely outside of the box." Also, the immediate supervisor's

position enabled access to the senior leader and internal and external subject matter experts. A knowledge worker described the role of the immediate supervisor as responsible for getting “information, guidance, and direction straight from the person that I directly support.”

To enable knowledge worker creativity during the incubation and illumination stages of the creative process, immediate supervisors who used their positional authority and provided the necessary “top-cover” that allowed the creative team time and space to think enhanced the creative process. A knowledge worker explained that the immediate supervisor must provide the creative team with space to “get a little bit off track at times without going too far” with the understanding that “maybe it [creative idea] is not the 100% solution, but it might get you to the ah-ha moment.” Another knowledge worker stated that the immediate supervisor serves as the equilibrium between finding “a solution that works, but not being so far outside the realm of possibility that you are proposing infeasible solutions.” Also, to maintain a creative focus during the incubation and illumination stages, a knowledge worker spoke about the importance of immediate supervisors providing uninterrupted time for creative work and not “two hours on this day in the morning, and then three hours in the afternoon on this day in the same week.”

By design, the military chain of command structure establishes organizational gatekeepers, decision makers, and staff equities. Immediate supervisors who used their position and influence to navigate the military paradigm enabled knowledge worker creativity. For instance, an immediate supervisor remarked that “once the team has a reasonably solid plan,” the immediate supervisor advocates for the team and attempts to “gain the commander's concurrence.” Additionally, the immediate supervisor aids the knowledge worker with preparation of products to meet the senior leader’s expectations. An immediate supervisor argued that “a lot of people who are creative are not good at presenting the information” in the

way that the boss understands. Another way the immediate supervisor navigates the military paradigm is the supervisor's willingness to use his position to take the raw product to the senior leader for guidance and say, "Hey boss, this is not perfect," when presenting the creative team's in-process product.

The observations of the MARCENT planning group supported the finding that organizational hierarchy and creative autonomy can coexist. During both observed planning groups, the immediate supervisor leveraged the military organizational hierarchy to gather internal and external subject matter experts to support the creative process. The MARCENT planning group sessions had internal subject matter experts who represented the MARCENT staff sections. Additionally, during one of the MARCENT planning group sessions, the immediate supervisor invited an external subject matter expert speaker who provided the MARCENT knowledge workers with a presentation to address an organizational planning requirement.

**Research Question 2: How do leaders amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process?**

Study participants affirmed that the immediate supervisor and knowledge worker trust relationship influenced how the knowledge workers approached the creative process. The data suggested that the role the immediate supervisor played in the coaching and mentoring of the knowledge worker fostered the expectancy of creative support. The data showed that immediate supervisors enabled the creative environment by supporting the knowledge worker's cognitive processes, acquiring physical resources, and working with colleagues and senior leaders. Participant referenced codes support the finding that leaders who create a path for their



knowledge workers and increase the expectancy of creative support influence the creative process.

**Finding 2.1: Trust relationships increased the expectancy of creative support.** The senior and subordinate relationship inherent in the military organization develops a trust relationship between the supervisor and worker. The data indicates that immediate supervisors who balanced their involvement throughout the creative process, listen actively, and use an open feedback leadership methodology enhanced knowledge worker expectancy of creative support.

*Discussion 2.1.* The 26th Secretary of Defense, General Jim Mattis, advocated for a coaching leadership approach to build trust, promote initiative, and facilitate success in subordinates (Mattis & West, 2019). Mattis and West (2019) added,

When they make mistakes while doing their best to carry out your intent, stand by them.

Examine your coaching and how well you articulated your intent. Remember the bottom line; imbue in them a strong bias for action (p. 44).

The data concludes that the immediate supervisor's involvement throughout the creative process requires trust that balances autonomy and micromanagement. Immediate supervisors who provide their workers high levels of autonomy will encourage creativity (Amabile et al., 1996). An immediate supervisor observed that "if you are too prescriptive, you're going to limit the team based on your own inherent biases, but you don't want to be so laissez-faire with it that they go off the rails." A knowledge worker commented that the immediate supervisor should "act as a facilitator" and not a micromanager.

Trust relationships between the immediate supervisor and knowledge worker that led to the knowledge worker's expectancy of creative support was evident during all four stages of the creative process. Initially, in the preparation stage, immediate supervisors increased knowledge

worker's expectancy of creative support by getting to know their workers. For example, an immediate supervisor commented that supervisors who "get to know their people on a personal basis—beyond the basic information in their record books—are better able to show that they care and motivate their workers to be more creative." Also, immediate supervisors advanced the knowledge worker's expectancy of creative support by fostering a psychologically safe environments where trust relations were built. An immediate supervisor commented that "workers will be more comfortable being open if they are not afraid to speak the truth." In the incubation step, immediate supervisors increased the expectancy of creative support by helping the worker develop a path toward idea generation. A knowledge worker declared that the immediate supervisor's responsibility was "helping to frame the problem and then communicate their thoughts and allow a kind of open sharing of ideas." Next, during the incubation and illumination stages of the creative process, immediate supervisors enhanced knowledge worker's expectancy of creative support by fostering safe environments where knowledge workers were free from fear to openly share ideas. An immediate supervisor commented that letting the knowledge workers come to their conclusions and encouraging them to "say what they want to say" enhances trust and the expectancy of creative support. Immediate supervisors who empowered the knowledge workers advanced the expectancy of creative support during the incubation and illumination stages. A knowledge worker commented that immediate supervisors who did not empower the creative team and did not encourage them to think broadly would "cause the team to doubt whether they can be creative." Additionally, an immediate supervisor stated that the supervisor's responsibility is to listen and allow the creative team "to approach the problem from the best way that they saw based on their intimate knowledge" of the problem. Then, during the verification stage of the creative process, immediate supervisors who guided the

knowledge worker and provided feedback during the final product refinement increased the expectancy of creative support. A knowledge worker commented that his immediate supervisor was “receptive enough to hear out the concept” necessary to improve the product.

Last, the review of military doctrine and the observations of knowledge workers corroborated the finding that trust relationships increased the expectancy of creative support. According to *Techniques for Effective Knowledge Management* (ATP 6-01.1; Department of the Army [DOA], 2015), commanders facilitate command climates that promote or hinder mutual trust. Additionally, *Command and Control* (MCDP 6; Department of the Navy [DON], 1995) states that supervisor trust enables worker confidence in that subordinates trust that their supervisors “will provide the necessary guidance and will support them loyally and fully, even when they make mistakes” (p. 114). Finally, during the observations of the MARCENT planning group, the immediate supervisor advanced the knowledge workers’ expectancy of creative support by establishing a psychologically safe environment that encouraged debate and idea generation.

**Finding 2.2: Immediate supervisors leverage bureaucracy to enable an environment that promotes creative thinking.** Doctrine, directives, and organization processes drive how military organizations conduct daily operations. Creativity and innovation literature suggest that creativity is enhanced by environments that promote spontaneity, and that structured systems and methods cannot be creative (Rietzschel, Slijkhuis, & Van Yperen, 2014). However, research participant sentiments and the examined organizational documents suggest that military bureaucratic structures can enhance environments that promote creativity and deep thinking.

**Discussion 2.2.** Military doctrine and organizational processes provide boundaries and frameworks that support military knowledge work. The *Marine Corps Planning Process*

(MCWP 5-0; Department of the Navy [DON], 2015) outlines a detailed and systematic six-step planning methodology: problem framing, course of action (COA) development, COA wargaming, COA comparison and decision, orders development, and orders transition. However, the Marine Corps' planning process was not designed to limit creativity or deep thinking. For instance, the *Marine Corps Planning Process* (MCWP 5-0) states, "Planning involves elements of both art and science, combining analysis and calculation with intuition, inspiration, and creativity" (DON, 2015, p. 1-1). Additionally, the Department of Defense's keystone publication for joint planning, *Planning* (JP 5-0; Joint Chiefs of Staff [JCS], 2017), states that the joint planning process is a logical framework for idea generation, but the joint planning process is not intended to be prescriptive.

The possibility of bureaucracy to serve as an enabler for creativity and deep thinking was evident within all four stages of the creative process. In the preparation stage, the immediate supervisors leveraged bureaucracy by providing the knowledge worker the necessary resources to enable creativity. As an example, a knowledge worker commented that "the supervisor either provides you [the knowledge worker] the time to answer the question that needs to be answered or the people to answer the specifics of what's being asked." An immediate supervisor commented that during the preparation stage of the creative process, he would invest a "significant amount of effort and research on the front end" to figure out what resources were needed to accomplish the mission. In the preparation stage, bureaucracy enabled creativity by establishing a framework for planning. An immediate supervisor commented that a "bureaucratic culture helps creativity by providing a 'box' or set of boundaries in which to work solutions." Marine Corps doctrine, *Planning* (MCDP 5; DON, 1997) supports the complementary nature of a disciplined framework and creativity:

Planning can provide a disciplined framework for approaching problems. It provides coordinated and cooperative methods for solving problems in a group setting. The key is to adopt a method that provides a helpful structure without restricting judgment and creativity. (p. 17)

In the incubation and illuminations stages, immediate supervisors who understand how to navigate the bureaucracy and the importance of providing their knowledge workers with time to formulate ideas enable creativity. According to an immediate supervisor, immediate supervisors must allow the knowledge workers time to explore ideas and “free them from all the other distractions.” A knowledge worker affirmed the importance of uninterrupted time to develop creative products and declared that the immediate supervisor must “set aside a specific time with the expectation that this time is to be used for problem solving and being creative.” Also important in the incubation and illumination stage was separating the knowledge worker from the daily routine. One knowledge worker called the separation of the worker from the daily routine a “distraction-free environment away from your usual space of work.” The knowledge worker added that in “some respects, it was good to be at an austere site and not close to a hierarchical organization because we were able to be creative in how we got things done.” The belief that bureaucracies provide knowledge workers with a sense of job security is another factor that enables creative freedom. A knowledge worker commented that in bureaucracies “you have job security so that bureaucracy gives you that security and that security allows creativity.” An immediate supervisor commented that knowledge workers should exercise deep thinking free of fear, as the final decision on new product acceptance or implementation rests with the senior leader and not the knowledge worker.

In the verification stage of the creative process, immediate supervisors who grasped and navigated the bureaucratic processes promoted knowledge worker success by advocating for the knowledge worker and aiding the knowledge worker in product presentation. When asked what role the immediate supervisor plays in the verification stage of the creative process, an immediate supervisor explained that the supervisor's job is to serve as an advocate for the knowledge worker. An immediate supervisor commented that "the members of your team are counting on you to support them and to advocate for them." Another immediate supervisor added that "once the team had a reasonably solid plan" for what was needed and what can be asked for, the immediate supervisor acted "the part of the salesman to attempt to gain the commander's concurrence." The immediate supervisor added that the leader's responsibility was to "provide top-cover" for subordinates "to show good faith."

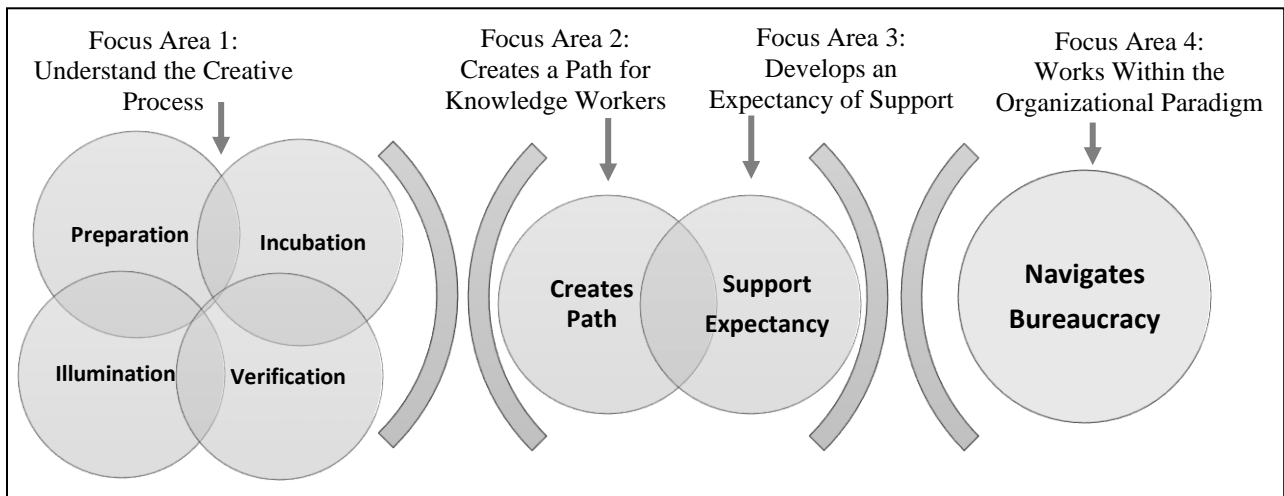
Last, the review of military doctrine and the observations of knowledge workers supported the finding that immediate supervisors can leverage military bureaucracy to enable an environment that promotes creative thinking. *Planning* (JP 5-0; JCS, 2017) asserts that military planning is not intended to be rigid. *Marine Corps Planning Process* (MCWP 5-0; DON, 2015) affirms that planning is both science and art. *Planning* (MCDP 5; DON, 1997) supports the concept of balancing between a disciplined framework and creativity. Additionally, as evidenced through the observations of the MARCENT planning group, the immediate supervisor promoted knowledge worker discourse and deep thinking. Additionally, the immediate supervisor attempted to solicit input from all knowledge workers present—regardless of rank—to establish knowledge worker trust and the expectancy of creative support.

## Proposed Grounded Theory

To enhance knowledge worker creativity in bureaucratic organizations, the immediate supervisor must adhere to four focus areas which are depicted in Figure 6. Focus area one is an illustration of how the immediate supervisor integrates the creative process with the organization's military planning process. Focus area two highlights the role of the immediate supervisor in creating a path for knowledge worker creativity during each step of the creative process. The immediate supervisor enables the creative process by providing cognitive support and acquiring physical resources. Focus area three is a description of how the immediate supervisor develops an expectancy of support in the creative team. Initially, through personal experience and hierarchical position, the immediate supervisor coaches the knowledge worker through each step of the creative process. Next, the immediate supervisor develops trust relationships that foster a psychologically safe environment where candid discourse and divergent thinking blossom. Focus area four is how the immediate supervisor leverages past experiences and organizational familiarity to aid the knowledge worker in navigating the bureaucratic environment.

Figure 6

### *Enabling Creativity Conceptual Framework*



## **Study Limitations**

This qualitative grounded theory study examined how the military design (i.e., bureaucracy) influenced the creative process and how leaders (i.e., immediate supervisors) amplify (mitigate) the positive (negative) effects of bureaucracy on the creative process. The research methodology consisted of analyzing data collected through interviews, observations, and document reviews from a single military organization (MARCENT). The study indicates a few study limitations.

First, the principal researcher had served with the examined organization as a knowledge worker and immediate supervisor. Therefore, a possible study limitation was the introduction of research bias based on the examiner's familiarity with the studied organization. To mitigate the risk of confirmation bias, before initiating the coding process, biases and preconceived notions were bracketed. Next, quotes were used to capture interview data. Last, the researcher used thick description of observation and interview data to discuss participant sentiments.

Second, based on the organization's national security mission and constraints of security classifications regarding the work performed by the examined knowledge workers, the study did not assess any actual creative material. The data collection focused on the knowledge workers, immediate supervisors, and senior leaders' perceptions of creativity. To lessen the risk of participant subjectivity, interview questions were concentrated on how the military design and immediate supervisor influenced the creative process and not on the actual creative product.

Third, all the study participants were military officers (active duty or retired), so the possibility of strong military biases and high organizational loyalty or fear of reprisal presented a study limitation. To reduce the risk of bias inherent in convenience sampling, 22 participants



were purposively selected who varied in organizational position (i.e., knowledge workers, immediate supervisors, and senior leaders), tenure, experience, and education level. Additionally, two knowledge worker planning sessions were observed, and 10 organizational documents were reviewed. The data collected from three diverse sources allowed for data triangulation.

### **Implications for Future Practice**

The purpose of this qualitative study was to understand how the military design (i.e., bureaucracy) influenced creativity and how leaders enhance or mitigate knowledge worker creativity throughout the creative process in bureaucratic organizations. Specifically, the study examined how leaders who recognized and navigated the bureaucratic and creative tension in their organization enabled the knowledge workers to create products that were novel and useful. There are four recommendations for future practice resulting from this study on enhancing creativity in bureaucratic organizations.

#### **Recommendation 1**

Organizations may choose to implement personality assessments to measure how the knowledge worker processes information and responds to supervisor behavior. According to Finding 1.1, supervisor behavior is paramount in enabling creativity. To create an environment where the immediate supervisor's behavior complements the knowledge worker's personality, organizations could invest in personality tests such as the Goldberg (1993) Five-Factor Model to measure and gain an appreciation of their knowledge workers dominant personality traits. Additionally, knowledge workers could be administered a Personal Need for Structure survey to measure their preference for structure and order in the performance of tasks (Rietzchel et al., 2014). Last, organizations may wish to consider educating immediate supervisors on behavioral methods that help to align the knowledge worker's personality traits and the need for structure.

## **Recommendation 2**

Organizations may elect to train immediate supervisors who oversee knowledge workers on the creative process. Finding 1.2 suggests that organizational hierarchy and creative autonomy can coexist. To reduce the perceived tension between creativity and bureaucracy, organizations ought to provide immediate supervisor training on the following: (a) the four creative steps and how each step complements the military planning process, (b) the influence of cognitive biases on product development and acceptance, and (c) the influence of cognitive biases on decision making.

## **Recommendation 3**

Immediate supervisors may want to consider the influence trust relationships and psychologically safe environments have on the knowledge worker's expectancy of creative support. Finding 2.1 results and the literature suggest that trust relationships fostered an expectancy of creative support. Immediate supervisors who promote a safe environment and are active listeners create an organizational climate that enhances trust and enables creativity (Castro et al., 2018). To develop trust relationships and the expectancy of creative support, immediate supervisors ought to consider the influence that psychologically safe environments have on building trust and creativity. Psychological safety is the belief by team members that the group is safe for risk-taking and feel free to give candid feedback (Edmondson, 1999). Psychological safety is a mediating factor of worker creativity, as a safe environment enables individuals to openly communicate new and novel ideas (Castro et al., 2018).

## **Recommendation 4**

Immediate supervisors should consider supporting the knowledge worker's cognitive processes and guide the knowledge worker to achieve the organizational goals during the

creative process. Finding 2.2 suggests that immediate supervisors leverage bureaucracy to enable an environment that promotes creative thinking. Table 6 is a list of immediate supervisor actions within each step of the creative process derived from the research data.

Table 6

*Immediate Supervisor Actions that Enhance Creativity*

Creative Step	Role of the Immediate Supervisor
Preparation	<ul style="list-style-type: none"> <li>• Provides time to examine the problem</li> <li>• Gathers necessary resources</li> <li>• Seeks guidance from the senior leader</li> <li>• Gathers internal and external experts</li> <li>• Creates opportunities for the creative team to meet with the senior leader</li> <li>• Sets expectations and timelines for the creative team</li> </ul>
Incubation Illumination	<ul style="list-style-type: none"> <li>• Creates a safe environment to enhance discourse and exchange of tacit knowledge</li> <li>• Gathers explicit knowledge from internal and external sources</li> <li>• Enhances deep thinking through prioritization of work</li> <li>• Provides the creative team time and space to promote deep thinking</li> <li>• Promotes brainstorming</li> </ul>
Verification	<ul style="list-style-type: none"> <li>• Performs quality control to ensure the product meets the intent</li> <li>• Serves as an advocate for the team</li> <li>• Seeks external and internal subject matter expert examination of the draft product</li> <li>• Ensures the draft product presentation supports the senior leader's decision-making model</li> <li>• Forces the knowledge worker to rehearse before product presentation</li> </ul>

**Recommendations for Future Research**

The research aimed to advance and contribute to the literature on creativity in the workplace in two areas: (1) the interaction between the immediate supervisor and knowledge worker through the four stages of creativity, and (2) the influence of bureaucratic conditions on the creative process. Based on the study findings, the following future research is recommended to deepen the literature on creativity:

1. Replicate components of this study in other bureaucratic organizations with similar hierarchical constraints (e.g., chain of command, doctrine) to examine if similar findings emerge. Future research could include other government agencies, religious centers, or academic institutions.
2. Conduct a quantitative study to examine the effect of a leader's behavior on the supervisor and knowledge worker trust relationship and knowledge worker expectancy of creative support in bureaucratic organizations.
3. Examine the relationship between emotional intelligence and creativity in bureaucratic organizations. Emotional intelligence is the ability to monitor one's emotions to guide one's thinking and actions (Prati, Douglas, Ferris, Ammeter, & Buckley, 2003). The data suggest that immediate supervisors who demonstrated emotional intelligence through self-awareness and social awareness influenced knowledge worker creativity.
4. Examine the relationship between path-goal theory and creativity in bureaucratic organizations. According to Northouse (2016), "path-goal theory is designed to explain how leaders can help followers along the path to their goals" (p. 116). The data suggest that immediate supervisors who created a path for the knowledge worker positively influenced creativity.

### **Conclusion**

Organizational hierarchy and creativity can coexist in bureaucratic organizations. Through a grounded theory qualitative study, the study examined a mid-sized military organization to answer two questions: (1) How does the military organizational design (i.e., bureaucracy) influence the creative process? and (2) How do leaders amplify (mitigate) the

positive (negative) effects of bureaucracy on the creative process? According to Amabile et al. (1999), workplace rigidity, worker internal strife, and formal management structures have a physical and psychological influence on creativity. However, the data suggest that the perceived tension between the military organizational design (i.e., bureaucracy) and knowledge worker creativity is mitigated by the immediate supervisor's behavior and ability to navigate the bureaucratic landscape.

Immediate supervisor and knowledge worker behavioral interactions influence the creative process. Through positive leader and subordinate interactions, the immediate supervisor develops trust and a psychologically safe environment that leads to the knowledge worker's expectancy of creative support. Also, aligning the immediate supervisor's behavior with knowledge worker's personality traits enables the knowledge worker to navigate the bureaucratic organization. Lastly, through immediate supervisor assistance, the knowledge worker can overcome organizational rigidity and find common ground with stakeholders of the organization.

Military doctrine does not hamper the creative process. Military publications specifically declare that the military planning process is not intended to limit creativity or divergent thinking. *Planning* (JP 5-0; JCS, 2017) states that the joint planning process is not intended to be followed in a prescriptive manner. Additionally, the *Marine Corps Planning Process* (MCWP 5-0; DON, 2015) asserts that planning combines both analysis and creativity. Lastly, *Planning* (MCDP 5; DON, 1977) warns knowledge workers to guard against becoming too procedurally rigid during the planning process. Therefore, immediate supervisors who understand the relationship between military planning doctrine and the creative process can establish a balance between the military bureaucracy and the need for autonomy and divergent thinking.

This study added to the existing body of research on creativity in the workplace and focused on the influence of bureaucratic conditions on the creative process and the interaction between the supervisor and worker through the four stages of the creative process. The study findings suggest that: (a) Supervisor behavior is paramount in enabling creativity, (b) Organizational hierarchy and creative autonomy can coexist, (c) Trust relationships increase the expectancy of creative support, and (d) Immediate supervisors who leverage bureaucracy enable an environment that promotes creative thinking.

## References

- Acar, O. A., Tarakci, M., & Van Knippenberg, D. (2019). Creativity and innovation under constraints: A cross-disciplinary integrative review. *Journal of Management*, 45(1), 96–121. Retrieved from <https://doi-org.seu.idm.oclc.org/10.1177/0149206318805832>
- Ahmed, F., Shahzad, K., Aslam, H., Bajwa, S. U., & Bahoo, R. (2016). The role of collaborative culture in knowledge sharing and creativity among employees. *Pakistan Journal of Commerce & Social Sciences*, 10(2), 335–358. Retrieved from <http://www.jespk.net/publications/295.pdf>
- Alder, P. S., & Borys, B. (1996). Two types of bureaucracy: Enabling and coercive. *Administrative Science Quarterly*, 41(1), 61–89. Retrieved from <https://doi.org/10.2307/2393986>
- Allahar, H. (2018). A management framework for fostering creativity and sustainability in organizations. *Journal of Creativity and Business Innovation*, 4. Retrieved from <https://papers.ssrn.com/abstract=3203902>
- Amabile, T. (2013). Componential theory of creativity. In E. Kessler (Eds), *Encyclopedia of management theory* (pp. 134–139). Retrieved from [https://www.researchgate.net/profile/Yasir\\_Jamal2/publication/323445090\\_encyclopedia\\_of\\_managements\\_theory\\_encyclopedia\\_by\\_eric\\_hKessler\\_ed/links/5a9647880f7e9ba42972e52d/encyclopedia-of-managements-theory-encyclopedia-by-eric-hKessler-ed.pdf](https://www.researchgate.net/profile/Yasir_Jamal2/publication/323445090_encyclopedia_of_managements_theory_encyclopedia_by_eric_hKessler_ed/links/5a9647880f7e9ba42972e52d/encyclopedia-of-managements-theory-encyclopedia-by-eric-hKessler-ed.pdf)
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *The Academy of Management Journal*, 39(5), 1154–1184. Retrieved from <https://www-jstor-org.seu.idm.oclc.org/stable/256995>

- Amar, A. D., & Hlupic, V. (2016). Leadership for knowledge organizations. *European Journal of Innovation Management*, 19(2), 239-260. Retrieved from <https://doi.org/10.1108/EJIM-12-2014-0120>
- Botella, M., Zenasni, F., & Lubart, T. (2018, November 21). What are the stages of the creative process? What visual art students are saying. *Frontiers in Psychology*, 9. Retrieved from <https://doi.org/10.3389/fpsyg.2018.02266>
- Bunderson, J. S., & Boumgarden, P. (2010). Structure and learning in self-managed teams: Why “bureaucratic” teams can be better learners. *Organization Science*, 21(3), 609–624. Retrieved from <https://doi.org/10.1287/orsc.1090.0483>
- Caniëls, M. C. J. (2018). Proactivity and supervisor support in creative process engagement. *European Management Journal*, 37(2), 188–197. Retrieved from <https://doi.org/10.1016/j.emj.2018.04.002>
- Caniëls, M. C. J., De Stobbeleir, K., & De Clippeleer, I. (2014). The antecedents of creativity revisited: A process perspective. *Creativity & Innovation Management*, 23(2), 96–110. Retrieved from <https://doi.org/10.1111/caim.12051>
- Carmeli, A., & Paulus, P. B. (2014). CEO ideational facilitation leadership and team creativity: The mediating role of knowledge sharing. *The Journal of Creative Behavior*, 49(1), 53–75. Retrieved from <https://doi.org/10.1002/jocb.59>
- Castro, D. R., Anseel, F., Kluger, A. N., Lloyd, K. J., & Turjeman-Levi, Y. (2018). Mere listening effect on creativity and the mediating role of psychological safety. *Psychology of Aesthetics, Creativity, and the Arts*, 12(4), 489–502. Retrieved from <https://doi.org/10.1037/aca0000177>



- Constas, H. (1958). Max Weber's two conceptions of bureaucracy. *American Journal of Sociology*, 63(4), 400–409. Retrieved from <https://doi.org/10.1086/222263>
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. United States of America: Sage Publications, Inc.
- Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). Los Angeles, CA: SAGE.
- Damanpour, F., & Aravind, D. (2012). Organizational structure and innovation revisited: From organic to ambidextrous structure. In D. Aravanid (Ed.), *Handbook of Organizational Creativity* (pp. 483–515). Oxford, England: M. Mumford.
- Davenport, T. H. (2005). *Thinking for a living: How to get better performance and results from knowledge workers*. Boston: Harvard Business School Press.
- Department of the Army. (2015). Techniques for Effective Knowledge Management (ATP 6-01.1). Retrieved from <https://caccapl.blob.core.usgovcloudapi.net/web/character-development-project/repository/atp6-01x1-2015.pdf>
- Department of the Army. (n.d.). The Red Team Handbook. Retrieved from [https://usacac.army.mil/sites/default/files/documents/ufmcs/The\\_Red\\_Team\\_Handbook.pdf](https://usacac.army.mil/sites/default/files/documents/ufmcs/The_Red_Team_Handbook.pdf)
- Department of Defense. (2017). The Unified Command Plan and Combatant Commands: Background and issues for Congress. Retrieved from <http://www.dtic.mil/docs/citations/ADA585140>
- Department of the Navy. (1994). Marine Corps Planning Process (MWCP 5-10). Retrieved from <https://www.marines.mil/Portals/1/Publications/MCWP%205-10.pdf?ver=2019-07-18-151736-227>

- Department of the Navy. (1997). Planning (MCDP 5). Retrieved from <https://www.marines.mil/Portals/1/Publications/MCDP%205%20Planning.pdf>
- Department of the Navy. (1996). Command and control (MCDP 6). Retrieved from <https://www.marines.mil/Portals/1/Publications/MCDP%206%20Command%20and%20Control.pdf>
- Drucker, P. F. (1993). *Post-capitalist society*. Oxford: Butterworth Heinemann.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383. Retrieved from <https://doi.org/seu.idm.oclc.org/10.2307/2666999>
- Fisher, C. M., Pillemer, J., & Amabile, T. M. (2018). Deep help in complex project work: Guiding and path-clearing across difficult terrain. *Academy of Management Journal*, 61(4), 1524–1553. Retrieved from <https://doi.org/10.5465/amj.2016.0207>
- Florida, R. L. (2012). *The rise of the creative class*. New York: Basic Books.
- Frick, D. E., & Drucker, P. F. (2011). Motivating the knowledge worker. *Defense Acquisition Research Journal: A Publication of the Defense Acquisition University*, 18(4), 368–387. Retrieved from <https://web-a-ebSCOhost-com.seu.idm.oclc.org/ehost/pdfviewer/pdfviewer?vid=4&sid=fe82fc6e-da55-4898-9099-5ddbc83f6dd3%40sdc-v-sessmgr02>
- Gilhooly, K. J., Georgiou, G., & Devery, U. (2013). Incubation and creativity: Do something different. *Thinking & Reasoning*, 19(2), 137–149. Retrieved from <https://doi.org/10.1080/13546783.2012.749812>

- Goldberg, L. R. (1990). An Alternative “Description of Personality”: The Big-Five factor structure. *Journal of Personality & Social Psychology*, 59(6), 1216–1229. Retrieved from <https://doi-org.seu.idm.oclc.org/10.1037/0022-3514.59.6.1216>
- Han, T.-S., Chiang, H.-H., & Chang, A. (2010). Employee participation in decision making, psychological ownership and knowledge sharing: Mediating role of organizational commitment in Taiwanese high-tech organizations. *The International Journal of Human Resource Management*, 21(12), 2218–2233. <https://doi.org/10.1080/09585192.2010.509625>
- Hemlin, S., Allwood, C. M., & Martin, B. R. (2004). *Creative knowledge environments: The influences on creativity in research and innovation*. Edward Elgar Publishing. Retrieved from <https://search-ebSCOhost-com.seu.idm.oclc.org/login.aspx?direct=true&db=nlebk&AN=114767&site=ehost-live&scope=site>
- Hirst, G., Van Knippenberg, D., Chen, C., & Sacramento, C. A. (2011). How does bureaucracy impact individual creativity? A cross-level investigation of team contextual influences on goal orientation-creativity relationships. *Academy of Management Journal*, 54(3), 624–641. Retrieved from <https://doi.org/10.5465/AMJ.2011.61968124>
- Jayasingam, S., & Yong, J. R. (2013). Affective commitment among knowledge workers: The role of pay satisfaction and organization career management. *International Journal of Human Resource Management*, 24(20), 3903–3920. Retrieved from <https://doi.org/10.1080/09585192.2013.781520>
- Joint Chiefs of Staff. (2017). *Joint planning* (JP 5-0). Retrieved from [https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp5\\_0\\_20171606.pdf](https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp5_0_20171606.pdf)

- Jones, G. R., (1999). *Contemporary management*, (2<sup>nd</sup> ed.). Burr Ridge, IL: Irwin Professional Publishers.
- Kotter, J. P. (2012). *Leading change*. Boston, MA: Harvard Business Press.
- Kremer, H., Villamor, I., & Aguinis, H. (2019). Innovation leadership: Best-practice recommendations for promoting employee creativity, voice, and knowledge sharing. *Business Horizons*, 62(1), 65–74. Retrieved from <https://doi.org/10.1016/j.bushor.2018.08.010>
- Langfred, C. W. (2004). Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of Management Journal*, 47(3), 385–399. Retrieved from <http://mason.gmu.edu/~clangfre/Negativeeffects.pdf>
- Lassk, F. G., & Shepherd, C. D. (2013). Exploring the relationship between emotional intelligence and salesperson creativity. *Journal of Personal Selling & Sales Management*, 33(1), 25–38. Retrieved <https://doi.org/10.2753/PSS0885-3134330103>
- Lee, M. Y., & Edmondson, A. C. (2017). Self-managing organizations: Exploring the limits of less-hierarchical organizing. *Research in Organizational Behavior*, 37, 35–58. Retrieved from <https://doi.org/10.1016/j.riob.2017.10.002>
- Mainemelis, C., Kark, R., & Epitropaki, O. (2015). Creative leadership: A multi-context conceptualization. *The Academy of Management Annals*, 9(1), 393. Retrieved from <https://seu.idm.oclc.org/login?url=https://search-proquest-com.seu.idm.oclc.org/docview/1691311209?accountid=43912>
- Mattis, J., & West, J. (2019). *Call sign chaos: Learning to lead*. New York: Random House.
- Medeiros, K. E., Steele, L. M., Watts, L. L., & Mumford, M. D. (2018). Timing is everything: Examining the role of constraints throughout the creative process. *Psychology of*

- Aesthetics, Creativity, and the Arts*, 12(4), 471–488. Retrieved from <https://doi.org/10.1037/aca0000148>
- Mládková, L. (2012). Leadership in management of knowledge workers. *Social and Behavioral Sciences*, 41, 243–250. Retrieved from <https://www.sciencedirect.com/science/article/pii/S1877042812009081>
- Nath, P. (2007). The creative process: An investigation (Unpublished doctoral dissertation). York University, Canada. Retrieved from <https://search-proquest-com.seu.idm.oclc.org/docview/304776103/7046E47284C0479APQ/1?accountid=43912>
- Neff, J. M. (1998). Grounded theory: A critical research methodology. In C. Farris & C. M. ANSON (Eds.), *Under Construction* (pp. 124–135). University Press of Colorado: JSTOR. Retrieved from <https://doi.org/10.2307/j.ctt46nrqf.12>
- Northouse, P. G. (2016). *Leadership: Theory and practice* (7th ed). Thousand Oaks: Sage Publications.
- Nuñez Ramírez, M. A., Wendlandt Amezaga, T. R., & Álvarez Medina, M. T. (2016). The relationship between organizational culture and knowledge management in tequila companies from Mexico. *International Journal of Advanced Corporate Learning*, 9(1), 44–50. Retrieved from <https://doi-org.seu.idm.oclc.org/10.3991/ijac.v9i1.5748>
- Ohly, S., & Fritz, C. (2010). Work characteristics, challenge appraisal, creativity, and proactive behavior: A multi-level study. *Journal of Organizational Behavior*, 31(4), 543–565. Retrieved from <https://search-ebSCOhost-com.seu.idm.oclc.org/login.aspx?direct=true&db=bth&AN=48836928&site=ehost-live&scope=site>. Acesso em: 22 fev. 2020.

- Ou, Z., Chen, T., Li, F., & Tang, P. (2018). Constructive controversy and creative process engagement: The roles of positive conflict value, cognitive flexibility, and psychological safety. *Journal of Applied Social Psychology, 48*(2), 101–113. Retrieved from <https://doi.org/10.1111/jasp.12494>
- Prati, L. M., Douglas, C., Ferris, G. R., Ammeter, A. P., & Buckley, M. R. (2003). Emotional intelligence, leadership effectiveness, and team outcomes. *International Journal of Organizational Analysis, 11*(1), 21-40. Retrieved from <https://doi.org/10.1108/eb028961>
- Rietzschel, E. F., Slijkhuis, J. M., & Van Yperen, N. W. (2014). Task structure, need for structure, and creativity. *European Journal of Social Psychology, 44*(4), 386–399. Retrieved from <https://doi.org/10.1002/ejsp.2024>
- Rosso, B. D. (2012). Creativity and constraint: Exploring the role of constraint in the creative processes of new product and technology development teams [ProQuest Information & Learning]. In *Dissertation Abstracts International Section A: Humanities and Social Sciences* (Vol. 73, Issue 5–A, p. 1941). Retrieved from <https://search-ebshost-com.seu.idm.oclc.org/login.aspx?direct=true&db=psyh&AN=2012-99210-226&site=ehost-live&scope=site>
- Rubinstein, W., & Von Maravic, P. (2010). Max Weber, bureaucracy, and corruption. In G. de Graaf, P. von Maravić, & P. Wagenaar (Eds.), *The good cause: Theoretical perspectives on corruption* (pp. 21-35). Opladen; Farmington Hills: Verlag Barbara Budrich. Retrieved from <http://www.jstor.org/stable/j.ctvbj7k5p.6>
- Sadler-Smith, E. (2015). Wallas' four-stage model of the creative process: More than meets the eye? *Creativity Research Journal, 27*(4), 342–352. Retrieved from <https://doi.org/10.1080/10400419.2015.1087277>

- Smith, N. G. (2001). Creativity in the twenty-first century: A critique of contemporary theories of creativity (Unpublished doctoral dissertation). The Ohio State University, Ohio.  
Retrieved from <https://search-proquest-com.seu.idm.oclc.org/pqdtglobal/docview/304720655/7BA9B57B5C15455BPQ/1?accountid=43912>
- Steele, L. M., Hardy, J. H. I., Day, E. A., Watts, L. L., & Mumford, M. D. (2019). Navigating creative paradoxes: Exploration and exploitation effort drive novelty and usefulness. *Psychology of Aesthetics, Creativity, and the Arts*. Retrieved from <https://doi.org/10.1037/aca0000236>
- U.S. Central Command. (n.d.). Area of responsibility. Retrieved from <http://www.centcom.mil/AREA-OF-RESPONSIBILITY/>
- Vandewalle, D., Van Dyne, L., & Kostova, T. (1995). Psychological ownership: An empirical examination of its consequences. *Group & Organization Management*, 20(2), 210–226.  
<https://doi-org.seu.idm.oclc.org/10.1177/1059601195202008>
- Vego, M. (2013). On military creativity. *JFQ: Joint Force Quarterly*, (70), 83–90. Retrieved from [https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-70/JFQ-70\\_83-90\\_Vego.pdf](https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-70/JFQ-70_83-90_Vego.pdf)
- Wallas, G. (2018). *Art of thought*. Place of publication not identified: SOLIS Press.
- Walton, N. (2012). “Four-closure”: How Amazon, Apple, Facebook & Google are driving business model innovation. doi:10.1109/ICIMTR.2012.6236368
- Weber, M., Henderson, A. M., & Parsons, T. (1997). *Max Weber: The theory of social and economic organization*. New York: Oxford University Press.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *The Academy of Management Review*, 18(2), 293–321. doi:10.2307/258761

Zarraga, C., & Bonache, J. (2003). Assessing the team environment for knowledge sharing: A empirical analysis. *International Journal of Human Resource Management*, 14(7), 1227–1245. Retrieved from <https://doi.org/10.3846/bme.2018.2852>

Zhou, Q., & Pan, W. (2015). A cross-level examination of the process linking transformational leadership and creativity: The role of psychological safety climate. *Human Performance*, 28(5), 405–424. Retrieved from <https://doi:10.1080/08959285.2015.1021050>



## APPENDICES

## Appendix A

### INTERVIEW RECRUITMENT LETTER

Rank, Mr., Mrs., XXX,

My name is Jaime Macias, and I am a doctoral student from the College of Education at Southeastern University. I am writing to invite you to participate as an interview subject in my research study about creativity in planning and the role the organization plays in enhancing the creative environment. As a military planner, you may have experienced many situations that have enhance or detracted from the creative process.

I obtained your contact information from U.S. Marine Corps administration section. If you decide to participate in this study, you will be asked a number of questions about the creative process, obstacles and enablers to creativity, and the organization's contribution to the creative environment.

Interviews will last approximately 20 minutes and will be audio recorded and transcribed. You will have an opportunity to review the transcriptions for accuracy. Transcriptions will be coded and analyzed for themes pertaining to the issue. Your interview responses will help further research that military leaders can use to understand how to best provide support to planners in the development of creative products.

Remember, your participation is completely voluntary. You can choose to be in the study or not. If you would like to participate or have any questions about the study, please email me at [jmacias@seu.edu](mailto:jmacias@seu.edu).

Thank you very much.

Sincerely,

Jaime Macias, Doctoral Candidate  
Southeastern University  
[jmacias@seu.edu](mailto:jmacias@seu.edu)

Dr. Sarah Yates, Research Chair  
Southeastern University  
[sjyates@seu.edu](mailto:sjyates@seu.edu)

## INFORMED CONSENT FORM

Rank, Mr., Mrs., XXX,

You are being asked to participate in a research study focusing on the aspects that enhance or detract from creativity in planning. This research is being conducted by: Jaime Macias under the supervision of Dr. Sarah Yates.

The purpose of this study is to understand the relationship between the supervisor's and knowledge worker's interaction throughout the creative process in bureaucratic organizations. The study will also examine knowledge worker (planner) perception of support provided by the organization in the development of planning products. The study will be conducted from March - April 2019 and serve as part of the research for a doctoral dissertation.

As a study member, you are being asked to participate in an interview. The interview will take approximately 20 minutes to complete. You will be asked a number of questions about the creative process, obstacles and enablers to creativity, and the organization's contribution to the creative environment. Your participation is voluntary, and the interview is confidential. No personally identifying information about you will be made public. Any written results will discuss group findings and will not include information that will identify you. Aggregate interview data will be kept in a password-protected database accessible only by the researchers. After two years, the files will be erased, and the password will be destroyed. Portions of the interview will be recorded for accuracy.

Participants in the study will not receive any form of compensation. However, by participating in this study, you will help further the research that military leaders can use to understand how to best provide support to planners in the development of creative planning products.

There are no risks associated with this project that are expected to be greater than those ordinarily encountered in daily life, and this research has received the approval of the Southeastern University Institutional Review Board (IRB) and the United States Marine Corps IRB, which function to ensure the protection of the rights of human participants.

There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time.

### **Contacts:**

You may contact any of the researchers at the following addresses and email addresses:

Dr. Sarah Yates, Research Chair  
Southeastern University  
College of Education  
1000 Longfellow Blvd.  
Lakeland, FL 33801  
Email: [sjyates@seu.edu](mailto:sjyates@seu.edu)

Dr. Janet Deck, Methodologist  
Southeastern University  
College of Education  
1000 Longfellow Blvd.  
Lakeland, FL 33801  
Email: [jldeck@seu.edu](mailto:jldeck@seu.edu)

Should you desire to discuss your participation in the study and/or request information about the results of the study:

Mr. Jaime Macias (Doctoral Candidate)  
3518 Cordgrass Drive  
Valrico, FL 33596  
Email: [jmacias@seu.edu](mailto:jmacias@seu.edu)

If you have questions about your rights as a research volunteer, you may contact the IRB Office  
[IRB@seu.edu](mailto:IRB@seu.edu)

## Appendix B

### Email Invitation to Participants

XXXX,

I hope this email finds you well. Commander USMARCENT, Headquarters Marine Corps, and Southeastern University have approved my request to conduct my dissertation research aboard USMARCENT to examine the creative process in support of planning.

I am asking workers with planning familiarity to share their experiences. After I have interviewed about 25 people, I will start to identify themes and best practices. Please know that the interview will be confidential, and my conclusions will only address trends. At no time will I associate an individual to a specific research finding.

I have started my interviews and will like to set-up a 20-25 minute phone call with you, preferably in the evening to not interfere with work requirements. The interview will be recorded, but this recording will be deleted as soon as it has been transcribed. I want to also stress that you should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time.

Finally, and most importantly, my aim is to improve the planning environment. As a military planner, it is likely that you have experienced situations that have enhanced or detracted from the creative process; so, your input will be of great value.

If you have any questions or concerns, I'll be happy to address them.

Thank you for considering my request,

Respectfully,

Jay Macias – [jmacias@seu.edu](mailto:jmacias@seu.edu)

Principal Investigator and Dissertation Chairperson: Dr. Sara Yates  
Southeastern University

## Appendix C

### Interview Guide

(Interview data not included for confidentiality purposes)

Interviewer: Jaime Macias

Date:

Time:

Location:

***To Read Aloud:*** Thank you for agreeing to participate in this research project. The purpose of this project is to gather information on what supervisors and workers can do to enhance the creative process for employees. This conversation will be confidential. Your name will be anonymous and not used in research. Have you read the consent form, and do you have any questions? With your permission I am going to record the interview. Do I have your permission? You have permission to end the interview at any time. Do you have any questions?

#### **Interview Questions:**

1. Thinking about the military culture and organization, how does bureaucracy (e.g., doctrine, chain of command, structure) help or reduce creativity?

***To Read Aloud:*** Based on your previous answer, think about the last project you were assigned and the process that you used to generate your ideas for the project. Reflecting on that process:

2. Can you describe the role your supervisor [you as the immediate supervisor] played in generating the requirement for a new idea or problem that needed to be addressed?  
(Preparation focus)
3. How did your supervisor [you as the immediate supervisor] help the team define the problem or goal? (Preparation focus)

4. How did you or the team [you as the immediate supervisor help the team] reach the new idea (the “aha moment”) to address the problem or goal? (Incubation/Illumination focus)
5. Can you describe the role your supervisor played [you played as the immediate supervisor] in the evaluation of the new idea? (Verification focus)
6. What could your immediate supervisor do to help [you as the immediate supervisor do to help] the team enhance the creative process in your organization?

**Interview questions for senior leaders**

- SL1.** Thinking about the military culture and organization, how does bureaucracy (e.g., doctrine, chain of command, structure) help or reduce creativity?
- SL2.** How would you assess the development of novel and useful ideas in your organization based on the products your team develops?
- SL3.** From your observation of planning and the products you receive, what would you characterize as the chief cause of enabling or limiting creativity and novel ideas?
- SL4.** If you could give one piece of advice to incoming planners/knowledge workers, what would it be?