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DECISION MAKING IN CHAOS

by

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December 2015

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How do military special operations officers make quick decisions in complex, fast-moving combat environments where the quality and speed of a decision could mean the difference between life and death? This qualitative study of Army and Navy special operations officers explores the factors that contribute to each individual's decision-making process. The findings reveal that chaos is a function of enemy sensebreaking efforts, and to overcome this, leaders must first internalize the gravity of their current circumstances, a process referred to as "sense conversion." After this point they are able to begin the sensemaking process that allows them to make an informed decision. This study led to a model of rapid decision making that revealed both the individual process as well as external factors, such as cohesion, that played critical roles in their ability to make decisions in chaos.

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DECISION MAKING IN CHAOS

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How do military special operations officers make quick decisions in complex, fast-moving combat environments where the quality and speed of a decision could mean the difference between life and death? This qualitative study of Army and Navy special operations officers explores the factors that contribute to each individual's decision-making process. The findings reveal that chaos is a function of enemy sensebreaking efforts, and to overcome this, leaders must first internalize the gravity of their current circumstances, a process referred to as "sense conversion." After this point they are able to begin the sensemaking process that allows them to make an informed decision. This study led to a model of rapid decision making that revealed both the individual process as well as external factors, such as cohesion, that played critical roles in their ability to make decisions in chaos.

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LIST OF ACRONYMS AND ABBREVIATIONS

ANA	Afghan National Army
CASEVAC	Casualty Evacuation
IED	Improvised Explosive Device
IRB	Institutional Review Board
MDMP	Military Decision-Making Process
NCO	Non-Commissioned Officer
ODA	Operational Detachment-Alpha
SFAS	Special Forces Assessment and Selection
SOF	Special Operations Forces
SOP	Standard Operating Procedure

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I. INTRODUCTION

Since the onset of the global war on terrorism, the United States (U.S.) has deployed hundreds of thousands of soldiers into combat environments[1] spanning from the Middle East to Africa. Prior to September 11, 2001, only a small percentage of U.S. military members had much, if any, experience in direct combat.[2] Although the conventional war has died down since the withdrawal from Afghanistan, the role and reach of special operations forces (SOF) continue to increase. Much attention has been given to funding and training these forces to ensure that they are able to meet the challenges of a continually expansive enemy.[3] With priorities shifting to a smaller military and decreased defense budget, it seems that SOF are being asked to do more with less.

Given that SOF will increasingly be facing new environments around the globe, their ability to adapt to these environments and make the same efficient and rapid decisions under a flood of new environmental factors is a concern. Within special operations are two distinct missions with different environmental conditions. Special warfare is typically described as by, with and through operations, which focus on exerting influence to stabilize or destabilize a regime.[4] Conversely, surgical strike operations are typically more unilateral, direct action operations, such as kill/capture of high value targets and hostage rescue.[5] During the execution of either of these types of missions, a chaotic incident outside of

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[1] Dave Baiocchi, *Measuring Army Deployments to Iraq and Afghanistan* (Santa Monica, CA: RAND Corporation, 2013), 1–3.

[2] Nick Turse, "Why Are U.S. Special Operations Forces Deployed in Over 100 Countries?," *Nation*, January 7, 2014, http://www.thenation.com/article/177797/why-are-us-special-operations-forces-deployed-over-100-countries.

[3] Linda Robinson, "The Future of U.S. Special Operations Forces," *Council on Foreign Relations*, Council Special Report 66 (April 2013): 1–22.

[4] Dan Madden et al., "Special Warfare: The Missing Middle in U.S. Coercive Options," *War on the Rocks*, November 20, 2014, http://warontherocks.com/2014/11/special-warfare-the-missing-middle-in-u-s-coercive-options/.

[5] Department of the Army, *ADP 3–05 Special Operations* (Washington, DC: Army Publishing Directorate, 2012), 8.

mission parameters could occur. It is the decision-making process that occurs during these incidents that is the focus of this study. These types of chaotic environments typically necessitate the ability to make rapid decisions.[6]

The conditions under which the research participants of this study operate have primarily been direct-fire, combat environments in Iraq and Afghanistan. However, many of them have also been a part of special warfare missions, including those in contested environments and relatively ungoverned spaces. These environments are often characterized by highly uncertain, potentially life-threatening conditions, with a high likelihood of exposure to rapid information flows and unique scenarios that test flexibility and responsiveness. In addition, factors external to their immediate environment, including accountability to superiors and pressure to produce results, often factor into the decision-making process. Much of the research in this area has focused on the decision-making process of civilian organizations, where change and the ability to make strategic decisions to meet the challenges of a changing environment are key to a businesses' survival.[7] However, research has not put as much focus on the decision-making process within a tactical setting, where rapid decisions in combat and contested environments can mean the difference in life or death.

In combat, leaders practically never have all the information they want, and often have only an incomplete picture of the information they need.[8] Every combat situation, especially in the case of counterterrorism and counterinsurgency, can be unique; despite intensive training and contingency planning, one may never be truly prepared for what he is to face.[9] For all small

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[6] David J. Hickson et al., "*Top Decisions: Strategic Decision-Making in Organizations* (San Francisco: Jossey-Bass, 1986), 240.

[7] L. J. Bourgeois and Kathleen M. Eisenhardt, "Strategic Decision Processes in High Velocity Environments: Four Cases in the Microcomputer Industry," *Management Science* 34 (1988): 816.

[8] Ben Connable et al., *Modeling, Simulation and Operations Analysis in Afghanistan and Iraq: Operational Vignettes, Lessons Learned, and a Survey of Selected Efforts* (Santa Monica, CA: RAND Corporation, 2014), 14–15.

[9] Jason Rineheart, "Counterterrorism and Counterinsurgency," *Perspectives on Terrorism* 4, no. 5 (2010), http://www.terrorismanalysts.com/pt/index.php/pot/article/view/122/html.

units, such as SOF, factors are evaluated that determine whether the operation will commence; a shift in the balance often results in the mission being aborted. However, once an operation has been launched and the unit is thrust in the midst of a chaotic incident, the situation cannot be as tightly controlled. It is in these instances that the decision-making process of the leaders of these special operations units will be analyzed. In these particular situations, it may be that the meaning of the term "decision" might more aptly resemble "response," in that the majority of the decisions that could be made in a tactical setting have already been pre-planned and rehearsed, but this will be explored in greater depth. Previous studies have examined related fields, such as firefighters and medical personnel,[10] to examine rapid decision-making under time constraints. These studies found that knowledge and recognition of situational factors based on prior experience were the most critical factors leading to rapid decision-making.

This thesis explores the decision-making process of SOF leaders under chaotic conditions and examines their ability to use multiple factors to overcome or avoid information overload. Two key research questions drove the research: (1) What does the decision-making process of SOF officers look like under highly chaotic conditions? (2) What are the most critical factors allowing SOF Officers to make rapid decisions under these conditions? Although each of the officers at the time of the interview were leaders within SOF, they were given the opportunity to select the specific experience they would discuss during their interview. For many, that included incidents that occurred while they were part of a special operations unit, but for others, they recounted experiences during their conventional military tours. This allowed for a cross-section of military experience that informed a model of tactical decision-making of leaders within both SOF and small conventional military elements.

[10] Gary A. Klein, Roberta Calderwood, and Anne Clinton-Cirocco, *Rapid Decision Making on the Fire Ground* (Technical Report 796) (Ft. Belvoir, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, 1985), 1–4; Andrea Baumann and Frances Bourbonnais, "Nursing Decision Making in Critical Care Areas," *Journal of Advanced Nursing* 7, no. 5 (1982): 435.

The results of this study show that the decision-making process of SOF Officers is based on a multi-layered model incorporating aspects of their selection, training, experience and team dynamics that effectively raises their ability to rapidly process information under chaotic conditions, allowing them to make decisions more quickly. The first key criterion separating SOF officers from those in other professions is their process of selection; these individuals are hand-picked based on a unique profile that determines their suitability for unconventional situations.[11] This selection is followed by both individual and team training that develops unique skills and the proper mindset for the unusual circumstances to which they are exposed. These leaders first enter combat having trained heavily to familiarize themselves with a great deal of contingencies that may occur in a combat situation.[12] They have, in essence, raised the level at which environmental complexity could enact a form of *sensebreaking*. *Sensebreaking* has been defined as the destruction or breaking down of ones understanding of a given circumstance or situation.[13] For them, the term *status quo* refers not only to a mission going as planned, but also a mission in which a number of contingencies may have been addressed. Additionally, leaders are trained to rapidly engage in the *sensemaking* process, which is defined as the ability to recognize a fundamental change in the nature or reality of a given situation.[14] Due to the nature of combat, leaders must also be prepared to operate on incomplete information.

Small-unit leaders within SOF are then deployed to a wider range of environments, which increases the scope of their exposure and experiences as

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[11] United States Army John F. Kennedy Special Warfare Center and School, *USAJFKSWCS Academic Handbook*, *FY2015* (Ft. Bragg, NC: United States Army John F. Kennedy Special Warfare Center and School), http://www.soc.mil/SWCS/academichandbook.html.

[12] Carl Steiner, "U.S. Special Operations Forces: A Strategic Perspective," *Strategic Studies Institute*, August 2, 1990, http://strategicstudiesinstitute.army.mil/pubs/parameters/Articles/1992/1992%20stiner.pdf.

[13] Michael Pratt, "The Good, the Bad, and the Ambivalent: Managing Identification among Amway Distributors," *Administrative Science Quarterly* 45, no. 3 (2000): 464.

[14] Dennis Gioia et al., "Symbolism and Strategic Change in Academia: The Dynamics of Sensemaking and Influence," *Organization Science* 5, no. 3 (1994): 363.

compared to those in conventional units. This exposure to diverse tactical settings builds on the training received to insulate against sensebreaking,[15] and continues to redefine what the term *status quo* means for these individuals. Throughout this entire process, a small-unit leader is developing relationships with his peers, and ultimately with the team that he will command, that further contributes to his ability to make rapid decisions in a chaotic environment. Finally, leaders fully understand the importance of making timely decisions,[16] as well as the ramifications of making the wrong decision. As such, they treat their decision-making process as iterative, and continually strive to improve it. The result is a heightened ability that enables the small-unit leader to make decisions under unique and chaotic scenarios more efficiently and more quickly.

[15] Pratt, "The Good, the Bad, and the Ambivalent," 464–467.

[16] Raymond Odierno, "CSA's Remarks at Special Forces Qualification Course Graduation," *Army.mil*, April 30, 2015, http://www.army.mil/article/147904/April_30__2015____CSA_s_remarks_at_Special_Forces_Qualification_Course_graduation/.

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II. BACKGROUND

Performance is linked to an individual's ability to handle stress, a relationship represented by Yerkes and Dodson's Inverted-U Model (see Figure 1).[17] Under changing and dynamic conditions, an individual often encounters a higher level of information and more complex information, and their stress levels increase until the individual reaches a point of information overload. This often results in a decline in decision quality, leading to decreased performance.[18] The question then, is how can you increase an individual's ability to maintain a high level of performance under chaotic circumstances? Herbert Simon addresses decision making in both uncertain and complex environments, using the theory of bounded rationality to account for different approaches to decision-making in environments that tax an individual's ability to process vast amounts of information.[19] He describes processes, such as satisficing and optimizing that allow for a reduction in the complexity of the environment, thus enabling an individual to begin the decision-making process.[20]

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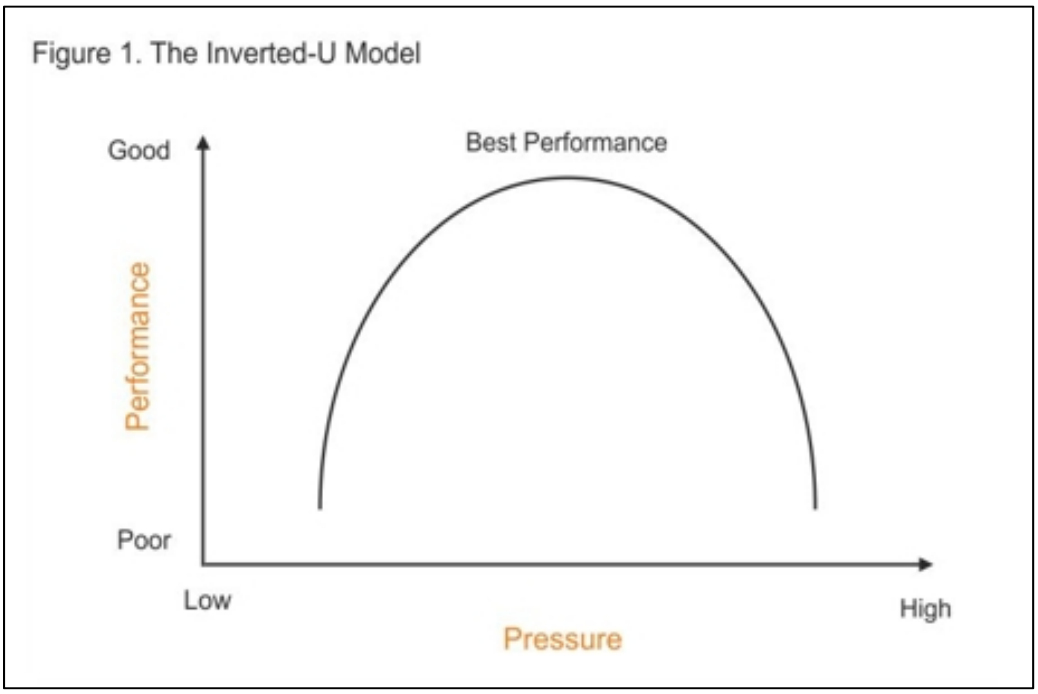
[17] James Manktelow, "The Pressure/Performance Dilemma," June 28, 2011, http://www.mindtools.com/pages/Newsletters/28Jun11.htm.

[18] Mark Hwang and Jerry Lin, "Information Dimension, Information Overload and Decision Quality," *Journal of Information Science* 25, no. 3 (1998): 216–217.

[19] Herbert Simon, "Theories of Bounded Rationality," in *Decision and Organization*, eds. C. B. McGuire and Roy Radner (Amsterdam: North-Holland Publishing Company, 1972), 161–176.

[20] Simon, "Theories of Bounded Rationality," 170–171.

Figure 1. Inverted-U Model



Source: James Manktelow, "The Pressure/Performance Dilemma," June 28, 2011, http://www.mindtools.com/pages/Newsletters/28Jun11.htm.

The complexity of the environment under combat conditions requires an elevated ability to rapidly make sense of dynamic factors and produce the best decision as expediently as possible. This sensemaking ability has been explored with regard to identity change[21] and during periods of crisis,[22] but scenarios examined in these studies differ significantly from the type of environment encountered in combat. Jensen and Brehmer come closer to analyzing this concept under what they term the "fog of war," but their study did not focus on actions in the field, but rather on the command and control climate of military

[21] Gioia, "Symbolism and Strategic Change," 363–365.

[22] Karl Weick, "Enacted Sensemaking in Crisis Situations," *Journal of Management Studies* 25, no. 4 (1988): 305–306.

teams at a university.[23] Their model better incorporates the factors associated with leadership sensemaking, the decision-making process and the factors of a team environment that contributed to the leaders' decisions. However, the setting of their study was still more controlled and not representative of actual combat conditions.

It should be noted that much of the literature on rapid decision making took place in organizations making strategic decisions. Although useful for identifying some of the similarities in process between strategic and tactical decisions, there are clear differences. For instance, Eisenhardt examined the decision-making process in high-velocity environments to determine which factors contributed to technology firms' ability to make rapid strategic decisions.[24] This study was useful in examining how rapid decision-making was defined in a civilian organization and highlighted similar processes used by these organizations to those seen in a tactical environment, but still centered on strategic decisions. Some of the key factors identified included the use of higher quantity information, the consideration of multiple alternatives, and aspects of team dynamics, such as conflict resolution and assistance from advisors. Her findings contradicted previous conclusions in the field asserting that the consideration of fewer alternative options leads to quicker decisions.[25] Moreover, she highlighted one factor in particular concerning the method of relying on centralized decision making for rapid strategic decisions,[26] showing that, contrary to much of the available literature, fast decisions are not always best in a centralized structure. In her study, the key to a rapid decision depended more on

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[23] Eva Jensen and Berndt Brehmer, "Sensemaking in the Fog of War: An Experimental Study of How Command Teams Arrive at a Basis for Action," report for the 10th International Command and Control Research and Technology Symposium—The Future of C2 (2005), Swedish National Defence College, Stockholm, Sweden, 5–9.

[24] Kathleen Eisenhardt, "Making Fast Strategic Decisions in High-Velocity Environments," *Academy of Management Journal* 32, no. 3 (1989): 543–576.

[25] Henry Mintzberg, "Strategy Making in Three Modes," *California Management Review* 16 (1973): 47.

[26] Eisenhardt, "Making Fast Strategic Decisions," 561; James Driskell and Eduardo Salas, "Group Decision Making Under Stress," *Journal of Applied Psychology* 76, no. 3 (1991): 473–474.

the experience and advice from experts in their field, rather than simply on the leader in charge. Many small-unit leaders, like the individuals interviewed for this study, would agree. Although the military generally follows a rigid hierarchy, and SOF as a whole retain a hierarchy, individual SOF teams deviate from this model due to their smaller unit size, more advanced training, and unconventional role.[27] This may be due in part to necessity, but they have also developed individual models over time, learning from experience and exposure through years of combat.

Eisenhardt also examined the link between rapid decision-making and performance, determining that the speed of decisions was critical to the performance and survivability of businesses in rapidly changing environments.[28] However, the speed of decisions in her study ranged from 1.5 to 12 months, a timeframe suitable for strategic decisions in a business environment, but one that does not translate to tactical decision-making in combat environments. During patrols, raids, or other engagement activities in contested areas, the amount of time to make a decision can often be measured in seconds, occurring under highly intense and stressful conditions. More related to this current study would be Weick's research into decision-making in crisis situations. In this study, Weick argues that poor sensemaking in chaotic situations leads to prolonged and intensified chaos. This highlights the importance of the ability of special operations leaders to cope effectively with chaos in combat.[29]

Beyond severe time constraints, many studies have addressed the role that training and experience play in developing cognitive and physiological

[27] Patrick Lohaus, "A Precarious Balance: Preserving the Right Mix of Conventional and Special Operations Forces," American Enterprise Institute, September 8, 2014, http://www.aei.org/publication/a-precarious-balance-preserving-the-right-mix-of-conventional-and-special-operations-forces/.

[28] Eisenhardt, "Making Fast Strategic Decisions," 567–570.

[29] Weick, "Enacted Sensemaking in Crisis Situations," 305–307.

responses under times of stress.[30] Gasaway ultimately asserts that information gaps are addressed by applying intuition that is gained from experience in the field. In a previous study, Weick highlights not only the importance of understanding such information gaps, but also comprehending that multiple players are involved in a chaotic environment who are also operating with similar limitations.[31] There are multiple ways to handle uncertainty in these situations; these are often addressed prior to conducting an operation through processes, such as rehearsal, contingency planning, and intelligence collection. Although this may reduce uncertainty, the environment remains complex, particularly for special operations leaders who are responsible for leading their team, combatting the enemy, communicating effectively with their headquarters, and working with local indigenous leaders.

However, although these studies examine the factor of exposure to high-risk conditions, they do not include tactical combat environments. In many of the cases included in this study, the participants were faced with unique circumstances in which they had very little real-world experience. In fact, when asked to describe a chaotic experience, many of the participants chose examples from earlier portions of their career. This implies that as experience was gained it allowed for the formation of intuition, which made future iterations of similar circumstances seem challenging rather than chaotic; the formation of such intuition is described by Gasaway.[32] The aforementioned articles described how training and experience enhance an individual's ability to respond to high levels of stress while maintaining high levels of performance, essentially increasing their baseline along the Inverted-U model. However, further research is required to understand how this translates to a combat environment. The Department of

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[30] Richard Gasaway, "Making Intuitive Decisions under Stress: Understanding Fireground Incident Command Decision-Making," *International Fire Service Journal of Leadership and Management* 1, no. 1 (2007): 12.

[31] Karl Weick, "The Vulnerable System: An Analysis of the Tenerife Air Disaster," *Journal of Management* 16, no. 3 (1990): 571–572.

[32] Gasaway, "Making Intuitive Decisions under Stress," 9.

the Army directly points to a leader's experience as being a crucial factor in his ability to make a decision,[33] but the changing combat environment warrants a holistic review of all of the factors contributing to the decision-making process.

The importance and confluence of factors that can either inhibit or assist the speed of a tactical decision can vary significantly from one where time is not as critical a factor. Again, previous literature has explored some aspects of the speed of tactical decision-making, as well as related professions to determine critical components of a rapid decision-making process, identifying training, experience, and information flow as key factors impacting this process.[34] The current study aims to incorporate speed as one key factor influencing the decision-making process and aims to use a qualitative methodology to examine additional factors in greater depth.

[33] Department of the Army, *ADP 6–22 Army Leadership* (Washington, DC: Army Publishing Directorate, 2012), 1–4.

[34] Department of the Army, *ADP 6–0*, 6; Jennifer Kavanagh, *Stress and Performance: A Review of the Literature and its Applicability to the Military* (Santa Monica, CA: RAND Corporation, 2005), 18; Kathleen Kowalski-Trakofler, Charles Vaught, and Ted Scharf, "Judgment and Decisionmaking under Stress: An Overview for Emergency Managers," *International Journal of Emergency Management* 1, no. 3 (2003): 5–7.

III. METHODS

The selection process for this research study was one of purposeful sampling of the research participants,[35] in which individuals were chosen based on their ability to provide information relevant to rapid decision-making in chaotic environments. The group of participants studied were all U.S. Armed Forces Officers currently serving as graduate students. Each participant was screened to ensure that they had been actively involved in leadership positions in either combat or contested environments in which they had to make decisions affecting themselves and their team members. Finally, the group of potential participants was restricted to either Army or Navy special operations officers, ensuring not only a high level of exposure to chaotic environments, but also that there were comparison groups with which to confirm or disconfirm inferences.[36] The final group of participants were composed of SOF team leaders with a rank equivalent of captains, majors and lieutenant colonels in the Army or lieutenants, lieutenant commanders and commanders in the Navy. The majority of the participants have served in leadership positions on multiple combat tours, with total time of military service ranging from 9 to 24 years. Due to the nature of SOF structure, mission and combat exposure, female military officers and officers from the Air Force and Marines were excluded, due to either inconsistent exposure to ground combat operations or lack of availability within the current student body. This follows the methodology of grounded theory as described by Glaser and Strauss.[37]

The primary collection method of this study was the use of semi-structured interviews targeting a specific incident occurring in a chaotic environment that involved the research participants' decision-making process. Prior to any

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[35] Yvonna Lincoln and Egon Guba, *Naturalistic Inquiry* (Los Angeles, CA: Sage, 1985), 201–202.

[36] Robert Yin, *Case Study Research: Design and Methods* (Los Angeles, CA: Sage, 1984), 47–48.

[37] Barney Glaser and Anselm Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (London: Wiedenfeld and Nicholson, 1967), 49–58.

interviews, approval was granted by the Institutional Review Board (IRB) for the Protection of Human Subjects of the university. Following approval, a total of 24 interviews were conducted, with each research participant undergoing a 1–2 hour interview conducted by a member of the 9-person research team. The authors of this study were part of the research team and conducted five of the 24 interviews. Initial interviews were conducted by a two-member research team composed of a military and civilian member to better establish rapport with the research subject.[38] Subsequent interviews were conducted by individual members of the research team. All of the interviews were then collected and stored according to IRB standards, and approval was granted for use of the dataset for this study.[39]

Each interview comprised a number of main questions designed to elicit key components of the research subjects' experience that centered on decision-making in chaotic environments.[40] The research team was also instructed and prepared to ask both probes and follow-up questions to elicit details and clarifying information on the experience being discussed. The interviews were designed to be flexible, iterative, and continuous; as such the interviewers allowed for new concepts to emerge, then the ability to narrow the focus as themes emerged, and finally to adjust throughout the process.[41] In some instances, research participants were contacted following the interview to obtain further information during the data analysis process.[42]

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[38] Herbert Rubin and Irene Rubin, *Qualitative Interviewing: The Art of Hearing Data* (3rd ed.) (Los Angeles: Sage, 2012), 49–51.

[39] Frank Barrett, "Combat Leadership in Iraq and Afghanistan—A Qualitative Investigation Into Decision-Making in Chaotic Environments," Dataset, Naval Postgraduate School, 2015, (NPS IRB#NPS.2015.0027-IR-EP7-A). Note: All direct quotes, unless otherwise specified, as well as all stories described in this thesis were derived from the dataset corresponding to NPS IRB#NPS.2015.0027.0027-IR-EP7-A.

[40] Rubin and Rubin, *Qualitative Interviewing*, 45–48.

[41] Rubin and Rubin, *Qualitative Interviewing*, 43–47.

[42] Glaser and Strauss, *The Discovery of Grounded Theory*, 45.

The research team followed Glaser and Strauss's method of Grounded Theory.[43] The theoretical sampling process was pursued, allowing each research team member to collect, code and analyze the data simultaneously. Researchers employed the method of comparative analysis to generate categories and conceptual properties of the data collected. This allowed for a process of delineating themes and aggregate dimensions.[44] This process was repeated until the research team determined that theoretical saturation[45] had been reached, at which point further data collection was not necessary.[46]

Upon completion of the interviews, recordings were transcribed to allow for coding. Initial data analysis employed the use of open coding, which grouped first order codes,[47] also termed informant codes, into categories. Next, the researchers used axial coding[48] to explore and identify the relationships between first-order codes and organize them into higher-order themes. Finally, higher-order themes were examined and organized into overarching dimensions that led to the identification of a preliminary model. In keeping with grounded theory generation, conceptual categories were noted throughout the coding process.[49] The data was repeatedly re-examined during the data collection and analysis process following an iterative approach to ensure that new data was incorporated

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[43] According to Glaser and Strauss (1967), Grounded Theory is the discovery of theory from data. Unlike quantitative research methods, which are theory generating, grounded theory is a qualitative process the uses comparative analysis to generate theory from data. This allows for a ground up approach that provides the researcher with relevant predictions, explanations, interpretations and applications from their data.

[44] Gioia, "Symbolism and Strategic Change," 368.

[45] Glaser and Strauss (1967) define theoretical saturation as the stopping point for theoretical sampling after it has been determined that additional data will not provide new properties for a category. This point is achieved through a process of joint collection and analysis of the data whereby no more differences are noted. There are a number of criteria to determine theoretical saturation, including a combination of the empirical limits of the data, the integration and density of the theory, and the analyst's theoretical sensitivity.

[46] Glaser and Strauss, *The Discovery of Grounded Theory*, 61.

[47] John Van Maanen, "The Fact of Fiction in Organizational Ethnography," *Administrative Science Quarterly* 24 (1979): 540–541.

[48] Kathy Charmaz, *Constructing Grounded Theory* (2nd ed.) (London: Sage, 2014), 147–148.

[49] Glaser and Strauss, *The Discovery of Grounded Theory*, 22–24.

and the conceptual framework adjusted as necessary.[50] This process was repeated until new data did not provide any additional substantive content or insight into current categories, themes or dimensions, resulting in theoretical saturation.[51]

To ensure the trustworthiness of the data,[52] the data collection and analysis process incorporated multiple steps. First, the interview data were organized and very clearly coded to identify first-order codes. Then, each individual code was manually entered into a computer program and further analyzed to identify patterns within the data. Additionally, during initial data collection, the identification of patterns in the data were discussed among the research team and an experienced qualitative researcher. This allowed for additional perspectives to be included in the data analysis process and to ensure adherence to the Grounded Theory Process.[53]

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[50] Kevin Corley and Dennis Gioia, "Identity Ambiguity and Change in the Wake of a Corporate Spin-off," *Administrative Science Quarterly* 49 (2004): 180–182.

[51] Glaser and Strauss, *The Discovery of Grounded Theory*, 61.

[52] Lincoln and Guba, *Naturalistic Inquiry*, 290.

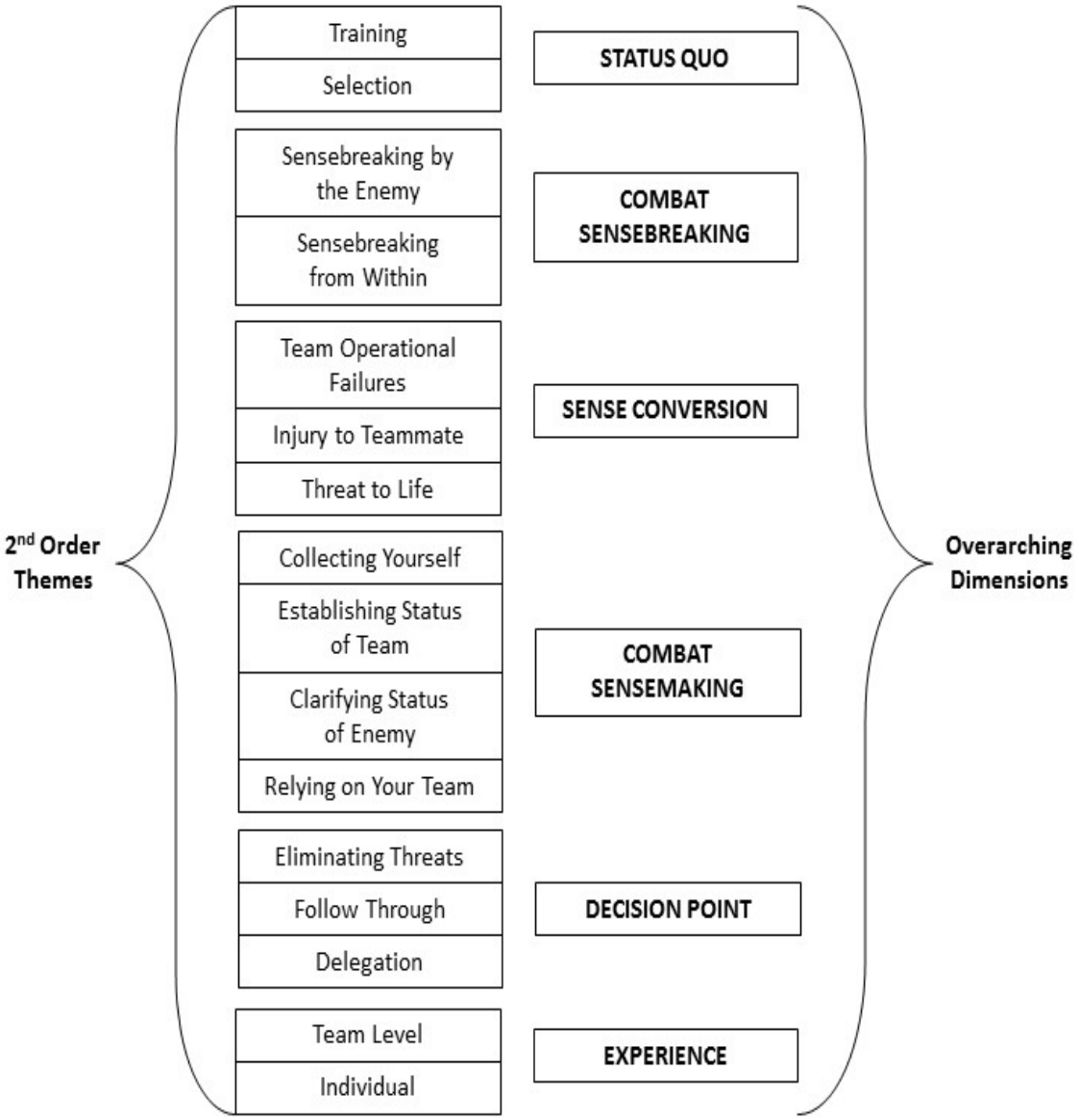
[53] Glaser and Strauss, *The Discovery of Grounded Theory*, 2–6.

IV. DATA ANALYSIS

The first step in the data analysis process was the compilation and transcription of each interview. Each member of the research team was responsible for the transcription of the interviews they personally conducted which generally ranged from one to three interviews apiece. The interviews were transcribed manually to allow for the capture of subtle nuances and to protect the identity of the research participants. Upon completion of the interview transcription process, all interview transcriptions were then collected in a central repository for use as a dataset for further research and analysis. The authors of this thesis were part of the original research team and were granted access to the dataset for this very purpose. The dataset included 26 interviews, which the authors then each analyzed and coded for this thesis.

Data analysis of all 26 interviews resulted in 646 first-order codes, 16 second-order themes, and six overarching dimensions (see Figure 2). To illustrate the progression through the coding process and the resulting insights, each of the overarching dimensions will be discussed in detail. Each of these sections will be comprised of a set of second-order themes, which will be accompanied by tables containing excerpts of first-order codes. The data analysis process will culminate in a model illustrating the decision-making process that highlights the role and placement of the overarching dimensions within this process.

Figure 2. Data Analysis: Themes and Dimensions



A. STATUS QUO

Understanding how small-unit leaders make decisions in chaos requires an understanding of what the term *status quo* means to the participants of this study. These men have gone through basic military training, undergone a rigorous selection process to move into special operations, and have often received years of advanced training prior to serving on their teams for an initial

deployment.[54] Additionally, the deployment tempo is much more frequent than is seen by more conventional military units.[55] As such, the type and intensity of combat that these men are prepared to view as simply routine is relatively high, even when compared to other combat units.[56] For example, leading patrols in the middle of the night in an insurgent infested sector of a combat zone is referred to as "routine" or "basic," by those interviewed in this study.[57]

In one example, a combat leader discussed a particular mission in which his definition of *status quo* would certainly exceed the realm of routine. His team had received time-sensitive intelligence on the location of a high value terrorist target. They quickly used this information to conduct a rapid mission planning session to execute a time-sensitive raid aimed at capturing the target. In an attempt to use the element of surprise, they elected to operate under the cover of darkness and off-set their tactical insertion site to minimize the possibility of being heard as they closed in on the target. This was especially crucial, as the target area was a known hotbed for terrorist activity. Within a few minutes of arriving, the team leader began to receive intelligence from radio intercepts that the enemy was fully aware of their presence, despite his team's attempt at stealth. He also received reports of potential enemy personnel moving from the intended target building into a neighboring building.[58]

He quickly assessed the potential threat resulting from the enemy radio communication as an acceptable risk, and assessed that his team strength was sufficient to secure both the original target building and also the neighboring one. As he led his team further down a ravine toward the compound, sporadic gunfire

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[54] United States Army John F. Kennedy Special Warfare Center and School, *Academic Handbook*, http://www.soc.mil/SWCS/academichandbook.html.

[55] Michelle Tan, "Spec Ops Needs 5,000 Soldiers," *Army Times*, February 23, 2015, http://www.armytimes.com/story/military/careers/army/2015/02/23/army-special-operations/23304113/.

[56] Odierno, "CSA's Remarks," http://www.army.mil/article/147904/April_30__2015____CSA_s_remarks_at_Special_Forces_Qualification_Course_graduation/.

[57] Barrett, NPS IRB.

[58] Barrett, NPS IRB.

erupted. Both he and his teammates recognized it as fire from a large caliber weapon, but felt that it was not precisely directed enough to qualify as an immediate threat, despite the fact that the enemy rounds were essentially flying directly overhead. He had accepted the hostile nature of the area and the sound of the enemy firing in the distance as more routine than cautionary.[59]

As they proceeded under the cover of darkness toward the target, they were provided intelligence that people in the target building were possibly using night vision devices, which would make his team far easier to see. While many people would find this news alarming, the leader simply reckoned that this possibility only served to confirm the validity that the team was headed toward the right location.[60] His responses during the situation described illustrate what is meant by *status quo* to special operations leaders. The question that follows is, what changes might better prepare these leaders for the hostile and often complex challenges they are apt to face?

1. Selection

> Yeah, so I was selected and trained for my capacity to do that, to problem solve quickly, make decisive calls…and make the decisions. But I'll tell you it takes a long time to get to that point.
>
> —Survey Subject 6

Before soldiers even begin their training to become a SOF Officer they undergo a selection process to evaluate their potential to perform effectively under the stressful and chaotic conditions they are likely to face. Many do not pass this evaluation. This is a rigorous process that determines their capability to adapt and adjust to ambiguous and often contentious circumstances and to make rapid decisions under high-risk conditions.[61] This is the first step in choosing

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[59] Barrett, NPS IRB.

[60] Barrett, NPS IRB.

[61] U.S. Army John F. Kennedy Special Warfare Center and School, *Academic Handbook*, http://www.soc.mil/SWCS/academichandbook.html.

individuals that will naturally operate under much more stressful conditions at a higher level than the normal population.

As described by the participants in this study, for those in SOF, it is not just a job, but a calling. As seen in Table 1, SOF members are drawn to both the elite status of these units, as well as the challenge that comes with its membership. Multiple participants described their draw to the SOF community as immediate and irresistible. For many, their first exposure to SOF units made them realize that is what they wanted to do. One participant described his first experience with members of a SOF unit when he underwent basic training with fellow soldiers headed to the Special Forces. Immediately, he knew that was something he was interested in and wanted to pursue. Further exposure immediately following his training solidified that decision. “Yeah, this is definitely what I want to do…I just liked the way that they operated and wanted to challenge myself and be surrounded by other soldiers that were the best at what they did.”[62] In their own words, participants described the high caliber of individuals within SOF. The members of these units had a level of maturity and professionalism that they respected, which increased their interest and desire to be a part of these units.

Table 1. Selection

First-Order Codes	Second-Order Categories	Overarching Dimensions
• “I felt like I was part of something bigger.” • “Level of professionalism.” • “Wanted to challenge myself.” • “Very psychologically demanding.” • “We’re very disciplined.”	Elite	SELECTION
• “That is just the risk of what we do.” • “That is what we do.” • “It is inherently dangerous.” • “I enjoy the hell out of combat…it’s a good trait.”	Risk	

The research participants in this study specifically sought out positions within SOF to challenge themselves and join units that would face more diverse

[62] Barrett, NPS IRB.

and intense environments. As one participant put it, “I didn’t join Special Forces to sit behind a desk…I wanted to be in the mix of things…I wanted to lead men in combat.”[63] This unique personality trait held true throughout our group of participants. One SOF team leader had difficulty putting it into words. He did not want to sound like a thrill-seeker, a character trait often applied to those in the SOF community. In the beginning of his career, he was a member of the conventional military and found that he enjoyed being in combat, but did not want to state it in those terms. In fact, after initially stating that he had liked being in combat, he went back and said that was a bad term, that it could be misinterpreted. However, being in combat was a major draw for him. After working as an augmentee with an Army Special Forces unit known as an Operational Detachment-Alpha (ODA) for only 24 hours, he realized, “hey, I want to go do that.” Being in combat, and more specifically being a member of the SOF community made him feel like he “was part of something bigger.” He immediately applied to Special Forces Assessment and Selection (SFAS) and became a member of this elite organization.[64]

This selection of individuals that are naturally inclined to seek out more challenging environments, coupled with both elevated physical and behavioral baselines ensures that as their levels of stress increase, they are able to maintain better levels of performance under more adverse conditions. As one participant put it, “everyone responds to trauma differently,” so selection is critical to ensure that key traits are present, while eliminating those individuals that cannot operate under these conditions.[65]

One individual in particular experienced a roller coaster of emotions that could have induced a very negative emotional response. However, those within the SOF community are selected for their ability to react and adapt to dynamic and adverse circumstances. The participant was deployed to Colombia as a

[63] Barrett, NPS IRB.

[64] Barrett, NPS IRB.

[65] Barrett, NPS IRB.

Special Forces Team Leader. During this deployment, he was able to fly home to see the birth of his son, which is often not a possibility for many soldiers, particularly those in leadership positions. However, they were not in a highly chaotic environment, so he was able to spend five days at home and then return to Colombia. However, within a week of his return, his unit was responding to indirect fire by the enemy. Then, less than two weeks later, he was back at home with his family. In his words, "It was a really bizarre three-and-a-half weeks. Kind of emotional, but not what I thought it would be." For many, "bizarre" would not be the term they would use, but this individual was screened and selected for his ability to remain calm under chaotic circumstances.[66] Again, this illustrates the caliber of individuals selected for these types of units, a process that incorporates multiple steps to screen those capable of filling these roles.

To make this determination, multiple personality tests are administered during the selection process, which assists the selection officer in his evaluation of each candidates' personality profile.[67] However, although it has been shown that personality plays a role in the ability to handle stress,[68] selection also includes multiple field tests, enabling selection officials the opportunity to evaluate each candidate's ability to make decisions within replicated high-stress environments, as both individuals and as part of a team,[69] the latter of which will become crucial when put in real-world scenarios.

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[66] Barrett, NPS IRB.

[67] L. Morgan Banks, *The History of Special Operations Psychological Selection*, (Washington, DC: American Psychological Association, 2006), users.idworld.net/dmangels /banks-.doc.

[68] Basira Salehi, M. Isabel Cordero, and Carmen Sandi, "Learning under Stress: The Inverted-U-Shape Function Revisited," *Learning & Memory* 17 (2010): 523–525.

[69] Banks, *The History of Special Operations Psychological Selection*.

2. Training

> Our unit level training is far more difficult than deployment, far more difficult.
>
> — Survey Subject 13

Following the selection process, SOF Officers undergo extensive training, both as individuals and with their respective teams.[70] Through analysis of SOF interviews, this was one of the critical factors contributing to their ability to make rapid decisions (see Table 2). Critical to both of these training environments is the inculcation of standard operating procedures (SOPs) through battle drills. SOPs lay the groundwork for typical operating procedures in a multitude of different operating environments and are essentially a framework within which each military unit operates. This foundation could not have been more clearly enunciated by our research participants.

Table 2. Training

First-Order Codes	Second-Order Categories	Overarching Dimensions
• "All these guys had an immense amount of training." • "Principles remain the same" • "You build that type of mentality into your training plan to mitigate that scenario." • "Our guys are phenomenally trained."	Skills Training	
• "We created a plan, we were following a plan." • "There were a lot of SOPs we had for IED attacks." • "Had to be self-reliant, prepared, rely heavily on SOPs." • "Those were the tactical operating procedures that we were directed to do."	Planning/Procedure	TRAINING
• "Rehearse the scenario." • "You cannot do this without realistic training." • "We treated it as such, just like we had trained for before." • "It was a lot of repetition, and I think a lot of that did pay dividends in the end."	Rehearsal/Practice	

The SOF participant with the longest tenure in our research study repeatedly referenced the importance of establishing and rehearsing SOPs. Having deployed to countries in Europe, the Middle East and Africa, he recounted his experiences in Northern Iraq in the early part of Operation Iraqi

[70] Banks, *The History of Special Operations Psychological Selection*; U.S. Army John F. Kennedy Special Warfare Center and School, *Academic Handbook*, http://www.soc.mil/SWCS/academic handbook.html.

Freedom. On a routine combat patrol, his unit was following their action plan exactly as directed. They had modified their vehicles to adapt to the unique environment they found themselves in and had an SOP for the direction the guns would be facing. Suddenly, he noticed something that “didn’t seem quite right.” He immediately identified the threat from two individuals in an alley way and opened fire. Within seconds, his unit was receiving fire from other enemy personnel in what would turn out to have been a well-laid ambush. Direct fire came from every side. He had to make a decision and quickly. Relying on his training and the multitude of SOPs ingrained over the years, he gave the order to push into the ambush—a decision that may seem counter-intuitive—but this was a tactic that he remembered as “an old trick from Vietnam.”[71]

Fortunately, his unit was able to break through the ambush and get enough separation to evaluate the state of their personnel and vehicles. They had not suffered any casualties and everything was operational, so he had to make another decision. Do they return to base or re-engage the enemy while they still have all of their capabilities and maintain the initiative? At this point, he realized that demonstrating the will to fight against the enemy was the right course of action so they returned to the ambush site and awaited support from conventional forces nearby. Throughout the engagement, he refers back to SOPs, covering everything from weapons systems to vehicle placement to patterns of movement during the firefight.[72] Without these principles to rely on, and the associated quick reactions and streamlining of available courses of action, this event could have been catastrophic.

In addition to SOPs that assist leaders in creating the foundation for action in a multitude of settings, the Military Decision-Making Process (MDMP) assists the military decision-maker by defining roles and responsibilities within their chain

[71] Barrett, NPS IRB.

[72] Barrett, NPS IRB.

of command and helps them develop courses of actions.[73] Although this is a beneficial process for the majority of the military, it is less relevant in chaotic tactical settings, as the MDMP can be a time-consuming process, and when faced with scenarios requiring rapid decision-making, SOF Officers need to adjust quickly.[74] As one participant put it, "MDMP plays no part in a combat zone, in combat." He explained that it helps in the planning phase, but once in combat, you "just don't have time, if you wait and think about it at all, someone gets hurt."[75] So how do they develop the ability to be more adaptable? One of the key tools allowing them to do so is through advanced training and exposure to unique training scenarios during exercises.

Individual training is designed to expose these leaders to situations where they are often faced with moral and ethical dilemmas requiring a decision under extreme time constraints. This type of training starts to condition them to become adaptable to the dynamic environment in which they will be operating. It also exposes them to a diverse range of scenarios that allow them to become more familiar with the type of events they might encounter in combat. That way, even if they are facing a situation in combat that does not exactly replicate training, they are able to react and respond. One participant felt this firsthand as he faced an enemy ambush that was well organized and had substantial firepower. As he described it, he had not practiced that exact type of ambush, had not seen an adversary with the same capabilities and in those numbers. However, he had been exposed to similar training simulations and was therefore familiar with some of the elements present; as such, he was able to make sense of the chaotic

[73] Department of the Army, *Army Planning and Orders Production, FM 5–0* (Washington, DC: Army Publishing Directorate, 2005), 41–45.

[74] Peter Thunholm, "Planning under Time Pressure: An Attempt toward a Prescriptive Model of Military Tactical Decision Making," in *How Experts Make Decisions,* ed. von Henry Montgomery, Raanan Lipshitz, and Berndt Brehmer (Mahwah, NJ: Lawrence Erlbaum, 2005), 1–3.

[75] Barrett, NPS IRB.

situation, come up with an appropriate course of action, and execute it without being overwhelmed.[76]

Team training also serves a distinct purpose by forcing the leader to start interacting with and developing relationships with his fellow team members. Group training creates an environment that fosters higher levels of comradery and cohesion within the team that has been cited as a critical factor for the performance of SOF teams in combat.[77] However, although team members start to become more cohesive during training, experiences in combat greatly influence the levels of cohesion within a team, as will be discussed in greater depth.

Similar to individual training, the team also conducts extensive rehearsals of real-life scenarios, a process that repeats itself until reaction to certain conditions becomes automatic.[78] In this case, they are instilling a reflex, but one that is effective and reduces risk associated with delayed responses in dynamic, high-risk situations. In one participant's words, this type of training allows the operator to instantly react, so that "when it comes time, it can be a reflex, not a conscious thought or memory."[79] Rehearsal also serves to identify variations on training scenarios, alternative courses of action and the development of contingencies,[80] specifically as a member of a team. As one member of the study described it, they are constantly "sketching alternatives."[81] This builds a level of improvisation that can be key to operating within highly uncertain conditions.[82]

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[76] Barrett, NPS IRB.

[77] Marc I. Alderman, "Women in Direct Combat: What is the Price for Equality," Monograph, United States Army Command and General Staff College, 1992, 8; Directorate of Service Personnel Policy Service Conditions, *Women in the Armed Forces* (London: United Kingdom Ministry of Defence, 2002), 5.

[78] Banks, *The History of Special Operations Psychological Selection*.

[79] Barrett, NPS IRB.

[80] Banks, *The History of Special Operations Psychological Selection*.

[81] Barrett, NPS IRB.

[82] Karl Weick, "The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster," *Administrative Science Quarterly* 38 (1993): 638–640.

With so many potential variables to consider, the ability to rapidly cycle through options and reach the most effective solution is key to the decision-making process.[83]

These types of training are the first step to instill key operational principles that serve as the foundation for action in combat. In fact, many research participants described the need to fall back on your training, describing how "training kicks in" in combat, and the need to "rely on principles." Although no situation in combat is going to exactly replicate training, the "principles remain the same."[84] This type of advanced training, rehearsal and exposure to situations requiring considerations of contingencies elevates the SOF operator to be more adaptable and more responsive to the type of complex environments that they will face in combat.

Ultimately, if enough variation and complexity is experienced in training scenarios, the combat environment will feel far less chaotic when missions do not go exactly as planned. As a result, these leaders are well conditioned to expect the unexpected. This is especially crucial when conducting operations in areas where the enemy is known to present a constant threat.

One particular informant shared an exemplar of this scenario when he discussed his near-constant expectation of a firefight. During this time, he had been leading his team on numerous missions in a very dangerous part of Afghanistan. In fact, the area they were operating in was so known for its violence that it was featured in a documentary on the National Geographic Channel. When asked about any apprehension he had felt when facing such a deployment, he said only that he was looking forward to being "in the mix of things" and that he believed he knew exactly what he was getting himself into, which was, as he put it, "the Wild West."[85] Throughout his time, the mountainous

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[83] Eisenhardt, "Making Fast Strategic Decisions," 570–571.

[84] Barrett, NPS IRB.

[85] Barrett, NPS IRB.

operating area limited options for movement, making his team an easy improvised explosive device (IED) target every time they ventured away from their firebase. Despite this constant threat of enemy strike, he was able to lead his team effectively and aggressively by always staying alert and trying to anticipate the ways in which an attack could unfold at any moment.

This constant focus on real and potential threats was echoed throughout the interviews by all informants in this study. One commented, "We knew we were going in to a bad place on the get go," while another highlighted the manner in which his training prepared him for such an environment saying, "our unit level training is far more difficult than deployment, far more difficult."[86] As a result, when chaotic situations arose, the participants were able to rely on their training and internalize would-be chaos as routine or quickly fall back to a contingency plan crafted as a result of anticipating potential enemy attacks. For SOF leaders, training was intended to be two-fold. First, leaders were conditioned to expect highly uncertain and potentially chaotic conditions. Second, they were given tools to help them cope with and make decisions under these conditions.

B. COMBAT SENSEBREAKING

The process of sensebreaking has been applied to a number of scenarios in previous studies. Typically, it describes the process whereby one's understanding of a situation or process is effectively disrupted or destroyed.[87] However, in combat, especially from the perspective of small units in a tactical setting, sensebreaking is unique. It is therefore important to define and describe such characteristics to understand how they impact the decision-making process examined in this study. As illustrated in Table 3, the data shows that combat sensebreaking has two unique attributes: sensebreaking by the enemy and sensebreaking from team-internal factors.

[86] Barrett, NPS IRB.

[87] Pratt, "The Good, The Bad, and the Ambivalent," 464.

Table 3. Combat Sensebreaking

Informant Codes	Second-Order Categories	Overarching Dimensions
• "We basically drove right into this thing [ambush] going 'oh f***!'" • "We were not expecting to find what we found." • "I think I was definitely shocked at what just happened." • "…next thing you know, there is a gun fight." • "The next thing I remember was a huge explosion and black smoke filled my vehicle."	Sensebreaking by the Enemy	COMBAT SENSEBREAKING
• "I saw my Air Force CCT hit on the hood of the truck…" • "…so he was hit bad'" • "I realize, oh my gosh, he's landing in the wrong spot." • "I was dismounted so it was, take cover and pray a mortar doesn't land on you'"	Sensebreaking from Within	

1. Sensebreaking by the Enemy

Despite thorough selection, intensive training, and previous combat experience, it is not possible to prepare for every potential scenario in combat; it is when these unknown scenarios arise that the environment adopts a chaotic feel.[88] This feeling of chaos is indicative of combat sensebreaking. There are two distinct ways in which the enemy has shown a capability to induce combat sensebreaking: the first occurs when the enemy demonstrates an unexpected or new tactic, while the second occurs when the enemy engages a team at an unexpected time.

As described by the participants in the study, when the enemy utilizes unexpected tactics it elicits a level of confusion or frustration. Previous solutions or courses of action may no longer be viable often leaving leaders unsure of how to proceed. In one particular case, a participant discussed his time as a new platoon leader in a conventional unit. While on a routine patrol he took his platoon to inspect a black market fuel point known as a terrorist meeting point. As an illegal area of fuel sales, it was common to see empty fuel cans strewn about the area.[89] However, what one team member discovered was anything but common.

While searching the area for any signs of terrorist activity and displaying a military force presence to discourage future enemy activity, a team member upturned an empty fuel can to discover it was rigged as an IED and was wired to

[88] Weick, "Enacted Sensemaking in Crisis Situations," 305.

[89] Barrett, NPS IRB.

an artillery shell. Concurrently, the rear element of the young leader's team began to receive small arms fire from an unidentifiable location. Unknowingly, this platoon leader had found himself in the middle of a complex enemy attack.[90]

He described his feelings in that moment, saying that he felt his heartrate rise and a general overall escalation of his physical and cognitive processes. At this point, his radio lit up with calls relaying reports of enemy fire and potential enemy movement while, for the first time in combat, he himself heard the distinct sound of gunfire overhead. IEDs were ubiquitous at the time, but IEDs followed by direct fire engagement were a newer phenomenon. The platoon leader was forced to face a tactic for which he had found himself unprepared.[91] It was both the unique feeling of first exposure and the unexpected complexity of the attack that induced combat sensebreaking for the young leader.

However, unexpected timing proves to be even more effective at combat sensebreaking. In combat, unexpected timing often refers to a split second occurrence; this can happen as fast as the wheel of a vehicle crossing an IED or a shot from a gun. Its rapid nature instills an emotional shock, which can have an immediate effect of sensebreaking. This type of rapid sensebreaking was epitomized by a situation described by one participant. He was serving the sixth month of his first combat deployment in Iraq. As a new platoon leader he had to rapidly adjust to what he referred to as a steep learning curve on a nearly daily basis. However, by this point in his deployment, a night patrol enforcing a governmental curfew was considered routine. He had not noticed anything remarkable during this patrol, not even the small fire he saw burning in the middle of the road seemed considerably out of place. In this part of Iraq it was common for the locals to burn their trash roadside, so there was no reason for alarm. However, he felt that it was just bizarre enough to warrant further investigation.[92]

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[90] Barrett, NPS IRB.

[91] Barrett, NPS IRB.

[92] Barrett, NPS IRB.

The platoon leader ordered his column of five Humvees to approach the flame and upon arrival, did not notice anything unusual…at first. His primary concern leading the vehicle patrol was the threat of an IED, but that is not what he encountered. Once the first vehicle came to a stop there was a moment of calm followed shortly by enemy gunfire from both the rear and right of the convoy. He had led his team directly into an ambush.[93] The use of an ambush is a tactic commonly used in warfare, but when properly executed, its unexpected timing can still be effective at combat sensebreaking. Sitting in the second vehicle, the platoon leader could do little more than watch his first vehicle take direct machinegun fire. He could see the gunner in the first vehicle get shot and fall into the vehicle from the hatch. His reaction was to order the driver of his own vehicle to act as a shield by driving in front of the one being assaulted. At this moment, he was able to do little more than sit scrunched in a Humvee seat while his vehicle was pelted with automatic fire.[94] As a result, the enemy had taken the upper hand by launching an effective ambush at an unexpected time.

It is by executing the unexpected, such as this ambush, that the enemy is able to either exceed the limitations of training, contingency planning and experience, or simply catch a team off-guard and leave them reeling to regain control of the situation.

2. Sensebreaking from Within

There are at least two sides to any battle. While the enemy can present an obstacle to any leader, so too can his own team. These teams are typically both highly trained and well-practiced as a unit.[95] As such, there is an expected reduction in tactical execution issues. However, circumstances in which the team

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[93] Barrett, NPS IRB.

[94] Barrett, NPS IRB.

[95] UNITED STATES Army John F. Kennedy Special Warfare Center and School, *Academic Handbook*, http://www.soc.mil/SWCS/academic handbook.html.

experiences a diminished combat capacity, or in circumstances in which team cohesion has not been fully developed, significant issues can arise.[96]

As the participants described in their interviews, wounded team members, failures of communications equipment and vehicle malfunctions all serve as alarms that the mission is now in a state of chaos. This diminished combat capacity can quickly lead to combat sensebreaking. In some instances, tactical leaders must be concerned with both their own team's capacity, as well as with that of a unit from a partner nation, further complicating the situation. One interview participant shared such an experience.

While conducting a joint patrol with a partner nation's Special Forces team, the collective group came under direct small arms and grenade fire from a concealed enemy contingent. While his team performed as expected, the partner force proved ineffective. A member of this force sustained a gunshot wound; procedures clearly dictate that the casualty should be treated quickly and evacuated when possible. However, the participant elaborated, "What actually happened in real time though, the [partner force] platoon just basically watched this guy get shot in the neck and fall over at their feet. They both stopped firing and did nothing to treat their friend."[97]

Additionally, high intensity firefights illuminated team cohesion issues in which leaders realized their subordinates felt a diminished confidence in the leader's decision-making ability. In the scope of this study, the diminished confidence did not stem from a lack of confidence in the leader's skill set, but from a lack of shared combat experience. One leader described having confidence issues from his team, as he had only been newly minted as a team leader when he joined the team two months prior to the deployment. This lack of developed cohesion came to a head as arguments ensued among the team while trying to determine whether to reengage the enemy or exfiltrate a contested

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[96] Richard Guzzo and Marcus Dickson, "Teams in Organizations: Recent Research on Performance and Effectiveness," *Annual Review of Psychology* 47 (1996): 310–312.

[97] Barrett, NPS IRB.

area after an ambush. Arguments erupting with regard to courses of action while under-fire are a definite sign of combat sensebreaking as they indicate friction between a decision maker and his subordinates.[98]

a. Injury to Teammate

Operations can go on despite injury or death; in fact, one study concluded that injuries to a teammate actually led to a higher commitment to the ongoing mission.[99] However, beyond the estimation of combat ground power and the logistical need to recover the wounded, leaders faced the injury of their subordinates with even more concern than the possible injury to themselves. One participant succinctly stated what many had intoned, "My first thought was the safety of the guys."[100] As a result, teammate injuries swiftly lead to *combat sensebreaking* by quickly and convincingly demonstrating the heightened intensity of a tactical situation.

In one instance, a team leader was maneuvering his unit in position to conduct an assault on an enemy compound. Prior to commencement, the enemy opened fire on the team leading to a severe head wound to one subordinate and a chest wound to the other. In the leader's mind, the welfare of these two men became his primary mission.[101] This reaction was common among the participants of the study when facing similar situations. It is significant in that an injury to a teammate signals to a leader that the mission is clearly no longer going as planned. In severe circumstances, this can leave a leader confounded in the middle of combat, unsure of what to do next; this is the direct effect of combat sensebreaking. Some leaders overcome this state better than others and move on to the next phases of the decision-making process. In combat, this

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[98] Barrett, NPS IRB.

[99] Thomas Bauer and Ralph Rotte, "Prospect Theory Goes to War: Loss-Aversion and the Duration of Military Combat" (SFB 386 Discussion Paper, University of Munich, 1997), 1–2.

[100] Barrett, NPS IRB.

[101] Barrett, NPS IRB.

ability can significantly impact the safety of the rest of the team and the likelihood that those already critically injured will survive.

b. Threat to Life

> Because before that point I was a like a f***ing god, like I could do anything. Right then and there I went from being that guy that could do anything to, oh f*** I could die, this s**ks. It was very unnerving actually.
>
> —Survey Subject 1

While the threat to a teammate's life is considered both severe and critical, the threat to one's own life is perhaps the most direct signal to a leader that he is in a state of crisis. It would appear that many reactions to the threat to one's own life are merely instinctual or automatic, but the emotions felt during these moments are internalized and cognitively processed; participants remarked, "things started to escalate for me. Of course, heartrate, everything sort of through the roof," "adrenaline just goes, you know we're not practicing anymore," and "like nothing I've ever felt in my life."[102]

However, as one becomes more experienced, even direct threat to life can lose its sensebreaking effect. One participant described an unnerving terror flow through his mind as he felt his own blood running down his leg after being shot by enemy machinegun fire. He described an instant and clear understanding of his own mortality. However, when describing the next time he was wounded he said that he "felt calm," and thought to himself, "I know how this feels, I survived it the first time."[103] This indicates that circumstances needed to bring about sensebreaking are dependent on the experience of the individual in the situation. It is no surprise that more seasoned leaders have a deeper intuition for the battlefield and as such are less apt to experience combat sensebreaking.[104] It is

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[102] Barrett, NPS IRB.

[103] Barrett, NPS IRB.

[104] Mike Bottoms, "SOF Leadership in the Face of Stress," *Journal of Special Operations Medicine*, *9,* no. 4 (2009): 107–109.

for this reason that participants in this study used experiences from earlier deployments in their career when describing chaotic environments. As their experience grew, what was once chaotic became routine. However, should combat sensebreaking occur, leaders are left to face a situation for which they were not fully prepared. It is at this point that they transition into the next phase of the decision-making process.

C. COMBAT SENSEMAKING

> I was selected and trained for my capacity to do that, to problem solve quickly, make decisive calls, to manage a sky full of assets, manage a gunfight, manage a CASEVAC and make the decisions.
>
> —Survey Subject 5

> Things slow way down, the physiological response to having endorphins and adrenaline dumped into your system… I'm hyper sensitive, I can distinctly remember dust in the air, I can remember the feel of the butterfly trigger, the shaking, the rhythm of the 50 Cal at the time…and real appreciation for things that are actually unfolding all around.
>
> —Survey Subject 2

To decide upon a corrective course of action once combat sensebreaking occurs, one must first reestablish their status quo. Leaders must take stock of their new circumstances; this is combat sensemaking. This process can unfold in a matter of minutes and its result will inform the decisions made in response to the crisis. Effective leaders are well adept at rapid combat sensemaking and in special operations, they are selected specifically for their ability to do so.[105]

In combat, this step consists of first collecting oneself, essentially mentally slowing down the velocity of the situation. Next, leaders must establish the current capabilities of both their team and the enemy. This process can be

[105] James Picano, Thomas Williams, and Robert Roland, "Assessment and Selection of High-Risk Operational Personnel" in *Military Psychology: Clinical and Operational Applications*, ed. Carrie H. Kennedy and Eric A. Zillmer (New York: The Guilford Press, 2006), 57–62.

expedited when there exists cohesion within the team, allowing one to delegate tasks and focus on developing an understanding of the chaos.[106] Table 4 shows the components of combat sensemaking.

Table 4. Combat Sensemaking

Informant Codes	2nd Order Categories	Overarching Dimensions
• "I get out, to get security, Then we can start piecing the puzzle together..." • "You have to take that next step in order to take control of the situation." • "I knew I had to move there because I couldn't see what the hell was going on."	Collecting Yourself	
• "We were still fully capable and so close that it made sense to turn into the ambush." • "We circle the wagons, consolidate, reorganize, take accountability of everything." • "My first thought was the safety of the guys."	Establishing Status of Team	COMBAT SENSEMAKING
• "Once we got fire superiority, things got progressively easier from there." • "I had to maintain awareness of what was going on in the target." • "So it came time to start systematically attempting to isolate the enemy."	Clarifying Status of Enemy	
• "Trust the NCO's and the leadership within the unit.'" • "You got the wounded. Let me know when CASEVAC's complete." • "I told him he needed to come help us secure where we just had been blown up."	Relying on Your Team	

1. Collecting Yourself

First, the leader must establish situational awareness regarding his current status, the status of his team and that of the enemy. To clarify his relative position to the enemy, he must first attempt to mitigate or remove immediate enemy threats. Identifying immediate threats is a task that can be as simple as looking for the muzzle flash of enemy rifles. The ability to do this does not, in fact, separate effective decision makers from less effective ones. The differentiating factor is the ability to identify these threats, work to eliminate them, and simultaneously establish the best possible understanding of the unfolding situation.[107] In April 2004, during the early stages of the war in Iraq, one leader's ability to do just this was tested under fire.

[106] Michelle Marks, John Mathieu, and Stephen Zaccaro, "A Temporally Based Framework and Taxonomy of Team Processes," *Academy of Management Review* 26, no. 3 (2001): 358–359.

[107] Picano, Williams, and Roland, "Assessment and Selection," 61.

Similar to many of the experiences shared throughout the interview process, this event began as a routine mission. The participant was in charge of a routine patrol in a hostile area of the country. While patrolling the city, he manned the 50 Caliber machine gun mounted to his vehicle and remained alert for any enemy activity, which seemed highly likely given his teams operating area. As his vehicle passed an alley, there was a split second of perfect illumination, allowing him to see two combatants carrying an RPG launcher. Instinctively, he turned his gun toward the alley and opened fire. While what followed happened in mere moments, to him it felt like an eternity.[108]

The two enemy fighters fired the first RPG round as the rest of his team turned to provide supporting fire. However, two enemy fighters with RPGs were not the only combatants in the area. As they fired 3–4 more rockets, additional enemy joined in the fight, firing on the team with small arms from nearby buildings. It was clear at this moment that the team had found itself in a well-laid ambush. It was at this point that the team leader exhibited his ability to quickly identify the threat, and develop an understanding of the unfolding situation.[109]

The threat was obvious and immediate; the team was receiving RPG and small arms fire. The situation itself had an SOP that dictated a certain response. However, in this case, that procedure would have determined the response to be an immediate acceleration of the patrol through the ambush to break contact with the enemy. Instead, he directed his team to drive directly into the ambush to overwhelm the enemy. Within a few moments, the enemy's ambush position had been obliterated. He had based this decision on his understanding of the surrounding area. Since he knew that the entire area was hostile, he believed that the most prudent course of action was to eliminate the immediate threat.[110]

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[108] Barrett, NPS IRB.

[109] Barrett, NPS IRB.

[110] Barrett, NPS IRB.

This decision would later show its merit. The team would soon find that if they had driven through the ambush, they would have found themselves in the middle of a planned secondary ambush. Instead, the enemy in the second ambush position was forced to leave their concealed location and attempt to engage the team out in the open. This was a major disadvantage for the enemy and they too were quickly eliminated once they attempted to engage the team.[111]

2. Establishing Status of Team

> I've got three conversations going on at once. I'm making sure that the assets are looking at what I want them to look at…updating higher headquarters that they're moving the CASEVAC, and I'm waiting for updates from my troop chief.
>
> —Survey Subject 5

Decision-making in chaos requires one to not only have an understanding of the obstacles he needs to overcome, but also the tools that are at his disposal. In the case of these small unit teams, the most important tools are one's teammates.[112] Therefore, to conduct combat sensemaking one must ascertain the status of one's team.

First, a leader must account for what combat power he has lost as a result of enemy action. In some instances, casualties can be removed from the combat area, but in on-going chaotic circumstances they often can only be taken out of the line of direct fire. The net effect is the loss of the combat power of the causalities, as well as those needed to care for them. Therefore, it is crucial that while establishing what tools are available for use in dealing with the situation, the leader understands the functionality of the people on his team.

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[111] Barrett, NPS IRB.

[112] A. William Evans III, Michelle Harper, and Florian Jentsch, "I Know What You're Thinking: Eliciting Mental Models about Familiar Teammates," (Proceedings of the First International Conference on Concept Mapping, Pamplona, Spain, 2004), 2–3.

While human tools are considered most critical, leaders must also take stock of the functionality of their equipment and other support assets. Equipment malfunctions can quickly place intense pressure on a leader during chaos. A number of participants referred to issues concerning vehicle malfunctions, weapons issues, and failures of communication equipment as part of their chaotic environment. For example, the failure of communications equipment could affect both the ability to maneuver as a team, as well as the ability to direct air support assets appropriately.[113]

In Afghanistan, one ODA team leader had to make such an assessment while in pursuit of a group of Taliban fighters who had just attempted to ambush his team. Just after the ambush was launched and proved ineffective, the team leader turned his armored convoy up a steep ridgeline directly toward the enemy. While moving, he ordered the gunners on the vehicles to engage the enemy with their mounted Mark 19s. However, not one, but both guns failed to fire as the enemy hurried to flee the area. The team leader had to quickly discern which weapons systems were still available for rapid engagement against the enemy.[114]

Support from the Afghan National Army (ANA) had also been attached to his element, but in this case they provided no help. In fact, when assessing the situation as it played out, the team leader realized that the ANA had failed to follow him up the ridgeline. Not to be deterred, he radioed a request for air support to aid in the pursuit of the Taliban element, but none was available. It is at this moment that he had to fully consider the status of his team. He was operating with two armored vehicles, but neither had a functioning mounted weapon. His ANA support element had failed to follow him, leaving his unit split. And lastly, he had no air support. As a result, he stalled his pursuit of the enemy to consolidate his team and assess his combat power. Having survived an

[113] Kevin Christie, “Synchronizing Chaos: Command and Control of Special Operations and Conventional Forces in Shared Battle Space,” (Monograph, Naval War College, 2006), 8–9.

[114] Barrett, NPS IRB.

ambush in a highly hostile area of Afghanistan and knowing that the route back to base would soon be drawing Taliban attention, he ultimately decided to hasten the team's withdrawal from the area.[115] Had he not properly assessed his team's status he may have made the decision to pursue the enemy, which could have proven catastrophic.

3. Clarifying Status of Enemy

A leader will have some level of understanding of the status of the enemy in a crisis; this is to say that he will be aware of an enemy presence, otherwise there would be no combat aspect to combat sensemaking. However, his situational awareness of the strength and disposition of the enemy may have been degraded as a result of combat sensebreaking, and the struggle to regain it is expressed via comments, such as, "I had to maintain awareness," "I wanted more situational awareness," and "Situational awareness is key."[116] A leader's ability to quickly grasp the enemy disposition in a firefight can easily mean the difference between life and death. In counterterrorism and counterinsurgency, leaders have an increasingly difficult challenge as the enemy dresses the same as the civilian population; there are no uniforms or other such traditional means to aid in combat sensemaking.[117]

4. Relying on Others

Once a leader has collected himself, established the status of both his team and his enemy, he must then delegate appropriately. This allows him to reduce the number of variables factoring into his decision process so that he can focus on only those that require his specific skill set. One participant illustrated this when discussing a chaotic situation in Afghanistan.

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[115] Barrett, NPS IRB.

[116] Barrett, NPS IRB.

[117] Stuart Gordon, "The Protection of Civilians: An Evolving Paradigm?," *The Stability Journal*, August 16, 2013, http://www.stabilityjournal.org/articles/10.5334/sta.cb/.

The participant and his team were setting up to surround a building in a known Taliban safe haven. The intent was to conduct a “call-out,” in which they would inform the occupants of the building that they were surrounded and request them to peacefully exit and surrender. This had become a common tactic when conducting missions under the cover of darkness. However, it turned out that the occupants were aware of the team’s presence and had prepared to fight.[118]

As the team surrounded the building, an occupant, who was in fact a Taliban leader, blindly tossed a grenade from within the compound walls. The team lead referred to the result of the Taliban leader’s effort as sheer luck on the part of the enemy, as the grenade landed right in front of a group of his teammates. A moment later, the team leader would be operating with four wounded team members.

Faced with a now-ongoing firefight, four wounded team members, a hostile general area and unchanged mission objectives, the team leader had too many variables to handle. As a highly trained and experienced combat leader, any number of these factors were well within his skill set to handle, however, there were certain variables that he was best suited to handle and others that he could delegate to reduce the complexity of the situation. In this case, he was able to rely on a Senior Enlisted member of his team to manage the Casualty Evacuation (CASEVAC) process while he focused on the ongoing firefight.[119] Certainly, it was within this leader’s capability to manage a CASEVAC, but he was using his authority to delegate to reduce the number of complex variables he faced.[120]

Delegation in this sense should not be conflated with delegation in decision-making. Instead, it is a means to diffuse complexity to allow for more

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[118] Barrett, NPS IRB.

[119] Barrett, NPS IRB.

[120] J. Alberto Espinosa et al., “Familiarity, Complexity, and Team Performance in Geographically Distributed Software Development,” *Organization Science* 18 (2007): 623–625.

efficient combat sensemaking. Special operations leaders espouse trust among their team as being a key factor in their ability to operate.[121] When describing an intense firefight, one leader stated of a senior team member, "If I needed something, he wanted to anticipate." When asked what advice he would give to a young leader, another participant said simply, "I would tell him to trust his guys."[122] This trust and faith in one's team is crucial in the process of reducing complexity to better conduct combat sensemaking.

D. DECISION POINT

> You have to make these decisions on just the amount of information that comes to you, it's never the amount you need.
>
> —Survey Subject 5

At this point in the process, the leader is now ready to make a decision. He has gathered as much information as possible, given the severe time constraints and has consolidated that information during the combat sensemaking phase. In almost every case, the leader knows that his decision must be direct and clear and that it is being made with limited information.[123] As a result, his first inclination is toward eliminating eminent danger, followed by providing clear and consistent direction, and finally ensuring a unified team effort. The flow of this process, as derived from the participant data, is illustrated in Table 5.

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[121] Simone Payment, *Navy SEAL: Special Operations for the U.S. Navy* (New York: The Rosen Publishing Group, 2003), 23.

[122] Barrett, NPS IRB.

[123] John Brown, "Ethics of Combat," *Army.mil*, October 24, 2012, http://www.army.mil/article/89854/Ethics_of_Combat/.

Table 5. Decision Point

Informant Codes	2nd Order Categories	Overarching Dimensions
• "We assault through, kill the machine gunner." • "…getting shot at and the bullets cracking through my Humvee, it's time to get the f*** out and kill these dudes." • "…that doesn't mean the threat is removed. You still have to remove the threat"	Eliminating Threats	
• "In regard to decision making, never ever, ever be indecisive, never flip flop." • "I am in a bad situation and this is what we need to do." • "The worst decision you can make is indecision."	Follow Through	**DECISION POINT**
• "Unless I got the north-south from my troop chief, unless he was in agreement, we would not execute the operation." • "Don't try to micromanage things."	Delegation	

1. Eliminating Threats

At this point in the decision-making process, a leader has assessed enemy strength and is aware of his own combat capability. As a result, he is able to make a determination regarding his relative position to the enemy and decide if he either has the upper hand or if he needs to break contact. In these cases, leaders ascribe to the doctrine that one should never lose the initiative. This is to say that if one feels he has the upper hand, he should aggressively engage the enemy.[124]

However, if the leader is unsure of the balance of combat power, he must decide how to proceed. In one instance, a leader determined that the prudent course of action was exfiltration of the target area. However, in another situation the leader remarked, "We're not going to cower with our tail between our legs and head back to base."[125] The tactical efficacy of either action is not important here, but instead demonstrates that in individual cases, leaders decide to either eliminate the threat with force, or eliminate the threats ability to exert force on their team by removing themselves from the danger.

[124] William McRaven, *Spec Ops: Case Studies in Special Operations Warfare, Theory and Practice* (New York: Random House, 1995), 16–18.

[125] Barrett, NPS IRB.

2. Following Through

> In regards to decision making, never ever, ever be indecisive. You have to make a decision.
>
> —Survey Subject 1

One of the most apparent narratives throughout the study was the need to be decisive. For the participants this did not simply mean making a decision, but instead it meant making a decision, sticking to it, and seeing it through to its end. This does not mean that a leader cannot adjust his plan as the situation unfolds, only that adjustments need to be made as clear and definitive as the original command. As leaders, these men know that their subordinates are looking to them for guidance and that their failure to provide it can lead to disaster in combat.[126] Therefore, it is paramount that during chaotic circumstances leaders follow through on their decisions.

One participant made this point clear when discussing the decisions he made after his team found themselves in an ambush. With his team receiving direct enemy machinegun fire he had two options, either dismount the vehicles and assault the enemy position, or stay in the vehicles and attempt to engage the enemy with the mounted weapons. He ultimately decided to dismount and assault the enemy on foot. Upon reflection, he said that either decision could have been right or wrong, but the important focus was to give clear and concise orders. "Flip flopping will get guys killed."[127]

The point, he said, is that when you are being shot at, everyone is scared, and it is with that fear that people make bad decisions. This is why orders must be simple and direct. Otherwise, "more people get hurt, more people get confused, people get lost, [and] eventually people are going to die." He went on to say that as a leader, one is expected to be able to cope better with that fear than his subordinates and to make better decisions. He elaborated that many

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[126] Driskell and Salas, "Group Decision Making Under Stress," 474.

[127] Barrett, NPS IRB.

subordinates may be feeling much more fear than you and need you to be decisive and make the best decision for the entire team.[128] It is for this reason that you must not only make a clear decision, but also follow through.

Another participant echoed this sentiment stating, “No matter what decisions you’re making as long as you’re making a decision, you have to do something. Your guys are looking for you to do something.” “You don’t necessarily make the right decisions every single time, but you learn from those.”[129] Such comments serve to reinforce the participants’ belief that leaders must provide clear direction even when uncertainty exists.

3. Delegating

A leader’s faith that his team will both follow and execute his orders enables him to act rapidly; he is able to decide on a course of action for one part of his team, consider that task handled, and move on to directing another part.[130] One participant remarked about his team, “I didn’t have to question if they were instinctively going to understand what needed to happen.”[131] This freedom allows leaders to focus on directing their team rather than micromanaging it.[132]

The participant’s in this study cited many instances of delegation that allowed the leader to focus on overseeing the operation and not get bogged down in the tasks for which he had competent personnel. As one participant put it, “If you’re doing the sergeants job, who’s doing the officer’s job?”[133] The ability to delegate tasks to capable personnel allows the officer to focus on maintaining overall situational awareness. For many, there was at least one or two individuals

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[128] Barrett, NPS IRB.

[129] Barrett, NPS IRB.

[130] Simone Payment, *Navy SEAL: Special Operations for the U.S. Navy* (New York: The Rosen Publishing Group, 2003), 54.

[131] Barrett, NPS IRB.

[132] Robert Kilcullen et al., “Identifying Agile and Versatile Officers to Serve in the Objective Force,” (paper presented at the meeting of the 23rd Army Science Conference, Orlando, FL, December, 2002), 1–3.

[133] Barrett, NPS IRB.

that the leader referred to as “fire and forget” team members, allowing the officer to “worry about the big picture” and avoid getting “down in the weeds.”[134]

E. EXPERIENCE

Each step of the decision-making process as described has been influenced by previous individual and team experiences of the leaders of these small combat units. Building on their advanced training, their operational experience, or the real-time exposure to combat operations in which they were forced to react and respond under chaotic conditions, heavily influenced their ability to progress through the decision-making process (see Table 6). Reliance on past experience is one of the key factors contributing to an individuals’ ability to make a decision, and within the decision-making cycle, would contribute to the resilience of these individuals when faced with situations that would induce sensebreaking.[135] Combat exposure, specifically combat stress, has been cited as one factor that positively influences resilience for SOF leaders.[136]

Table 6. Experience

First-Order Codes	Second-Order Categories	Overarching Dimensions
• “The most beneficial is in the environment with your guys just constant contact, the more you know about them the more you can read their cues and know the situation.” • “It almost goes to muscle memory, all the initial decisions go off of training and what we are used to doing as a team.” • “[We] learned a lot of lessons for what worked there and what didn’t.” • “We just knew it was going to happen.” • “We had been blown up before. It was not entirely new.”	Team Experience	EXPERIENCE
• “Accumulation of everything I had picked up.” • “We have been trained in a bunch of different things. Not all of it was as a group.” • “Getting shot is very unnerving; second time I got wounded I was very calm.” • “The other one when I got blown up in Afghanistan, that was easy. At that point I’d been direct hit before.” • “You can fall back on that experience, whether it’s a little or a lot.” • “Because obviously you learn and grow. You don’t necessarily do the right decisions every single time but you learn from those.”	Individual Experience	

[134] Barrett, NPS IRB.

[135] Department of the Army, *ADP 6–22 Army Leadership*, 1–4; George Kaempf et al., “Decision Making in Complex Naval Command-and-Control Environments,” *Human Factors* 38, no. 2 (1996): 220.

[136] Bottoms, “SOF Leadership in the Face of Stress,” 107–109.

Increased experience, up to a certain threshold, builds confidence and the ability to focus on key variables while eliminating extraneous information, all within shorter periods of time.[137] In this way, experience is also a critical aspect of sensemaking.[138] Many SOF units are at a distinct advantage over other military forces, in that they are continually deployed for shorter deployment lengths in a variety of combat or contested environments, so they have extensive and consistent exposure to unique conditions. This exposure to a broad spectrum of previously encountered experiences instills an adaptability and readiness for future scenarios that assists the individual in more rapidly making sense of the variables in the new situation.

The two primary categories identified in this study within the experience realm concerned (1) Individual military experience of the SOF officer prior to joining the team in which the chaotic incident occurred, and (2) team experience that occurred either prior to or during the deployment in which the chaotic incident occurred. For all of the participants in this study, prior individual experience included previous duty assignments with conventional units. In fact, many of the experiences that these individuals chose to recount were from their deployments with conventional units. The decision to choose those events could have been due to a number of factors. For some, the timing of either the war at that point in their career, their individual level of exposure to chaotic events, or lack of subsequent chaotic incidents could have been the deciding factor for their selection of that event. Regardless, the inclusion of chaotic events spanning both conventional and special operations missions provides a richer dataset and allows for a broader range of applicability of the findings.

The individual experience described by the participants ranged from innocuous accounts from prior duty stations and training events to previous

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[137] Britta Herbig and Andreas Glockner, *Experts and Decision Making: First Steps towards a Unifying Theory of Decision Making in Novices, Intermediates and Experts* (Bonn: Max Planck Institute for Research on Collective Goods, 2009), 7–8.

[138] Gary Klein et al., *Decision Making in Action: Models and Methods* (Norwood, NJ: Ablex, 1993), 107–109.

deployments with other conventional and special operations units, to highly chaotic incidents with previous teams. The participants recounted these events as a means to describe the cumulative effect that prior experience had on their reactions and responses to future events. For many, the exposure to and lessons learned from these experiences greatly contributed to their ability to act more quickly and more efficiently in subsequent scenarios. For most participants, their individual experiences increased their confidence and decreased both cognitive and physical responses to future events. For example, one individual had been in a firefight and suffered a bullet wound to his leg. The first time he experienced this type of injury, he said he was in shock, his heart rate and emotional response to the situation escalated. The second time he was injured, he was calm; having experienced an injury before, he knew how to maintain control of and better respond to the situation.[139]

In addition to individual experience, prior team experience also had a significant effect on the leader's ability to make decisions that affected both himself and his team. Prior experience with the same unit contributed to a better understanding of the overall team dynamic, which allowed him to anticipate his team members' actions and gain confidence in their abilities to respond appropriately under chaotic conditions. He was also able to better read their body language and determine if the group as a whole was picking up anything out of the ordinary, leading to a higher level of situational awareness.[140] Familiarity with team members also reduced anxiety and the need to prove the participants value to the team. Both individual and team experience increased his ability to focus on the most critical variables within the chaotic environment.

Due to the rank and time in service of our research participants, there was no lack of individual and team experience within the group. However, many of the participants cited their lack of experience with a particular scenario when recounting prior chaotic experiences. One participant described his first real

[139] Barrett, NPS IRB.

[140] Barrett, NPS IRB.

firefight as part of a Special Forces ODA conducting a Village Stability Operations mission. His team had deployed to a contested area of Southern Afghanistan and was trying to establish credibility with the local population as they intended to embed their small 12-man team within the local village. Their timing could not have been worse. The local poppy harvest was approaching and the Taliban were known to mass to take advantage of the local population through theft, extortion, and intimidation tactics, resulting in increased profits for future Taliban operations.[141]

As expected, the participant's ODA had to go head-to-head with the Taliban. They could not allow them the freedom of movement to take advantage of the local populace—that would have been considered mission failure. His ODA was partnered with an Afghan National Army element and had support from an Infantry Platoon in the area. The firefight began and immediately command and control began to break down. One of the Afghan Army soldiers was shot, and the situation was compounded by communication issues between the various elements on the ground. In addition, the team leader had not had significant experience conducting medical evacuation and it took some time to get a helicopter en route. Even when the helicopter arrived, it landed in the wrong spot. However, through it all, the team leader was able to maintain control of his individual element, eventually communicate and coordinate with the other two supporting elements, and regain control of the situation.[142] Although the Afghan soldier died, the lessons learned about the actions of his team and those of the partner forces allowed for more cohesive and responsive joint operations in the future. The research participant cited this experience as having created a better understanding of the complexity of the environment and the critical elements that lead to the success or failure of the mission in these types of conditions.

[141] Barrett, NPS IRB.

[142] Barrett, NPS IRB.

F. COHESION

The aspect of team cohesion, which is developed throughout the selection, training, and deployment processes, provides the last key component that enables a team leader to make a more effective decision, and enables a team to act at a higher level of performance.[143] With respect to the decision-making cycle outlined in this study, cohesion influences nearly every aspect of the process.

Many studies identify two types of cohesion, task cohesion and social cohesion. Task cohesion refers to the "shared commitment among members to achieving a goal that requires the collective efforts of the group."[144] Social cohesion describes the "extent to which group members like each other, prefer to spend their social time together, enjoy each other's company, and feel emotionally close to one another."[145] Both of these types of cohesion are cultivated within the military at large, whose operations in combat environments place elevated levels of stress that test the cohesive bonds that tie groups together, and where divisive elements and a fracturing of the team can have devastating consequences.

The definition of cohesion has changed over the years, but generally includes the concepts of trust, communication, and cooperation (see Table 4).[146] The degree of trust between team members is based on multiple factors but is enhanced by interaction and prior experience.[147] Trust is one of the key

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[143] Alderman, "Women in Direct Combat," 8; Fred Mael and Cathie Alderks, "Leadership Team Cohesion and Subordinate Work Unit Morale and Performance," *Military Psychology* 5, no. 3 (1993): 143–144.

[144] Robert MacCoun and William Hix, "Chapter Five: Cohesion and Performance," in *Sexual Orientation and U.S. Military Personnel Policy: An Update to Rand's 1993 Study* (Santa Monica, CA: RAND Corporation, 2010), 139.

[145] MacCoun and Hix, "Chapter Five: Cohesion and Performance," 139.

[146] Janet McLeod and Kathryn Von Treuer, "Towards a Cohesive Theory of Cohesion," *International Journal of Business and Social Research* 3, no. 12 (2013): 1–3.

[147] Gareth Jones and Jennifer George, "The Experience and Evolution of Trust: Implications for Cooperation and Teamwork," *The Academy of Management Review* 23, no. 3 (1998): 535–536.

components for building team cohesion as high levels of trust facilitate more open communication and willingness to cooperate.[148] Unlike the conventional military, SOF units are typically deployed in contested and ungoverned spaces as part of a small team. Without the advantage of a large supportive force, these small teams need to have extremely high levels of cohesion to maintain high levels of performance in such adverse conditions.[149] Under high levels of stress, team members also tend to rely on the authority and decision-making ability of their leaders which is further enabled by high levels of cohesion.[150] This critical factor produces multiple benefits that enhance a team leader's information processing ability to make rapid decisions.

An individual is only able to cognitively handle a certain amount of pressure represented by such elements as stress, information, physical arousal, etc.[151] As discussed in the *decision point* stage of the decision-making cycle, delegation can be critical to a leader's ability to focus on the most important task at hand. The development of a highly cohesive team, specifically through trust and cooperation, allows the team leader the ability to delegate tasks to other team members. This delegation of tasks distributes the workload and decisions being processed by the individual in the leadership position. This was evidenced on multiple occasions whereby the team leader praised his team members for taking over such critical tasks such as weapons systems, air coordination and reporting responsibilities.[152] The team leader was then able to focus on a smaller number of variables, giving them his attention more exclusively and more quickly.

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[148] Rachid Zeffane, Syed Tipu, and James Ryan, "Communication, Commitment & Trust: Exploring the Triad," *International Journal of Business and Management* 6, no. 6 (2011): 78–79.

[149] Alderman, "Women in Direct Combat, 9–10.

[150] Driskell and Salas, "Group Decision Making Under Stress," 473–474.

[151] Kowalski-Trakofler, Vaught, and Scharf, "Judgment and Decisionmaking under Stress," 4–8; Barry Staw, Lance Sandelands, and Jane Dutton, "Threat-Rigidity Effects in Organizational Behavior: A Multilevel Analysis," *Administrative Science Quarterly* 26 (1981): 505–507.

[152] Barrett, NPS IRB.

Nowhere is this more important than when a unit suffers a casualty. Due to the cohesive nature of combat units, team members feel like family and when one of them is hurt the mission changes dramatically. Typically, the team leader is forced to shift his priorities to treatment and medical evacuation while letting others handle other aspects of the fight.[153] But what happens when it is the team leader himself that is the casualty? One of our participants recounted his first major injury while on a deployment to Iraq during a heightened period of the war. The team leader was out with his unit when a conflict erupted with the enemy and he was shot during the initial part of the firefight. One of his men radioed that he, the team leader, had been shot, but there was no time to pull back from the fight, nor would he have wanted them to at this point. The priority for him was to make sure everyone else made it out safely, and his team knew that. They were able to make it through the ambush although he suffered additional shrapnel in his knee and elbow from grenades being thrown by the enemy as they cleared the ambush site.[154]

Although he was terrified at being injured for the first time, most of his concern was for his men, whom he praised effusively for their actions that night. During the discussion, he recounted the relationships he had with his driver and the squad leader, both of whom he trusted implicitly and with whom he felt incredibly comfortable. Their experiences together had forged the type of working relationship that is critical to combat units. For this, he felt fortunate.[155]

This enabled him to make decisions more rapidly and to focus only on certain aspects of the fight knowing that his soldiers “were doing exactly what they should be.” This level of cohesion cannot be created on the fly. As he put it, “In this situation we had been working together for a long time so…they knew exactly what I wanted; if I was doing something they could tell what I was doing. If they were doing something, without verbally saying it, I knew what they were

[153] Barrett, NPS IRB.

[154] Barrett, NPS IRB.

[155] Barrett, NPS IRB.

doing. It also has to do with [the fact that] we were living on a patrol base, we lived, ate, slept. I knew all their wives, they knew my wife, I knew all their kids, they knew my kids; it was that kind of organization."[156]

For those in combat units, this cohesive atmosphere is nothing new. Troops forge deep bonds during training and out in the field and never miss an opportunity to prove their worth to the team. As this team leader put it, "There is a weird phenomenon with soldiers, if you're not there you're an outsider. If you're there with your dudes getting shot at, you can talk about it later, it's like a cohesion thing."[157] Particularly with those in command positions, this is critical. They are the ones responsible for leading their men in combat, for ensuring that everyone is well-trained and ready for whatever may come, and feel accountable for every injury and loss that affects their team. However, those that are good leaders, know that they are not the only capable individuals on the team.

As expected, those operating within a cohesive team relied on the feedback and advice of their team members, specifically those with the most experience. This use of confidants and experts has been discussed by Eisenhardt as crucial to rapid strategic decision-making.[158] This study found that this also holds true in rapid tactical decision-making. The feedback from other members of the team increases the situational awareness of the commander allowing him to move more rapidly from *sensebreaking* through *sensemaking*. Multiple team leaders cited their platoon sergeants, their radio telephone operators, and other key members as being critical factors allowing them to reaffirm their decisions and assisting them in choosing among multiple courses of action. During the planning phases of an operation, "everybody kind of had a vote."[159] In the field, although the leader had final decision-making authority, they often consulted with their more experienced and trusted team members before,

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[156] Barrett, NPS IRB.

[157] Barrett, NPS IRB.

[158] Eisenhardt, "Making Fast Strategic Decisions in High-Velocity Environments," 559.

[159] Barrett, NPS IRB.

during and after firefights. One participant “wouldn’t do much without bouncing it off of” his team sergeant. Another would not pursue any course of action without getting agreement from his troop chief.[160] These close-knit relationships were a prevalent theme throughout the research pool. This dependence on other team members can have a negative effect if the level of cohesion within the team is low, but as discussed, cohesion within small combat units is cultivated early and often.[161] The reliance on the expertise of other team members was critical to increasing the confidence necessary to be more decisive under chaotic conditions.[162] A cohesive team provides a level of comfort, capability and support that instills the type of self-assurance required for making rapid decisions.

With respect to small combat units, team cohesion has a synergistic effect, enabling small units to perform at much higher levels than each individual could have done on his own. This is a product of the interaction and collaboration between the team members that results in increased overall group performance.[163] However, many of the participants cited their relationships and interactions as having a direct effect on their own individual performance, displaying a two-fold effect of cohesion on both individual and team performance.[164]

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[160] Barrett, NPS IRB.

[161] Dale Yeatts and Cloyd Hyten, *High-Performing Self-Managed Work Teams: A Comparison of Theory to Practice* (Los Angeles: Sage, 1998), 98–99.

[162] Mael and Alderks, “Leadership Team Cohesion,” 143.

[163] James Larson, Jr., *In Search of Synergy in Small Group Performance* (New York: Psychology Press, 2010), 78.

[164] Barrett, NPS IRB.

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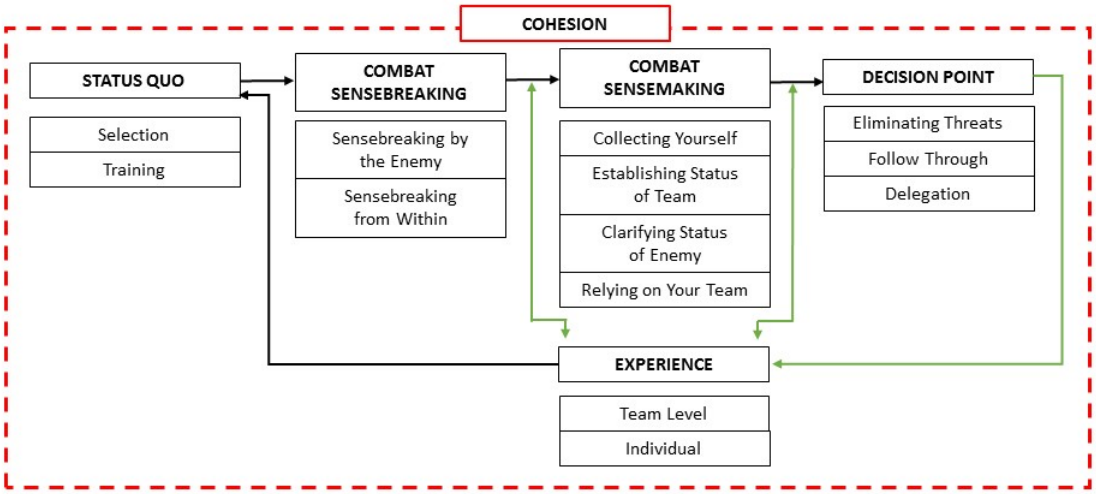
V. FINDINGS

From analysis of the data emerges a non-linear model consisting of six key attributes: status quo, combat sensebreaking, combat sensemaking, decision point, experience, and cohesion (Figure 3). First, there exists the established norms of an operation which is dictated by mission requirements and planning. Chaotic environments arise when this status quo is dramatically changed as a result of combat sensebreaking. A return to order is then achieved by the process of combat sensemaking, and it is after this that a leader is able to process events and decide on a course of action rather than simply reacting to the situation in front of him. The level of individual and team experience by the leader influences how quickly he can move between the stages of this decision cycle. Finally, the cohesion fostered within these teams creates a synergy that elevates the leader's ability to make decisions under chaos and the overall performance of the team in these conditions.

Figure 3. Decision-Making Process



In this study, combat sensebreaking differs from the more traditional views of sensebreaking as described by Pratt.[165] While there are a number of key distinctions as indicated, they are all derived from the key difference in the types of people who find themselves in combat, how they are trained, the situations they are prepared to face, and the severity of what an adversary must do to induce combat sensebreaking. Once combat sensebreaking has occurred and the leader has come to terms with his situation, it is incumbent upon him to regain his bearings and make sense of his new circumstances.

In combat, a leader must collect the right amount of information, which is typically highly limited, to inform a timely decision; this process is called combat sensemaking. Sometimes this means getting "just enough" information in order to move forward. He must gain an understanding of the status of his own force, the status of the enemy, and then begin to focus only on the most important variables. Once this is complete, he is able to make a decision. Participants placed great importance on arriving to this decision quickly and ensuring that the resulting course of action was understood clearly by their subordinates; ambiguous or impotent commands turn chaos into disaster.

The model presented is derived directly from the interviews and encapsulates the decision-making process as it was described by the participants of the study. However, as mentioned earlier, there exists one additional step in the process which is unique to decision-making in the chaos of combat.

A. SENSE CONVERSION

While both the sensebreaking and sensemaking process have been previously explored in non-combat settings, this study uncovered an additional step in the decision-making process that takes place between the two in a chaotic tactical combat environment. Sense conversion occurs at the moment in which one fully grasps the severity of their current circumstance. One must

[165] Pratt, "The Good, the Bad, and the Ambivalent," 464.

recognize that despite prior extensive preparation or experience, he was unprepared for the circumstance being faced; it is only after this realization has occurred that he was able to begin to make sense of his surroundings and move forward in the decision-making process. When an individual already has experience in a specific situation he may have developed an intuition that enables him to transition from combat sensebreaking to combat sensemaking almost seamlessly, making sense conversion seem transparent. This is why the participants of this study nearly all chose situations earlier in their careers to describe chaotic environments. As they gained more experience and intuition, they found fewer situations requiring sense conversion, as fewer combat scenarios felt chaotic.

In Table 7, the data shows that the process leading to *sense conversion* has two unique attributes: internalizing threats and accepting ambiguity. These may occur either independently or in combination, but each one can be sufficient to require *sense conversion*.

Table 7. Sense Conversion

Informant Codes	Second-Order Categories	Overarching Dimensions
• "..bullets flying over my head, kind of hard to explain the experience the first time." • "Holy s***, I'm going to get shot." • "Right then and there I stopped being that guy that could do anything to, oh f*** I could die, this s***ks." • "Honestly, I think more than anything, I think I was shocked. I think I was definitely shocked at what had just happened."	Internalizing Threats	SENSE CONVERSION
• "We actually really weren't sure what we were up against." • "Where the f*** is everybody." • "...what the heck is going on and where are my guys?" • "F***, I just got a guy killed. What the f*** just happened?" • "there's a little corner of your brain that says, 'I screwed up, I screwed up big time.'"	Accepting Ambiguity	

1. Internalizing Threats

As discussed in combat sensebreaking, a threat to one's life can have a profound sensebreaking effect. Experiencing a direct threat to life can leave a leader stunned, impacting his ability to think clearly and make decisions.[166] The

[166] Staw, Sandelands, and Dutton, "Threat-Rigidity Effects in Organizational Behavior," 505–507.

ability to internalize the fear related to such threats so that one can begin the *combat sensemaking* process is a key component in *sense conversion*. This step is unique to this study in that it represents a distinct moment following *sensebreaking* that must occur for *sensemaking* to begin.

Soldiers are often portrayed as fearless in the face of danger, even when their life is on the line. This characteristic is often further exaggerated when describing special operations leaders, such as the ones interviewed in this study. However, they were all able to recall with a high degree of clarity the physical and emotional responses they felt when faced with a tangible threat of death. Each of them described a distinct moment in which they realized the gravity of the situation they were facing, and this realization occurred in those moments after combat sensebreaking, but before the commencement of combat sensemaking.[167]

The process of *sense conversion* with regard to internalizing threats was exemplified when described by one participant. While leading a patrol he found his team trapped in what he referred to as a perfectly laid ambush. As he began to maneuver his team into position to react to the threat, he felt his leg give way. It was not until he stood up and positioned himself in the cover of his Humvee that he felt his own blood running down his leg. He expressed what was running through his mind, “Right then and there I stopped being that guy that could do anything to, oh f*** I could die, this s**ks.”[168] It is the ambush and wound that caused sensebreaking, but it was his ability to accept this threat, understand its ramifications, and overcome it that demonstrates *sense conversion.* It is not a lack of fear of death that allows these leaders to go from sensebreaking to sensemaking, but instead their ability to accept this tangible fear, internalize it, and move on.

[167] Barrett, NPS IRB.

[168] Barrett, NPS IRB.

2. Accepting Ambiguity

Beyond accepting mortal danger, leaders also expressed the process of *sense conversion* when having to accept the ambiguity faced when their status quo was challenged after combat sensebreaking. The participants commonly discussed a panic-like state as they attempted to come to terms with the dynamic shift in their situation. One participant described this thought succinctly, "what the heck is going on and where are my guys?"[169] The weight of not understanding the unfolding situation in a tactical setting must be accepted in a manner similar to accepting a threat to one's life. Feeling lost in such dire circumstances also has the ability to stun, or shock, a leader. In such a state, he must be able to overcome this shock to conduct sensemaking; this is another form of *sense conversion*.

In one scenario an interview participant described the shock he felt during an investigation into the explosion of an IED. This support-type mission had become routine by this point in his deployment. However, shortly after arriving he was taken aback when a second IED exploded near his team. Seconds later this shock was compounded with the eruption of small arms fire. His team had been split, an IED had exploded, and he did not know whether the split part of his team was responding with fire in the direction of the explosion, or if a firefight had begun. As a result, he described a moment of disorientation, not in the physical sense, but in the sense that he was not immediately able to process what had just happened. He said to himself, "Hey man, s**t just blew up," (referring to the explosive nature of the situation), as if attempting to clarify and internalize the events unfolding.[170] It was only after this that he described the ability to refocus and make sense of his surroundings; this illustrates the *sense conversion* process.

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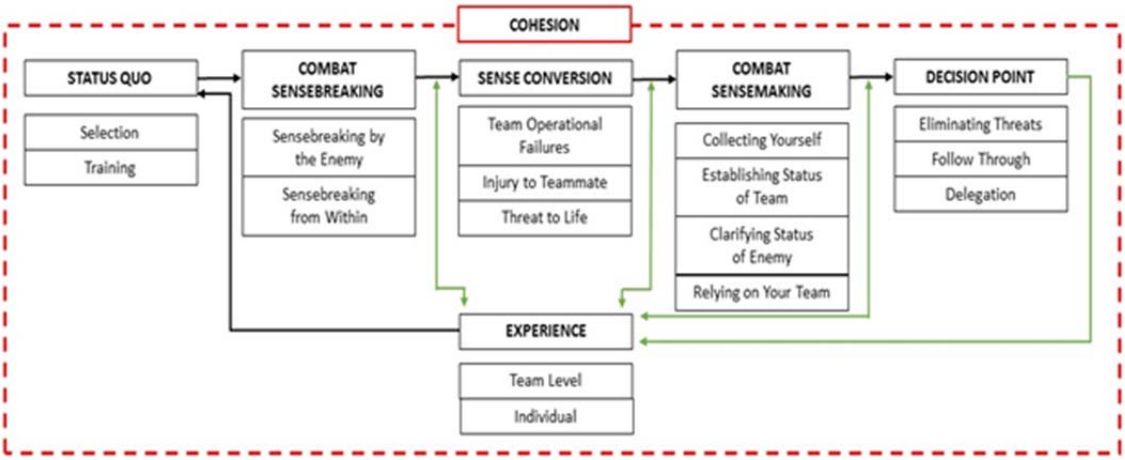
[169] Barrett, NPS IRB.

[170] Barrett, NPS IRB.

Sense conversion allows leaders in chaotic environments to transition from *combat sensebreaking* to *combat sensemaking*. Those who are able to do this more quickly have the ability to reduce the amount of time it takes to begin combat sensemaking and ultimately direct their teams in response to the situation. When time is a critical factor, as is the case in combat, the speed of sense conversion can have major ramifications on the success of the mission, as well as the safety of the team. With the addition of sense conversion the resulting decision-making process model is illustrated in Figure 4.

Figure 4. Revised Decision-Making Process



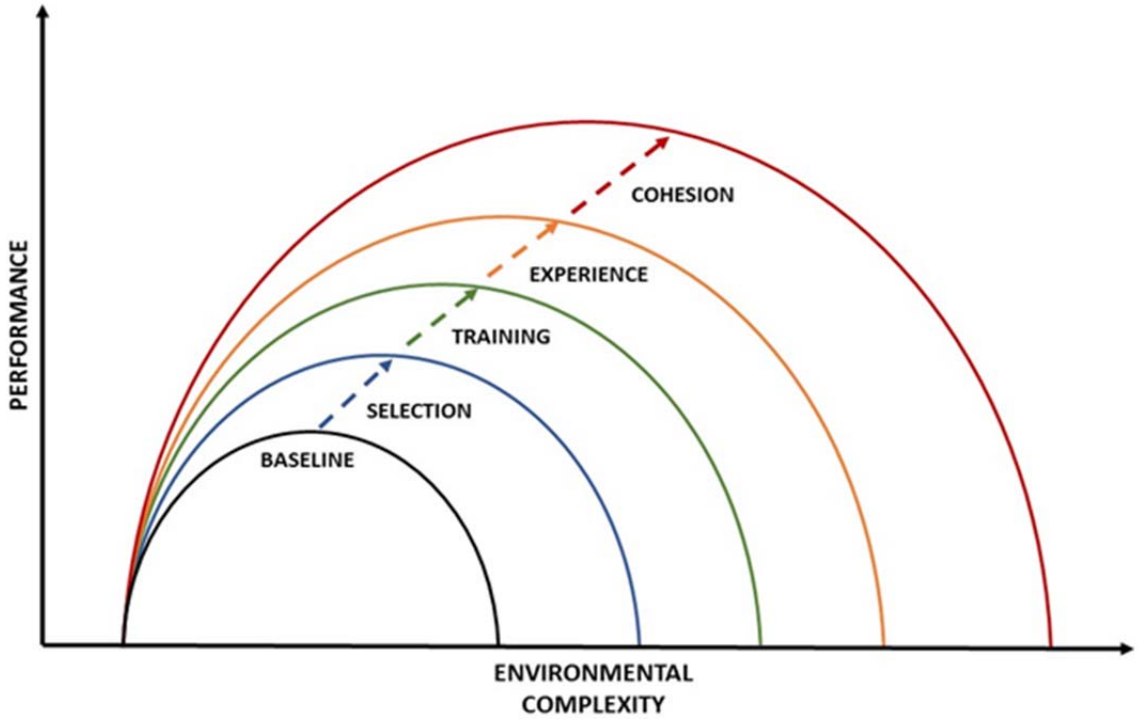
B. EXPANDING THE INVERTED U

To this point, the study has explored the critical components that both prepare and assist a SOF Officer to increase his capability to make decisions under chaotic conditions. A SOF officer undergoes selection and assessment, is trained both individually and as a team, conducts multiple deployments, and develops social bonds with his teammates that allow for a cohesive fighting unit. However, these components cannot just be added up to conclude that this is the whole picture.

As previously discussed, with an increase in environmental complexity comes an accompanying increase in stress, which affects performance. This type of relationship was originally modeled by Yerkes and Dodson as an inverted-U.[171] In the current study, it can be expressed that as the environment becomes more dynamic and the potential for information overload more probable, the ability to perform becomes degraded. If modified to incorporate the critical components identified by our SOF Officers as key to their increased ability to handle information overload, the model might be modified to reflect this layered effect (see Figure 5). Essentially, the Inverted-U curve of a SOF Officer has been expanded by these critical components. This allows for the maintenance of a high standard of performance at much higher levels of environmental complexity found within the chaotic conditions of combat and operations in contested and highly volatile areas. This model gives a sufficient outline for understanding decision-making capabilities of SOF officers, but does not encompass some of the key, more nuanced elements that enabled more rapid decision making.

[171] Robert Yerkes and John Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit-Formation," *Journal of Comparative Neurology and Psychology* 18 (1908): 480–482.

Figure 5. SOF Inverted-U



When examining the data for less overt themes, one of the more interesting findings concerned the individual's selection of the chaotic incident that he chose to discuss with the interviewer. More than one-third of the interview participants chose their first enemy engagement as the incident they recalled being the most chaotic. For those describing first-time contact experiences, they felt overwhelmed, of not being able to get all of the information they needed to get the situation under control. In one participant's words, "despite my best efforts in a really small space in time, I wasn't able to get accurate details right there in front of me." Another individual recounting his first experience said that "it was really our first operation…I was not quite comfortable with it yet."[172]

This further supports the idea that experience reduces environmental complexity, or at least enables the individual to better process chaos after regular exposure. Multiple participants described being calm in subsequent crisis

[172] Barrett, NPS IRB.

situations. The first time one of the participants was shot, he described being terrified and said that the whole experience was very unnerving. However, his second injury in a later deployment was a completely different story. He was calm and was able to maintain control over both his emotions and the dynamic environment in which he was operating. In fact, multiple participants cited prior experience as having actually decreased their subsequent emotional responses to similar chaotic situations.[173] These descriptions indicate the necessity of real-world combat exposure for SOF operators to enable better cognitive responses to the flow of information during incidents of high-stress. Although training can simulate an operational environment, there is no substitute for the real thing. This is also different than just improving resilience; combat exposure is actually enhancing the information processing ability of these operators. Not only will they be psychologically stronger and able to withstand multiple deployments, they will be able to perform better within those complex environments.

One unique part of the decision-making process that emerged was the use of negative visualization that allowed the individual to better prepare himself for crisis situations. Although previous studies found that training and preparation can decrease both physiological and emotional responses in the event the scenario occurs, our research participants went beyond the basics, describing the specific use of visualization and anticipation of negative events that helped them operate better when the operational environment deteriorated.[174] As one participant put it, “You should be anticipating. You should be looking beyond the next move. This is a chess game.” Another respondent described that his team “constantly left the wire expecting to be ambushed.”[175] In fact, many of the problems that these individuals encountered arose from situations that they had not expected. This is not unusual. You cannot possibly be trained in or

[173] Barrett, NPS IRB.

[174] Aymeric Guillot and Christian Collett, *The Neurophysiological Foundations of Mental and Motor Imagery* (New York: Oxford University Press, 2010), 217–219.

[175] Barrett, NPS IRB.

experienced with every situation, but it seems that some of these variables can be mitigated through the use of anticipation and negative visualization. Again, referring to the Inverted-U model, this type of cognitive preparation can help prevent the occurrence of information overload that could degrade performance under these conditions.

Another key finding concerned additional capabilities created by both individual and team experiences in the combat environment. Repeat exposure to ambiguous and complex environments created the development of intuition during times of uncertainty. Many of the research participants described the development of a sixth sense during times of crisis. One research participant described how his multiple deployments and leadership positions had enabled him to get a "sixth sense that something is about to happen… [which makes you] perk up and take note of the situation." In his case, it was an ambush during a deployment in Afghanistan. He described how he was able to better queue into the warning signs that were present, even when unable to pinpoint exactly what's wrong. In fact, he described it as something "you should feel…almost before you recognize or understand it, you almost feel it."[176] He contributed that type of intuitive capability to practice, experience and repetition. And he was not the only one. Multiple other participants credited the combat environment with creating opportunities that led to the development of intuition, and how that capability provided them with a better sense of the environment, a critical factor when operating in uncertainty.[177]

The development of intuition through combat experience was not limited solely to the individual's ability to cue into their environment, but also to intuit the actions of their teammates as well. One participant described how constant contact in an operational environment develops in-depth knowledge of teammates enabling one to "read their cues and know the situation."[178] This was

[176] Barrett, NPS IRB.

[177] Barrett, NPS IRB.

[178] Barrett, NPS IRB.

not the only perk resulting from the development of intra-team intuition; in fact, one of the more interesting developments concerned how team cohesion and intuition affected the level of communication among team members. Although there was a high level of open communication both prior and following the chaotic incident, this study found that these highly cohesive teams required less communication when the incident was chaotic.

One participant was questioned specifically on how he would have reacted with a less cohesive team, and responded that if he had not been working with soldiers he was comfortable with, he "would have had to [have] been more verbal." When surrounded by a bunch of soldiers you do not know, "you have to be explicit…very controlled." Another described how he and his troop chief wanted to be able to anticipate each other's needs if things became chaotic.[179] This would have allowed them to operate during incidents of high stress with less communication necessary. When questioned about this relationship, he mentioned that it develops over time, and although they would have had to have potentially short conversations while that relationship develops, the ability to anticipate the needs and actions of your teammates is key to a smooth running operation.[180]

Finally, another participant described that when the firefight began, there was "very little communication necessary," and described that as a "beautiful thing."[181] He attributed the minimal communication not only to training, but to the caliber of people on his team and their prior experience and training with one another, which resulted in an instinctual understanding of each other's actions and the events unfolding before them. Again, this previous experience among the team, both in training and in combat produced an almost intuitive response to actions between the team members, so that the need for communication decreased while still maintaining high levels of performance. This freed the team

[179] Barrett, NPS IRB.

[180] Barrett, NPS IRB.

[181] Barrett, NPS IRB.

leader from having to exert more control over his team and allowed him the ability to take that needed time for more crucial matters. This type of decentralization of power within organizations has been noted by Mintzberg,[182] and leads to more efficient operations under more complex environmental conditions.[183]

For SOF commanders leading small combat units, being able to effectively operate within a complex and dynamic environment and making rapid decisions affecting themselves and their teammates is critical to the survival of the team and success of the mission. In fact, this study found that one of the most cited aspects of decision-making was the need to be decisive within the shortest time possible. Leaders are expected to immediately act under chaotic conditions to reestablish control.[184] This study aimed to determine what the decision-making process of SOF officers operating in these conditions looked like and what key factors enabled their ability to make rapid decisions. As demonstrated by the Inverted-U model (see Figure 5), the layered effects of selection, training, experience and team cohesion built a framework by which the SOF leader was able to acquire the necessary skills to more effectively handle the information complexity of the chaotic situation and rapidly construct and execute life or death decisions. The ability to reduce information overload was achieved throughout this process.

SOF officers are initially assessed and selected for their ability to face ambiguous and often intense environmental conditions, rapidly cycle through available course of action, and come to the best decision in the shortest time possible. The introduction of field tests and required interaction with fellow candidates demonstrates their ability to perform under simulated conditions and effectively interact, communicate and cooperate with potential future teammates.

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[182] Mintzberg, “Organization Design: Fashion of Fit?,” 5–8.

[183] Kowalski-Trakofler, Vaught, and Scharf, “Judgment and Decisionmaking under Stress,” 6–7.

[184] David Snowden and Mary Boone, “A Leader’s Framework for Decision Making,” *Harvard Business Review* 85, no. 1 (2007): 74–75.

Once selected, the SOF officer undergoes extensive individual and team training. Individual and team training instill the principles of combat action, often through SOPs and knowledge of battlefield tactics. Training scenarios that replicate real-world situations and require consideration of contingencies and alternate options create an almost instinctual response when the individual is faced with similar circumstances in future combat conditions.

However, what previous literature does not identify is the development of intuition and anticipation among team members. The team cohesion that results from both training and combat exposure leads to an increased understanding of the future behavior and actions of their teammates. This cohesion is founded on trust, communication and cooperation, which instills confidence and the ability to delegate tasks to other team members, reducing the complexity of the variables facing the decision-maker and the amount of time needed to complete the task at hand. Additionally, the relationships that develop through training and experience allow the individual a more heightened awareness of the team's readiness and whether the situation is under control or something is amiss.

Another key factor that seems almost counter-intuitive is the impact these relationships have on the level of communication necessary during combat operations. SOF units generally tout a flattened hierarchy, characterized by decentralized decision-making and transparent communication between team members. This held true, but what also emerged was the type of close-knit relationship that sometimes alleviated the need for cross-talk within the team. The high level of repetition, rehearsal and long-term training and experience among the team removed the type of explicit communication and strict control over team members that was evident in less cohesive team environments. Although communication was high prior to and following an operation, the level of communication needed during that operation decreased within cohesive teams.

Additionally, consistent combat exposure further expanded their intuitive sense of the environment, allowing them to better read cues that clued them into changes in the environment. Prior experience decreased the emotional reaction

typically seen in first-time crisis situations and the use of negative visualization enabled them to act more rapidly and anticipate issues before being confronted by them. The research participants identified these elements as having increased their overall ability to make rapid decisions and perform at high levels in these chaotic environments. In essence, it is the combination of these critical factors that has produced these elite groups of soldiers, leading to them being referred to as "the tip of the spear."[185]

C. IMPLICATIONS

Although this model demonstrates the process by which small tactical unit leaders make rapid decisions under chaotic conditions, it is composed only of individuals from the Army and Navy and therefore the applicability to other services is unknown. It is expected that the process of selection, training and experience for SOF teams within the Marine Corps would be the most similar to those in our research study, due to their use as ground forces and exposure to similar combat environments. However, the increase in joint operations over the past decade may have provided the type of experiences that would better replicate those in the current study, but future research is recommended.

Another consideration for future research concerns the sample in the current study. Research participants were drawn from a pool of available students attending graduate school, and therefore, may not constitute the SOF community writ large. However, the backgrounds and experience of the individuals studied represented a wide range of ground-force missions, both conventional and SOF, over the past decade and the decision-making process remained consistent across the range of scenarios discussed. It is expected that the decision-making cycle would be applicable to small combat units within the conventional military, as the results were gleaned from incidents spanning both

[185] United States Special Operations Command, "Tip of the Spear," June, 2006, http://naemt.org/docs/default-source/PHTLS-TCCC/0715_USSOCOM_Tip_of_the_Spear_TCCC_June_2006.pdf.

conventional and SOF experiences, with minimal variation noted in the decision-making cycle between the two.

It should also be noted that the sample was limited to special operations officers, many of whom espoused the importance of leadership in their non-commissioned officers (NCOs). Interviews with NCOs in leadership positions could be conducted to further verify the soundness of the decision-making model presented in this study. Conversely, such interviews may illuminate difference in the decision-making process between officers and NCOs.

Additionally, all participants provided narratives on experiences in contemporary warfare. The total temporal bounds of the sample narratives was little more than a decade. More longitudinally focused research should be conducted to determine how this process has either changed or remained consistent over time. Despite this, the consistency of this model across disparate battlefields over a decade, and among both Navy and Army special operations leaders does suggest validity in the findings presented with regard to the timeframe investigated.

The applicability of this type of model to civilian organizations is unknown, although many of the elements identified in the decision-making model are present in sectors, such as law enforcement, first responders and some environments encountered by emergency medical personnel. Generally, these types of fields do have a more rigid hierarchy and have more support than a small unit in a combat environment, but there are teams within these fields that do place emphasis on the type of training and experience that develop high levels of cohesion and would operate under crisis situations in a manner similar to small combat units.

The expanding terrorist threat to the United States will necessitate an increased need for small-scale, flexible forces capable of conducting operations in far-flung locations and under diverse environmental conditions.[186] This rests

[186] Robinson, “The Future of U.S. Special Operations Forces,” 3–4.

squarely on SOF, as they are currently the primary action force for these types of operations. The size, structure and environment of SOF has rapidly changed since the attacks of September 11, 2001. They have gone from a size of approximately 33,000 soldiers to upward of 74,000.[187] The budget has nearly tripled in that time. However, the withdrawal from Afghanistan, a decreased fiscal budget, and mandated military personnel cuts are just a few of the changes being brought about by policy and decision-makers that continue to influence the future of SOF.[188]

In response to the increasing need to expand its forces, the SOF community created the 18X Program, which changed the prerequisites necessary to attend SFAS.[189] Prior to 2002, all soldiers interested in attending SFAS had to be current enlisted soldiers or officers with a minimum rank requirement.[190] Once the 18X Program was created, individuals without any previous military experience could apply directly to attend SFAS following Basic and Advanced Individual Training, two prerequisites upon initial entry into the military. Many current SOF members have been highly skeptical of this program, but it is uncertain how the soldiers being recruited by this program will influence the Inverted-U Model presented in this study.[191]

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[187] Turse, "Why Are U.S. Special Operations Forces Deployed in Over 100 Countries?"

[188] Lohaus, "A Precarious Balance," http://www.aei.org/publication/a-precarious-balance-preserving-the-right-mix-of-conventional-and-special-operations-forces/.

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