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Strategic Advantage or Strategic Hinderance?:
Achieving the Promise of Diversity on Joint Planning Outcomes

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by Ann-Kristine H. Thrift

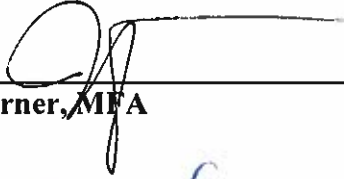
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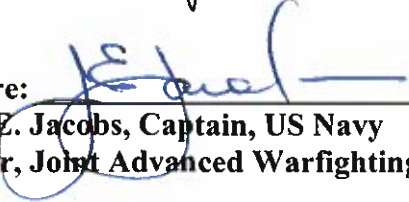
A paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning Strategy. The contents of this paper reflect my own personal views and are not necessarily endorsed by the Joint Forces Staff College or the Department of Defense.

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Abstract

Diversity in a workforce offers an approach to achieve creative thinking, yet the DoD has struggled to achieve Diversity and Equity amongst the joint force. The DoD Diversity, Equity, Inclusion, and Accessibility (DEIA) initiative focuses on retention, recruiting, and training for a future force and fails to take into account how to employ diversity in the force today. Design approaches to DEIA fails to address behaviors that enhance and realize the potential of diversity. National security solutions are developed at the combatant and component commands through planning teams. Planning teams, however, in the DoD lack gender diversity and the gender disparity might inhibit the development of the innovative solutions needed to solve national security challenges and resolve dilemmas. Previous research on whether mixed gender teams lead to more novel ideas has been inconclusive. One critical factor believed to undermine the benefits of creativity in mixed gender teams is the degraded cohesiveness of diverse teams. Literature indicates behaviors detrimental to cohesion and communication are also maladaptive to team dynamics and inhibitory to creativity. Surveys and field observation suggests leadership framing and mitigation play a significant role in addressing and building team cohesion that begets increased creativity and innovation on planning teams.

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Dedication

To all the women who have blazed a path for me, may this research continue to light the way for those who come after.

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Chapter 1: Introduction

In the Interim National Security Strategic Guidance (INSSG), President Biden describes a world of strategic competition characterized by a rapidly changing strategic environment in terms of challenges and power dynamics.¹ The INSSG recognizes the U.S. need to focus on creative solutions, using all instruments of national power, to solve complex problems.² According to the INSSG, diversity is one of the sources of national power.³ The United States cannot match her adversaries in some aspects of power, such as economic power, therefore she must overmatch her enemies in other ways to maintain a strategic advantage. The nation's intrinsic diversity, the INSSG seems to posit, may offer such an opportunity to cultivate strategic advantage. President Biden demanded “creative approaches” in the INSSG, and the Joint Chiefs of Staff require creativity “to inform national strategy, conduct globally integrated operations, and fight under conditions of disruptive change.”⁴

The Joint Chiefs of Staff, charged with developing the total force, with guidance from the President and the Secretary of Defense, are broadly concerned with equipment and people. The FY22 defense budget focuses on modernizing the force and building a force that “recognizes and embraces its diversity as a strength.”⁵ In July 2020, the Joint Chiefs disseminated the Implementation Plan for The Joint Chiefs of Staff Vision and Guidance for Professional Military Education & Talent Management. The plan states, that “gaining and sustaining an intellectual

¹ Joseph R. Biden Jr, *Interim National Security Strategic Guidance* (The White House, March 2021), 1.

² Biden, *Interim National Security Strategic Guidance*, 6.

³ Biden, *Interim National Security Strategic Guidance*, 6.

⁴ Biden, *Interim National Security Strategic Guidance*, 6; U.S. Joint Chiefs of Staff, *Implementation Plan for The Joint Chiefs of Staff Vision and Guidance for Professional Military Education & Talent Management* (Washington D.C: Pentagon, July 11, 2020), 1.

⁵ David Vergun, “Hicks Provides Overview of DOD Priorities,” *U.S. Department of Defense*, June 8, 2021, <https://www.defense.gov/News/News-Stories/Article/Article/2650466/hicks-provides-overview-of-dod-priorities/>.

overmatch in the future will require joint warfighters who can conceive, design, and implement strategies and campaigns.”⁶ Additionally, civilian and military leaders expect innovation and novel courses of action from the military. Harnessing the strength of diversity may contribute to the realization of the strategic goals. Gender diversity may serve as one source of strength to attain national security objectives.

The recognition of diversity’s role in successful institutions and endeavors led to two prominent policies, Executive Order 14035, Executive Order on Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce, and the Women, Peace, and Security Act of 2017. Executive Order 14035 led to the development of the Government-Wide Strategic Plan to Advance Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce and Public Law 115-69. The Women, Peace and Security Act of 2017 led to the development of the DoD Women, Peace, and Security Strategic Framework and Implementation Plan. The White House strategic plan to advance diversity includes promoting internships, recruitment, professional advancement, and training.⁷ The DoD’s implementation of the Women, Peace, and Security (WPS) Act similarly concentrates on recruitment, retention, and promotion of women in the force.⁸

Both policies and their subsequent implementation plans recognize the need for gender diversity in the federal-government and make strides to increase the number of diverse personnel in the workforce. However, the focus on multi-year hiring plans, training, and creating a pipeline for diverse “promotion eligible” candidates is a decades long project.⁹ Similarly, while the

⁶ U.S. Joint Chiefs of Staff, *Implementation Plan for The Joint Chiefs of Staff Vision*, 1.

⁷ White House, *Government-Wide Strategic Plan to Advance Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce* (Washington, D.C: White House, 2021), 9.

⁸ U.S Department of Defense, *DoD Women, Peace, and Security Strategic Framework and Implementation Plan* (Washington DC: Pentagon, June 2020), 16.

⁹ White House, *Government-Wide Strategic Plan to Advance Diversity*, 11.

recruitment of women into military positions is critical for the success of the future force, the force faces challenges today that may be eased by the deliberate use of the force personnel available now. The recruitment and retention of women in the force will take decades to produce the desired results, while the need for creative solutions to national security problems is critical now. Donald Rumsfeld, former Secretary of Defense, famously stated, “You go to war with the army you have, not the army you might want or wish to have at a later time.”¹⁰ Mr. Rumsfeld meant military equipment, but in much the same way, one goes to war with the people they have in the force at the moment. Postponing diversity on the basis of future force design is not an option. Combatant Commanders charged with protecting and defending the homeland require the innovative qualities brought about by diversity now and into the future.

Diversity, as a term, means a broad range of differences between the members of a group or society. Diversity generally falls into two categories: inherent diversity and functional diversity.¹¹ Inherent diversity includes the readily detectible attributes of race, gender, ethnicity, and age. Functional diversity includes less visible or underlying attributes that are malleable, such as specialized skills, education, occupation, values, and culture. Both categories of diversity are important to the force as they bring a variety of cognitive abilities and life experience to problem solving. Force employment and development naturally create a functionally diverse force with differing service cultures, a multitude of occupations and specialized skills, and focused professional military education. The force, is not, however inherently diverse, hence the need for Executive Order 14035 and WPS. Gender is an important aspect of inherent diversity.

¹⁰ Eric Schmitt, “Iraq-Bound Troops Confront Rumsfeld Over Lack of Armor,” *New York Times*, December 8, 2004, <https://www.nytimes.com/2004/12/08/international/middleeast/iraqbound-troops-confront-rumsfeld-over-lack-of.html>.

¹¹ Frances J. Milliken and Luis L. Martins, “Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups,” *Academy of Management Review* 21, no 2 (1996): 403; Martha L. Maznevski, “Understanding Our Differences: Performance in decision-making groups with diverse members,” *Human Relations* 47, issue 5 (May 1994): 2.

Plans for the protection and defense of the nation are accomplished in planning teams. Therefore, focusing on planning team diversity may provide insight to how a Combatant Command can come to creative solutions to security problems. Joint Publication (JP) 5-0, Joint Planning, is the Department of Defense's key doctrinal publication on joint planning principles for joint planners.¹² JP 5-0 suggests building an interdisciplinary, or functionally diverse, planning team by including membership from experts across the headquarters and specialists from without.¹³ A functionally diverse team, does not, however, necessarily encompass diversity in its totality. A functionally diverse team may still lack inherent diversity. Just because a team is functionally diverse does not mean it is structured to fully leverage the diversity of the available force. Doctrine accounts for functional diversity, but leveraging inherent diversity requires more concerted effort. The Military Leadership Diversity Commission (MLDC) promotes diversity management, which "entails recognizing, appreciating, respecting, and utilizing a variety of human attributes."¹⁴ In other words, the planning team must be diverse, and the leadership of the group must recognize and utilize diversity to create strategic advantage against competitors.¹⁵ The deliberate introduction of inherently diverse members onto a planning team may provide a way for the Department of Defense to generate intellectual overmatch against adversaries and move closer to its goal of strategic advantage. Yet, there have been no Department of Defense studies on forming an optimized diverse planning team or determining where diversity inputs would be most useful in military planning to produce creative and novel options for decision makers.

¹² Chairman of the Joint Chiefs of Staff, "Joint Publication 5-0: Joint Planning" (Washington DC, 2020), i.

¹³ CJCS, "Joint Publication 5-0," III-1.

¹⁴ Military Leadership Diversity Commission, *From Representation to Inclusion: Diversity Leadership for the 21st-Century Military, Final Report* (Arlington, VA, March 15, 2011), 17.

¹⁵ U.S. Department of Defense, *Department of Defense: Diversity and Inclusion Strategic Plan, 2012-2017* (Washington DC: Department of Defense, 2012), 3.

Diversity alone cannot be seen as the ultimate means to achieving intellectual overmatch against an adversary. The dynamics of a group are significantly different in a homogenous group than a heterogenous group. Some groups can be negatively affected by the addition of diversity because group dissonance manifests based on the introduction of differences among group members. Conversely, the cognitive and cultural differences associated with diversity offer many benefits, including improved problem solving and innovation. The joint planning process embodies these two perspectives, facing the risk of group dissonance while anticipating the promise of more thorough and creative outputs. Joint Publication 5-0, Joint Planning (JP 5-0) details the four planning functions of military planning, 1) strategic guidance, 2) concept development, 3) plan development, and 4) assessment. This research concentrates on the concept development due to time limitations and a recognition that the cognitive and creative differences because of gender diversity would be most likely to alter outcomes during the second functions of the planning processes. Gender is one of the most readily visible diversity measures. Gender is also a key element of the U.S. military, in which women constitute the largest inherent diversity group at just over eighteen percent of the force.¹⁶ Concentration on gender diversity enables insight into one inherently diverse group's impact on group outcomes and viable solutions that leaders may be able to implement in solving complex problems.¹⁷

¹⁶ U.S. Department of Defense, *2019 Demographics Profile of The Military Community* (Washington DC: Department of Defense, 2019), 219.

¹⁷ U.S. Department of Defense, *2019 Demographics Profile of The Military Community* (Washington DC: Department of Defense, 2019), 219.

Strategic guidance initiates planning and the formation of a planning team.¹⁸ It is during the formation of the planning team that the negative aspects of diversity, the inability to form productive group cohesion and the tendency toward group think, may arise. Part of a group or team forming is self-categorization or putting oneself into a group.¹⁹ The most likely self-categorization during orientation of a mixed-gender group is gender because it is one of the most recognizable visible attributes. Self-categorization can cause disagreements if the group splinters along self-categorization instead of becoming cohesive.²⁰ In terms of the planning functions, a newly formed team is still forming and conducting self-categorization while at the same time expected to develop and understand the strategic and operational environment. There is obvious difficulty in forming a cohesive group and while simultaneously asking for divergent thought, which necessitates leadership and management skills.

During the concept development function, the team must generate courses of action (CAOs) recommendations for the commander. COA development necessitates creativity and innovation to provide a range of options for the commander within the boundaries of ends, ways, means, and time, while also harmonizing risk and presenting a clear path to defeat the adversary. It is a demanding task for the planning team, and intellectual overmatch seems most likely to manifest from the incorporation of diversity into the team. The value-in-diversity theory theorizes a competitive advantage of diverse groups due to improved levels of creativity from diverse perspectives and the ability to solve problems.²¹ The Military Leadership Diversity Commission (MLDC) re-states the value-in diversity theory writing, diversity “creates

¹⁸ CJCS “Joint Publication 5-0”, III-6.

¹⁹ Nils Karl Reimer et al., “Self-Categorization and Social Identification: Making Sense of Us and Them,” *PsyArXiv* (March 18, 2020): 3.

²⁰ Daniel R. Forsyth, *Group Dynamics, Seventh Edition* (Boston, MA, 2019), 138-139.

²¹ Taylor H. Cox and Stacy Blakes, “Managing Cultural Diversity: implications for organizational competitiveness,” *Academy of Management Executive* 5, no 3 (1991): 45.

performance advantages through the synergy of people’s different ideas and competencies.”²²

The theory suggests competitive advantage arises from diverse perspectives to a solution.

Diverse perspectives are a result of diversity in a group but the diverse perspective may not be translated into competitive advantage without leadership guidance.

The current Federal and DoD implementation plans regarding diversity highlight a force design problem. The implementation is focused on recruitment, training, and retention. While these plans are important to grow the future force, diversity cannot be put on hold until a later time when diversity in the force increases. The number of women in the military has grown but U.S. national security does not have the luxury of waiting for gender parity in the military. Leaders today need to be deliberate about the use of members in the force they currently have, and once in place, how to best leverage their divergent ideas and creativity for an advantageous group outcome.

Existing research indicates there are behaviors a group can develop to mitigate the negative effects of diversity in group outcomes.²³ The group is unlikely to develop the behaviors organically. Cox and Blakes suggest organizations reap the benefits of diversity when the organization manages diversity.²⁴ The management of diversity is first and foremost a leadership responsibility at all levels.²⁵ Leaders, however, need data in order to understand where and how managing diversity will have the biggest impact.²⁶

This is the first study to collect based on current understanding of group behaviors that mitigate the negative effects of diversity in military planning group outcomes. The study

²² Military Leadership Diversity Commission, *From Representation to Inclusion*, 17.

²³ Cox and Blakes, “Managing Cultural Diversity,” 46-51.

²⁴ Cox and Blakes, “Managing Cultural Diversity,” 46-51.

²⁵ Cox and Blakes, “Managing Cultural Diversity,” 52-53.

²⁶ Cox and Blakes, “Managing Cultural Diversity,” 52-53.

analyzes existing joint planning teams to determine what behaviors are and are not being employed by planning teams. The study findings indicate joint planning teams are not organized or behave in such a way that takes advantage of the strategic advantage promise of diverse teams.

Chapter 2: Literature Review

The review of literature regarding group behaviors that mitigate negative diverse group outcomes, specifically in gender diverse groups, focused on theories related to six research related questions:

- How are diversity and gender diversity defined?
- What type of behaviors might a gender diverse group manifest?
- What are the theoretical advantages of a gender diverse group?
- What are the theoretical disadvantages of a gender diverse groups?
- What theoretical ways could the DoD could take advantage of gender diversity in a planning team?
- How can mitigating behaviors be employed for positive gender diverse group outcomes?

How are diversity and gender diversity defined?

The Department of Defense (DoD) defines diversity as “all the different characteristics and attributes of individuals that are consistent with Department of Defense core values, integral to overall readiness and mission accomplishment, and reflective of the Nation we serve.”¹ The DoD definition qualifies that the attributes must be in line with DoD values and stresses all the different characteristics.

The academic literature explores additional nuances to definitions of diversity. Mannix and Neale define diversity as “any attribute that another person may use to detect individual differences,” while Shwa and Garrett-Power use the definition: “the presence of differences

¹ Military Leadership Diversity Commission, *From Representation to Inclusion*, 12.

among members of a social unit.”² Roberge and van Dick meld the two and present the definition of diversity as the “differences between individuals on any attributes that may lead to the perception that another person is different from the self.”³ Academic researchers do not define the attributes as values based, as the DoD does, but rather as characteristics. The DoD’s use of values in its definition of diversity demonstrates efforts to “reflect the diverse population of the United States eligible to serve in the Armed Forces, including gender specific, racial, and ethnic populations.”⁴ The DoD values diversity as an extension of the population it attempts to protect.

Researchers generally use two categories of diversity, inherent diversity and functional diversity. Inherent diversity includes attributes like race, gender, ethnicity, and age.⁵ Functional diversity are attributes that can changed, such as specialized skills, education, occupation, values, and culture.⁶ Both the DoD definition and academic definitions recognize diversity as part of a social function. The DoD makes the definition inclusive as consistent with Department of Defense policy while the academic definition of diversity portrays exclusivity or otherness as the perception that another person is different from the self. Both recognize the need for both inherent and functional diversity.

Inherent diversity is the more obvious of the two types of diversity because of its characteristics of race, gender and age are readily discernable. Gender diversity, as a subset of

² Elizabeth Mannix and Margaret A. Neale, “What Differences Make a Difference? The Promise and Reality of Diverse Teams in Organizations,” *Psychological Science in the Public Interest* 6, no. 2 (October 1, 2005): 31; James B. Shwa and Elain Barrett-Power, “The Effects of Diversity on Small Work Group Processes and Performance,” *Human Relations* 51, no. 10 (1998): 1307.

³ Marie-Elene Roberge and Rolf van Dick, “Recognizing the benefits of diversity: When and How Does Diversity Increase Group Performance?” *Human Resource Management Review* 20 (2010): 295.

⁴ United States Code, 2012 Edition, Supplement 3, Title 10 – ARMED FORCES, Pub l. 112-239, 126 Stat 1720 (2016), §656.

⁵ Frances J. Milliken and Luis L. Martins, “Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups,” *Academy of Management Review* 21, no. 2 (1996): 403.

⁶ Maznevski, “Understanding Our Differences,” 2.

inherent diversity, however, is not specifically defined by the DoD. Ritter-Hayashi, Vermeulen, and Knoblen define gender diversity as the “balance between the two genders.”⁷ Gender diversity is not the same as gender equality. Ritter-Hayashi, et al., states gender equality “is societally engrained, manifested in country policy and laws as well as visible in practices such as access to education.”⁸ Gender equality, according to the same researchers “entails whether policy and practice grant boys and girls as well as men and women equal access” to status.⁹ Gender equality necessitates social equality while diversity only requires some mix in gender composition.

What types of behaviors might a gender diverse team manifest?

A diverse planning team would most likely exhibit similar behaviors to any other diverse team. It is these behaviors that will determine the group’s outcome. The study of group dynamics is “concerned with human behavior and social relationships” especially regarding the relationship of the group to a goal or cause.¹⁰ The MLDC finds a link between DoD’s core values and diversity. In the issue paper, *Department of Defense and Core Values*, the MLDC reports on research conducted by the Air Force that identifies “creating a shared identity focused on the mission” as one technique to manage any negative impacts of diversity.¹¹ The DoD or Service core values act as an organizational identity that all members can focus on.¹² The paper goes on to indicate that core values can also shape the way people interact with each other. In other words, the core values of duty, integrity, ethics, honor, courage, and loyalty should

⁷ Daniela Ritter-Hayashi, Patrick Vermeulen, and Joris Knoblen, “Is this a man’s world? The effect of gender diversity and gender equality on firm innovativeness,” *PLoS ONE* 14, no. 9 (September 18, 2019): 1.

⁸ Ritter-Hayashi, Vermeulen, and Knoblen “Is this a man’s world?” 1.

⁹ Ritter-Hayashi, Vermeulen, and Knoblen, “Is this a man’s world?” 2.

¹⁰ Dorwin Cartwright and Alvin Zander, “Origins of Group Dynamics,” *Group Facilitation: A Research & Application Journal* 2, no. 2 (2000): 39.

¹¹ Military Leadership Diversity Commission, *Issue Paper #6: Department of Defense Core Values* (Arlington, VA, December 2009), 1.

¹² Military Leadership Diversity Commission, *Issue Paper #6, 2*.

manifest itself in the way members of the team treat each other and thus mediate any negative effects of diversity on group performance.

Behaviors arising from identity are often found in group dynamics. Self-categorization and social identification are the building-block theories of identity in group dynamics. Research on diverse groups indicates that individual differences based on attributes that distinguish between self and other may mediate positively or negatively on the outcomes of a team.¹³ A study conducted by Woolley, et al., determined the proportion of women in a group significantly alters the collective intelligence factor of the entire group and is a useful indicator for predicting the ability of a group to accomplish a spectrum of tasks.¹⁴ The collective intelligence factor includes two correlated factors: social sensitivity and speaking in-turn variance.¹⁵ Women score higher in both of these correlated factors; hence, the collective intelligence factor points to gender diversity as an important predictor of a group's ability to complete various tasks.¹⁶

John Turner's self-categorization theory and Henri Tajfel's social identity theory provide useful frameworks for group dynamics and behavior. Tajfel explains individual behavior in a group as a continuum of "social categorization-social identity-social comparison-positive distinctiveness sequence."¹⁷ Social categorization is the spontaneous and almost instantaneous sorting behaviors humans use to categorizing themselves into a group or defining where they belongs in society.¹⁸ Self-categorization theory is a "perspective on how, when, and why

¹³ Roberge and van Dick, "Recognizing the benefits of diversity," 295.

¹⁴ Anita Williams Woolley et al., "Evidence for a Collective Intelligence Factor in the Performance of Human Groups," *Science* 330, no. 6004 (October 29, 2010): 688.

¹⁵ Woolley et al., "Evidence for a Collective Intelligence Factor," 688.

¹⁶ Mathias Wullum Nielsen et al., "Opinion: Gender Diversity Leads to Better Science," *Proceedings of the National Academy of Sciences* 114, no. 8 (February 21, 2017): 1741.

¹⁷ John C. Turner and Katherine J. Reynolds, "Self-Categorization Theory," *Handbook of Theories of Social Psychology* (2012): 3.

¹⁸ Turner and Reynolds, "Self-Categorization Theory," 3; Reimer et al., "Self-Categorization and Social Identification," 2.

individuals categorize themselves into certain social groups.”¹⁹ Turner conceptualized three levels of self-categorization, the interpersonal level, where the individual retains their ideas of individuality and uniqueness; the intergroup level, where the individual identifies as a member of the group (ingroup) and different from those outside the group (outgroup); and the superordinate level, where an individual identifies as human versus other life forms.²⁰ The level of individual self-categorization depends on the situation and the person who is sorting.²¹ Interestingly, when mixed-gender and single gender groups were studied, the individual was more likely to categorize by their gender in a mixed-gender group.²² This highlights the importance of gender identity in self-categorization.

A person will move from the interpersonal level to the intergroup level if “the perceived differences between that person and other ingroup members are less than the perceived differences between that person and outgroup members.”²³ When a person moves from first to second level self-categorization, they relate to the ingroup identity even more than their own personal identity; and as such, they become prototypes of the group – that is, they “embody all attributes that characterize groups and distinguish them from other groups.”²⁴ Their group membership identity takes on additional meaning.

Social identification moves a person from self-categorizing to internalizing the group membership as part of the individual’s self-concept.²⁵ Social identification “denotes that an individual perceives their group and their membership thereof as meaningful, desired, and

¹⁹ Reimer et al., “Self-Categorization and Social Identification,” 2.

²⁰ Turner and Reynolds, “Self-Categorization Theory,” 5.

²¹ Turner and Reynolds, “Self-Categorization Theory,” 5.

²² Turner and Reynolds, “Self-Categorization Theory,” 8.

²³ Turner and Reynolds, “Self-Categorization Theory,” 5.

²⁴ Reimer et al., “Self-Categorization and Social Identification,” 5; Michael A. Hogg and Deborah J. Terry, “Social Identity and Self-Categorization Process in Organizational Contexts,” *Academy of Management Review* 25, no. 1 (January): 123.

²⁵ Reimer et al., “Self-Categorization and Social Identification,” 5.

important,” or as Tajfel writes, social identification is “that part of an individual’s self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that group membership.”²⁶ This social identification can be explained by the social attraction hypothesis which posits that group cohesion is determined by the number of prototype individuals in the group.²⁷

According to the group dynamic theories, a group’s behavior changes when the individuals in a group move from self-categorization to social identification and become prototypes of the group. The behaviors of the group are then based on ingroup and outgroup distinctions. Essentially, it is the “differences between [groups] on any attributes that may lead to the perception that [an outgroup] is different from the [ingroup]” or, in other words, the diversity between, not within, groups.²⁸ While seemingly creating another diversity issue, behavior within a group often relies on the sense of being ingroup. This sense of group membership is described as cohesion and is an integral predictor of group outcomes.²⁹

What are the theoretical advantages of a gender diverse group?

The Federal Workforce Plan on Diversity, Equity, Inclusion, and Accessibility “reaffirms that the United States is at its strongest when our Nation’s workforce reflects the communities it serves.”³⁰ The Department of Defense’s position mirrors the Federal workforce claim and promotes two advantages to embracing diversity: innovation and creativity, and social representation.³¹ The academic literature, however, is not as definitive about whether or how

²⁶ Reimer et al., “Self-Categorization and Social Identification,” 5-6.

²⁷ Hogg and Terry, “Social Identity and Self-Categorization,” 126

²⁸ Roberge and van Dick, “Recognizing the benefits of diversity,” 295.

²⁹ Hogg and Terry, “Social Identity and Self-Categorization,” 130-131.

³⁰ White House, *Government-Wide Strategic Plan to Advance Diversity*, 3.

³¹ Mark Esper, Secretary of Defense, memorandum for record, June 20, 2020.

diversity increases creativity and leads to innovation. If gender diversity leads to greater innovation and creativity then it most likely does so by increasing available skills and knowledge, mitigating social dynamics, and increasing collective intelligence. Roberge and van Dick reviewed numerous studies focusing on diversity and found that theoretically, diversity can provide multiple benefits to a group including: “a broader range of task-relevant knowledge, skills, abilities, and viewpoints that are distinct and non-redundant compared to . . . homogeneous groups.”³² The theoretical advantage could translate into greater creativity and innovation in group outcomes.³³ Paulus, Larey, and Dzindolet theorize that tasks needing a wide variety of skills are more likely to benefit from diversity and the production of novel ideas.³⁴ Paulus, et al., describe a model for studying creativity they call idea generation. Idea generation is broken into four types: the quantity of ideas (fluency), the span of ideas from different specialties (flexibility), innovative ideas (originality), and synergizing or modifying current ideas (elaboration).³⁵

Other research demonstrates that diversity increases the entire group’s ability to perform.³⁶ Collective intelligence theory states, “collective intelligence is the inference one draws when the ability of a group to perform one task is correlated with that group’s ability to perform a wide range of other tasks. The described kind of collective intelligence is a property of the group itself, not just the individuals in it.”³⁷ Ultimately, collective intelligence theory is similar to the concept of a whole being more than just the sum of its parts.

³² Roberge and Dick, “Recognizing the benefits of diversity,” 297.

³³ Roberge and Dick, “Recognizing the benefits of diversity,” 297.

³⁴ Paul B. Paulus, Timothy S. Larey, and Mary T. Dzindolet, “Creativity in Groups and Teams,” *Groups at Work*, ed Marlene Taylor (New Jersey, 2001): 330.

³⁵ Paulus, Larey, and Dzindolet, “Creativity in Groups and Teams,” 330.

³⁶ Woolley et al., “Evidence for a Collective Intelligence Factor,” 687.

³⁷ Woolley et al., “Evidence for a Collective Intelligence Factor,” 687.

Woolley, et al.'s research findings demonstrate that certain factors increased or decreased collective intelligence. They identified three factors that correlate to a group's collective intelligence: "average social sensitivity of the group members, the equality in distribution of conversational turn-taking, and the proportion of females in the group."³⁸ The proportion of females in a group is a key component in collective intelligence because research suggests females are more socially sensitive and more likely to promote equitable division of conversational turn-taking over their male counterparts.³⁹ These findings suggest that gender diversity plays a critical role in a group's ability to conduct a wide range of tasks.

Research focusing on the impact of token, minority, and representative gender diversity have demonstrated differing results.⁴⁰ Token is defined as one member of the opposite sex on a team, minority as being more than one but still in the numerical minority, and representative as close to or equal representation of both sexes. Rogelberg and Rumery studied the decision quality of teams with a lone or token female member. The lone female member team produced higher quality decision making than the all-male team.⁴¹ Though Rogelberg and Rumery assumed the female added time on task and interpersonal cohesion, or what Ely and Thomas call social sensitivity, which aided higher quality outcomes, they were unable to show decisively how or why the token female facilitated better performance.⁴² A study by Apesteguia, Azmat, and Iriberry published in *Management Science*, explored the effect of teams' gender composition during a business game in which three-member teams competed for market shares against four simulated companies. The three member teams were most successful when the gender

³⁸ Woolley et al., "Evidence for a Collective Intelligence Factor," 687.

³⁹ Woolley et al., "Evidence for a Collective Intelligence Factor," 687.

⁴⁰ Steven G. Rogelbert and Steven M. Rumery, "Gender diversity, Team decision quality, time on task, and interpersonal cohesion," *Small Group Research* 27, no. 1 (February 1996): 79-88.

⁴¹ Rogelbert and Rumery, "Gender diversity," 79-82, 84-88.

⁴² Rogelbert and Rumery, "Gender diversity," 79-80, 84-88.

composition was one female and two males. The researchers suggested diversity led to improved team dynamics.⁴³ Another study by Hoogendoorn, Oosterbeek, and van Praag, with team between nine and sixteen members, found that business teams with an equal gender distribution or female-dominated composition out-performed the male dominated teams.⁴⁴ Ritter-Hayashi, et al., conducted a study on under-represented females in businesses in developing countries, specifically in Africa, the Middle-East, and South Asia. They reported that women in the workforce had a significant, positive impact on innovation in the businesses they studied.⁴⁵ The positive impact rose even higher when there was female leadership and managers in a company.⁴⁶ Julia Bear and Anita Williams Woolley's literature review of research focusing on women's effect on teams in the science, technology, engineering, and math fields demonstrated that women advance the group process. The advances related to the effects of women on teams could lead to increases in creativity and innovation.⁴⁷

What are the theoretical disadvantages of a gender diverse group?

While some studies have shown the advantages of gender diversity in groups, there is also research that demonstrates the negative or neutral impacts of gender diversity on team outcomes. Kholsa, et al.'s study of teams in a software development setting that reported the "presence of females did not have any effect on the team performance activities" in the creative

⁴³ Jose Apesteguia, Ghazala Azmat, and Nagore Iriberry, "The Impact of Gender Composition on Team Performance and Decision Making: Evidence from the Field," *Management Science* 58, no. 1 (January 2012): 78, 93.

⁴⁴ Sander Hoogendoorn, Hessel Oosterbeek, and Mirjan van Praag, "The Impact of Gender Diversity on the Performance of Business Teams: Evidence from a Field Experiment," *Management Science* 59, no. 7 (July 2013): 1514, 1526-1527.

⁴⁵ Ritter-Hayashi, Vermeulen, and Knoblen, "Is this a man's world?" 6, 14-15.

⁴⁶ Ritter-Hayashi, Vermeulen, and Knoblen, "Is this a man's world?" 6, 14-15.

⁴⁷ Julia B. Bear and Anita Williams Wooley, "The Role of Gender in Team Collaboration and Performance," *Interdisciplinary Science Reviews* 36, no. 2 (June 2011): 146, 151.

areas of brainstorming and research, nor in the social sensitivity categories of information sharing and teamwork.⁴⁸ Horwitz and Horwitz completed a meta-analysis of research focusing on teamwork and diversity, and specifically the relationship between inherent diversity and team performance. The authors of the study found there was no significant relationship between inherent diversity and team performance; however, they found a positive relationship between functional diversity and team performance.⁴⁹

Two primary theories offer explanations about why gender diversity does not always fulfill its theoretical advantages. The first theory is that when gender diversity is not integrated, the diverse group is unable to communicate effectively and thus is not as productive as a homogeneous group.⁵⁰ The second theory focuses on the impact of self-categorization. When individuals categorize themselves or others by gender and not by ingroup, commitment to the team is negatively affected.⁵¹ Additionally, a team may have a negative outcome if the minority group is not seen as prototypical.⁵² Both of the theories focus on the cohesion of the group. When a group is not able to cohere because of perceptions of outgroup membership the group outcomes may be negative.

What theoretical ways could the DoD could take advantage of gender diversity in a planning team?

7. ⁴⁸ Sourabh Khosla et al., “Females in Software Engineering Teams: A Social Sensitivity Perspective,” n.d.,

⁴⁹ Sujin K. Horwitz and Irwin B. Horwitz, “The Effects of Team Diversity on Team Outcomes: A Meta-Analytic Review of Team Demography,” *Journal of Management* 33, no. 6 (December 2007): 988, 1009.

⁵⁰ Maznevski, “Understanding Our Differences,” 531–52,

⁵¹ Jee Young Seong and Doo-Seung Hong, “Gender Diversity: How Can We Facilitate its Positive Effects on Teams?” *Social Behavior and Personality* 41, no. 3 (Seoul, 2013): 498.

⁵² Hogg and Terry, “Social Identity and Self-Categorization,” 130.

Prior research findings provide both the theoretical advantages of diversity and qualitative tests on gender diversity outcomes. Teams fail to take advantage of diversity potential if they are unable to coalesce because diversity is seen as a hinderance instead of a benefit. In those cases, either the majority or minority members are not invested in the team. Paulus, et al., provide recommendations on optimizing group formation and the procedures most likely to stimulate group creativity. The recommendations include: 1) limiting the size of the group needed to complete the task, 2) set challenging goals for the number of ideas the group can generate, 3) give breaks to the group, and 4) include both inherent and functional diversity.⁵³

Ely and Thomas described how an organization's culture can take advantage of diversity. They suggest the "diversity perspective" of a group will determine if diversity will lead to positive group outcomes.⁵⁴ A "diversity perspective" is the rationale that guides people's efforts to create and respond to cultural diversity in a work group; normative beliefs about the value of cultural identity at work, expectations about the kind of impact, if any, cultural differences can and should have on a group and its work; and beliefs about what constitutes progress toward the ideal multicultural work group.⁵⁵

Ely and Thomas outline three learning perspectives related to learning in a diverse culture based on their study of three professional businesses with different diversity perspectives.⁵⁶ The discrimination and fairness perspective is an attempt at diversity blindness, focusing on innate humanity but ignoring the richness of diversity. The access and legitimacy perspective takes into account diversity but only for the sake of using it for an advantage in particular markets. The

⁵³ Paulus, Larey, and Dzindolet, "Creativity in Groups and Teams," 331-334.

⁵⁴ Robin J. Ely and David A. Thomas, "Cultural Diversity at Work: The Effects of Diversity Perspectives on Work Group Processes and Outcomes," *Administrative Science Quarterly* 46, no. 2 (June 2001): 234.

⁵⁵ Ely and Thomas, "Cultural Diversity at Work," 234.

⁵⁶ David A. Thomas and Robin J. Ely, "Making Differences Matter: A New Paradigm for Managing Diversity," *Harvard Business Review* (September-October 1996): 81.

integration and learning perspective acknowledges diversity and attempts to leverage diversity for an advantage.⁵⁷ The integration and learning perspective understands diversity as:

A valuable resource that the work group can use to rethink its primary tasks and redefine its markets, products, strategies, and business practices in ways that will advance its mission. This perspective links diversity to work processes – the way people do and experience the work – in a manner that makes diversity a resource for learning and adaptive change.⁵⁸

According to Ely and Thomas, a group with an integrated and learning perspective has employees who feel respected and valued, work towards resolving intergroup conflict, and feel they contribute to the organization.⁵⁹ In other words, an integration and learning perspective leads to group members having a stronger social identity than those in the other diversity perspectives, and it manifests in the group behavior. Unfortunately, Ely and Thomas did not specify how the organization came to have an integration and learning perspective. Rather, they inferred that when management embraced the integration and learning perspective, so did the employees.⁶⁰ The business with the integrated and learning perspective also had management that fostered “symmetric relations of power as well as more effective functioning.”⁶¹

Raghuram and Garud studied the role of diversity in group outcomes and productivity in *The Vicious and Virtuous Facets of Workforce Diversity*. The researchers found two factors that affect the outcome of diverse groups – voice and exit. Voice is the opportunity to be heard and share values and exit is the ability for a group to change the composition of the group without changing the culture of the group.⁶² Studies by Diehl and Strobe suggest that the critical factor

⁵⁷ Ely and Thomas, “Cultural Diversity at Work,” 240-247.

⁵⁸ Ely and Thomas, “Cultural Diversity at Work,” 240.

⁵⁹ Ely and Thomas, “Cultural Diversity at Work,” 261.

⁶⁰ Ely and Thomas, “Cultural Diversity at Work,” 265.

⁶¹ Ely and Thomas, “Cultural Diversity at Work,” 267.

⁶² Sumita Raghuram and Raghu Garud, “The Vicious and Virtuous Facets of Workforce Diversity,” *American Psychological Association* (1996): 157.

production blocking on a team is the inability to present ideas as they are generated.⁶³ An example of this would be a person who cannot get a word in edgewise during brainstorming so the group loses the idea because it is never verbalized.⁶⁴

What mitigating behaviors can lead to positive group outcomes?

Several studies have attempted to determine ways to mitigate the negative outcomes of diversity on a group. Martha Mazneski proposes communication as an integrating mechanism in diverse groups. Communication, according to Mazneski, includes turn-taking and the effective transmission of the message.⁶⁵ Wooley, et al.'s concept of collective intelligence factor, which states the proportion of females in the group is important because females are more likely to promote equitable division of conversational turn-taking over male counterparts, support Mazenski's findings.⁶⁶

Cooperative group norms may also mitigate gender diversity disadvantages by minimizing differences and pointing the group towards a common goal.⁶⁷ Seong and Hong define cooperative group norms as the importance a person puts on their membership in a group.⁶⁸ Their definition of cooperative norms match's Turner's self-categorization theory. The greater the cooperative norms, the better the group outcomes.⁶⁹ Shaw and Barret-Power, Binsiddiq and Alzahmi, and Church all came to the same conclusion that when cooperative

⁶³ Michael Diehl and Wolfgang Stroebe, "Productivity Loss in Brainstorming Groups: Toward the Solution of a Riddle," *Journal of Personality and Social Psychology* 53, no.3 (September 1987): 498.

⁶⁴ Diehl and Stroebe, "Productivity Loss in Brainstorming Groups," 498; Paulus, Larey, and Dzindolet, "Creativity in Groups and Teams," 321.

⁶⁵ Maznevski, "Understanding Our Differences," 535.

⁶⁶ Woolley et al., "Evidence for a Collective Intelligence," 687.

⁶⁷ Seong and Hong, "Gender Diversity," 497.

⁶⁸ Seong and Hong, "Gender Diversity," 498.

⁶⁹ Seong and Hong, "Gender Diversity," 505.

norms were present group outcomes improved.⁷⁰ Interestingly, Seong and Hong found transformational leadership did not moderate the negative effects of gender diversity.⁷¹ They did, however, acknowledge managers are integral in fostering a cooperative team climate.⁷²

The Military Leadership Diversity Commission (MLDC) came to the same conclusion as Mazneski and Seong and Hong. In order to enhance readiness and mission accomplishment, the MLDC recommends effectively leading diverse groups must become a core competency across the DoD and Services. To implement this recommendation,

Leadership training at all levels shall include education in diversity dynamics and training in practices for leading diverse groups effectively. DoD and the Services should determine the framework (e.g., curriculum, content, methods) for how to inculcate such education and training into leader development, including how to measure and evaluate its effectiveness.⁷³

The report emphasizes the importance of diversity leadership training and recommends looking through a “diversity lens,” similar to Ely and Thomas’ integration and learning perspective, that focuses the leader on the opportunities and costs of group diversity. The report acknowledges the negative aspects as “loss of cohesion, communications difficulties, [and] conflict.”⁷⁴ The MLCD, however, does not have any specific recommendations on training or mitigation techniques.

⁷⁰ Shaw and Barrett-Power, “The Effects of Diversity on Small Work Group Processes.”1307; Yasser A. Binsiddiq and Rashed A. Alzahmi, “Work Engagement and Group Dynamics in Diverse and Multicultural Teams: Critical Literature Review,” *Review of Management Innovation & Creativity* 6, no. 19 (2003): 121-122; Allan H. Church, “Diversity in Workgroup Settings: A Case Study,” *Leadership & Organization Development Journal* 166. no.6 (1995): 3.

⁷¹ Seong and Hong, “Gender Diversity,” 499, 505.

⁷² Seong and Hong, “Gender Diversity,” 505.

⁷³ Military Leadership Diversity Commission, *From Representation to Inclusion*, 21-22.

⁷⁴ Military Leadership Diversity Commission, *From Representation to Inclusion*, 22.

Conclusion

The literature review clarifies the definition of gender diversity in a group being at least one member of each sex on the team. There are indications in academic literature of both positive and negative outcomes arising from diverse teams. The research suggests gender diverse teams have the capacity for creative and innovative outcomes beyond that of a homogenous team. In order to reach their full creative and positive group outcomes most teams will need mitigation. The two mitigation behaviors are cohesion and communication. The review of the literature suggests two research questions:

- Primary: Do planning teams practice the mitigating behaviors as described in the literature?
- Subordinate: What behaviors can leaders and planning team members practice to have a positive effect on gender diverse groups producing positive outcomes?

Chapter 3: Methods

The research employed two methods to gather data to answer the research questions. The research employed a survey based on mitigating group behaviors determined by the literature review to gather quantitative data. The research also employed observations to gather qualitative data. The observations were guided by the survey statements and refined through the literature review.

Survey

The survey was designed around the two mitigating group behaviors of cohesion and communication that effect planning group outcomes. This outcome is to produce creative ideas to national security problems. Creativity was included as the third category of group outcomes in the survey. The survey consisted of two demographic questions and fourteen group outcome statements pertaining to a participant's experience on a planning team. The prompts offered respondents a pseudo-Likert Scale of strongly disagree, disagree, neutral, agree, strongly agree as responses to the group outcome statements. According to Kronish and Hutchinson-Krupat, idea-generation is critical component of innovation and creativity, so idea-generation was used as a proxy for creativity in five questions.¹ The research was limited to determining the planner's experiences and not reviewing the actual products, hence the need for a creativity proxy. Five group outcome statements concerned group cohesion and the last four group outcome statements

¹ Laura Kornish and Jerney Hutchinson-Krupat, "Research on Idea Generation and Selection: Implications for Management of Technology," *Production and Operations Management* 24, no. 4 (April 2017): 634.

concentrated on communication among members of the group. The respondents were also given an area to input comments.²

The surveys were distributed via Microsoft Forms to current members of the Joint Enabling Planning Element, the planning section of the Joint Enabling Capabilities Command, U.S. Transportation Command, Norfolk Naval Station, and current and former Joint Advanced Warfighting School students. The researcher obtained 130 responses from across the joint planning community.

The researcher calculated the mean for each of the responses and took the three statements with the lowest mean for further observation. The three group outcome statements with the lowest mean on the survey were:

- The team produced novel ideas.
- Everyone on the team agreed on the goal.
- I was able to express my ideas without interruption.

The group outcome statements reflected two mitigating group behaviors for group outcomes and a creativity behavior. “The team produced novel ideas” reflected creativity, “everyone on the team agreed on the goal” relates to cohesion, and “I was able to express my ideas without interruption” aligns with communication. The three group outcome statements were used to create an observation code book to focus the observation research.

The researcher used first cycle in-vivo coding to break down each comment into basic sentiments on planning team behaviors. In second cycle coding, pattern coding was used to

² See Appendix A for the survey.

group the sentiments into broad categories to gain further insight into planning team member's thoughts and behaviors.

Observations

The researcher used the group outcome statements identified by the lowest mean from the quantitative data to create a code book for observations. Theories and concepts developed in the literature review were then applied to a corresponding group outcome statement to define an observable behavior.³

Group Outcome Statement. The team produced novel ideas.

Observable Behavior. Fluency, Flexibility, Originality, and Elaboration as proxies for creativity.

Theory. Idea generation was used as a proxy for creativity. The four types of idea generation are: the quantity of ideas (fluency), the span of ideas from different specialties (flexibility), innovative ideas (originality), and synergizing or modifying current ideas (elaboration).⁴ Idea generation is considered a positive group outcome.⁵

In order to interpret the behaviors being observed the researcher further clarified the definitions pertaining to idea generation.

- Fluency/Quantity of Ideas: number of distinct “descriptions of solutions to a problem posed.”⁶
- Flexibility/Span of ideas: number of members on the team who offer solutions to a problem posed.

³ See Appendix B for the code book.

⁴ Paulus, Larey, and Dzindolet, “Creativity in Groups and Teams,” 330.

⁵ Kornish and Hutchinson-Krupat, “Research on Idea Generation and Selection,” 634.

⁶ Kornish and Hutchinson-Krupat, “Research on Idea Generation and Selection,” 634.

- Originality/Innovative Ideas: “conscious, purposeful search for opportunities” based on knowledge to provide solutions to problems posed.⁷
- Elaboration/Synergizing or modifying current ideas: building upon the solutions to problems posed by others on the team.

Group Outcome Statement. Everyone on the team agreed on the goal.

Observable Behavior. The team received a task or product to accomplish or deliver. The team produced a plan-to-plan time-line. The group understood the materials they were given. The demonstrated observables were used as a proxy for agreeing upon a goal.

Theory. By providing a goal(s) the leader is able to move individuals towards self-identification with the team and attainment of team goals. Setting goals is one way to minimize the negative impacts of diversity on a team.⁸ Formal goals are often given to a planning team in the form of a task or product required to complete or produce. The planning team may informally set goals through the use of a plan-to-plan strategy of creating a time-line for completing tasks. Within tasks, the team may create micro-goals to understand the materials.

Group Outcome Statement. I was able to express my ideas without interruption.

Observable Behavior. Turn-taking as an indication of group communication.

Theory. Turn-taking is critical to verbal communication and occurs when one person moves from speaker to hearer and the other from hearer to speaker.⁹ Turn-taking can be distinguished into two types, interruption and overlap. Interruption is generally seen as “turn-competitive

⁷ Peter F. Drucker, “The Discipline of Innovation,” *Harvard Business Review*, August 1, 2002.

⁸ Seong and Hong, “Gender Diversity,” 499.

⁹ Dnyaneshwar P. Suryawanshi, “Turn-Taking and Simultaneous Speech,” *Language In India* 20, no. 9 (September 1, 2020): 60.

incomings” where the incoming speaker takes the floor before the current speaker has completed their utterance.¹⁰ Several types of interruption have been studied but for the purpose of this study, the researcher coded for intrusive interruption. Intrusive interruption seeks to “change the ongoing topic, to disagree with the speaker or to get hold of the conversational floor.”¹¹ Overlap does not carry the same negative connotation as interruption. Overlap is used in cooperative sentence building when both speaker and listener complete the same thought, requests and provides verification without taking the floor, or repetition when the listener repeats the utterance of the speaker without changing speaker.¹² Overlap is usually perceived as cooperative.

Communication contributes to both group creativity and group cohesion. Consistent interruption may cause a speaker to give up attempting to share an idea or lose the idea when interrupted. Intrusive interruption can be a sign of high-status and low-status members and affects group behavior.¹³

Behaviors were further broken down into positive and negative dyads for coding purposes. Where Kornish and Hutchinson-Krupat did not specify an opposite behavior, the researcher provided an opposite. The coding framework was as follows:

Table 3.1. Positive and negative behavior dyads for observation coding

Behavior	Positive	Negative
Fluency	Fluency	Evaluation Apprehension
Flexibility	Flexibility	Free Riding
Originality	Original	Speculation

¹⁰ Suryawanshi, “Turn-Taking and Simultaneous Speech,” 61.

¹¹ Suryawanshi, “Turn-Taking and Simultaneous Speech,” 63.

¹² Suryawanshi, “Turn-Taking and Simultaneous Speech,” 68.

¹³ Mark Ter Maat, Khiet P. Truong, and Dirk Haylen, “How Agents’ Turn-Taking Strategies Influence Impressions and Response Behaviors,” *Presence* 20, no. 5 (October 2011): 413.

Elaboration	Elaboration	Dismissal
Goals	Purpose	Confusion
Turn-Taking	Overlap	Interruption

The researcher uses the following the negative behaviors not specified previously:

- Evaluation Apprehension: “the fear of negative evaluations from other group members” that keeps a member from offering ideas.¹⁴
- Free Riding: the belief that a member does not have to work because either the member is not being monitored or the feeling their contributions do not benefit the group.¹⁵
- Speculation: providing ideas that are not based on knowledge, experience, or military skill set.
- Dismissal: clearly indicating one member is “unwilling to accept any challenge to his expertise” or ideas.¹⁶
- Confusion: a group member asks for explanation of the task.¹⁷

The researcher took notes while observing the planning team during the planning exercise. The researcher also audio recorded the observations and transcribed the group interactions after the fact. The researcher used attribution coding to determine the sex of the speaker. First cycle coding was used to determine breaks in conversation or topic. Second cycle coding was conducted to code verbal acts.

Limitations

¹⁴ Diehl and Stroebe, “Productivity Loss in Brainstorming Groups,” 498.

¹⁵ Diehl and Stroebe, “Productivity Loss in Brainstorming Groups,” 499.

¹⁶ Peter Hartley, *Group Communication* (London: Routledge, 1997), 5.

¹⁷ Hartley, *Group Communication*, 28.

The researcher recognized several limitations at the outset of the study. There were limitations due to time and accessibility in the number and variety of planning team observations the researcher was able to conduct. Observations were conducted almost exclusively on military members and the gender diversity may be different at a Combatant Command with the addition of DoD civilians involved in planning teams. Observations were limited to three behaviors, which may skew the data. Observations were also limited to verbal actions and did not include body language that may have provided more information on mitigating group behaviors. The code book served as an instrument to maintain objectivity and curb potential biases, but subjectivism could have occurred because the researcher is both part of the military planning community and female.

Chapter 4: Survey Analysis

The researcher calculated the mean and standard deviation for each group outcome statement, as shown in Table 4.1. The group outcome statements were based on common behaviors in each of the mitigating group behavior categories creativity, cohesion, and communication. A mean below four indicates there were more respondents who answered strongly disagree, disagree, or neutral than those that answered agree or strongly agree. The researcher used the outcomes represented in the statements with a mean less than four to further explore behaviors during observations. The three statements with a mean less than four were, “The team produced novel ideas,” “Everyone on the team agreed on the goal,” and “I was able to express my ideas without interruption.” Two statements represented mitigating group behaviors and one statement represented creativity. The distribution of statements validated the categories the researcher chose for mitigating behaviors.

Table 4.1. Quantitative analysis of survey data

Group Outcome Statement	Mean	Standard Deviation
The team leader encouraged all members to speak up and share thoughts and ideas.	4.52	0.83
I was able to share ideas during the planning sessions.	4.55	0.74
The team leader encouraged creative and novel ideas.	4.35	0.82
The team leader gave breaks during the planning sessions	4.19	0.97
The team produced novel ideas.	3.97	0.94
The leadership planning team had a clear goal.	4.17	0.95
Everyone on the team agreed on the goal.	3.85	0.97
Differences in ideas and opinions were understood as positive.	4.05	0.91
I felt I was respected by my colleagues.	4.51	0.76
I felt a sense of belonging to the team.	4.35	0.84

My ideas were dismissed without reasonable consideration or explanation.	1.7*	1.06
I was able to express my ideas without interruption.	3.99	1.03
Language used by the team was respectful.	4.45	0.78
Language on the team made me feel included.	4.38	0.77

*The statement was posed in the negative, thus this item is reverse scored.

Comments constituted the second set of data from the survey. Of the 130 respondents, there were sixty comments. The high number of written responses suggests responders were invested in and were eager to share their opinion on the survey subject. The researcher first broke down each comment into basic sentiments on planning team behaviors. In the second cycle, pattern coding was used and the researcher noted six patterns. Three of the patterns dealt with beliefs about diversity and the other three about perceived behaviors affecting group outcomes. The three patterns on diversity belief were, 1) functional diversity is a more important indicator of group performance than inherent diversity, 2) focusing on inherent diversity is detrimental to planning, and 3) group diversity leads to positive group outcomes, shown in Table 4.2. The three patterns on perceived behaviors affecting group outcomes were, 1) leadership determines the experience and outcome of the planning team, 2) group dynamics are different in every team, 3) time plays an important role in group cohesion and performance, shown in Table 4.3.

Table 4.2. Diversity beliefs from survey comments

Pattern Code	Comment
Functional diversity is a more important indicator of group performance than inherent diversity	Not everyone gets an equal voice because there are often vast differences in talent, experience, and work ethic among the members.
	Competence in the JPP, emotional intelligence, and ability to drive the JPG are paramount. Professional planners and strategists are not influenced by gender.

In reality, successful planning teams desire intellectual diversity. Intellectual diversity is when planners approach problems with learning perspectives and ask insightful questions that challenge the intellectual status quo of the group through a range of perspectives.

Competence, initiative, and desire to contribute are key characteristics of all planning team members. Without that commitment and participation, no amount of diversity matters.

In my opinion, personality characteristics had a stronger, more direct impact on inclusiveness than gender.

Our planning team leadership leaned on the team members' operational background for important insight, regardless of rank, race, or gender.

My team's dynamic was great. Distractions such as gender identity and inclusivity were not present. Honestly surveys like this highlight our differences and are not helpful.

Focusing on inherent diversity is detrimental to planning

I believe we emphasize gender, racial, sexual, ethnic diversity etc to our own detriment in optimizing planning.

Despite the encouragements from JAWS staff and your own political opinions and decision-making biases that likely lead you to believe there is no diversity outside of gender, sex, race, or other small group belonging, I would encourage you to pursue more meaningful research and write for serious audiences that will take your work and use it to polish the application of the instruments of military power. Producing a thesis rooted in psychological experiments and inference,

a thesis with conclusions that could never withstand the unforgiving criticisms of the real world and it's long timeline should be beneath you and your responsibilities according to the Oath you have sworn to support and defend the Constitution of the United States of America against all enemies, foreign and domestic...

GCC use of JECC planner augmentation of OPTs usually results in a more diverse OPT and more collaborative approach because JECC planners are both trained in JPP and OPT leadership, and because the JECC has a more diverse cohort of assigned officers.

Group diversity leads to positive group outcomes

I always found it beneficial to have a diverse planning team.

The diversity of the teams composition (male, female, different services, and countries) increased creativity for finding recommendations.

The desire for functional diversity corresponds with Paulus, et al.'s recommendation to include functional diversity in groups for creative outcomes but fails to recognize the role of inherent diversity.¹ The researcher suggests two reasons the respondents may overlook inherent diversity, specifically gender diversity. One, women represent just over eighteen percent of the population in the military, so it is unlikely most of the respondents have any experience working as part of a team with gender parity. Thus, they are unable to address the differences between groups of gender parity and imparity because they have not experienced it. As a result, the respondents' concentration is on the diversity present in their planning team, which is functional diversity. Two, diversity perspective research indicates the respondents have a discrimination

¹ Paulus, Larey, and Dzindolet, "Creativity in Groups and Teams," 331-334.

and fairness perspective. According to Ely and Thomas when people have a discrimination and fairness perspective, they believe there is “no instrumental link between diversity and the group’s work.”² Groups demonstrating a discrimination and fairness perspective tend to see any diversity, equity, and inclusion actions as carrying more political clout than warranted, and believe it is irrelevant to the groups outcomes.³ In addition, organizations with a discrimination and fairness perspective tend to measure their diversity progress by recruitment and retention goals.⁴

Table 4.3. Perceived behaviors affecting group outcomes survey comments

Pattern Code	Comment
Leadership determines the experience and outcome of the planning team,	<p>OPT Leader took time for introductions which created an inclusive environment. Team building after hours increased team cohesion as members learned more about one another. OPT leader cared about diverse thoughts and opinions. OPT leader took time to interrogate plans with a designated red-team which increased the quality of outputs.</p> <p>Leader personality and conduct sets the tone for the OPT.</p> <p>All of the leads have been inclusive and supportive.</p> <p>Team lead did a remarkable job of seeking out the expertise and opinions of all team members through specific techniques that not only sought but required input from everyone on the team.</p> <p>Great leadership resulting in a high performing team from start to finish.</p>

² Ely and Thomas, “Cultural Diversity at Work,” 245-246.

³ Ely and Thomas, “Cultural Diversity at Work,” 246.

⁴ Ely and Thomas, “Cultural Diversity at Work,” 246.

JPT/OPT leader and the skills, knowledge, and experience necessary to lead effectively a diverse team.

The JPG started with a list of ground rules that mirror your survey questions. Everyone felt welcome and a part of the team from jump street.

An effective team leader does all that this survey is hinting at.

There were multiple colonels making last-minute decisions to change briefs, so that the product created with our planning team, which used USAF, USN and USA element across the US, was practically unrecognizable.

As a J35 participated in a planning team responding to the DOD COVID response. Planning Team was led by an Army Female O6 from the J5. Biggest issue we had was the CG had no idea what he wanted. Talk about frustrating!

Group dynamics are different in every team

Different planning teams have different dynamics. The planning teams I participated on at JAWS were extremely more inclusive than ones I participate in within the construction industry or even my National Guard planning teams.

Every OPT is different, including the individual personalities on the team, but generally I've worked with excellent people who have a lot to contribute.

Some MTP groups are better than others.

The OPT was with the DOS, USAID, and others from the Interagency. Their approach to individual training is very minimal and this OPT was on TNG. Also, these organizations don't believe in

practical hands-on pragmatic approach to problem solving with deliverables; most of their deliverables are done in a Cable word-document without technical solutions laid out.

There will always be friction when you bring a variety of planners into a collaborative environment, especially when they each are chosen to not only represent but advocate their sending unit/functional discipline/capability etc.

Planning teams vary.

Time plays an important role in group cohesion and performance

Like any group, cohesion evolved over the course of the planning effort. At the beginning, I did feel like my thoughts were not being taken seriously; that changed with time and participation.

Not much camaraderie under time suspense and leadership pressure for multiple products due quickly.

Due to operational time constraints, the diverse ideas and discussions were given a specific deadline.

The greatest challenge is fostering an open and inclusive planning environment, especially during accelerated planning times.

Group dynamics are always shifting, depending on members of the group who enter or exit, the amount of time the group has to form, and the stress the group experiences. The comments likely represent each of the factors. To minimize the negative aspects of group dynamics, that are especially prevalent in diverse groups, mitigating group behaviors are necessary.⁵ The comments suggest that when the leaders of the teams performed the positive

⁵ Seong and Hong, "Gender Diversity," 499, 505.

behaviors outlined in the survey, the team performance was seen as positive. Leadership was seen to be a fundamental factor in the outcome of diverse groups, as noted in the survey comments.

Chapter 5: Observations Analysis

The researcher completed four days of observations with two different planning groups. The research was primarily qualitative and focused on three group outcome statements derived from the survey and concentrated the researcher on the behaviors associated with those outcomes.

First Group Observations

The first group observed was comprised of forty-four reserve component participants taking part in military planning training through the use of a fictional scenario. The first group was tasked with conducting mission analysis on the problem set with a final mission analysis briefing as the end product. There were a total of ten females and thirty-four males, exceeding the active component percentage of females at twenty-two percent versus eighteen percent. For the purpose of the research, however, having approximately the same percentage as the general military population of women is equivalent to a token minority. The group was broken into five teams. Three members made up the joint planning group (JPG) with two males and one female. The rest of the members were divided into four operational planning teams (OPT), each with a mentor. OPT 1 had ten participants with one female member, nine male members, and one male mentor. OPT 2 consisted of nine members with two female members, seven male members, and a female mentor. OPT 3 had nine members with two female members, seven male members, and a male mentor. OPT 4 had ten members with two female members, eight male members, and a female mentor. Since all teams had at least one female member, the researcher categorized the teams as gender diverse.

Idea Generation

The researcher observed the difference in positive idea generation behaviors between males and females. Males were more likely to exhibit fluency and original behaviors, that is expressing distinct descriptions of solutions to a problem posed either from the present problem or previous knowledge. Females were more likely to exhibit overlap, clarification and agreement, or elaboration, building on previous ideas. The differences correspond to collective intelligence theory, which indicates social sensitivity is correlated to females in the group, and females provide it, not males.¹ Sixty-four percent of the time females spoke, they demonstrated elaboration or overlap, while their male counterparts demonstrated overlap and elaboration only thirty-four percent of the time. Males demonstrated higher levels of fluency and originality at twenty-six percent, compared to females at twenty-two percent. The total observable behaviors that exhibited positive creativity was seventy-eight percent of all verbalized actions.

Negative idea generation behaviors were also present. The researcher did not observe any negative obstruction behavior. Free riding was only demonstrated by male members who made no comments nor offered any ideas to the group. However, the researcher cannot make any definitive remarks on free riding since they did not observe all teams during the entire training period. The last negative idea generation behavior was dismissal. Dismissal was demonstrated by one female to another female, four dismissals of males to females, and two dismissals of males to males.

The researcher did not attempt to determine the efficacy idea-generation behavior by observation, only the behaviors that lead to idea-generation. The research did indicate negative

¹ Woolley et al., "Evidence for a Collective Intelligence," 687.

idea generation behaviors, specifically dismissal, is an area in which gender diverse teams need to improve.

Goals

All planning teams were given specific planning tasks by the JPG. All planning teams were observed to work toward the specific task as the goal. The researcher concluded, through observation of conversation and planning materials, that the planning teams understood the goal of the training exercise. Confusion was limited to details over the materials given to them to work with or the definition of doctrinal terms. The researcher observed all teams working toward the end product. All teams used a plan-to-plan timeline to complete tasks. All groups worked through the materials given to understand their task.

The researcher determined the gender diverse teams demonstrated the mitigating group behavior of goal setting, approval, and time management.

Turn-taking

While the literature presents overlap as part of communication, the researcher observed overlap was relevant to idea generation because overlap often consisted of clarifying questions and agreement to keep idea fluency progressing. Communication as part of the idea generation or creative process is also described in studies by Ter Maat, et al.² Therefore, the researcher only recorded observations on interruptions when analyzing turn-taking. Similar to dismissal, the researcher observed males were more likely to interrupt females than any other gender combination. Of the thirteen observed interruptions, ten of them were males interrupting females, one was a female interrupting another female, and two were a male interrupting other males. Interruptions represented eight percent of all verbal interactions.

² Ter Maat, Truong, and Haylen, "How Agents' Turn-Taking Strategies Influence Impressions," 413.

The research indicates the turn-taking behavior of interruption is an area gender diverse teams need to improve.

Second Group Observations

The second group consisted of twenty-one active-duty professional military education students learning the military planning processes and conducting an exercise. The group was broken into three OPTs of an all-male sample. OPT 1 had eight male members. OPT 2 had eight male members. OPT 3 had five male members. Since the group was all male, the researcher was able to observe interactions in a homogenous group.

Idea Generation

The researcher observed males had a similar percentage of overlap and elaboration in a homogenous diverse group at thirty-seven percent compared to thirty-four percent in a gender diverse group. The total group percentage of fluency and originality in a male only group was thirty-five percent versus twenty-four percent in a gender diverse group. The total positive creativity observable behaviors in the homogenous group was equal to the percentage in a gender diverse team at seventy-eight percent of all verbalized actions.

Negative idea generation behaviors were also observed. The researcher did not observe any negative obstruction behavior. Since the groups were male-only, free riding was only observed in males. However, the researcher cannot make any definitive remarks on free riding since they did not observe all teams during the entire training period. The last negative idea generation behavior was dismissal. Six dismissals were observed.

By comparing idea-generation behaviors of the homogenous diverse teams to the gender diverse teams, the research showed that positive idea generating behaviors were demonstrated equally in both sets of groups. The individual behaviors were, however, very different between men and females. The researcher was not surprised to find a greater number of fluency and original verbal actions in the homogenous teams because males are more likely to make statements, instead of asking clarifying questions or search for agreement. The researcher quality of the ideas generated is beyond the scope of the research, however, it was noted that the number of ideas generated from a homogenous and gender diverse group are similar.

Goals

All planning teams were given specific planning tasks by their instructors. The researcher observed the planning teams overall understood the outcome of the training was a Course of Action Briefing. The teams used the joint doctrine steps for a Course of Action Briefing in JP 5-0 to understand the final product. Confusion was limited to details over the materials given to them to work with or the definition of terms. The researcher observed all teams working toward the end product. The researcher did not observe the teams using a plan-to-plan timeline to complete tasks. The groups referenced the materials they were given to understand the task.

The researcher determined the homogenous teams demonstrated the mitigating behavior of goal setting and approval but did not demonstrate time management. The researcher cannot make any determination on the effect of time management on the homogenous teams. The gender diverse teams were specifically trained to use a plan-to-plan system for time management while the researcher did not observe the homogenous team receiving any such training. Time management is an area all teams can be easily trained on.

Turn-taking

As in the first group, the researcher only recorded observations on interruptions under turn-taking analysis. The researcher observed ten cases of interruption in the homogenous diverse group. Interruptions comprised four percent of the total verbal interactions.

The homogenous teams demonstrated interruptions half as often as the gender diverse teams. This suggests gender diverse teams should focus more on turn-taking.

Conclusion

The positive verbal actions of idea generation, fluency, original, elaboration, and overlap were found in equal percentages in both the homogeneous teams and the gender diverse teams. While the percentage of positive actions demonstrated were equal, the quality of the ideas generated is beyond the scope of this research. The number of elaboration and overlap verbal actions in the gender diverse group indicates ideas were challenged and there was a conversation between members. The number of fluency and original verbal actions in the homogenous diverse group suggests less conversation overall and a greater number of accepted ideas that went unchallenged.

The negative verbal actions of idea generation were more prominent in gender diverse teams. The negative verbal actions again suggest a greater number of challenges to ideas in gender diverse teams versus homogenous teams, but conclusions as to the quality of ideas in idea generation are outside the scope of the research.

Goal setting and acceptance, as well as tools for understanding and time management were observed by the researcher as a function of training versus a function of gender diversity. Interruptions, however, were a function of diversity and an area for leaders to focus guidance.

Chapter 6: Discussion

Strategic competitors, climate change, and pandemics require innovative solutions. The Biden Administration believes diversity is a strategic asset of the US and can be better leveraged to develop innovative solutions to complex problems. There has been significant research indicating diverse teams provide ideas of greater novelty than non-diverse teams under certain conditions. Three behaviors are needed to have positive outcomes in a diverse team: support to creativity, mitigating cohesion behavior, and mitigating communication behavior. The three behaviors manifest in a multitude of ways. It was impossible to observe all of the behaviors attached to creativity, cohesion, and communication in this study. Instead, the researcher focused on specific behaviors associated with the three qualities. The researcher used verbal actions to code all behaviors during the observation of joint planning teams.

The research literature suggests that diverse groups cease to require mitigating behaviors if they have an integrated and learning perspective. An integrated and learning perspective views diversity as a benefit not a hinderance. The research findings described here indicate joint planning team members have not reached the level of functioning inherent to the integrated and learning perspective. So, while an integrated and learning perspective is the most beneficial to success in a diverse team, it is an ideal and not a current reality in the military. Therefore, positive group outcomes on planning teams currently require mitigating behaviors to take advantage of the diversity already present within the military.

The findings suggest joint planning teams are not taking full advantage of diverse teams because they do not actively implement mitigating group behaviors. None of the groups actively recognized mitigating behaviors or set business rules for the group to integrate diverse members

of the team. On the other hand, the researcher did not observe any member of any group purposely disenfranchising another member. Though there were no clearly intentional actions to disenfranchise another group member, the number of interruptions and dismissals of men toward women suggest unconscious bias. The unconscious bias may lead to fissures in the group and reduce positive group outcomes. For instance, when a member makes a series of interruptions or dismissals, even unwittingly, they may disenfranchise another member, which leads to diminished contributions. The diminished contributions limits idea generation and cohesion, both which disrupt positive group outcomes.

The unconscious bias may result from several factors tied to individual members' characteristics. The majority of members surveyed or observed have served the country for fifteen years or longer. They believe they are performing to the best of their ability. When performing to the best of their ability they also will believe they are producing the best products, which is demonstrated by the survey comments. Accordingly, after serving for fifteen or more years, members are enculturated and may produce what is expected not necessarily what is novel. Availability bias, in this case, thinking that the diversity of the planning group is representative of the organization means no effort is made to reach beyond the demographics available, which constrains the group. All of the factors point to the discrimination and fairness perspective, which is the lowest rung of the three learning perspectives related to learning in a diverse culture.³ The discrimination and fairness perspective focuses on equal opportunity, curbing prejudices, and suppressing discrimination because it is a moral imperative.⁴ While these are worthy goals, the discrimination and fairness perspective does not view diversity as integral

³ Thomas and Ely, "Making Differences Matter," 81.

⁴ Ely and Thomas, "Cultural Diversity at Work," 245-246.

or necessary for positive group outcome.⁵ Diversity is an end to itself and therefore is tolerated but not embraced as having intrinsic value.⁶

There are indications both the *DoD Women, Peace, and Security Strategic Framework and Implementation Plan* and the *Government-wide implementation of Diversity, Equity, Inclusion, and Accessibility* recognize diversity implementation falls within a maturity scale. The DoD WPS Framework Plan views the three defense objectives—model and employ WPS, promote partner nation women’s participation, and promote protection of partner nation civilians—as long-term goals that will be implemented over time.⁷ The federal government implementation plan details an entire maturity model with the goal of “effectively building an infrastructure for DEIA within their organization to improve efficiency, effectiveness, and equity within their workforce.”⁸ Both use specified efforts to mature the diversity perspective. The DoD WPS Framework includes intermediate steps that focus on recruitment and retention, policy, and training before getting to any women’s participation in national security.⁹ The federal government implementation plan for DEIA follows the same pattern as the DoD WPS Framework. The federal government implementation plan has eight efforts, four which deal with recruitment, two on data collection and policy, one on training, and one on accessibility.¹⁰ None of the federal government efforts look at how to best employ the diverse members of government today.

The maturity scale, however, is flawed. Neither of the implementation plans promote effective use of diversity today, and DEIA training may actually be more harmful than helpful.

⁵ Ely and Thomas, “Cultural Diversity at Work,” 245-246.

⁶ Ely and Thomas, “Cultural Diversity at Work,” 246.

⁷ U.S Department of Defense, “DoD Women, Peace, and Security Strategic Framework,” 8, 10.

⁸ White House, “Government-Wide Strategic Plan to Advance Diversity, Equity, Inclusion, and Accessibility,” 23.

⁹ U.S Department of Defense, “DoD Women, Peace, and Security Strategic Framework,” 16-17.

¹⁰ White House, “Government-Wide Strategic Plan to Advance Diversity, Equity, Inclusion, and Accessibility,” 9.

Kalev, Dobbin, and Kelly studied 708 private sector businesses and found biases cannot be trained out of a person through a few hours of DEIA training and can actually cause backlash against minorities.¹¹

Recommendations

Diversity is not just a moral imperative or a social construct, it is a national security necessity. The research conducted in this study suggests the DoD will not achieve the full benefits possible from diversity by simply following current diversity implementation plans that focus on force development and design and not force employment. Kalev and Dobbin provide three ways to promote diversity that go beyond policy: engagement, contact, and social accountability.¹² Engagement includes DoD mentorship programs that assign minority groups mentors instead of the voluntary mentorship programs in place today.¹³ Joint planning teams fall within Kalev and Dobbin's idea of contact, which includes bringing diverse members together in cross functional work groups.¹⁴ Lastly, social accountability demands results from leadership now, not in the future.¹⁵ All three efforts move diversity programs in the right direction today. The research in this study advocates focusing efforts on contact and social accountability in joint planning teams to promote diversity, creativity, and national security

Contact in work groups to promote diversity and have the potential for creative and innovative solution. The first hurdle for joint planning teams is creating contact by gathering a

¹¹ Alexandra Kalev, Erin Kelly, and Frank Dobbin, "Best Practices or Best Guesses? Assessing the Efficacy of Corporate Affirmative Action and Diversity Policies," *American Sociological Review*, 71, no. 4 (August 2006), 611.

¹² Frank Dobbin and Alexandra Kalev, "Why Diversity Programs Fail," *Harvard Business Review* (July-August 2016), 57-58.

¹³ Dobbin and Kalev, "Why Diversity Programs Fail," 57.

¹⁴ Dobbin and Kalev, "Why Diversity Programs Fail," 58.

¹⁵ Dobbin and Kalev, "Why Diversity Programs Fail," 60.

diverse team. Commander and directors at the Combatant Command level can provide social accountability by holding joint planning teams accountable for group outcomes, which can prompt consideration of behavior and inclusivity. At the same time joint planning team leads must have the opportunity and flexibility to seek out diversity within the command. Since a joint planning team is doctrinally designed to be functionally diverse, the team lead will need to focus on including inherent diversity. The team lead must be able to pull from the entire staff with support from higher leadership to create a diverse team.

The second hurdle, then, is to create a cohesive joint planning team that can provide solutions to national security dilemmas. Both team members and the lead need to be aware of and practice mitigating group behaviors. The findings of this study indicate planning teams can improve on interruption, dismissal, challenging ideas, and time-management. Simple business rules incorporating mitigating behaviors and reminders of those rules throughout the life cycle of the team can improve group behavior. Business rules may include: members ideas are to be respected and not dismissed, conversation will not be interrupted, plan-to-plan task and time management strategies will be used, and challenges to ideas are encouraged.

Diversity, Equity, Inclusion, and Accessibility (DEIA) programs need to continue to be supported for the health of the future service; however, to be successful it must push beyond recruitment, retention, and training. DEIA efforts that stagnate on recruitment, retention, and training will not mature. Such efforts will become mired in a classic discrimination and fairness perspective. Moving beyond the discrimination and fairness perspective in the DoD is not simply about developing more programs, it is a recognition of diversity as useful tool in national security. This research seeks to move the diversity conversation forward to an access and legitimacy perspective as a steppingstone to an integrated and learning perspective. Access and

legitimacy is not the goal; it is an intermediate step to what Diversity, Equity, Inclusion and Accessibility should focus on, an integrated and learning perspective that sees all diversity as a benefit to the team or system.

Future studies

Future studies into the role of gender diversity in planning teams should focus on the outcomes of the mitigating behaviors. This study concentrated on whether planning teams demonstrated mitigating behaviors but did not examine whether mitigating behaviors led to greater positive outcomes. A study on the positive outcomes of planning teams would have to determine a valid, reliable measurement for positive outcomes. Within those positive outcomes, creativity should be measured. Creativity in planning team products is subjective and further studies would require significant consideration to develop a framework and a measuring implement for planning product creativity.

Conclusion

Just as creating a diverse force will take generations, it will likely take a significant amount of time to move from a discrimination and fairness perspective through an access and legitimacy perspective and, finally, to an integrated learning perspective. The research findings promote an access and legitimacy perspective through which diversity is seen to have a specific benefit—in this case national security. The security of the nation needs the benefits of diversity today and cannot wait until the military reaches the ideal of integrated and learning perspective. Therefore, it will be up to leaders to hold their organizations socially accountable to the promotion of diversity, and planning team leads will need to deliberately seek out and bring

diversity into their planning teams. Simply adding diversity, however, will not suffice and mitigating group behaviors will be required.

Appendix A

Survey

Demographics

What sex do you identify as?

Male / Female / Prefer not to say

The following questions are based on your last experience on a planning team.

1. Was the planning team lead:

Male / Female / Non-binary

Please rate the following statements on a scale of 1-5 (1 being the lowest)

2. The team leader encouraged all members to share thoughts and ideas.
3. I was able to share ideas during the meeting.
4. The team leader encouraged creative and novel ideas.
5. The team leader gave breaks during the planning session.
6. The team produced novel ideas.
7. The planning team had a clear goal.
8. Everyone on the team agreed on the goal.
9. Differences in ideas and opinions were seen as positive.
10. I felt I was respected by my colleagues.
11. I felt a sense of belonging to the team.
12. My ideas were dismissed without reasonable consideration or explanation.
13. I was able to express my ideas without interruption.
14. Language used by the team was respectful.
15. Language used by the team made me feel included.

Appendix B

Figure B.1. Code Book

Behavior	Verbal Action	Abbreviation	Key phrases to look for
Idea Generation	Quantity of Ideas (Fluency)	NQ	"I think..." "We could do...." "An option..." "It could be"
	Obstruction	NO	Overtasking someone so they are not able to participate, sidelining someone so they cannot participate
	# of members who offer solutions (Flexibility)	M#	Member # said ...
	Solutions based on knowledge (Original)	NK	"According to doctrine..." "In my experience..."
	Speculation	NP	"What I think it means..." "I am not sure but..."
	Building upon the solutions of other (Elaboration)	NS	"I agree with..." "adding onto..." "they are right"
	Dismissal	ND	"No, you are wrong..." "What were you thinking"
	Purpose (Yes / No)	GY / GN	"the objective for this training" "our output / product at the end is" "our goal is to..."
	Buy into goal	GB	"good" "got it"
	Confusion	GC	"I don't understand" "that makes no sense"
Turn-Taking, Overlap	cooperative sentence building	OC	finishes sentence
	request / provide verification	OV	"could you say that again?" "could you repeat that?" "I'm not following" " yes, I agree" "I concur" "umhmm" nodding head

	repetition	OR	repeats phrase
Turn-Taking, Intrusive interruption to get the floor	Change topic	IC	"so..." "moving on..." "going to the next subject" "we're done here"
	Disagree with speaker	ID	"I disagree" "I don't think that is what it means" "what are you talking about"

Verbal action from observation.

Table B.1. First group observation

Verbal Action	Male	Female
Total observations	116	59
Fluency	21	9
Evaluation Apprehension*	0	0
Flexibility*	0	0
Free Riding*	0	0
Original	13	5
Speculation	5	0
Elaboration	29	27
Dismissal	13	1
Purpose	1	3
Confusion	1	0
Overlap	11	12
Interruption	11	2
Non-coded	3	3

*Behaviors that cannot be coded by verbal action

Table B.2. Second group observation

Verbal Action	Male	Female
Total observations	232	0
Fluency	57	0
Evaluation Apprehension*	0	0
Flexibility*	0	0
Free Riding*	0	0
Original	26	0
Speculation	9	0
Elaboration	47	0
Dismissal	6	0
Purpose	7	0
Confusion	6	0
Overlap	39	0
Interruption	10	0
Non-coded	25	0

*Behaviors that cannot be coded by verbal action

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Vita

Lieutenant Ann-Kristine Thrift was born and raised on Maui, Hawaii, surrounded by the ocean, her family, and cultures from around the world. She grew to love learning about how people related to each other in the present as well as in the past. This love continued through her Bachelor of Science in History at the United States Air Force Academy. After she graduated as distinguished graduate, Ann-Kristine spent a year promoting the Air Force Academy to minority students across the country. She understood the power of diversity and the need to develop a diverse force. Her intelligence military career has since been focused on providing insight to Air Force leaders on the cultural and ideological variances that underscore adversary actions. Appreciating diversity of thought and world-views has allowed Lt Col Thrift to provide the best indications and warnings possible. Ann-Kristine earned a Masters of Arts in Liberal Studies from the University of North Carolina at Greensboro with a certificate in global studies. Again, she focused on culture, art, literature, and science as the intersection of how and why diverse people think and act. Ann-Kristine became more fascinated with the power of diversity as she entered the Joint Advanced Warfighting School where less than ten percent of the student body was female. She recognized a disparity between how diversity was being employed and how diversity in the force was being designed. Her Masters thesis “Strategic Advantage or Strategic Hinderance?: Achieving the Promise of Diversity on Joint Planning Outcomes” is an examination on how women can be employed and benefit national security today.