



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**FROM BATTLE TO HOMELAND: DOES BATTLEFIELD
LEADERSHIP WORK IN HOMELAND SECURITY**

by

Geir J. Gabrielson

June 2023

Co-Advisors:

Nicholas Dew
Nadav Morag (contractor)

Approved for public release. Distribution is unlimited.

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE			<i>Form Approved OMB No. 0704-0188</i>	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC, 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE June 2023	3. REPORT TYPE AND DATES COVERED Master's thesis	
4. TITLE AND SUBTITLE FROM BATTLE TO HOMELAND: DOES BATTLEFIELD LEADERSHIP WORK IN HOMELAND SECURITY			5. FUNDING NUMBERS	
6. AUTHOR(S) Geir J. Gabrielson				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release. Distribution is unlimited.			12b. DISTRIBUTION CODE A	
13. ABSTRACT (maximum 200 words) As threats to the homeland become more complex, the homeland security enterprise (HSE) has incorporated the military leadership approach of mission command to handle these dynamic situations. This thesis used the Super Storm Sandy, Camp Fire, and 1 October Las Vegas Shooting as case studies to examine to what degree and how mission command has affected the response of the HSE. It then examined what elements of mission command should be more integrated into the National Incident Management System and Incident Command System and how to achieve implementation. Using mission command might also improve interoperability between civil and military authorities, as increased threats to the homeland require more coordination. The thesis demonstrates a positive correlation between the incorporation of mission command and improved response performance in the HSE. Thus, the thesis concluded that mission command had improved the HSE. The thesis recommends that mission command should be integrated into the Federal Emergency Management Agency incident response system in a formal way to improve interoperability in the HSE and to continue improving performance in the HSE. The recommendation is for a multi-year integration process based on how the military has implemented doctrinal change. The thesis also developed a new means of visualizing mission command in the Boyd OODA loop.				
14. SUBJECT TERMS mission command, leadership, Incident Command System, OODA Loop, Homeland Security Enterprise			15. NUMBER OF PAGES 111	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UU	

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18

THIS PAGE INTENTIONALLY LEFT BLANK

Approved for public release. Distribution is unlimited.

**FROM BATTLE TO HOMELAND: DOES BATTLEFIELD LEADERSHIP WORK
IN HOMELAND SECURITY**

Geir J. Gabrielson
Major, United States Army National Guard
BS, Rensselaer Polytechnic Institute, 2003

Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL
June 2023**

Approved by: Nicholas Dew
Co-Advisor

Nadav Morag
Co-Advisor

Erik J. Dahl
Associate Professor, Department of National Security Affairs

THIS PAGE INTENTIONALLY LEFT BLANK

ABSTRACT

As threats to the homeland become more complex, the homeland security enterprise (HSE) has incorporated the military leadership approach of mission command to handle these dynamic situations. This thesis used the Super Storm Sandy, Camp Fire, and 1 October Las Vegas Shooting as case studies to examine to what degree and how mission command has affected the response of the HSE. It then examined what elements of mission command should be more integrated into the National Incident Management System and Incident Command System and how to achieve implementation. Using mission command might also improve interoperability between civil and military authorities, as increased threats to the homeland require more coordination. The thesis demonstrates a positive correlation between the incorporation of mission command and improved response performance in the HSE. Thus, the thesis concluded that mission command had improved the HSE. The thesis recommends that mission command should be integrated into the Federal Emergency Management Agency incident response system in a formal way to improve interoperability in the HSE and to continue improving performance in the HSE. The recommendation is for a multi-year integration process based on how the military has implemented doctrinal change. The thesis also developed a new means of visualizing mission command in the Boyd OODA loop.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
A.	PROBLEM STATEMENT	1
B.	RESEARCH QUESTIONS.....	3
C.	LITERATURE REVIEW	3
1.	Military Literature on Mission Command	4
2.	Mission Command in Homeland Security Literature	7
D.	RESEARCH DESIGN	9
II.	REVIEW OF MISSION COMMAND.....	11
A.	SUMMARY OF MISSION COMMAND	11
1.	Brief History of Mission Command	11
2.	Definition of Mission Command.....	12
B.	WILDFIRE SERVICE ADOPTION.....	19
C.	ISSUES WITH IMPLEMENTATION OF MISSION COMMAND	22
III.	DEPARTMENT OF DEFENSE RESPONSE DURING SUPER STORM SANDY	25
A.	NEW YORK NATIONAL GUARD RESPONSE.....	26
1.	Competence	26
2.	Mutual Trust	28
3.	Shared Understanding.....	28
4.	Commander's Intent.....	29
5.	Mission Orders	30
6.	Disciplined Initiative.....	30
7.	Risk Acceptance	31
8.	Summary of NYNG Response.....	32
B.	FEDERAL FORCES STRUGGLE DURING SANDY	33
1.	Competence	34
2.	Shared Understanding.....	34
3.	Commander's Intent.....	35
4.	Mission Orders	35
5.	Mutual Trust	36
6.	Disciplined Initiative.....	36
7.	Risk Acceptance	36
8.	Summary of Title 10 Response	37
9.	Summary of Federal Force Response	37

C.	CONCLUSION	38
IV.	WILDLAND FIRE: CAMP FIRE.....	41
A.	COMPETENCE.....	42
B.	SHARED UNDERSTANDING.....	43
C.	COMMANDER’S INTENT.....	44
D.	MISSION ORDERS.....	45
E.	MUTUAL TRUST	45
F.	DISCIPLINED INITIATIVE	46
G.	RISK ACCEPTANCE	47
H.	CONCLUSION	47
V.	LAW ENFORCEMENT CENTRIC RESPONSE	49
A.	COMPETENCE.....	50
B.	SHARED UNDERSTANDING.....	51
C.	COMMANDER’S INTENT	52
D.	MISSION ORDERS.....	53
E.	MUTUAL TRUST	54
F.	DISCIPLINED INITIATIVE	55
G.	RISK ACCEPTANCE	57
H.	CONCLUSION	57
VI.	ASSESSMENT OF MISSION COMMAND IN HOMELAND SECURITY ENTERPRISE	61
A.	TRENDS	61
1.	Competence	62
2.	Shared Understanding.....	63
3.	Commander’s Intent.....	64
4.	Mission Order.....	65
5.	Mutual Trust	65
6.	Disciplined Initiative.....	66
7.	Risk Acceptance	67
B.	OUTCOMES	67
1.	Mission Command in the Decision-making Cycle	69
2.	Assessment	71
VII.	CONCLUSION	73
A.	KEY FINDINGS	73
B.	RECOMMENDATIONS.....	75
C.	FUTURE RESEARCH.....	76

LIST OF REFERENCES	79
INITIAL DISTRIBUTION LIST	85

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF FIGURES

Figure 1.	The Operations Process.....	18
Figure 2.	Commander’s Visualization.....	19
Figure 3.	Mission Command Relationships and the OODA loop.....	70

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF TABLES

Table 1.	New York National Guard Mission Command Observations	32
Table 2.	Federal Forces Mission Command Observations	38
Table 3.	Camp Fire Observations	48
Table 4.	1 October Observations.....	58
Table 5.	Summary of Analysis.....	61

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF ACRONYMS AND ABBREVIATIONS

1 October	1 October 2017 shooting in Las Vegas
AAR	after action report/review
ADP	Army Doctrine Publication
AI	Artificial Intelligence
BLM	Black Lives Matter
CCAC	Convention Center Area Command
CAL FIRE	California Department of Forestry and Fire Protection
CCFD	Clark County Fire Department
CHDS	Center for Homeland Defense and Security
DHS	Department of Homeland Security
DOC	department operation center
DOD	Department of Defense
DSCA	defense support to civil authorities
EM	emergency management
EMAC	Emergency Management Assistance Compact
EOC	emergency operations center
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
HSE	homeland security enterprise
ICP	incident command post
ICS	Incident Command System
IDF	Israeli Defense Force
IRA	immediate response authority
JCE	joint coordinating element
LNO	liaison officer
LVMPD	Las Vegas Metropolitan Police Department
MA	mission assignment
MACC	multi-agency coordination center
MACTAC	Multi-Assault Counter-Terrorism Action Capabilities
MCDP	Marine Corps Doctrine Publication

MCI	mass casualty incident
NATO	North Atlantic Treaty Organization
NIMS	National Incident Management System
NWCG	National Wildfire Coordination Group
NYNG	New York National Guard
NYPD	New York Police Department
OODA	observe, orient, decide, act
RTF	rescue task force
SMART	specific, measurable, achievable, relevant, time-bound
SOP	standard operating procedures
SWAT	special weapons and tactics
USFS	United States Forest Service
USMC	United States Marine Corps
VA	Veterans Administration

EXECUTIVE SUMMARY

Mission command is a military leadership approach to enable decisive action in battle or other crises. U.S. Army doctrine states that mission command, “empowers subordinate decision-making and decentralized execution appropriate to the situation.”¹ Mission command comprises seven principles: *competence, mutual trust, shared understanding, commander’s intent, mission orders, disciplined initiative, and risk acceptance*.² In the past few decades, the concept of mission command has been borrowed and integrated into many aspects of the homeland security enterprise (HSE). Given recent events affecting national security and new threats to the homeland, the ability for civil-military interoperability has received increased attention. The use of mission command is one way to increase this interoperability. This thesis examines the modern HSE environment and assesses whether the use of mission command by agencies in the HSE has improved performance.

This thesis uses case studies to determine the effectiveness of mission command during major HSE responses. The first case study examines the military’s use of mission command during the Super Storm Sandy response. The next case study uses the 2018 Camp Fire in Paradise, California, to examine mission command during firefighting. The final case study examines law enforcement’s use of mission command during the 1 October shooting in Las Vegas. The thesis then evaluates the case studies in terms of the principles of mission command to answer these questions.

A. RESEARCH QUESTIONS

To what degree and how has mission command’s use in the HSE affected performance during an agency’s response to incidents?

Are there elements of mission command that could be incorporated more broadly in HSE, including NIMS?

¹ Department of the Army, *Mission Command: Command and Control of Army Forces*, ADP 6–0 (Washington, DC: Department of the Army, 2019), 1–3.

² Department of the Army, 1–7.

B. CONCLUSIONS

1. Competence

Across the incidents, the organizations examined showed high tactical proficiency. The organizations could reliably execute unit-specific or generalized responses. The main issues with competence were derived from limited training and experience with large-scale incidents and associated processes. The agencies showed less proficiency at the operations level during large-scale incidents. Limited time and resources to train for infrequent incidents are the main contributing factors to building competence.

2. Shared Understanding

Most of the agencies in this analysis had prior relationships with the other responding agencies allowing them to communicate effectively and build shared understanding. The agencies built these relationships through training, exercises, and prior incidents. The case studies also affirmed the usefulness of liaison officers (LNO) in creating shared understanding. Currently, communications, tracking, and artificial intelligence (AI) have not replaced LNOs to facilitate understanding among response elements. A major improvement area is developing an accurate, common operating picture. In addition, many incidents develop faster than humans can understand the situation. Thus, shared understanding is the area ripest for a technological solution supported by AI.

3. Commander's Intent

All the incidents studied displayed the value of having a good commander's intent and its usefulness in driving response actions. The HSE members' use of the commander's intent is a best practice that the HSE should expand beyond first responders. However, the cases showed that commander's intent alone is insufficient for effective mission command. Commander's intent still needs the support of the other mission command principles.

4. Mission Order

Using mission orders allowed the agencies to delegate tasks quickly and to adjust objectives as the situation dictated rapidly. Communicating quickly during a rapidly evolving incident is critical for success. Mission orders are a critical element that the HSE

needs to effectively direct operations in a chaotic environment and a skill necessary for all members of the HSE.

5. Mutual Trust

Most of the agencies observed regularly interacted with each other and built trusting relationships. Inter-agency training and exercises were vital to developing mutual trust between the agencies. Training and exercise are particularly important for agencies that do not frequently interact outside large-scale events. HSE leaders must ensure trust enhances shared understanding and creates a common operating picture. Too much trust can result in information flowing only in one direction leading to an incorrect shared understanding. Mutual trust is also necessary to conduct meaningful after-action reports that allow for improvement.

6. Disciplined Initiative

In the cases examined, the responders effectively used the commander's intent to guide disciplined initiative towards a common objective. Disciplined initiative combined with the other mission command principles drives actions toward achieving the desired outcome. One perennial negative is that initiative and desire to be part of the action and support comrades can often lead responders to self-dispatch. A better understanding of mission command and its principles could help agencies better inform their members about how to respond in a disciplined way and give a reason not to self-dispatch, thus reducing the desire to go rogue.

7. Risk Acceptance

The agencies studied all adopted a forward-leaning strategy that required the assumption of operational and tactical level risks. The cases show that a forward-leaning mindset is critical to successfully getting ahead of an incident. Risk acceptance is balancing conflicting priorities and accepting risk in one area to advance the overall objective. It requires constant assessment and reassessment by the leadership.

C. OUTCOMES

HSE has improved as mission command ideas have become more prevalent in the HSE. The correlation suggests a link between improved response and mission command application.

1. Mission Command in the Decision-Making Cycle

A common way to frame the decision-making cycle is to use John Boyd's Cycle of *Observe, Orient, Decide, Act* (OODA) Loop.³ Figure 1, "Mission Command Relationships and the OODA Loop," was created to further understand mission command based on the observations noted in the case studies. Mission command principles shape the context in which a subordinate makes decisions. Framing the principles in mission command in the OODA Loop helps illuminate where and how the principles support effective decision-making. Shared understanding is a crucial component of *Observe* and gives all the operators a common starting point.

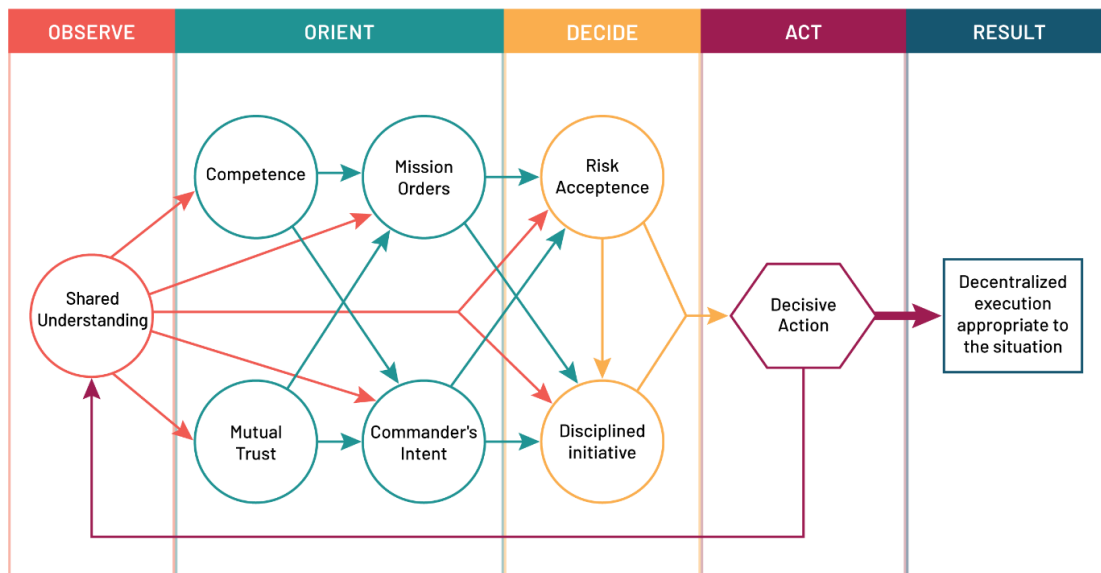


Figure 1. Mission Command Relationships and the OODA Loop

³ Frans Osinga, *Science, Strategy and War: The Strategic Theory of John Boyd* (Delft, Netherlands: Eburon Academic Publishers, 2005), 2.

The part of mission command that the commander has the most influence on is the *orient* phase. With the principles of competence, mutual trust, mission orders, and commander's intent, the commander directs the subordinates' initiatives and actions toward the desired end state. This allows the commander to drive decisions even without direct consultation.

Finally, risk acceptance and disciplined initiative principles allow subordinates to take decisive action and act effectively. The OODA Loop is iterative and cycled through many times until mission completion.⁴ Mission command allows the commander to effectively guide subordinates through the OODA Loop towards organizational objectives.

2. Assessment

Due to the numerous changes to the HSE over the past twenty years, it is impossible to pin improvements on one factor. However, the analysis of the case studies suggests a positive correlation between mission command principles and effective responses. They suggest that the effective application of mission command likely contributed to the successful response in these cases and the improvement in the HSE over the last few decades.

3. Key Findings

This thesis has five significant findings from its analysis of mission command in the HSE:

- Mission command is present in many areas of the HSE to varying degrees in different agencies
- Mission command is not formally the HSE doctrine
- Mission command in HSE is heavily influenced by military doctrine

⁴ Osinga, 3.

- Application of mission command principles can be linked to the success of the response to Super Storm Sandy, the Camp Fire, and the 1 October shooting
- Mission command is positively correlated with improvement in the HSE

4. Recommendations

The HSE should incorporate mission command formally into the HSE to better propagate the framework and allow for improved performance for three main reasons. First, the Incident Command System (ICS) system was insufficient to respond effectively to complex incidents. Second, there is a positive correlation between mission command and successful responses. Third, mission command is already present in many organizations that are part of the HSE. This thesis recommends that the Department of Homeland Security (DHS) and Federal Emergency Management Agency (FEMA) adjust National Incident Management System (NIMS) and the ICS to incorporate mission command as a doctrinal element with only necessary adjustments fitting the HSE. This will further develop homeland security as a professional field of knowledge and improve the response of agencies and organizations in the HSE.

ACKNOWLEDGMENTS

I would like to my fellow cohort members of 2005/2006 CHDS and the instructors for making this an engaging experience despite the COVID-19 restriction. I would also like to thank Lorie Sicafuse for putting up with me during the program and proofreading my papers.

THIS PAGE INTENTIONALLY LEFT BLANK

I. INTRODUCTION

A. PROBLEM STATEMENT

On July 6, 1994, on a mountainside outside Glenwood Springs, Colorado, 14 firefighters perished.¹ Following a thorough assessment, the wildland firefighting community concluded that the National Incident Management System (NIMS) and Incident Command System (ICS) were inadequate to provide an effective response.² To improve future response, the Leadership Task Group headed by the National Wildfire Coordinating Group (NWCG) in 2000 incorporated elements of the military concept of *mission command* into its leadership training for wildland firefighters.³ The NWCG has incorporated mission command concepts into its training for over 20 years, giving sufficient time to analyze any effects.

Another route for mission command into the Homeland Security Enterprise (HSE) is through the many veterans employed in the enterprise. Around 19% of law enforcement and 20% of firefighters are veterans.⁴ This is even higher at the Federal level, with the Department of Homeland Security (DHS) reporting 27.9% of its employees as veterans.⁵ Thus military concepts like mission command have spread to many HSE elements, with many advocating for broader implementation in firefighting services and law enforcement.

Mission command is a leadership approach developed by the Prussian army to enable aggressive action on the battlefield by subordinate leaders. The current U.S. Army doctrine states, “Mission command is the Army’s approach to command and control that

¹ Philip A. Cocker, “Mission Command: Retooling the Leadership Paradigm for Homeland Security Crisis Response?” (master’s thesis, Naval Postgraduate School, 2015), 90.

² Cocker, 94.

³ Cocker, 93–95.

⁴ Rosa Brooks, “Stop Training Police Like They’re Joining the Military,” *The Atlantic*, last modified June 10, 2020, <https://www.theatlantic.com/ideas/archive/2020/06/police-academies-paramilitary/612859/>; Walker Poston et al., “Health Disparities Among Racial and Ethnic Minority Firefighters,” *Journal of Health Disparities Research and Practice* 7, no. 5 (2014): 28.

⁵ Jonathan E Vespa, “Those Who Served: America’s Veterans from World War II to the War on Terror” (Washington, DC: U.S. Census Bureau, June 2024AD).

empowers subordinate decision making and decentralized execution appropriate to the situation.”⁶ The Army further explains that mission command comprises seven principles: *competence, mutual trust, shared understanding, commander’s intent, mission orders, disciplined initiative, and risk acceptance*.⁷ Although mission command has become generally accepted as the leadership philosophy best suited for combat operations, it requires a high degree of training and experience and can be challenging to implement.⁸ Militaries generally have more time and resources to devote to such training than most civilian agencies in the HSE. For example, an active-duty U.S. Army officer requires a minimum of 19 months of formal education over a 20-year career.⁹ In comparison, the NWCG L-series only has a total of 184 hours.¹⁰

Furthermore, effective execution of mission command requires leadership to accept a high degree of subordinate independence and operational risk during execution. This autonomy prevails because war is considered an “inherently chaotic and uncertain” environment.¹¹ Likewise, it is a domain in which casualties and collateral damage will happen. The military regularly receives criticism for various issues, and leadership’s response is often to implement more controls that inhibit autonomy which has been identified as a hindrance to effective mission command.¹² As evidenced by the number of police chiefs that have had to resign in the wake of Black Lives Matter (BLM) protests, the public is even less tolerant of mistakes in the HSE than in the military.¹³ This suggests the

⁶ Department of the Army, *Mission Command*, 1–3.

⁷ Department of the Army, 1–7.

⁸ Uzi Ben-Shalom and Eitan Shamir, “Mission Command between Theory and Practice: The Case of the IDF,” *Defense & Security Analysis* 27, no. 2 (June 2011): 101, <https://doi.org/10.1080/14751798.2011.578715>.

⁹ Department of the Army, *Commissioned Officer Professional Development and Career Management*, DAPAM 600–3 (Washington, DC: Department of the Army, 2014).

¹⁰ National Wildfire Coordinating Group, “NWCG Training Catalog.” Accessed November 22, 2020, <https://www.nwcg.gov/publications/training-courses/leadership>.

¹¹ Department of the Army, *Mission Command*, 1–3.

¹² Ben-Shalom and Shamir, “Mission Command between Theory and Practice,” 103–4.

¹³ Mili Godio, “At Least 20 Police Chiefs Have Resigned since Protests Began in May,” *Newsweek*, last modified September 9, 2020, <https://www.newsweek.com/least-20-police-chiefs-have-resigned-since-protests-began-may-1530723>.

autonomy that mission command requires might make it an unsuitable leadership philosophy for the HSE or limit its use only in certain circumstances.

This thesis aims to look at the modern HSE environment and assess whether the use of mission command by agencies in the HSE has improved performance. Based on that assessment, this thesis determines whether mission command use should be expanded in the HSE and whether such an expansion outside fire and police could include all-hazards response.

B. RESEARCH QUESTIONS

1. To what degree and how has mission command use in the HSE affected performance during an agency's response to incidents?
2. Are there elements of mission command that could be incorporated more broadly in HSE, including NIMS?

C. LITERATURE REVIEW

This literature review examines the current state of mission command concepts and the major organizations that have influenced their understanding and application. Although the concept of mission command has its genesis in the aftermath of the Napoleonic wars, significant literature and concept development has occurred within the last 30 years. The first notable inclusions of mission command into the HSE started in the late 1990s; therefore, this literature review focuses on developments of the concept within this period. Since mission command originated in the military and most of the literature on the concept comes from that domain, the literature on mission command's application in the HSE is limited and based on the military literature. The military literature in this field exists in the broad categories of theory, formal doctrine, and historical case studies. The homeland security literature can be divided into formal training literature and a discussion on adapting mission command to the HSE.

1. Military Literature on Mission Command

Due to similar missions and tasks, military organizations have similar cultural traits. However, each organization has unique aspects, resulting in each organization developing a distinct interpretation of mission command. Despite these differences, mission command has become the generally accepted command approach among Western militaries.¹⁴ Dominating the literature on mission command are the U.S. Army, the U.S. Marine Corps, the British Army, and the Israel Defense Force (IDF). The newer academic literature defines mission command using references from one of these organizations.

Army Doctrine Publication (ADP) 6–0, *Mission Command: Command and Control of Army Forces*, published in July 2019, outlines the U.S. Army’s doctrine.¹⁵ Due to this version’s recency, much of the literature references earlier versions of the doctrine, particularly the 2012 version. The 2019 ADP 6–0 changed the Army’s mission command doctrine in response to criticism from 52 U.S. Army War College research papers.¹⁶ The new doctrine expands the six principles of mission command to seven principles and modifies the other six principles’ wording and definition.¹⁷ The Army sees this as “an evolution of mission command doctrine, reflecting lessons learned since 2012,” not a break from the previous doctrine.¹⁸

The U.S. Army’s doctrine is the most straightforward mission command doctrine, breaking mission command into clear bulletized principles. The U.S. Army is the largest Western military promoting mission command and enormously influences the Department of Defense (DOD), allies, and the rest of the U.S. government. Articles in military journals such as *Military Review* and *Parameters* generally reference versions of ADP 6–0. This

¹⁴ Ben-Shalom and Shamir, “Mission Command between Theory and Practice.”

¹⁵ Department of the Army, *Mission Command*.

¹⁶ Doug Orsi, “Will New Doctrine Fix Mission Command?,” War Room (blog), U.S. Army War College, last modified October 9, 2019, <https://warroom.armywarcollege.edu/articles/new-doctrine-mission-command/>.

¹⁷ Department of the Army, *Mission Command*.

¹⁸ Randi Stenson, and Ted Crisco, “Combined Arms Center Launches New Mission Command Doctrine,” U.S. Army, last modified August 23, 2019, https://www.army.mil/article/225414/combined_arms_center_launches_new_mission_command_doctrine.

Army doctrine is one of the primary references for mission command in the HSE and became the basis of analysis for Phillip Cocker's 2015 Center for Homeland Defense and Security (CHDS) thesis on mission command's applicability to the HSE.¹⁹

U.S. Marine Corps doctrine defines mission command in Marine Corps Doctrine Publication (MCDP) 1-0, *Warfighting*, published in 1997, and MCDP 6-0, *Command and Control*, published in 1996. These publications are older and less clearly laid out than the Army's ADP 6-0. However, they contain the same general themes of commander's intent, mutual trust, mission-type orders, and subordinate initiative seen in the Army's doctrine. In addition, the Marine Corps doctrine has been cited in several papers promoting mission commands in the homeland security environment, such as Theodore Moody's and Jeremiah Hart's CHDS theses.²⁰

The British Army and its close commonwealth allies, Canada, Australia, and New Zealand, have their own mission command doctrine. The British Army defines mission command in its ADP, *Land Operations*, along similar lines as the U.S. Army.²¹ The British Army influences the U.S. military through its influence in the North Atlantic Treaty Organization (NATO) and participation in U.S. military journals such as Russell W. Glenn's article on mission command in the Spring 2017 issue of *Parameters*, a quarterly publication of the U.S. Army War College.²² However, British doctrine is not cited much by U.S. HSE promoters of mission command and thus only indirectly influences HSE mission command implementation.

Extensive literature also addresses the IDF and its use of mission command. Cocker looks at the IDF's mission command implementation in his thesis, concluding that mission

¹⁹ Cocker, "Retooling the Leadership Paradigm."

²⁰ Theodore J. Moody, "Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of the Urban Jihad" (master's thesis, Naval Postgraduate School, 2010); Jeremiah J. Hart, "Strategic Mutual Aid Response to Terrorism: A New Approach" (master's thesis, Monterey, CA, Naval Postgraduate School, 2020).

²¹ British Ministry of Defence Crown, *Land Operations*, Army Doctrine Publication AC 71940 (Bristol, UK: British Ministry of Defence Crown, 2017).

²² Russell Glenn, "Mission Command in the Australian Army: A Contrast in Detail," *Parameters* 47, no. 1 (Spring 2017): 21–30.

command increased the IDF's effectiveness.²³ Uzi Ben-Shalom and Eitan Shamir published a high-quality journal article in 2011 about the IDF's struggles to implement mission command. Eitan Shamir's book *Transforming Command* comprehensively examines implementing mission command.²⁴ Shamir is considered an expert on the subject.²⁵

Two works of note outside formal military doctrine and journals are the *Mission Command* anthologies edited by Donald Vandergriff and Stephen Webber.²⁶ Both books are collections of essays covering various mission command subjects, ranging from qualitative case studies to opinion pieces recommending the more effective application of mission command. The books focus primarily on mission command in the military, but a few articles, such as Fred Leland's "Improving Policing with Mission Command and a Community Oriented Approach," address the HSE.²⁷

In addition to formal doctrine, the U.S. Army has commissioned several works to increase mission command understanding. One of the more extensive works is *16 Cases of Mission Command*, edited by Donald Wright. The book consists of qualitative case studies demonstrating how implementing or failing to implement mission command principles affected the outcome of battles ranging from the American Civil War to Iraq and Afghanistan.²⁸ The book is well-researched and demonstrates why mission command principles matter in the military setting. Comparable work on mission command in HSE does not exist.

²³ Cocker, "Retooling the Leadership Paradigm," 146.

²⁴ Eitan Shamir, *Transforming Command: The Pursuit of Mission Command in the U.S., British, and Israeli Armies* (Palo Alto, CA: Stanford Security Studies, 2011).

²⁵ Nick Duke, "Expert: Mission Command Is a Culture," U.S. Army, last modified November 6, 2013, https://www.army.mil/article/114570/expert_mission_command_is_a_culture.

²⁶ Donald E. Vandergriff and Stephen Webber, eds., *Mission Command: The Who, What, Where, When and Why: An Anthology* (Self-published, 2017); Donald E. Vandergriff and Stephen Webber, eds., *Mission Command II: The Who, What, Where, When and Why: An Anthology* (Self-published, 2018).

²⁷ Vandergriff and Webber, *Mission Command*, 207.

²⁸ Donald P. Wright, *16 Cases of Mission Command* (Fort Leavenworth, KS: Combat Studies Institute Press, 2013).

Because of the lack of mission command doctrine and case studies in the HSE, the HSE application has depended on using the military literature to understand the doctrine and justify its application. Thus, mission command's success in military application forms the benchmark to compare the implementation and effectiveness in the HSE. The advantage of using the military literature as the basis of HSE doctrine on mission command is that the military literature is robust, has depth and history, and is strongly supported by academic research. However, although war and emergencies are similar environments, key differences limit the use and applicability to the HSE.

2. Mission Command in Homeland Security Literature

The most notable example of mission command implementation in the HSE is in wildland firefighting. Formal mission command literature in the wildland fire service begins with the NWCG's *Report of the Leadership Task Group to the Training Working Team*.²⁹ This document assesses different leadership and management styles and concludes that mission command applies to wildland firefighting. This resulted in the NWCG's developing *Leading in the Wildland Fire Service*, which adapts mission command to wildland firefighting. This publication uses the same basic framework as the military's doctrine; however, it does not go into as much detail or lay it out as simply.³⁰ In his CHDS thesis, Philip Cocker thoroughly discusses why the NWCG adapted mission command and how the U.S. Forest Service implemented it. However, Cocker's thesis notes the lack of follow-up literature about how successful mission command has been in response to recent fires. The wildland firefighting services' adoption, implementation, and use of mission command suggest that mission command is appropriate for homeland security and can be incorporated. However, no published quantitative or qualitative studies examine whether mission command has improved the fire service at this time. This gap prevents using the NWCG experience to make definitive conclusions about mission command in homeland security.

²⁹ Cocker, "Retooling the Leadership Paradigm," 93.

³⁰ National Wildfire Coordinating Group, *Leading in the Wildland Fire Service*, PMS 494-2 (Boise, ID: United States Department of Agriculture, 2007), 15, 34.

There is also a lack of quality literature on implementing mission command and its effectiveness in other fire services. A 2015 article in *Fire Engineer* magazine discusses using Army mission command doctrine in the fire service.³¹ Additionally, Chief Brian Fennessy applied a mission command–derived leadership method called mission-driven culture at his current agency, the Orange County Fire Authority, and his former agency, San Diego Fire-Rescue.³² He also spoke about applying mission-driven culture during a FEMA PREPTalks event in 2019.³³ Unfortunately, these are anecdotal rather than in-depth studies on mission command in the fire service and cannot be used to draw any meaningful conclusions about the true effectiveness of mission command in the fire service.

Similar to fire services, the empirical literature on the effectiveness of mission command in law enforcement is lacking. However, a significant amount of literature promotes its application to law enforcement. For example, a 2016 FBI Law Enforcement Bulletin article discusses applying commander’s intent to police operations.³⁴ Glenn French has written a Police1 article describing how he applies mission command to his special weapons and tactics (SWAT) team.³⁵ In a 2010 CHDS thesis, Theodore Moody advocates incorporating mission command elements in policing to deal with Mumbai-style terrorist attacks.³⁶ Likewise, in his CHDS thesis, Jeremiah Hart examines the Boston Marathon bombing, the Paris terrorist attacks, and the San Bernardino terrorist attacks. He suggests how law enforcement could use mission command principles to respond more

³¹ Matthew Oldenburg, “Mission Command, Fire Command, and Synchronization,” *Fire Engineering* 168, no. 8 (August 2015): 53.

³² “PrepTalk Released: Brian Fennessy’s ‘Building a Mission-Driven Culture,’” Federal Emergency Management Agency, last modified July 30, 2019, <https://www.fema.gov/news-release/20200220/preptalk-released-brian-fennessys-building-mission-driven-culture>.

³³ Federal Emergency Management Agency.

³⁴ W. Michael Phibbs, “Commander’s Intent: A Framework for Success,” FBI, Law Enforcement Bulletin, last modified October 6, 2016, <https://leb.fbi.gov/articles/featured-articles/commanders-intent-a-framework-for-success>.

³⁵ Glenn French, “Command and Control in Tactical Environments,” Police1, last modified February 28, 2012, <https://www.police1.com/active-shooter/articles/command-and-control-in-tactical-environments-LHHtWrV4EfLc6GOC/>.

³⁶ Moody, “Filling the Gap.”

effectively.³⁷ Fred Leland promotes mission command to improve community policing and overcome “means over ends syndrome” and overuse of force.³⁸ The literature on mission command in law enforcement is either anecdotal or prescriptive in nature. As with the fire services, these articles cannot be used to draw any firm conclusions about the merits of mission command in law enforcement or homeland security. However, they do indicate that many in law enforcement are already applying mission command and feel it is effective.

The amount and quality of literature on mission command vary significantly between the military and the HSE. The HSE lacks empirical studies of mission command implementation and whether it improves HSE response and effectiveness. This thesis aims to start filling this gap.

D. RESEARCH DESIGN

This thesis used case studies to determine the effectiveness of mission command during major responses. The study assessed the degree to which responders applied mission command and the degree to which it enhanced the response. This study used logs, after-action reports, internal agency reports, media reports, and media commentary to determine the degree of effectiveness and success of the responses. This effort produced a qualitative assessment of the response’s success.

This study examined three cases of implementing mission command in a homeland security environment. The first case study was the military’s use of mission command during the Super Storm Sandy response. This case study offers ample situations to assess mission command implementation, both positively and negatively, in the HSE. The next case study was the 2018 Camp Fire near Paradise, California. The Camp Fire was a large complex fire like the ones that caused NWCG to implement mission command. The Camp Fire case examined whether the problems that resulted in the NWCG’s implementing mission command were improved. The final case study was the 1 October shooting in Las

³⁷ Hart, “Strategic Mutual Aid Response to Terrorism.”

³⁸ Vandergriff and Webber, *Mission Command*, 239.

Vegas to examine how law enforcement used mission command in response. These cases were chosen due to the amount of information available and their ability to provide a variety of circumstances to examine mission command use and implementation by various agencies in the HSE.

For each case, this study used the U.S. Army doctrine's definition of mission command and the seven principles listed: competence, mutual trust, shared understanding, commander's intent, disciplined initiative, mission orders, and risk acceptance.³⁹ The study qualitatively assessed the degree to which these principles affected the response on a five-point Likert scale. The categories used are: Negative Impact, Not Present; Negative Impact, Present; No impact, whether present or not; Minor Positive Impact, present; Present significant positive impact. The analysis then established whether the principle was associated with positive or negative outcomes reported during the response (e.g., did the use of mission orders lead to success, or did ineffective mission orders lead to failure?). Finally, the study determined an overall assessment of mission command's effect during the incident and its possible link to the overall success of the response and critical lessons learned.

The study examined the case studies to see the degree of applicability of the principles in the responses. If they are linked to the success of the response, then the study determined overall trends and each principle's effect on an incident outcome. The study used this assessment to determine the overall effectiveness of mission command concepts in the HSE. The study used this information to recommend further implementing mission command in HSE doctrine and training. This study also recommended future areas of research.

The next chapter provides an overall review of the concept of mission command reviewing the history and the current doctrine of mission command to give the reader context and an understanding of how the incidents are examined. It then looks at how mission command has been applied to the HSE and to what level it has been formalized and studied in HSE.

³⁹ Department of the Army, *Mission Command*, 1–6.

II. REVIEW OF MISSION COMMAND

A. SUMMARY OF MISSION COMMAND

This chapter places mission command in context, briefly explaining how the concept came about and why it has become dominant in western militaries. It then explains the principles of mission command used to evaluate the case studies. It also investigates the U.S. wildland fire fighting services' reason for adopting mission command. Finally, the chapter discusses potential issues with implementing mission command for the reader to consider while examining the case studies.

1. Brief History of Mission Command

Modern academic and organizational literature on mission command originates in the Prussian concept of *Auftragstaktik* (translated as mission-tactics or mission command).⁴⁰ *Auftragstaktik*'s development was a response to the Prussian Army's failure against France in the Napoleonic Wars.⁴¹ Thus the Prussians would begin a series of reforms and modifications, ultimately leading to the German Army's tactical successes in World War II.⁴² The revival of mission command occurred in the 1970s and 1980s in the U.S. Army to counter the Warsaw Pact's numerical superiority.⁴³ Different organizations have used *Auftragstaktik* concepts, and several terms have been used to refer to it, including maneuver warfare, mission orders, decentralized command, commander's intent, mission-driven culture, and command by negation. Mission command is the term used by the U.S. Army and is used to refer to all related concepts for the purposes of this paper. This paper uses the current U.S. Army doctrine in *Army Doctrine Publication (ADP) 6-0 Mission Command: Command and Control of Army Forces* dated July 2019 as the baseline for defining mission command; differences in interpretation and implementation by an organization are noted by exception.

⁴⁰ Department of the Army, vii.

⁴¹ Shamir, *Transforming Command*, 29.

⁴² Shamir, 29–51.

⁴³ Shamir, 100–103.

2. Definition of Mission Command

The U.S. Army uses mission command to deal with war's inherently chaotic and uncertain environment.⁴⁴ Army doctrine states war is a realm of rapid change, friction, limited knowledge, and unforeseeable events.⁴⁵ This means that detailed, highly coordinated plans are unworkable. Mission command solves this problem by decentralizing execution and decision-making while enabling unified action. Mission command contrasts with "detailed command," which describes subordinate actions in detail and focuses on completing the steps and process.⁴⁶ Mission command frees the commander to anticipate future problems and avoid getting mired in lower-level details and problems. Additionally, the commander manages risk and the level of control needed based on the mission and subordinates' competency. To execute mission command effectively, a commander relies on seven principles defined in *ADP 6-0: competence, mutual trust, shared understanding, commander's intent, disciplined initiative, mission orders, and risk acceptance*.⁴⁷ Each term is defined below based primarily on current U.S. Army doctrine in ADP 6-0 with additional input from other sources. Understanding these principles is essential to determine applicability to the HSE.

a. Competence

Military operations rely on all team members to be competent in their specialty and basic military skills. A competent team is the bedrock that allows a commander to trust subordinates and execute mission command effectively. According to *ADP 6-0*, soldiers gain competence through training, education, exercises, and experience.⁴⁸ However, all soldiers do not have the same level of competence. For effective mission command,

⁴⁴ Department of the Army, *Mission Command*.

⁴⁵ Department of the Army, 1-3.

⁴⁶ Ben-Shalom and Shamir, "Mission Command between Theory and Practice."

⁴⁷ Department of the Army, *Mission Command*, 1-6.

⁴⁸ Department of the Army, 1-7.

commanders must understand their soldiers' competence level and adjust tasks, responsibilities, and guidance accordingly.⁴⁹

b. Mutual Trust

The U.S. Army defines mutual trust as “shared confidence that is between commanders, subordinates, and partners.”⁵⁰ Mission command depends on trust, primarily developed through common experience, whether in exercises or operations.⁵¹ Trust among those who have not worked together in the past is established by having a standard education, understanding of doctrine, and operational terms.⁵² Trust is a two-way street; if commanders do not trust their subordinates, the subordinates will not have the freedom to make rapid decisions in a chaotic environment.⁵³ Suppose subordinates do not trust the commander's decision or that the commander will back up the good faith decisions of the subordinate. In that case, they will not execute operations with the aggressive initiative needed for victory on the battlefield. Quick adjustments to task organization will often happen in complex operations; commanders and subordinates must give each other a minimum level of trust based on the universal military standards until deeper trust can be established.⁵⁴

c. Shared Understanding

Shared understanding is a critical element of mission command, without which decentralized execution is impossible. In the U.S. Army, creating shared understanding starts with all members going through professional military education and understanding doctrine.⁵⁵ This gives all members a common terminology, understanding of mission command principles, and the U.S. Military's methods for approaching problems. This

⁴⁹ Department of the Army, 1–7.

⁵⁰ Department of the Army, 1–7.

⁵¹ Department of the Army, 1–7.

⁵² Department of the Army, 1–7.

⁵³ Vandergriff and Webber, *Mission Command*, 180.

⁵⁴ Department of the Army, *Mission Command*, 1–8.

⁵⁵ Department of the Army, 1–8.

allows the Army to rapidly organize teams with little to no prior working experience to quickly become functional in chaotic environments. The commander uses the operations process to improve shared understanding and to create a collaborative environment.⁵⁶ Commanders promote honest but tactful discussion to establish a collaborative space that continuously increases all team members' situational awareness.⁵⁷ Open dialogue and discussion of ideas and recommendations are built on and reinforce mutual trust. As Chad Foster points out, shared understanding increases trust and team member support over time, resulting in more effective and innovative solutions being developed.⁵⁸ However, entropy constantly afflicts and degrades the common operating picture and requires diligent and continuous work by the team to maintain it.⁵⁹ Ultimately, shared understanding enables all units to achieve their mission while supporting other units and increasing overall mission success.

d. Commander's Intent

The mission command doctrine of the Army states, "The commander's intent is a clear and concise expression of the purpose of the operation and the desired military end state."⁶⁰ Ultimately the commander's intent gives subordinates and staff an understanding of the bigger picture of the operation and the goals that constitute success. According to Thomas Meyer, a commander's intent serves the same function as a corporate vision statement in a business aligning the organization's values with its goals.⁶¹ Doctrine is not dogma and thus does not prescribe any required format, allowing commanders to convey intent in any manner they deem effective. A recommended format in the doctrine that one frequently sees is the *purpose*, *key tasks*, and *end state* framework.⁶² The purpose section

⁵⁶ Department of the Army, 1–8.

⁵⁷ Department of the Army, 1–8.

⁵⁸ Vandergriff and Webber, *Mission Command*, 191.

⁵⁹ Department of the Army, *Mission Command*, 1–9.

⁶⁰ Department of the Army, 1–45.

⁶¹ Thomas E Meyer, "The Leadership Imperative: A Case Study in Mission Command," *Infantry* 103, no. 1 (March 2014): 31.

⁶² Department of the Army, *Mission Command*, 1–10.

of the commander's intent is to expand on the reason for the operation and give the subordinates a better understanding of how their actions tie into the bigger picture. *ADP 6-0* states, "key tasks are those significant activities the force must perform as a whole to achieve the desired end state."⁶³ The commander's vision of the operating environment's future state is referred to as the end state and is the common goal for all team members.⁶⁴ A common military cliché says, "no plan survives first contact," thus, rapid adjustment is needed on the battlefield.⁶⁵ This is where a well-crafted commander's intent becomes critical. An effective intent provides subordinates the direction and limits of initiative to enable quick, decisive action when conditions change, and the assigned task(s) no longer fit the situation.⁶⁶

e. Mission Orders

Commanders operate by issuing orders to subordinates. Mission orders are a technique for effectively transmitting the needed information to the force to complete operations successfully. The Army states, "mission orders are directives that emphasize to subordinates the results to attain, not how they are to achieve them."⁶⁷ A good mission order conveys the unit's mission, the commander's intent, the concept of operation and scheme of maneuver, tasks for the subordinate units, and the minimum necessary coordination for effective action.⁶⁸ According to *ADP 6-0*, tasks to subordinates should only include essential tasks and have the 5 W's (who, what, when, where, and why) but not a how (method).⁶⁹ Keeping tasks short and direct makes them easier to remember and allows for greater initiative and flexibility on the part of the subordinate. To keep mission

⁶³ Department of the Army, 1-10.

⁶⁴ Department of the Army, 1-10.

⁶⁵ Fred Tolman, "Mission Command: A Senior Enlisted Leader's Perspective," Army University Press, NCO Journal, last modified May 15, 2020, <https://www.armyupress.army.mil/Journals/NCO-Journal/Archives/2020/May/Mission-Command/>.

⁶⁶ Department of the Army, *Mission Command*, 1-10.

⁶⁷ Department of the Army, 1-11.

⁶⁸ Department of the Army, 1-11.

⁶⁹ Department of the Army, 1-11.

orders short, *ADP 6-0* warns that anything covered by standard operation procedures (SOP) or routine actions should be left out of the order.⁷⁰ However, there is no fixed length to mission orders as they vary based on the complexity of the operations, the units' experience, and the competence of the subordinates. The Army teaches that mission orders should be easily read and understood by the subordinate level they are intended for (e.g., brigades write for battalions, and battalions write for companies).⁷¹ According to Luccio and Roberts, mission orders allow a unit to be extremely adaptable on the battlefield when effectively used.⁷²

f. Disciplined Initiative

Army doctrine emphasizes all subordinates have an obligation to use their best judgment and own volition aggressively to accomplish the operational end state.⁷³ However, this does not mean subordinates can do whatever they want. The commander's intent constrains subordinate initiative in the Army, and all the actions must logically flow from the commander's intent toward achieving the end state.⁷⁴ The two-primary consideration defined in *ADP 6-0* when taking the initiative are:

- Whether the benefits of the action outweigh the risk of desynchronizing the overall operation.
- Whether the action will further the higher commander's intent.⁷⁵

Effective disciplined initiative is enabled by shared understanding and mutual trust, without which subordinate initiative can be stifled. Finney and Klug see major opportunities on the battlefield as fleeting and advise that rather than seeking new orders, or guidance, subordinates should aggressively "act in the spirit of their mission and

⁷⁰ Department of the Army, 1-11.

⁷¹ Department of the Army, 1-11.

⁷² Vandergriff and Webber, *Mission Command II*, 30.

⁷³ Department of the Army, *Mission Command*, 1-12.

⁷⁴ Department of the Army, 1-12.

⁷⁵ Department of the Army, 1-12.

commander's intent, which is disciplined initiative.”⁷⁶ Competent commanders accept actions that are logically based on the conditions and knowledge of the subordinate at the decision point and not based on the outcome alone.⁷⁷

g. Risk Acceptance

Risk is an inherent part of all military operations and cannot be avoided. Commanders must assess consequences and underwrite risk iteratively during an operation according to ADP 6–0.⁷⁸ To develop their understanding of risk, the commander, in collaboration with subordinates, must develop a shared understanding of the situation. Commanders must understand that there is never enough time to arrange things perfectly and that uncertainty pervades the battlefield. However, *ADP 6–0* warns commanders not to gamble with their units.⁷⁹ Darrell Fawley frames it as an imperative that commanders must support and encourage risk-taking as long as it does not violate basic safety and moral standards and take the time to educate their subordinates to allow for appropriate risk-taking.⁸⁰ Accepting and endorsing risk, especially by subordinates, while maintaining responsibility is a heavy burden in complex situations. Therefore, commanders must apply their years of education and experience to determine the correct level of risk to accept.

h. Commander's Role in the Operation Process

Commanders are the drive shaft that turns the operation process and forces the unit forward toward mission success. During operations, the commander's attention is constantly pulled in multiple directions. As a result, commanders are challenged to find the correct allocation of time spent managing the staff and leading subordinate commanders.⁸¹ Under *ADP 6–0*, commanders use the operation process to drive the mission's planning

⁷⁶ Nathan K. Finney and Jonathan P. Klug, eds., *Mission Command in the 21st Century: Empowering to Win in a Complex World* (Fort Leavenworth, Kansas: The Army Press, 2016), vii.

⁷⁷ Department of the Army, *Mission Command*, 1–12.

⁷⁸ Department of the Army, 1–14.

⁷⁹ Department of the Army, 1–14.

⁸⁰ Vandergriff and Webber, *Mission Command*, 180.

⁸¹ Department of the Army, *Mission Command*, 1–12.

and execution.⁸² ADP 6-0 defines four major tasks in the operations process: *plan*, *prepare*, *execute*, and *assess*.⁸³ These tasks are continuous and overlap during a major operation. As Flynn and Schrankel describe, the commander constantly does all four tasks during exercises or operations but prioritizes based on their assessment of the situation and the decisive point in space and time.⁸⁴ To drive the operations process effectively, the commander performs the six tasks of *understand*, *visualize*, *describe*, *direct*, *assess*, and *lead* (see Figure 1).⁸⁵

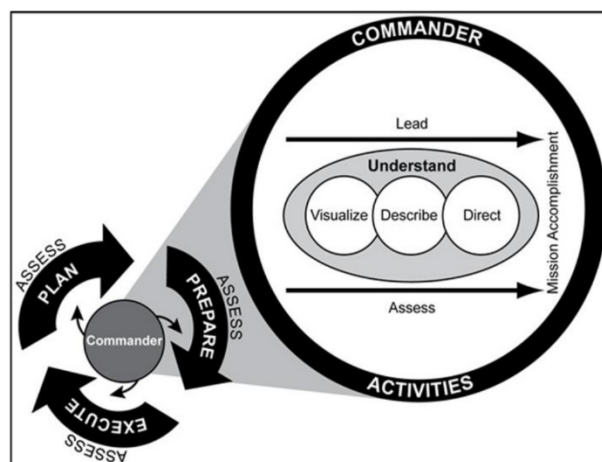


Figure 1. The Operations Process⁸⁶

The commander starts by understanding the battlefield in collaboration with subordinates and staff.⁸⁷ This then leads to the commander's visualization (Figure 2). During visualization, the commander frames the current operational environment, develops future state conditions (end state), and creates an operational approach to turn the current

⁸² Department of the Army, 2-12.

⁸³ Department of the Army, 2-12.

⁸⁴ Michael Flynn, "Applying Mission Command through the Operations Process," *Military Review* 93, no. 2 (April 2013): 29-30.

⁸⁵ Department of the Army, *Mission Command*, 2-13.

⁸⁶ Source: Department of the Army, 2-13.

⁸⁷ Department of the Army, 2-14.

state into the future state.⁸⁸ Once the commander has visualized the battlefield, the commander then describes it through the commander's intent, planning guidance (with an operational approach), the commander's critical information requirements, and essential elements of friendly information.⁸⁹ According to Finney and Klug, when describing their visualization, the commander should do so in terms of resources, purpose, time, and space.⁹⁰ The commander then directs action through mission orders. The commander is always providing leadership, assessing the situation, and making adjustments to continuously drive the unit towards achieving the end state.⁹¹

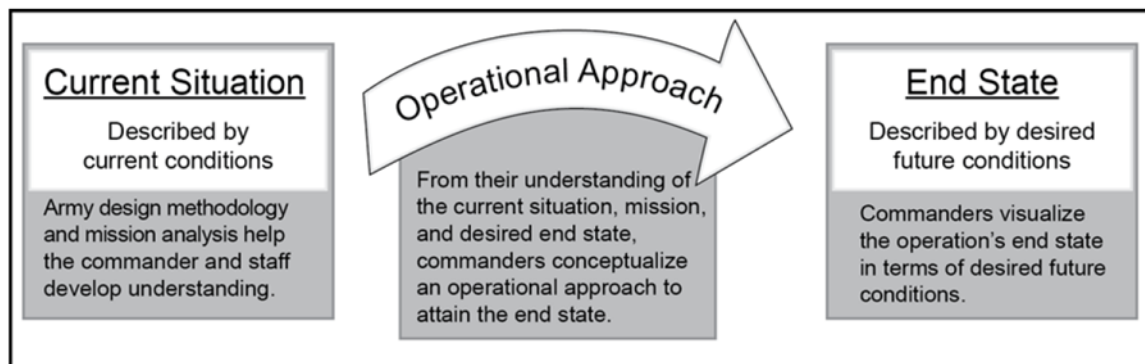


Figure 2. Commander's Visualization⁹²

B. WILDFIRE SERVICE ADOPTION

This section transitions from looking at mission command from a purely military perspective to examining it from a homeland security viewpoint. This is accomplished by looking at wildland firefighting and understanding the United States Forest Service (USFS) adoption of mission command.

⁸⁸ Department of the Army, 2–15.

⁸⁹ Department of the Army, 2–15.

⁹⁰ Finney and Klug, *Mission Command in the 21st Century*, x.

⁹¹ Department of the Army, *Mission Command*, 2–16.

⁹² Source: Department of the Army, 2–15.

The implementation of mission command concepts into homeland security has been limited. The most notable agency to have implemented mission command concepts into their leadership training is the USFS as part of their wildland firefighter training.⁹³ Several other fire agencies that base their training on the USFS material have also incorporated these concepts.⁹⁴ There has also been limited formal implementation of mission command in law enforcement. Given the number of former military members in law enforcement, one might also assume numerous informal implementations of mission command, which would be worthy of further study.

Wildland fires are not a thinking enemy, and they always burn out eventually. Thus the change in the USFS is not the result of a tactical defeat but instead the result of fatalities.⁹⁵ The USFS began looking at ways to improve their response due to the deaths of 14 firefighters at the South Canyon wildfire in 1994 and 16 firefighters in 2001 during the Thirtymile Fire.⁹⁶ The National Wildfire Coordination Group (NWCG) formed a Leadership Task Group to prevent future tragedies.⁹⁷ The Leadership Task Group studied the private sector, government, and military organizations and examined their leadership models and methods. Ultimately, the group decided to focus on military leadership models due to the similarities between the military environment and wildland fires. They noted, “These organizations all operate in high-risk environments where decisions must be made within compressed time frames, often by people under a great deal of stress. By and large, we found that many of the leadership development concepts and techniques practiced in the military have some applicability in the world of wildland fire.”⁹⁸ The Leadership Task Group did not adopt the military methods wholesale but adapted the key concepts mostly from U.S. Army and Marine Corps doctrine.

⁹³ Cocker, “Retooling the Leadership Paradigm,” 14.

⁹⁴ Cocker, 28.

⁹⁵ Cocker, 109.

⁹⁶ Cocker, 90–93.

⁹⁷ Cocker, 93.

⁹⁸ National Wildfire Coordinating Group, *Report of the Leadership Task Group to the Training Working Team, Feb 2001* (Boise, ID: United States Department of Agriculture, 2001), 3.

The NWCG's *Leading in the Wildland Fire Service* adapts mission command to fit into the firefighting culture. In *Leading in the Wildland Fire Service*, NWCG used "leader's intent" instead of "commander's intent," emphasizing the use of the purpose, key tasks, and end state framework.⁹⁹ It uses "bias for action" instead of "disciplined initiative," noting that, "This empowerment is not intended to encourage freelancing. In a high-risk environment, freelancing is a dangerous and unpredictable element, causing more harm than good."¹⁰⁰ The other principles of mission command have corollaries embedded in other aspects of the NWCG leadership framework. Building trust is emphasized in several locations in the document, and shared understanding is covered under communication.¹⁰¹ Instead of the term mission order, NWCG uses SMART (specific, measurable, attainable, relevant, and time-dependent) objectives.¹⁰² SMART objectives serve the same purpose as mission orders by covering everything the subordinate needs and the desired what, but not the how.

The USFS has also faced several issues in effectively implementing mission command in the firefighting service. Chief among these is the question of liability. In the wake of the fatalities during wildland fire operations at the Thirtymile fire, eleven felony charges were filed against the incident commander, including four counts of manslaughter.¹⁰³ Although later reduced to two counts of making false official statements, they still had a "chilling effect" on the service and firefighters' desire to accept higher leadership roles.¹⁰⁴ Fundamentally, mission command requires trust and that decisions made in good faith will not be punished based on outcomes. The charges filed against the incident commander worked directly against establishing trust in the USFS.

Effective mission command requires that subordinates be well trained, educated, and highly motivated. For leadership, the NWCG *L series* provides the foundational

⁹⁹ National Wildfire Coordinating Group, *Leading in the Wildland Fire Service*, 15,34.

¹⁰⁰ National Wildfire Coordinating Group, 26.

¹⁰¹ National Wildfire Coordinating Group, 22.

¹⁰² Cocker, "Retooling the Leadership Paradigm," 105.

¹⁰³ Cocker, 107–8.

¹⁰⁴ Cocker, 107.

leadership education for wildland firefighters. However, whether this is sufficient training to implement effective mission command is unclear.¹⁰⁵ Additionally, the USFS has experienced low morale and pay disparities compared to state and local agencies.¹⁰⁶ Both issues could be factors in implementing mission command in federal wildland firefighting.

The USFS adoption, implementation, and use of mission command in wildland firefighting suggest that mission command is appropriate for homeland security and can be incorporated. However, there are no published quantitative or qualitative studies examining whether mission command has improved the USFS fire service at this time. Chapter IV looks more closely at the mission command in wildland firefighting to assess its impact.

C. ISSUES WITH IMPLEMENTATION OF MISSION COMMAND

Although mission command has been shown to be an effective leadership style, there have been issues with its implementation in militaries that may prevent it from being effectively adapted to homeland security. Ben-Shalom and Eitan Shamir point out that mission command is “hindered, however, by a myriad of sociological, organizational and technological constraints that characterize today’s military operations.”¹⁰⁷

A rigorous professional education program is a key element in effectively implementing mission command in an organization.¹⁰⁸ Uzi Ben-Shalom and Eitan Shamir point out that the Israeli Defense Force (IDF) has struggled to implement mission command due to their lack of a strong military education program.¹⁰⁹ The core ICS curriculum requires six courses, with four delivered online and two in-resident, for a total of 49 hours of instruction.¹¹⁰ NWCG training requires ICS completion and has an additional 184 hours

¹⁰⁵ Cocker, 108–9.

¹⁰⁶ Cocker, 110.

¹⁰⁷ Ben-Shalom and Shamir, “Mission Command between Theory and Practice,” 101.

¹⁰⁸ Ben-Shalom and Shamir, 107.

¹⁰⁹ Ben-Shalom and Shamir, 107–8.

¹¹⁰ Federal Emergency Management Agency, “Emergency Management Institute – Independent Study (IS) | Course List.” Accessed November 22, 2020, <https://training.fema.gov/is/crslist.aspx>.

of instruction over a firefighter career.¹¹¹ In comparison, the standard Army officer training pipeline has 19 months of formal officer education over a standard 20-year career.¹¹² Even with this training, some studies have shown that not all officers in the Army understand mission command.¹¹³ This suggests that the ICS course in and of itself is insufficient without considerable additional education and exercising of mission command by all the agencies involved.

The commander's unwillingness to relinquish control and accept the risk of subordinate mistakes is another hindrance to effective mission command.¹¹⁴ Under mission command, commanders delegate authority but retain responsibility. This means a commander takes the risk that subordinates may make bad or reckless decisions. Added to this are political pressures to avoid casualties or collateral damage and societal criticism of problems within the military, such as sexual harassment, resulting in commanders being risk-averse and restraining subordinate initiative.¹¹⁵ As was seen with the liability issues with the USFS and the criticism of law enforcement from Black Lives Matter (BLM), the political pressure on homeland security is often more intense than for the military. Buck, Trainor, and Aguirre point out that large disaster responses quickly become politicized in a manner that NIMS and ICS were not designed to handle.¹¹⁶ This might make leaders in homeland security more hesitant to accept mission command concepts and prevent adoption.

In addition, communication technology makes it easier for leaders to directly contact and even see what subordinates are doing. These technologies, from Blue Force Tracker to remotely piloted planes, have proliferated on the battlefield. The stated use of

¹¹¹ National Wildfire Coordinating Group, "NWCG Training Catalog."

¹¹² Department of the Army, *Commissioned Officer Professional Development and Career Management*, 26–29.

¹¹³ Shamir, *Transforming Command*, 163.

¹¹⁴ Vandergriff and Webber, *Mission Command II*, 20; Ben-Shalom and Shamir, "Mission Command between Theory and Practice," 102.

¹¹⁵ Ben-Shalom and Shamir, "Mission Command between Theory and Practice," 103, 108.

¹¹⁶ Dick A Buck, Joseph E Trainor, and Benigno E. Aguirre, "A Critical Evaluation of the Incident Command System and NIMS," *Journal of Homeland Security and Emergency Management* 3, no. 3 (January 13, 2006): 19, <https://doi.org/10.2202/1547-7355.1252>.

these technologies is not to inhibit mission command, but as noted by Ben-Shalom et al., they often “...essentially curbed junior command initiative and promoted over-centralized command styles.”¹¹⁷ As these military technologies get cheaper, they will likely proliferate in homeland security and have the same effect of curbing the independence and initiative of subordinates. This will prevent the meaningful application of mission command in homeland security.

The issues that hinder the application of mission command in the military will also likely be issues in homeland security application of mission command. Added to this is the fact that Americans are probably less willing to accept mistakes, risks, or even compromised solutions at home than they are from the military in faraway countries. In the wake of BLM protests, at least 20 Police Chiefs were forced to resign.¹¹⁸ This could be interpreted as a sign the system is working or a sign of a zero-defect mentality for public service. This could indicate that the independence and initiative required for mission command is not an appropriate strategy for homeland security.

The next three chapters examine three incidents through the mission command lenses. They are followed by a chapter that provides an overall analysis and assessment of mission command in HSE and looks at whether mission command should continue to be applied as a doctrinal concept and the implication of that. Finally, it concludes with recommendations for future study and application in the HSE.

¹¹⁷ Ben-Shalom and Shamir, “Mission Command between Theory and Practice,” 104.

¹¹⁸ Godio, “At Least 20 Police Chiefs Have Resigned since Protests Began in May.”

III. DEPARTMENT OF DEFENSE RESPONSE DURING SUPER STORM SANDY

This chapter examines how the U.S. Military used mission command in the response to Super Storm Sandy. The Sandy response is an insightful case to dissect because it involved large numbers of both reserve and active-duty forces. This analysis of mission command starts off scrutinizing the National Guard, which is the section of the military primarily engaged in domestic response operations, and then contrasting it with Federal forces that participate in domestic response less frequently. Then it examines the seven mission command principles for the National Guard and Federal forces in detail, assesses the implementation successes, and provides illustrative examples. General trends and conclusions emerge from this analysis.

On October 29, 2012, the second-largest Atlantic storm, Super Storm Sandy, made landfall, devastating large parts of the Northeastern U.S. Costing an estimated \$75.4 billion, Sandy was the second-costliest disaster in U.S. history at the time and still ranks fourth overall.¹¹⁹ Furthermore, with at least 159 confirmed deaths, Sandy is still one of the deadliest natural disasters in recent memory.¹²⁰ Sandy was also one of U.S. history's largest Department of Defense civil support responses. The National Guard deployed over 12,000 service members across 11 states.¹²¹ With over 4,000 members deployed, the New York National Guard (NYNG) was the largest National Guard deployment of any state during the Sandy response.¹²²

This chapter illustrates the NYNG experience with mission command during the Sandy response. It further explains why mission command principles are necessary for

¹¹⁹ David Muhlbaum, "The Most Expensive Natural Disasters in U.S. History," Kiplinger, accessed December 15, 2021, <https://www.kiplinger.com/slideshow/business/t019-s001-most-expensive-natural-disasters-in-u-s-history/index.html>.

¹²⁰ Muhlbaum.

¹²¹ Jim Greenhill, "12,000 National Guard Members Helping 11 States Recover from Hurricane Sandy," National Guard, last modified October 30, 2012, <https://www.nationalguard.mil/News/Article/574966/12000-national-guard-members-helping-11-states-recover-from-hurricane-sandy/>.

¹²² Ryan Burke and Sue McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander* (Carlisle, PA: U.S. Army War College Press, 2015), 1.

success by looking at the Federal forces under Title 10 experience in Sandy as a counterexample in which all the mission command principles were not fully present.

A. NEW YORK NATIONAL GUARD RESPONSE

The New York National Guard's response to Super Storm Sandy was the largest of any state, and it is one of only two states that appointed a dual-status commander and took charge of active-duty forces during the response.¹²³ The NYNG would deliver over 2.5 million meals, 150,000 blankets, fuel 13,000 city vehicles, and conduct welfare checks on 12,000 residences in the days following landfall.¹²⁴

Super Storm Sandy would also serve as a testbed for the newly created dual-status commander (DSC) and whether the military could effectively apply mission command principles during civil support. Congress created the DSC concept in the aftermath of Hurricane Katrina. During Katrina, a lack of clear guidance for federal and state authorities led to confusion and hindered response by National Guard and active-duty military personnel. A DSC is an officer able to execute authority over Federal Title 10 active-duty and state Title 32 National Guard forces. Most appointments of a DSC have been of National Guard personnel acknowledging the National Guard as the primary military, domestic response. The NYNG response was an excellent demonstration of the effectiveness of mission command in a domestic operation.

1. Competence

Part of the NYNG's success during its Sandy response was due to its experience and knowledge of defense support to civil authorities (DSCA) operations, meaning it was high in the principle of competence. The NYNG gained competence in DSCA by responding to various emergencies in and out of the state of New York. The NYNG Director of the Joint Staff, Brigadier General Raymond Shields, stated, "We've gone from everything from floods to winter storms to ice storms to all sorts of [other] activities – so

¹²³ Burke and McNeil, 2–3.

¹²⁴ Eric Durr, "Massive Logistical Effort Marks N.Y. Guard Response to Hurricane Sandy," U.S. Army, last modified November 13, 2012, https://www.army.mil/article/91055/massive_logistical_effort_marks_n_y_guard_response_to_hurricane_sandy.

responding to natural disasters at the call of the state is not anything new that we haven't done in New York.”¹²⁵ The longest-running domestic operation of the NYNG is Empire Shield. Empire Shield is an operation where the NYNG assists local law enforcement with homeland security and has been an ongoing mission since activation after 9/11.¹²⁶ Shields credits Empire Shield with giving the NYNG a “warm start” for Sandy’s response.¹²⁷ Additionally, NYNG appointed as DSC Brig. Gen. Swezey who underwent specialized training to prepare him for this role.¹²⁸ The NYNG’s training and experience in DSCA made it a knowledgeable and competent DSCA force.

The NYNG’s competence was a major contributing factor to its successful Sandy response. In particular, a Heritage Foundation report emphasized the quick and successful mobilization of the National Guard as a major success during the response.¹²⁹ Mobilization is a complex and time-consuming task. The NYNG had to activate over 3,000 of its personnel and 800 Guardsmen from other States through Emergency Management Assistance Compact (EMAC).¹³⁰ The timely and successful activation of so many service members was only achievable because of the NYNG’s and supporting States’ competence. Furthermore, NYNG’s competence was important in enabling the other mission command principles.

¹²⁵ David Giles, *A Cascade of Emergencies (A): Responding to Superstorm Sandy in New York City* (Cambridge, MA: Harvard Kennedy School, 2017), 4.

¹²⁶ Jim Greenhill, “Task Force Born on 9/11 Still Guards New York,” U.S. Army, accessed January 10, 2022, https://www.army.mil/article/27232/task_force_born_on_911_still_guards_new_york.

¹²⁷ Steven Bucci et al., “After Hurricane Sandy: Time to Learn and Implement the Lessons in Preparedness, Response, and Resilience,” Special Report (Washington, DC: The Heritage Foundation, October 25, 2013), 5.

¹²⁸ Corey Baltos, “Army North Helps Prepare Future Dual-Status Commanders,” U.S. Army, last modified December 18, 2012, https://www.army.mil/article/93121/army_north_helps_prepare_future_dual_status_commanders.

¹²⁹ Bucci et al., “After Hurricane Sandy: Time to Learn and Implement the Lessons in Preparedness, Response, and Resilience,” 4.

¹³⁰ David Giles, *A Cascade of Emergencies (B): Responding to Superstorm Sandy in New York City* (Cambridge, MA: Harvard Kennedy School, 2017), 13.

2. Mutual Trust

The NYNG had a high degree of mutual trust within its ranks and with its State, local, and Federal partners. The trust the NYNG had built was a force multiplier in its Sandy response. The foundation of the mutual trust the NYNG had with its supported partners was its competence and experience working with them over the years. The multi-year Empire Shield operation was a vital component of this. Empire Shield familiarized the NYNG with not only the New York Police Department (NYPD) but also New York's Fire Department and Office of Emergency Management, where they have liaison officers (LNO).¹³¹ The NYNG also had familiarity and trust with FEMA built from years of disaster response.¹³² The mutual trust between the NYNG and FEMA allowed for flexible mission assignments, enabling responsiveness at the tactical level.¹³³ Trust was also critical in allowing the NYNG units to respond quickly under verbal orders, knowing that their higher command would get the proper written authorization.¹³⁴ The NYNG's trust with its partners laid the groundwork for applying the other mission command principles and the overall success of the NYNG response.

3. Shared Understanding

Another foundational mission command principle the NYNG had was shared understanding with supported agencies and partners. LNOs were the vital links that built and maintained a common operating picture and awareness of the situation that allowed for the rapid coordination observed in many of the reports on Sandy.¹³⁵ Significantly, the NYNG and its partners shared a “push mentality” for Sandy, contrasting with many past

¹³¹ Giles, *A Cascade of Emergencies (A): Responding to Superstorm Sandy in New York City*, 5.

¹³² Giles, 5.

¹³³ Giles, *A Cascade of Emergencies (B): Responding to Superstorm Sandy in New York City*, 14.

¹³⁴ Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 55.

¹³⁵ Burke and McNeil, 57; Giles, *A Cascade of Emergencies (A): Responding to Superstorm Sandy in New York City*, 5; Nicholas E Winters, “The DSCA Corps: Bridging the Gap between the Profession of Arms and Domestic Operations” (Monterey, CA, Naval Postgraduate School, 2017), 49.

responses which used a pull support system.¹³⁶ The military's establishment of a dual-status commander further enhanced the shared understanding, providing unity of effort to Guard and active-duty forces during the response.¹³⁷ The NYNG's ability to create shared understanding allowed it to operate decentralized.¹³⁸ The NYNG actualized the decentralized decision-making Stanely McChrystal discusses in *Team of Teams*.¹³⁹ Shared understanding is essential because it enables subordinates to have disciplined initiative based on the commander's intent, both of which were critical to the success of the NYNG.

4. Commander's Intent

Commander's intent is the linchpin of all the mission command principles and was a vital element of the DOD response during Sandy. The intent pushed out to all DOD forces, both Guard and active-duty, was to lean forward and adopt a push mentality.¹⁴⁰ Commander's intent, combined with competence and mutual trust, enabled the NYNG to develop FEMA mission assignments that allowed for subordinate unit commanders' decision-making.¹⁴¹ In contrast, the FEMA mission assignments for active-duty forces were initially too detail-oriented and not intent-based, resulting in restrictive orders that inhibited responsiveness.¹⁴² An example of this was when the USMC was given the task of "debris clearing," meaning to move it out of the way, but could not remove the debris to landfills without getting the assignment amended to add "removal."¹⁴³ The NYNG's

¹³⁶ Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 59.

¹³⁷ Department of Defense, *Defense Support of Civil Authorities*, JP 3-28 (Washington, DC: Department of Defense, 2018), II-10.

¹³⁸ Giles, *A Cascade of Emergencies (A): Responding to Superstorm Sandy in New York City*, 3.

¹³⁹ Stanley A. McChrystal, *Team of Teams: New Rules of Engagement for a Complex World* (New York, NY: Portfolio/Penguin, 2015), 20.

¹⁴⁰ Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 58-59.

¹⁴¹ Giles, *A Cascade of Emergencies (B): Responding to Superstorm Sandy in New York City*, 14-15.

¹⁴² Giles, 14.

¹⁴³ Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 42.

ability to operate effectively under intent-based leadership is a critical component that demonstrates the mission command principle of disciplined initiative.

5. Mission Orders

Mission orders assisted by the commander's intent allowed the NYNG to quickly communicate changes in operations to subordinate units. The NYNG exemplified success with mission orders with their ability to use and rely on verbal orders to allow for rapid mission changes.¹⁴⁴ A notable example of using verbal orders to guide operations occurred when the NYNG assumed control of USMC forces on Staten Island. Given the urgency of the DSC to assume command and effective control of the USMC on Staten Island, all the initial approval and guidance were verbal.¹⁴⁵ Furthermore, the effective writing of orders allowed for the flexibility seen in NYNG mission assignments from FEMA.¹⁴⁶ This flexibility was noted by Swezey, who commented, "It's no problem for me as a National Guard general to task forces not to clear debris today, but [instead] to deliver food."¹⁴⁷ Thus, the NYNG's ability to implement effective mission orders allowed them to respond timelier to needs than their active-duty counterparts and quickly bring the active-duty into the fold.

6. Disciplined Initiative

The NYNG was successful because its units could exercise disciplined initiative based on simple direct mission orders and the commander's intent. This combination worked because the NYNG had established a shared understanding with its units and civilian counterparts. The NYNG demonstrated disciplined initiative at all levels, from tactical to strategic. There are numerous examples of Guard members showing initiative at the tactical level to quickly and innovatively solve problems in support and coordination with their supported partners. One example was when soldiers were notified that generators

¹⁴⁴ Burke and McNeil, 55.

¹⁴⁵ Burke and McNeil, 55.

¹⁴⁶ Giles, *A Cascade of Emergencies (B): Responding to Superstorm Sandy in New York City*, 14.

¹⁴⁷ Giles, 14.

at a critical point of distribution site were running low and were able to dispatch a truck for refueling without waiting for the request to process through all the layers of command.¹⁴⁸ Decisive initiative was also displayed at the State level, as observed when the New York State deployed the NYNG to refuel civilian vehicles using military refueling trucks.¹⁴⁹ The problem is that military vehicles are designed for rapid refueling and have a larger diameter nozzle.¹⁵⁰ The NYNG quickly resolved this issue by dispatching a C-130 to retrieve nozzle adaptors from Kentucky to allow military fuel trucks to fill civilian vehicles.¹⁵¹

As seen in the NYNG response, discipline initiative is deeply interconnected to the other mission command principles and particularly relies on a solid shared understanding and commander's intent.

7. Risk Acceptance

In war, risk is primarily about the loss of life and the potential for an attack to fail. In DSCA operations, there is some fundamental danger; however, risking life and limb can be kept to a minimum during a domestic response. Thus, during DSCA for the National Guard, the risk is balancing other mission priorities such as training and deployments and being fiscally responsible with taxpayer assets. During the Sandy response, the NYNG had to balance these concerns. For example, just before Sandy's landfall, the NYNG was going to send 450 of its members to participate in a National Level Exercise in Missouri, but due to the situation, they decided to hold these troops back and use them in the Sandy response.¹⁵² This example shows the NYNG accepting the long-term risk of not training their members based on a greater immediate need. As pointed out, the NYNG also developed flexible mission assignments with FEMA and operated with verbal orders.

¹⁴⁸ Durr, "Massive Logistical Effort Marks N.Y. Guard Response to Hurricane Sandy."

¹⁴⁹ Durr.

¹⁵⁰ Durr.

¹⁵¹ Durr.

¹⁵² Noah Shachtman, "NY National Guard Suddenly Decides Hurricane Relief Trumps Mock Disaster Drill," *Wired*, last modified October 31, 2012, <https://www.wired.com/2012/10/new-york-sandy/>.

These are additional areas in which the NYNG accepted risk, enhancing its response. Had the NYNG failed to accept such risks, the response would have been muted and likely much less impactful to the state’s recovery. Thus, the risks the NYNG chose to accept were integral to establishing a push mentality, giving subordinates mission flexibility, and handling various short-notice requests.

8. Summary of NYNG Response

The National Guard response to Superstorm Sandy was a notable success and was seen by many as validating the dual status commander construct. For example, a Heritage Foundation report on Sandy noted that the dual-status commander enabled DOD to “operate in a more streamlined fashion.”¹⁵³ Likewise, Burke et al. noted the successful use of the dual-status command.¹⁵⁴ Although many factors contributed to the successful DOD response during Sandy, the ability of the National Guard to apply the mission command principles was a major contributing factor. Table 1 provides an overall analysis and summary of the mission command traits observed of the National Guard.

Table 1. New York National Guard Mission Command Observations

Principle	Negative Observations	Positive Observations
Competence		-Extensive DSCA experience -Handled a Variety of Missions -Efficient Mobilization -Understood Dual-status Commander Construct
Shared Understanding		-Effective use of LNO -Push Mentality -DSC provided unity of

¹⁵³ Bucci et al., “After Hurricane Sandy: Time to Learn and Implement the Lessons in Preparedness, Response, and Resilience,” 5.

¹⁵⁴ Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 46.

Principle	Negative Observations	Positive Observations
		effort -Decentralized Operations
Commander's Intent		-Push Mentality -Decentralized Operations -Flexible Mission Assignments (MA)
Mission Orders		-Use of Verbal Orders -Rapid Processing of MAs
Mutual Trust		-Dual-status commander built trust -Empire Shield experience built trust
Disciplined Initiative		-Multiple improvised responses -Flexible MAs
Risk Acceptance		-Pushed Support -Subordinates are given mission flexibility -Handled a variety of short-notice missions

B. FEDERAL FORCES STRUGGLE DURING SANDY

One can further understand the success of the National Guard in applying mission command by contrasting it with the performance of active-duty forces and the confusion and disorganization in their deployment.

The National Guard and active-duty forces both operate under mission command. However, the active-duty forces deployed for Superstorm Sandy lacked competence in DSCA and shared understanding with the National Guard and civilian partners resulting in significant criticism of the active-duty response. In particular, the USMC response shows the pitfalls of not having a solid grounding in all the mission command principles and their interconnectedness.

1. Competence

One of the main critiques of the USMC response was their lack of knowledge and experience dealing with DSCA. Although the USMC is a highly trained and competent force in other areas, they lacked training and experience in DSCA resulting in low competency. The Department of the Navy's after-action report noted the Marines' lack of training in DSCA and knowledge of the dual-status commander and FEMA mission assignment process.¹⁵⁵ These issues resulted in the FEMA Federal Coordinating Officer Michael Byrne criticizing the active-duty for their inexperience, cost, and hassle to deploy.¹⁵⁶ The lack of competence would interact with other elements of mission command and result in criticism of the Marines.

2. Shared Understanding

A major contributing factor to the USMC overstepping its bounds was its lack of shared understanding with the other players in the response. Initially, the Marines had no liaison officers with New York State or the National Guard and no established line of communication with the DSC.¹⁵⁷ Adding to the confusion of the active-duty forces was the addition of the Joint Coordinating Element (JCE) out of Joint Base McGuire-Dix-Lakehurst in New Jersey, which added a layer to the command structure.¹⁵⁸ Burke et al. note that instead of providing clarity, the JCE was not tied into the supported agencies, which added to the confusion and misunderstanding of active-duty forces during the response.¹⁵⁹ The failure of active-duty forces to establish a shared understanding with others in the response would contribute to the issues surrounding the active-duty response.

¹⁵⁵ Howard Link, Dylan Montes, and Richard Schultz, "Learning Lessons From Hurricane Sandy," *NEXT* 1, no. 1 (2013): 12.

¹⁵⁶ Giles, *A Cascade of Emergencies (B): Responding to Superstorm Sandy in New York City*, 17.

¹⁵⁷ Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 39–40.

¹⁵⁸ Burke and McNeil, 30.

¹⁵⁹ Burke and McNeil, 68.

3. Commander's Intent

On October 31, 2012, President Barack Obama, regarding Sandy's response, stated, "We're not going to tolerate any red tape. We're not going to tolerate any bureaucracy."¹⁶⁰ The USMC took this statement as a commander's intent and ran with it. However, without a good understanding of DSCA and shared situational understanding with others in the response, the Marines deployed to Staten Island, NY, without approval from either FEMA or New York state.¹⁶¹ Many referred to the Marines' deployment as an "invasion" of the State by Federal forces.¹⁶² The Marine Corps' actions show that strength in some mission command principles and weakness in others can result in mistakes counterproductive to mission accomplishment.

4. Mission Orders

A notable consequence of Title 10's insufficient competence and shared understanding were slow and inflexible FEMA mission assignments. Burke et al. criticize the procedures for Title 10 as "unwieldy" and "cumbersome."¹⁶³ The result was that many did not follow the proper process on several occasions at all levels of the chain of command.¹⁶⁴ When FEMA issued mission assignments, they were often too rigid, not allowing subordinate commanders to adapt quickly to the situation's nuances.¹⁶⁵ Burke et al. found that this significantly impeded the Title 10 response, requiring significant corrective action to improve future responses.¹⁶⁶ The lack of an effective order process directly hindered the response and inhibited the full implementation of mission command during Sandy.

¹⁶⁰ Burke and McNeil, 33.

¹⁶¹ Burke and McNeil, 39.

¹⁶² Giles, *A Cascade of Emergencies (B): Responding to Superstorm Sandy in New York City*, 15.

¹⁶³ Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 70.

¹⁶⁴ Burke and McNeil, 70.

¹⁶⁵ Giles, *A Cascade of Emergencies (B): Responding to Superstorm Sandy in New York City*, 14.

¹⁶⁶ Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 70–73.

5. Mutual Trust

The shortfalls in the mission command principles, most notably competence and shared understanding, negatively impacted the ability of Title 10 forces to build trust both during the response and in the long term with the States. The immediate impact of the lack of trust during Sandy halted many Title 10 responses midway until formal approval could be granted or verified.¹⁶⁷ In addition, the Title 10 violation of State sovereignty left a bitter taste in the mouth of some state officials and doubts about active duty's sincerity towards the DSC.¹⁶⁸ Thus mutual trust combined with shortfalls in other mission command principles degraded the effectiveness of the active-duty response.

6. Disciplined Initiative

Because of the already mentioned issues with several mission command principles, the active-duty force's application of disciplined initiative was a mixed bag during Sandy. Active-duty like the National Guard was proactive in shifting forces from training and placing them forward to respond.¹⁶⁹ Furthermore, active-duty forces responded several times under immediate response authority to requests from local officials.¹⁷⁰ These are positive actions and are generally desirable. However, as previously mentioned, some missions were halted midway due to confusion and waiting for formal approval, and detailed mission assignments hindered commanders at the lower levels.¹⁷¹ These issues degraded initiative for Title 10 forces. But, overall, Title 10 forces did show good initiative, even if sometimes it was misdirected.

7. Risk Acceptance

Generally, the active-duty forces, like the National Guard, were willing to accept risk when training and prepositioning forces. The Title 10 forces, like the National Guard,

¹⁶⁷ Burke and McNeil, 71.

¹⁶⁸ Burke and McNeil, 41.

¹⁶⁹ Burke and McNeil, 58.

¹⁷⁰ Burke and McNeil, 44–45.

¹⁷¹ Burke and McNeil, 70–73.

diverted troops from training and prepositioned them as part of a forward-leaning strategy and a “go big or go home” mindset. This strategy included positioning three ships off the coast of New York and New Jersey.¹⁷² Initially, many units acted on a request from local officials taking advantage of immediate response authority.¹⁷³ However, Title 10 forces hindered their ability to accept risk when several actions were halted in progress to gain official approval through a cumbersome FEMA mission assignment process. Generally, the Title 10 forces showed an appropriate level of risk acceptance.

8. Summary of Title 10 Response

Most of the issues associated with the Title 10 response during Sandy would quickly get resolved once the DOD placed the active-duty forces under the DSC and lines of communication were established. As the response unfolded, Title 10 forces would better understand the DSC and their relationship to the DSC and the States.

9. Summary of Federal Force Response

Table 2 summarizes the positive and negative observations of the active-duty response during Sandy. The situation was corrected quickly by placing the Marines under the command of the dual-status commander and the deployment of liaison officers to build trust and shared understanding.¹⁷⁴ However, the Marines’ poor shared understanding and competence in civil support resulted in confusion, inefficacies, and violation of state sovereignty.

¹⁷² Burke and McNeil, 32.

¹⁷³ Burke and McNeil, 44.

¹⁷⁴ Burke and McNeil, 56–57.

Table 2. Federal Forces Mission Command Observations

Principle	Negative Observations	Positive Observations
Competence	-Did not understand DSC -Did not understand the FEMA MA process -Lack of DSCA experience	-Prepositioned Assets for response
Shared Understanding	-JCE added to the confusion -Initially lack of LNOs with DSC	-Effective use of Battle Rhythm
Commander's Intent	-MA's not flexible	-Forward Leaning Strategy
Mission Orders	-Slow MA process -MA's too detailed and not flexible	
Mutual Trust	-Unauthorized missions halted -Violation of State Sovereignty	
Disciplined Initiative		-Quickly shifted from training to response -Responded under IRA
Risk Acceptance		-"Go big or go home" mindset -Forward Leaning Strategy

C. CONCLUSION

The military response during Superstorm Sandy shows that using mission command principles allows for an effective and timely response in a complex situation. The NYNG was particularly noteworthy in demonstrating the mission command principles. The Marine's less effective deployment shows that all the mission command principles must be present for the best performance.

The next chapter examines how mission command has affected the wildland firefighting response. The military has several unique advantages when applying mission commands, such as time devoted to training, professional education, and experience operating under mission command, culture, and an established hierarchy. However, when civilian agencies apply mission command, they do not necessarily share these conditions or to the same degree as the military.

THIS PAGE INTENTIONALLY LEFT BLANK

IV. WILDLAND FIRE: CAMP FIRE

This chapter examines how the NWCG incorporated mission command for wildland firefighters over the last 20 years. It uses the 2018 Camp Fire outside Paradise, California, as a case study because it is a large complex fire and the type of chaotic situation that mission command was designed to handle. This analysis of mission command focuses mainly on the action of the California Department of Forestry and Fire Protection (CAL FIRE) but also looks at how mission command affects CAL FIRE's interaction with supporting agencies. Mirroring the approach taken in the previous chapter, this chapter examines the seven mission command principles in detail. Next, it assesses the success of implementation in this case study, providing illustrative examples. Finally, the chapter draws conclusions from the trends identified in the case study.

On November 8, 2018, a faulty power line sparked the Camp Fire, one of the most catastrophic fires in U.S. history.¹⁷⁵ In the ensuing 17 days, over 150,000 acres would burn, destroying 18,804 structures and causing over \$16.5 billion in damages.¹⁷⁶ Tragically the fire would also cost the lives of 85 people, making it one of the deadliest fires in U.S. history. It would take over 5,000 firefighters to tame the fire and then weeks to sift through the remains for the victims.¹⁷⁷

The number of large fires in the Western U.S. has risen over the past few years due to climate change.¹⁷⁸ The NWCG incorporated mission command into wildland firefighting to help firefighters handle large-scale fires similar to the Camp Fire. Examining the Camp Fire should therefore shed light on whether mission command helps prepare wildland firefighters to handle future major fires or if adjustments to the mission command

¹⁷⁵ Hutch Brown, "The Camp Fire Tragedy of 2018 in California," *Fire Management Today* 78, no. 2 (August 2020): 11.

¹⁷⁶ California Department of Forestry and Fire Protection, "Camp Fire Incident," accessed November 24, 2021, <https://www.fire.ca.gov/incidents/2018/11/8/camp-fire/>; Brown, "The Camp Fire Tragedy of 2018 in California," 11.

¹⁷⁷ Frontline, "Fire in Paradise," directed by Jane McMullen, aired October 29, 2019, on PBS, <https://www.pbs.org/wgbh/frontline/film/fire-in-paradise/>.

¹⁷⁸ Brown, "The Camp Fire Tragedy of 2018 in California," 19.

model are needed. Despite the civilian deaths, the response to the Camp Fire can be considered a successful response due to no entrapments or firefighter deaths during the initial chaotic response. This chapter analyzes the Camp Fire response for each mission command principle and draws overall conclusions about the utility of mission command in this context.

A. COMPETENCE

Wildland firefighters are a mix of full-time, seasonal, volunteer, and inmate firefighters. Although firefighters have varying experience levels, the leadership is generally experienced, with the average lieutenant having around four to seven years of experience before being promoted.¹⁷⁹ Even for volunteer firefighters, 41% have over ten years of experience.¹⁸⁰ Specifically, CAL FIRE requires a minimum of two years of paid full-time or four years of part-time or volunteer time to qualify for a company-grade officer in fire service.¹⁸¹ Firefighters during the response were trained and knew how to operate on “leader’s intent.”¹⁸² Leaders’ experience was one of the factors credited with preventing death or worsening injuries to three firefighters caught in dangerous situations.¹⁸³ The leaders’ successful prevention of further injury and death is of particular note because this is the primary reason NWCG incorporated mission command in wildland firefighter training.

The negative side of knowledge and experience can also blind individuals to changing situations. This is expressed in the cliché, “Generals always fight the last war.” Leadership’s lack of understanding of the changing nature of wildfires in the west hindered

¹⁷⁹ Kiran Bharthapudi, “How to Become a Firefighter Lieutenant,” Career Trend, last modified September 26, 2017, <https://careertrend.com/how-to-become-a-firefighter-lieutenant-13640193.html>.

¹⁸⁰ Ben Evarts and Gary P Stein, “US Fire Department Profile – 2018” (Quincy, MA: National Fire Protection Association, February 2020), 4.

¹⁸¹ California Department of Forestry and Fire Protection, *Company Officer Certification Task Book* (Sacramento, CA: California Department of Forestry and Fire Protection, 2014), 19.

¹⁸² Dani Anguiano, *Fire in Paradise* (New York, NY: W.W. Norton & Company, 2020), 49.

¹⁸³ California Department of Forestry and Fire Protection, “Green Sheet: Burn Injuries Camp Incident” (Sacramento, CA: California Department of Forestry and Fire Protection, November 8, 2018), 12, <https://s3.documentcloud.org/documents/5628194/18-CA-BTU-016737-Camp-Green-Sheet.pdf>.

the response to the Camp Fire. Initially, the CAL FIRE leadership thought the fire was a nuisance fire because November was outside the typical fire season.¹⁸⁴ Not fully understanding the developing situation and how climate change affected fire behavior significantly hindered the early response.

B. SHARED UNDERSTANDING

Overall, during the Camp Fire, CAL FIRE had an excellent internal shared understanding as well as with supporting non-fire agencies. On the first day of the fire, two different fire crews ended up in a dangerous situation, with five firefighters sustaining injuries.¹⁸⁵ CAL FIRE's report on the incidents credits repeated briefings throughout the day as a significant factor in preventing the incidents from becoming life-threatening.¹⁸⁶ Additionally, CAL FIRE's shared understanding allowed it to quickly allocate resources from outside the area and coordinate the deployment of over 2,200 firefighters on the first day.¹⁸⁷ CAL FIRE also communicated well with the Paradise Emergency Operation Center (EOC) and local law enforcement, who assisted with rescue and evacuation efforts.¹⁸⁸ CAL FIRE's ability to communicate internally and externally created a shared understanding that assisted the response.

However, CAL FIRE took a while to establish a solid shared understanding and was slow to incorporate information from outside the agency, delaying the evacuation efforts. Early on the first day of the fire, 911 in Paradise received many calls from those concerned about the fire.¹⁸⁹ The dispatch communicated well with CAL FIRE and initially told citizens that the fire was far away, near the town of Concow.¹⁹⁰ However, this information was incorrect. CAL FIRE, at the time, did not understand how quickly the fire

¹⁸⁴ Frontline, "Fire in Paradise."

¹⁸⁵ California Department of Forestry and Fire Protection, "Green Sheet: Burn Injuries Camp Incident," 10–11.

¹⁸⁶ California Department of Forestry and Fire Protection, 12.

¹⁸⁷ Anguiano, *Fire in Paradise*, 84.

¹⁸⁸ Anguiano, 67–71.

¹⁸⁹ Frontline, "Fire in Paradise."

¹⁹⁰ Frontline.

was spreading due to embers and spot fires.¹⁹¹ The information flow was mainly from CAL FIRE to the EOC. CAL FIRE could not incorporate the information the dispatchers received from callers to increase its understanding of the situation. This failure delayed efforts to begin the evacuation of Paradise.

C. COMMANDER'S INTENT

CAL FIRE showed good use of the commander's intent ("leader's intent" in fire service terminology) throughout the response. CAL FIRE used intent to quickly and effectively allocate resources outside the area.¹⁹² In CAL FIRE's student manual for the course Command 1C, leaders are instructed to answer critical questions for subordinates like "Why are we here?" and "What is expected of us?" within the context of the standing incident priorities of (1) life, (2) property, (3) natural resources and (4) management goals for the area.¹⁹³ The incident commander's use of intent in context is observed over the radio when the incident commander directed, "We're just working on evacuations. That is our only priority right now. There is no fire defense going on."¹⁹⁴ This order revised the intent and answered the why and what of the operation for the firefighters, focusing on saving lives and ignoring everything else for the time being. It did this in the context of the four standing priorities used by CAL FIRE. Thus, CAL FIRE's ability to use the commander's intent allowed it to quickly shift from fire suppression to focus only on rescue and evacuation as the situation deteriorated quickly.¹⁹⁵ Using intent with mission orders allowed CAL FIRE to effectively transmit the new goals over the radio. This enabled firefighters to shift their focus and improvise responses and rescue throughout the area saving numerous lives. CAL FIRE's ability to use the commander's intent dramatically enhanced the response's effectiveness in a catastrophic situation.

¹⁹¹ Anguiano, *Fire in Paradise*, 52.

¹⁹² Anguiano, 84.

¹⁹³ California Department of Forestry and Fire Protection, *Command 1C: WUI Command Operations for the Company Officer: Student Manual* (Sacramento, CA: California Department of Forestry and Fire Protection, 2013), 45.

¹⁹⁴ Anguiano, *Fire in Paradise*, 88.

¹⁹⁵ Anguiano, 18.

D. MISSION ORDERS

CAL FIRE was able to use mission orders effectively to direct forces and shift objectives quickly during the initial stage of the response. An illustrative example is the direction given to bulldozer operator Joe Kennedy via cellphone, “Dozer 2342, out of unit response, vegetation fire to Butte.”¹⁹⁶ Kennedy drove the semi-truck 75 miles to Paradise with his dozer based on this direction.¹⁹⁷ Using simple direct orders, CAL FIRE coordinated the efforts of 2,289 firefighters, 303 engines, 11 helicopters, and 24 bulldozers in a manner that limited the loss of life on the first day.¹⁹⁸ In another example, Chief Shawn Hawkins demonstrated effective orders over the radio. As the Air Attack Base battalion chief, he effectively directed air assets conducting airdrops and sent a CHP helicopter to rescue stranded people.¹⁹⁹ Another demonstration of effective succinct orders was when, at 9:43 am, the command came over the radio, “We’re just working on evacuations. That is our only priority right now. There is no fire defense going on.”²⁰⁰ This order quickly shifted the firefighters’ mindset and directed them towards the immediate need to save lives and prevent further death. In summary, proper use of mission orders and the commander’s intent was a significant element in CAL FIRE’s response to the Camp Fire.

E. MUTUAL TRUST

There was mutual trust among many of the agencies responding to the Camp Fire, which assisted in their ability to improvise responses to situations. CAL FIRE had good communication up and down the chain of command during the response. Mutual trust facilitates communication, and subordinates, instead of hiding bad news, are not afraid to engage senior leaders when necessary. This can be seen in CAL FIRE when Ken Pimlott, the head of CAL FIRE at the time, was notified early at 6:30 am of the fire.²⁰¹ Further

¹⁹⁶ Anguiano, 71.

¹⁹⁷ Anguiano, 72.

¹⁹⁸ Anguiano, 49,84.

¹⁹⁹ Anguiano, 85–86.

²⁰⁰ Anguiano, 88.

²⁰¹ Anguiano, 47.

evidence of mutual trust and respect was expressed by a firefighter who stated, “Everything my strike team leader passed on to me we had a conversation on.”²⁰² This statement attests to leadership’s willingness to build trust and shared understanding by engaging in dialogue even at the lowest levels. Mutual trust was a critical component that enabled CAL FIRE to use the commander’s intent and mission orders to direct the response.

Mutual trust, however, must not lead to blind trust. Mutual trust allows for the challenging of ideas and the collaborative development of the situation. The 911 operators on November 8 had blind trust in CAL FIRE when they reassured callers that the fire was far from Paradise and not a concern.²⁰³ Unfortunately, the information received from callers was not incorporated into the responders’ shared understanding to build a more accurate picture of the situation. The result was a delay in the evacuation, potentially costing lives and degrading the response.

F. DISCIPLINED INITIATIVE

Responders to the Camp Fire showed disciplined initiative based on the commander’s intent at all levels during the response. Firefighters throughout the area had to improvise to meet the intent of evacuation and saving lives. One notable event was the firefighters improvised shelter-in-place at the Optimo Lounge, saving more than 100 civilians.²⁰⁴ Another example is the firefighter Joe Kennedy who had little guidance due to a lack of radio communication. Operating off of intent, he used his bulldozer in a non-traditional manner to move vehicles off of roads and open up evacuation routes.²⁰⁵ Many other improvised responses saved civilian lives while preventing firefighter entrapment. The success of these actions was due to disciplined initiative guided by the commander’s intent.

²⁰² California Department of Forestry and Fire Protection, “Green Sheet: Burn Injuries Camp Incident,” 12.

²⁰³ Frontline, “Fire in Paradise.”

²⁰⁴ Anguiano, *Fire in Paradise*, 104–5.

²⁰⁵ Anguiano, 84–87.

G. RISK ACCEPTANCE

CAL FIRE's actions at the Camp Fire demonstrate risk acceptance in a homeland security environment. As previously noted, firefighters had to improvise responses to save lives and evacuate civilians. Doing so requires them to judge the situation and accept a certain level of risk to achieve the intent. Firefighter Kennedy's decision to use his bulldozer to clear vehicles to open routes and free trapped people with fire on each side of the road is an excellent example of risk acceptance that resulted in success.²⁰⁶ Another example of risk acceptance was when firefighters tried to save the Depot. The firefighters there attempted to save the local iconic place, which they knew was risky.²⁰⁷ When it became clear they could not save the Depot, they reassessed and retreated to a safer location.²⁰⁸ Risk acceptance is not the sunk cost fallacy, and the firefighter's willingness to attempt difficult things and willingness to reassess is part of good risk acceptance. Properly assessing risk was vital in firefighters not getting entrapped or losing their lives in the fire. It also allowed for several improvised rescues and shelters in place that saved numerous lives and contributed to limiting the devastation of the fire.

H. CONCLUSION

Table 3 summarizes the findings of this chapter. Due to the rapid spread of the fire, even a perfect application of mission command would not have prevented all deaths. However, most notably, the inability to create an accurate shared understanding resulted in a delayed evacuation that likely added to the catastrophe of the Camp Fire. That said, CAL FIRE's application of mission command likely reduced the severity of the damage and positively contributed to the response. Significantly, despite this fire's rapid and unpredictable spread, no firefighters were entrapped or lost their lives. Given that avoiding entrapment was one of the main reasons for adopting mission command, one can say that mission command did what it was supposed to do for wildland fires. However, fire's application of mission command was not perfect, and there is room for improvement in

²⁰⁶ Anguiano, 56.

²⁰⁷ Anguiano, 122.

²⁰⁸ Anguiano, 124.

several areas, chiefly building shared understanding. Technology such as drones and artificial intelligence (AI) will likely assist in improving future responses. The next question, can mission command be used effectively in a law enforcement-centric situation, is addressed in the next chapter.

Table 3. Camp Fire Observations

Principle	Negative Observations	Positive Observations
Competence	-Did not understand the speed of fire spread -New alert System not used	-Effective response to injured firefighters -Trained on leader's Intent
Shared Understanding	-Slow to understand the spread of fire and the threat to Paradise	-Safety Briefing limits firefighter injuries -Quick allocation of outside-of-zone assets -Good communication with non-fire agencies
Commander's Intent		-Use of Leader's (commander's) Intent -Intent allowed for the quick dispatch of units outside the area -Able to shift priority to evacuation quickly -Improvised responses
Mission Orders		-Effective tasking out resources from outside area -Effective tasking to air assets -Quick shift of Objective
Mutual Trust	-Calls to 911 assured people fire was far away based on CAL FIRE reports	-Cross-communication among Firefighters -Effective Direction of Assets
Disciplined Initiative		-Improvised Rescues -Improvised Shelter In Place -No firefighter entrapments
Risk Acceptance		-Numerous improvised rescues -Effectively retreated from fire with no firefighter deaths

V. LAW ENFORCEMENT CENTRIC RESPONSE

This chapter uses the 1 October 2017 shooting in Las Vegas, NV, to examine mission command in a law enforcement centric response (hereafter referred to as 1 October). The analysis of mission command examines the Las Vegas Metropolitan Police Department (LVMPD) and its interaction with supporting agencies, chiefly Clark County Fire Department (CCFD), which was the other major agency involved. It investigates the responders' application of Multi-Assault Counter-Terrorism Action Capabilities (MACTAC) in dealing with the incident. MACTAC was developed in 2009 based on U.S. military doctrine and tactics to counter a complex coordinated attack, as seen in the Mumbai attack in 2008. The 1 October attack involved a lone shooter who committed suicide before engagement with police and was not a complex coordinated attack. This means the 1 October response cannot fully validate MACTAC. However, the response to the mass casualties and rumors of other attacks still allow observation of MACTAC as a strategy. Thus, 1 October still provides insight into mission command in the HSE.

The 1 October shooting was the worst active shooter incident in U.S. history, with 58 victims killed and over 850 wounded.²⁰⁹ The lone assailant fired from the 32nd floor of the Mandalay Bay Casino into an open-air music festival attended by over 22,000 people.²¹⁰ LVMPD led the response, assisted by numerous agencies in Clark County, NV. CCFD was the next largest contingent. The MACTAC procedures governed LVMPD response. LVMPD adopted MACTAC in 2009 and integrated it into training for all officers.²¹¹ LVMPD also gave this training to fire agencies and other law enforcement agencies in the area.²¹²

²⁰⁹ Las Vegas Metropolitan Police Department, "1 October After Action Review" (Las Vegas, NV: Las Vegas Metropolitan Police Department, June 6, 2019), 4.

²¹⁰ Las Vegas Metropolitan Police Department, 4.

²¹¹ Federal Emergency Management Agency, "1 October After-Action Report" (Washington, D.C., August 24, 2018), 4.

²¹² Federal Emergency Management Agency, 4.

Overall, the 1 October shooting response was a tentative success for MACTAC and mission command in HSE. Despite the strengths in the response, there were also areas for improvement. This analysis is also limited because 1 October was not a complex coordinated attack as MACTAC was designed to handle. However, the mass casualty incident (MCI) response provides valuable insights into mission command applicability to the HSE.

A. COMPETENCE

LVMPD and supporting agencies' training and exercise in MACTAC gave them sufficient competence greatly assisting the response. Prior interagency training allowed responders to form integrated no-notice Rescue Task Force (RTF) teams with law enforcement and fire personnel from multiple agencies.²¹³ The effectiveness of the RTFs was due to the joint training and exercises that LVMPD coordinates and standardizes with other agencies in the county. Additionally, LVMPD planned for and successfully handled numerous distraction calls.²¹⁴ A critical component of all large-scale responses is establishing an operation center to direct the response. Setting up an operation center can be difficult and time-consuming. The LVMPD personnel successfully established the Department Operation Center (DOC) to manage the incident within one hour of the gunfire ceasing.²¹⁵ The rapid establishment of an operation center testifies to the preparedness of the LVMPD leadership. The after-action reports did indicate some negative feedback. Some responders said they needed more training to integrate with special weapons and tactics (SWAT) teams more effectively.²¹⁶ Also, there were issues noted with radio discipline.²¹⁷ Despite these minor issues, the response showed a proficient understanding of MACTAC and its application.

²¹³ Federal Emergency Management Agency, 23.

²¹⁴ Federal Emergency Management Agency, 25.

²¹⁵ Las Vegas Metropolitan Police Department, "1 October After Action Review," 47.

²¹⁶ Las Vegas Metropolitan Police Department, 107.

²¹⁷ Las Vegas Metropolitan Police Department, 61,107.

B. SHARED UNDERSTANDING

The 1 October response involved effective coordination among several agencies and operations centers. The onsite Incident Command Post (ICP), LVMPD DOC, and Clark County Office of Emergency Management Multi-agency Coordination Center (MACC) had a solid shared understanding that enabled an effective response across the county. Both the DOC and MACC were operating within one hour of being notified of the incident and began establishing lines of communication.²¹⁸ The ICP, DOC, and MACC had good information flow with hourly briefings, which were enhanced by their strong prior relationships.²¹⁹ FEMA's report on the incident notes that the communication flow between the DOC and MACC was highly effective despite LVMPD's inability to send a liaison officer (LNO) to the MACC during the initial response.²²⁰ Multiple agency LNOs were at the DOC, ICP, and staging area.²²¹ LVMPD's review notes that the LNOs were critical for the flow of information and teams' quick assignment and response.²²² LNOs, regular briefings, and fluid communication allowed the responders to create a shared understanding that enabled an effective response by the leadership at the operations level.

However, there were several issues with effectively creating a shared understanding to enable a coordinated response at the lower levels. These issues were due to the number of personnel responding and the lack of radio discipline. For example, one of the channels became clogged with the staging area roll call preventing the transmission of other information on the main channel and forcing the use of multiple other channels.²²³ Additionally, within less than an hour, officers activated their emergency radio button 151 times, which gave them 10 seconds of radio priority and had to be cleared manually by dispatch.²²⁴ The unnecessary use of the emergency button significantly impacted the flow

²¹⁸ Las Vegas Metropolitan Police Department, 47,51.

²¹⁹ Las Vegas Metropolitan Police Department, 40,51.

²²⁰ Federal Emergency Management Agency, "1 October After-Action Report," 39.

²²¹ Las Vegas Metropolitan Police Department, "1 October After Action Review," 36.

²²² Las Vegas Metropolitan Police Department, 36–37.

²²³ Las Vegas Metropolitan Police Department, 40.

²²⁴ Las Vegas Metropolitan Police Department, 61.

of information. There were also several noted miscommunications during the response that inhibited effectiveness. For example, a CCFD operation chief dismissed several Henderson Fire Department personnel needed for RTFs, leaving the RTFs understaffed while clearing Mandalay Bay.²²⁵ The FEMA report also notes that although using seven different radio channels allowed for more communication, many responders were also confused about which channel they should be on.²²⁶ These issues and several others reduced the shared understanding at the tactical level, where it is needed to respond rapidly under mission command.

During the 1 October response, LVMPD created enough shared understanding to mitigate the worst of the attack. However, it noted several areas of improvement in organization and communication that could increase the shared understanding for officers down to the tactical level for the next major incident. The solutions noted are not all training and procedural. For example, LVMPD notes that a digital means of tracking units at the staging area would increase the visibility of resources available, reduce radio traffic, and aid in effective decision-making.²²⁷ Given the chaos of an expected complex coordinated attack, systems that aid shared understanding might provide the most significant future benefit for MACTAC and other complex responses.

C. COMMANDER’S INTENT

The MACTAC training provides a good commander’s intent allowing for an effective response to the 1 October incident. The MACTAC training lays out the intent in the *MACTAC Operation Manual*, which gives the first priority for officers as “moving to neutralize the immediate threat to save lives.”²²⁸ It further outlines secondary priorities of “rescue downed officers, contain the scene or force protection for fire or medical response

²²⁵ Federal Emergency Management Agency, “1 October After-Action Report,” 28.

²²⁶ Federal Emergency Management Agency, 43.

²²⁷ Las Vegas Metropolitan Police Department, “1 October After Action Review,” 40.

²²⁸ Joel M Justice, “Active Shooters: Is Law Enforcement Ready for a Mumbai Style Attack?” (master’s thesis, Monterey, California, Naval Postgraduate School, 2013), 50.

teams.”²²⁹ Officers operating on this intent quickly identified and closed in on the Mandalay Bay, where the shooter was located.²³⁰ Another example of using commander’s intent to make a decision was by the officers outside the shooter’s door. Due to radio interference inside the building, the collection of officers outside the shooter’s door had trouble communicating with the SWAT commander.²³¹ However, the team could hear reports of other shooters in the area; although these reports turned out to be false, this gave the officers the impression they needed to act fast.²³² This pressure, combined with the intent to “neutralize the immediate threat,” prompted the officers to independently decide to breach the shooter’s room at 11:20 pm.²³³ This decision is an excellent example of officers making a decision based on intent and the best information available. The soundness of this decision is more apparent when compared with the Columbine Massacre, where officers, based on different intent, waited for SWAT while the attack continued unhindered in the high school.²³⁴ The MACTAC training provided the responders of 1 October a practical intent that allowed them to act decisively and to effectively “switch from crime fighter to war fighter back to crime fighter.”²³⁵

D. MISSION ORDERS

Joint MACTAC training facilitated quick communication within law enforcement by giving them a common language for short mission orders, aiding the response. An excellent example of how MACTAC doctrine does this is the concept of “in-the-box” and “stay-at-home” squads. The “in-the-box” squads deploy to reinforce the area command where the attack occurs.²³⁶ The “stay-at-home” squads stay in their home command and

²²⁹ Justice, 50.

²³⁰ Tim Reid, “How the Las Vegas Shooter Foiled a Well-Drilled Counter-Terrorism Plan,” Reuters, last modified October 5, 2017, <https://www.reuters.com/article/us-lasvegas-shooting-plan/how-the-las-vegas-shooter-foiled-a-well-drilled-counter-terrorism-plan-idUSKBN1CA29N>.

²³¹ Las Vegas Metropolitan Police Department, “1 October After Action Review,” 29.

²³² Las Vegas Metropolitan Police Department, 29.

²³³ Las Vegas Metropolitan Police Department, 29.

²³⁴ Justice, “Active Shooters: Is Law Enforcement Ready for a Mumbai Style Attack?,” 38.

²³⁵ Justice, 63.

²³⁶ Federal Emergency Management Agency, “1 October After-Action Report,” 23.

maintain normal operations.²³⁷ The area commands assign these squads at the start of every shift.²³⁸ This terminology allowed the incident commander to quickly call-in reinforcements over the radio while preventing overconvergence.²³⁹ Thus, on 1 October, the LVMPD captain in charge of the Convention Center Area Command (CCAC), the closest area command, could quickly request the units he would need over the radio while en route.²⁴⁰ Thus, the MACTAC defines terminology allowing quick tasking of units during an incident. Such terms that speed communication align with the mission command principle of mission orders.

Furthermore, the CCAC captain used concise orders to designate the ICP and staging area over the radio.²⁴¹ The captain's actions and decisions were in line with ICS and LVMPD training.²⁴² First responders' knowledge and familiarity with this training enabled shared understanding that allowed the captain to effectively use mission orders over the radio to guide actions on the ground before his arrival. Mission orders allow for effective direction, as demonstrated by the CCAC captain, and allow subordinates to respond quickly.

E. MUTUAL TRUST

The familiarity exhibited by the responders of 1 October demonstrates the success of the Clark County emergency community in building mutual trust among its members. The LVMPD notes that "preexisting relationships and training across agencies proved extremely valuable."²⁴³ Mutual trust at the tactical level is apparent in the ability and willingness of the responders to form RTFs on the spot from several different agencies and

²³⁷ Las Vegas Metropolitan Police Department, "1 October After Action Review," 23.

²³⁸ Las Vegas Metropolitan Police Department, 23.

²³⁹ Las Vegas Metropolitan Police Department, 35.

²⁴⁰ Las Vegas Metropolitan Police Department, 35.

²⁴¹ Las Vegas Metropolitan Police Department, 35; Federal Emergency Management Agency, "1 October After-Action Report," 30.

²⁴² Federal Emergency Management Agency, "1 October After-Action Report," 30; Las Vegas Metropolitan Police Department, "1 October After Action Review," 35.

²⁴³ Las Vegas Metropolitan Police Department, "1 October After Action Review," 40.

then enter a potentially high-risk situation.²⁴⁴ The members of each RTF may not have known each other before the incident but must trust the standardized training they received to operate effectively. At the operational level, one can see the value of these relationships in the fluid communication between the DOC and the MACC. Due to the demands of the response, LVMPD was unable to send an LNO to the MACC during the first operational period.²⁴⁵ Despite this, the FEMA AAR notes the success of the CCFD Emergency Manager (EM) and LVMPD EM in maintaining constant contact and hosting hourly video teleconferences to maintain shared understanding.²⁴⁶ Years of conducting joint training, exercises, and real-world events had given the MACC and DOC personnel the relationships and experience to maintain information exchange even in less than ideal circumstances. LVMPD notes that establishing these relationships over the years was critical to the success of the response and a key takeaway from the incident.²⁴⁷ Thus the mutual trust among Clark County response agencies is an excellent example of why mutual trust is a critical component of successful mission command.

F. DISCIPLINED INITIATIVE

The disciplined initiative derived from the commander's intent added to the effectiveness of the response. A notable example occurred at the incident staging area. One of the critical roles during a response is the staging manager. Initially, the response staging area had no one assigned to manage it.²⁴⁸ An LVMPD lieutenant noticed this and, based on a shared understanding of the situation, appointed himself the staging manager and began organizing the site and tracking resources.²⁴⁹ Furthermore, he sent a representative to briefings to establish information flow and shared understanding.²⁵⁰ The officer's

²⁴⁴ Las Vegas Metropolitan Police Department, 90.

²⁴⁵ Federal Emergency Management Agency, "1 October After-Action Report," 40.

²⁴⁶ Federal Emergency Management Agency, 40.

²⁴⁷ Las Vegas Metropolitan Police Department, "1 October After Action Review," 86.

²⁴⁸ Las Vegas Metropolitan Police Department, 38.

²⁴⁹ Las Vegas Metropolitan Police Department, 38.

²⁵⁰ Las Vegas Metropolitan Police Department, 38.

willingness to jump into an overlooked position allowed LVMPD to handle the situation more effectively.

Another excellent example of disciplined initiative during the response was the decision to breach the shooter's room. As discussed, the officers outside the shooter's room had communication issues with the SWAT commander.²⁵¹ Based on the MACTAC intent and the understanding at the time that there were attackers elsewhere on the strip, they acted decisively and breached the room.²⁵² Although the information on other attackers would prove false, it was the best available information and a reasonable assumption given the situation. Based on the intent and this information, the officers' decision advanced the response's objectives. Thus the officers' actions show good disciplined initiative in line with the tenets of mission command.

Responders taking independent initiative inconsistent with the commander's intent and not based on sound, shared understanding have hindered the response to many large incidents, and 1 October was no different. The self-dispatching of many off-duty officers is a recurring issue in large incidents; this occurred on 1 October. LVMPD does not know the number of personnel who responded to 1 October. LVMPD only logged 219 officers officially responding but estimated over 1,500 responded.²⁵³ The officers' self-deployments would cause planning issues for the DOC as they tried to staff future operational periods.²⁵⁴ Additionally, during the operation, strike teams in the staging areas would hear requests over the radio for support and self-deploy without the staging manager's knowledge.²⁵⁵ This resulted in multiple teams responding and redundant efforts.

Furthermore, some responders unnecessarily cast aside procedures in the desire to respond quickly. Of note, some RTFs did not follow the shift and sort process for

²⁵¹ Las Vegas Metropolitan Police Department, 29.

²⁵² Las Vegas Metropolitan Police Department, 29.

²⁵³ Las Vegas Metropolitan Police Department, 39.

²⁵⁴ Las Vegas Metropolitan Police Department, 55.

²⁵⁵ Las Vegas Metropolitan Police Department, 39.

identifying victims to be extracted (orange tag) or left in place (black tag).²⁵⁶ The result was redundant efforts. Maintaining order and coordination in a chaotic environment requires aligning initiative with the other mission command principles.

G. RISK ACCEPTANCE

Due to the short time between when the shooter started firing and when the shooter committed suicide, there was little opportunity to accept operational risk. The one notable incident of risk acceptance was when responders chose to breach the shooter's door.²⁵⁷ The team that breached the shooter's door acted on the MACTAC intent and the best available understanding of the situation at the time.²⁵⁸ They decided to risk breaching to achieve the objective of immediately neutralizing the shooter to enable an effective response to possible other attackers. Their decision to accept such risk was in line with the principles of mission command.

H. CONCLUSION

Table 4 summarizes the findings of this chapter. The main strengths of the response were the ability to operate from the intent and mutual trust established by training and working together. The main challenges stemmed from limited shared understanding resulting in initiatives that did not align with the overall needs of the response. A fundamental issue with incidents like the 1 October shooting is that they are rare and outside typical police operations. Given the other operational demands on law enforcement, agencies have limited time to devote to training and exercises. Furthermore, given that the attack lasted only 10 minutes and was not a complex coordinated attack, this analysis cannot make definitive conclusions about the effectiveness of MACTAC or mission command by law enforcement in response to a complex coordinated attack. However, the response does suggest that mission command can be effective in such situations, and

²⁵⁶ Federal Emergency Management Agency, "1 October After-Action Report," 29–30.

²⁵⁷ Las Vegas Metropolitan Police Department, "1 October After Action Review," 29.

²⁵⁸ Las Vegas Metropolitan Police Department, 29.

focusing on improving the principles of mission command in LVMPD will make them more effective in future large-scale responses.

Table 4. 1 October Observations

Principle	Negative Observations	Positive Observations
Competence	-Certain areas need more training, e.g., ICS, Patrol SWAT integration -Communication issues due to lack of training	-MACTAC Training for Officers, Fire, and Private Security -Prepared for distraction calls -DOC stood up quickly and was effective
Shared Understanding	-Communication Channels clogged -Miscommunications and understanding at the incident site -Different Terminologies used caused confusion	-Established and effectively used LNOs -Good integration and strong relationships between response agencies -Good communication among IC, DOC, MACC
Commander's Intent		“-Good understanding of MACTAC roles facilitated direction of response -Prior training enabled response with little direction
Mission Orders		-Use of MACTAC terminology such as “in-the-box” squads enabled quick orders ‘Provided guidance to prevent over convergence
Mutual Trust		-Strong prior relationships due to events and exercises -Fluid communication among DOC, MACC, and UC -Integration with among agencies

Principle	Negative Observations	Positive Observations
Disciplined Initiative	-Self-dispatching caused confusion -Some responders ignored procedures, causing redundant efforts -Many processes and policies not followed, e.g., ICS, staging, shift, and sort	-Breaching of shooters room -Self-appointment of critical but unassigned roles -Several improvised solutions without direction
Risk Acceptance		-Decision to breach the shooter's room

The next chapter examines the overall trends across the three case studies and the application of mission command in the HSE. From there, it draws some overall conclusions about mission command currently in HSE. Finally, it examines whether it is worth developing a more formal mission command doctrine of HSE or maintaining the folk doctrine arising in the HSE community.

THIS PAGE INTENTIONALLY LEFT BLANK

VI. ASSESSMENT OF MISSION COMMAND IN HOMELAND SECURITY ENTERPRISE

This chapter summarizes the overall trends from the case studies to provide a general assessment of the applicability of mission command in the HSE. First, it looks at each mission command principle and the case studies overall trends to assess lessons learned. Second, it examines the outcomes and trends in the HSE over the last few decades to show the linkage of mission command to improvements in the HSE. Third, it frames mission command in a decision cycle for HSE. Finally, it provides an overall assessment of mission command in the HSE. This chapter answers the first research question: To what degree has mission command's use in the HSE affected performance during an agency's response to incidents?

A. TRENDS

This section summarizes the key observations from all the case studies. It identifies areas for improvement and strengths to capitalize on to refine the use of mission command in future incidents. Table 5 summarizes the overall trends observed in the preceding case studies.

Table 5. Summary of Analysis

Principle	Areas for Improvement	Strength to Capitalize On
Competence	-Limited training time: -Limited understanding of procedures -Communication issues	-Tactical Level Proficiency
Shared Understanding	-Time to build a common operating picture	-LNOs are highly effective for inter-agency shared understanding -Good unity of effort based on prior relationships

Commander's Intent		-Generally good at conveying intent -Can be pre-scripted
Mission Orders	-Flexible plain language tasks	-Enable quick tasking, whether verbal or written -If special terms are used, need to be incorporated into the training
Mutual Trust	-Must not become one-way blind trust	-Relationships built through prior training and exercises
Disciplined Initiative	-Self-dispatching -Not the following process	-Improvised solutions based on intent
Risk Acceptance		-Adopt forward-leaning strategies

1. Competence

Across the incidents, the organizations examined showed high tactical proficiency. The organizations could reliably perform unit-specific or generalized responses. The responders on 1 October showed a good understanding of MACTAC. The response to 1 October at the operational level was not as smooth as at the tactical level, resulting in confusion and redundant efforts. Discipline initiative at the tactical level could mitigate some of the issues. Likewise, the members of CAL FIRE during the Camp Fire showed a good understanding of firefighting and mission command. The responders to the Camp Fire showed less proficiency at the operational level, resulting in confusion and some delayed response. The NYNG was the only organization examined that showed high proficiency at both the tactical and operational levels. The NYNG's success here is mainly attributable to the fact they operate at the State level and thus have a high level of experience at the operational and tactical levels.

The agencies' main issues with competence derived from limited training and experience with large-scale incidents and associated processes, e.g., ICS and DSC. The

agencies observed showed less proficiency at the operations level during large-scale incidents. The main contributing factors were limited time and resources to train for infrequent incidents.

2. Shared Understanding

Most of the agencies examined in this analysis had prior relationships with the other responding agencies allowing them to communicate effectively and build shared understanding. The agencies built these relationships over time through training, exercises, and prior incidents that required coordination. In particular, the NYNG's ongoing Empire Shield operation with local law enforcement in New York City enhanced their ability to communicate effectively and quickly. Similarly, the coordination between the response agencies in Clark County, Nevada, was built and maintained by coordinating large-scale events throughout the year as part of the Las Vegas tourist economy. LVMPD further enhanced this by leading training and exercises for MACTAC response. The Camp Fire study also showed the effect of strong relationships established and built upon in previous fire seasons.

The case studies also affirmed the usefulness of LNOs in creating effective, shared understanding. LNOs during Sandy allowed for the efficient flow of information critical for building shared understanding. During 1 October, LNOs were vital in developing situational understanding and allocating resources. LVMPD needed LNOs with other agencies and different elements of the IC structure, such as between the staging area and the ICP. Currently, communications, tracking, and AI have not replaced having knowledgeable LNOs to facilitate understanding and comprehension among response elements.

Without prior operating experience and LNOs, misunderstandings arise, as seen in Super Storm Sandy's initial USMC response. A major area for improvement is the speed of building a common operating picture. The Camp Fire and 1 October incidents happened suddenly; the responders were delayed in developing a common operating picture due to slow information and misinformation. These types of incidents happen faster than any human could understand the situation. Thus, shared understanding is the area of

improvement ripest for a technological solution supported by AI. The military is already working on a Joint All Domain Command and Control system incorporating AI.²⁵⁹ The HSE will likely adopt this or similar technology to improve incident response.

3. Commander's Intent

All the incidents studied displayed the value of having a good commander's intent and its usefulness in driving response actions. The Superstorm Sandy case highlighted the need for a thought-out commander's intent. As demonstrated by the USMC and President Obama's intent during the Super Storm Sandy response, poorly formed intent can lead to miscommunication and conflict among those responding. As seen during Sandy and shown by the NYNG's ability to work well with locals, well-developed intent can allow flexibility during the response.

The case studies also showed how a commander could improvise intent in changing circumstances, as seen in the Camp Fire, or have it pre-scripted, as seen in MACTAC. If an agency can anticipate an incident, having the intent pre-scripted and delivered in training makes sense. A pre-scripted intent allows an agency to provide responders with a more detailed intent. The commander can then adjust this intent quickly during an incident. The HSE members' use of the commander's intent is a best practice that the HSE should expand beyond first responders.

Commander's intent is the lynchpin of mission command and, as seen in the case studies, a must for flexibility and responsiveness during a crisis. However, a commander's intent alone is insufficient for effective mission command. Intent still needs the support of the other mission command principles. ADP 6-0 states that intent with the other principles allows subordinates to "develop the situation, adapt, and act decisively in uncertain conditions."²⁶⁰ The case studies highlighted in this thesis demonstrate subordinates are effectively doing that.

²⁵⁹ John Keller, "ASTARTE Project to Create a Strong Common Operating Picture Using Artificial Intelligence (AI) Algorithms," Military Aerospace, last modified April 29, 2020, <https://www.militaryaerospace.com/computers/article/14174896/common-operating-picture-artificial-intelligence-ai-algorithms>.

²⁶⁰ Department of the Army, *Mission Command*, 1-10.

4. Mission Order

Using mission orders allowed the agencies to delegate tasks quickly and rapidly to adjust objectives as the situation dictated. Communicating quickly during a rapidly evolving incident is critical for success. As seen in the Sandy response, commanders need to write mission orders to communicate what needs to be done, facilitate flexibility in how it is done, and promote adaptation to achieve the commander's intent.

The Camp Fire case study highlighted the ability of mission orders to allow for quick resource allocation and shifting objectives. During the Camp Fire response, CAL FIRE used mission orders to quickly allocate resources from outside the area to the response. In addition, CAL FIRE aviation used mission orders to direct aviation assets to where they were needed while in the air without detailed instructions. The Camp Fire response showed the value of mission orders in a large-scale, rapidly involving situation.

Sometimes mission orders involve the use of specialized phrasing or terminology. For example, LVMPD's use of "in-the-box" squads is an excellent example of the use of a doctrinal term. This is because the term is still in plain language instead of agency codes, and LVMPD defined it for supporting agencies in training. The ability to define and share such terms across agencies significantly improves responses. Mission orders are a critical element that the HSE will need to effectively direct operations in a chaotic environment and a skill necessary for all members of the HSE.

5. Mutual Trust

Most of the agencies observed regularly interacted with each other and built trusting relationships. The one notable exception was the USMC which does not regularly respond to domestic emergencies. The NYNG had extensive experience with local agencies compared to the USMC. Importantly, through operation Empire Shield the NYNG had developed experience and relationships over several years with many of the agencies, they would support during Sandy. The NYNG's experience shows the value of building long-term relationships.

Inter-agency training and exercises were vital to developing mutual trust between the agencies. Training and exercise are particularly important for agencies that do not

frequently interact outside rare large-scale events. The effect of training was seen on 1 October, when inter-agency MACTAC training and exercises were critical to allowing members of different agencies to form teams and respond. Such events are necessary to build competence and shared understanding as well. Given budgets and operational constraints, these events should occur as often as necessary and feasible.

Additionally, HSE leaders must ensure trust enhances shared understanding and creates a common operating picture. Too much trust can result in information flowing only in one direction, as seen initially in the Camp Fire, leading to an incorrect shared understanding. The Army DSCA doctrine states, “Effective inter-organizational coordination depends on collaboration, relationships, and training before, during, and after incidents.”²⁶¹ Mutual trust is also necessary for agencies to conduct meaningful after-action reports or reviews that allow them to improve.

6. Disciplined Initiative

In the cases examined, the responders effectively used the commander’s intent to guide their actions toward the common objective. Disciplined Initiative combined with the other mission command principles allows subordinates to focus only on actions that achieve the desired outcome. For example, the NYNG dispatched C-130s to acquire fuel nozzles needed to fulfill an assigned mission. A more tactical example of the disciplined initiative was displayed at the Camp Fire when a firefighter used his bulldozer to clear disabled vehicles to form evacuation routes instead of creating fire breaks. During the 1 October shooting, an officer taking the initiative to assume a needed but unassigned role as staging area manager also shows how disciplined initiative can improve the functioning of an operation.

One perennial negative is that initiative and desire to be part of the action and support their comrades can often lead responders to self-dispatch. When responders self-dispatch, the result is confusion and actions that do not follow the correct procedures. Such actions often lead to less efficient responses and a lack of personnel accountability. An

²⁶¹ Department of the Army, *Defense Support of Civil Authorities*, ADP 3–28 (Washington, DC: Department of the Army, 2019), 4–30.

example was the 1 October response, where LVMPD could not account for all the officers who responded to the incident. A better understanding of mission command and its principles could help agencies better inform their members about how to respond in a disciplined way and give a reason not to self-dispatch, thus reducing the desire to go rogue.

7. Risk Acceptance

The agencies studied all adopted a forward-leaning strategy that required the assumption of operational and tactical level risks. The cases show that a forward-leaning mindset is critical to successfully getting ahead of an incident. During Sandy, the DOD's decision to preposition ships before landfall is an excellent example of forward-leaning. As the HSE has evolved since the start of the century, the enterprise accepts more risk and is more forward-leaning in responses than in previous incidents.

The shift toward leaning forward is dramatically apparent when comparing the Columbine Shooting response, where officers waited for SWAT, to MACTAC on 1 October, where they immediately moved to close with the shooter and other potential attackers. The decision to accept risk by the officers outside the shooter's door on 1 October is an excellent example of disciplined initiative combined with risk acceptance.

Risk is also a balancing act; withdrawing at a prudent time is part of risk acceptance. Effective reassessment of risk was demonstrated during the Camp Fire when the firefighters had to withdraw from protecting buildings and focus on evacuation. Risk acceptance is balancing conflicting priorities and accepting risk in one area to advance the overall objective. It requires constant assessment and reassessment by leadership.

B. OUTCOMES

No response to a disaster or emergency is perfect, and there is always the potential to improve. However, one can justifiably say that America's preparedness and response have improved over the last two decades since the creation of the DHS and the HSE. The response to Sandy was not perfect but was undoubtedly an improvement over Hurricane Katrina. The DSC provided an effective construct for military support to civil authorities

and execution of mission command.²⁶² Despite a complex and deadly fire, no firefighters died at the Camp Fire. Entrapment remains a deadly threat to firefighters, but the number of entrapments has dropped. From 1990–1998 there was an average of 4.3 entrapment deaths per year, with only one year with no incidents.²⁶³ From 2007–2016 post-implementation of mission command, the U.S. saw a reduction to 2.8 per year, with most of the deaths due to one incident and six years without any incidents, despite annual average acres burned increasing from 6.79 million acres to 7 million acres.²⁶⁴ This decrease is a significant improvement.

Additionally, as noted, MACTAC enabled a more proactive response during 1 October than the response to the Columbine or Mumbi attacks. Overall, the HSE has improved as mission command ideas have become more prevalent. The correlation suggests a link between improved response and mission command application.

These cases also show the influence the military has on the HSE. The military exerts influence through several avenues. In many states, the emergency management agency falls under the adjutant general and within the state military department, such as in Arizona, Washington, and Nevada. There are also many indirect ways for the military to influence HSE. Veterans are a significant influence on the HSE. Law enforcement comprises 19% veterans, and firefighting around 20%.²⁶⁵ The DHS reports that 27.9% of its employees are former military.²⁶⁶ In comparison, veterans only make up 7% of the U.S. population.²⁶⁷ Many of these former military members bring the concepts they learned in the military with them to the HSE.

²⁶² Burke and McNeil, *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*, 114.

²⁶³ National Wildfire Coordinating Group, “NWCG Report on Wildland Firefighter Fatalities in the United States: 2007–2016” (Boise, ID: National Wildfire Coordinating Group, December 2017), 4–5.

²⁶⁴ National Wildfire Coordinating Group, 4–5.

²⁶⁵ Brooks, “Stop Training Police Like They’re Joining the Military”; Poston et al., “Health Disparities Among Racial and Ethnic Minority Firefighters.”

²⁶⁶ “Federal Government Statistics,” VetsHQ, accessed February 20, 2022, <https://www.vetshq.com/federal-government-statistics/>.

²⁶⁷ Vespa, “Those Who Served: America’s Veterans from World War II to the War on Terror,” 1.

Furthermore, military leadership is often idealized and popularized in the civilian world through books like Stanley McChrystal's *Team of Teams*, which promotes a mission command style leadership philosophy. One can observe the military influence in FEMA doctrines such as ICS and the National Planning System.²⁶⁸ It is clear that military ideas will continue to heavily influence and shape the HSE.

1. Mission Command in the Decision-making Cycle

Visualization is often helpful in demonstrating interconnected linkages and concepts. Currently, no visualization shows the linkage of the mission command principles. U.S. Army doctrine ADP 6-0 lists the mission command principles and states they are all essential but does not visually demonstrate their interconnectedness. John Boyd's Cycle of *Observe, Orient, Decide, Act* (OODA) Loop one of the most well-known decision-making cycle frameworks.²⁶⁹ To further understand mission command, Figure 3 was created based on the observations noted in the case studies. It places the principles as elements of the OODA Loop. The desired outcome of effective mission command is "decentralized execution appropriate to the situation." Units and personnel achieve decentralized execution with decisive action. Mission command ultimately drives decisions by shaping and directing subordinates toward the desired outcome. Thus, the mission command principles shape the context in which a subordinate makes decisions. Framing the principles in mission command in the OODA loop helps illuminate how the principles support effective decision-making.

Shared understanding is a crucial component of *Observe* and gives all the players a common starting point. Thus, the commander and staff must develop processes, tools, and systems to give the subordinate commanders the most accurate picture possible. The reader should note that this requires more than just good communication. A common after-action comment is that communication did not work at critical times during civilian and military operations. Therefore, agencies need to develop a shared understanding that allows for decision-making absent current updates from the commander.

²⁶⁸ Federal Emergency Management Agency, "National Planning System," n.d., 10.

²⁶⁹ Osinga, *Science, Strategy and War*, 2.

The *orient* phase is the critical component of the OODA Loop and the part mission command has the most influence on. With the principles of competence (prior training), mutual trust, mission orders, and commander's intent, the commanders can direct the subordinates' initiatives and actions toward the desired end state. The mission command principles, mission orders, and commander's intent are the tools the commander uses during an operation to dramatically affect the orientation of the subordinate. As Osinga points out, "Boyd posits, we must effectively and efficiently orient ourselves; that is, we must quickly and accurately develop mental images, or schema, to help comprehend and cope with the vast array of threatening and non-threatening events we face."²⁷⁰ Effective orders and intent allow a subordinate to quickly develop a schema aligned with the operation's objectives. This allows the commander to drive decisions even without direct consultation.

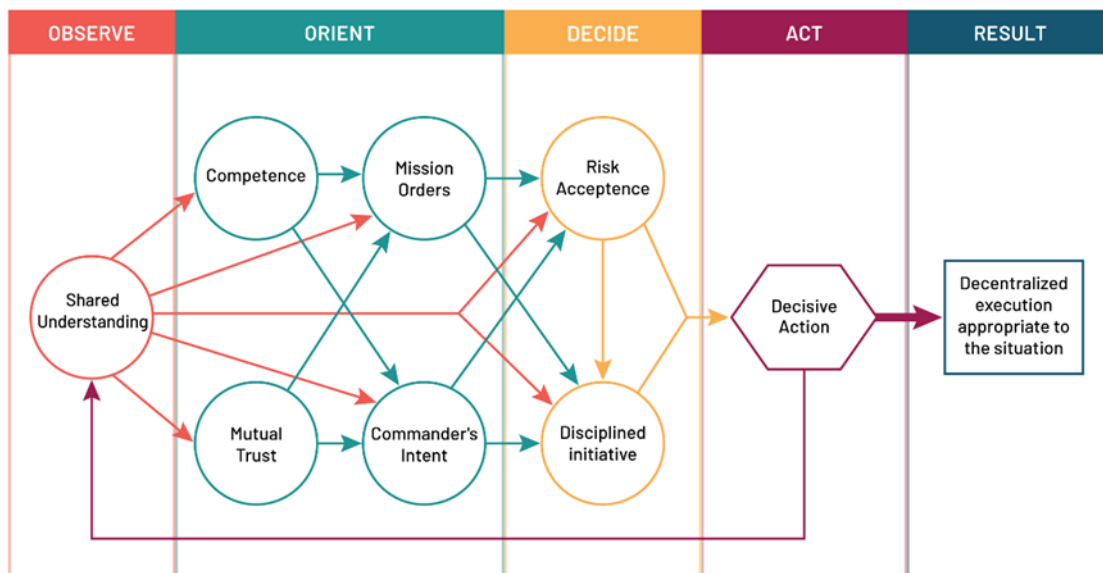


Figure 3. Mission Command Relationships and the OODA loop

²⁷⁰ Osinga, 271.

Finally, risk acceptance and disciplined initiative principles allow subordinates to take decisive action and act effectively. All operations involve a certain level of risk. This includes risks to operational mission success and social and physical risks to those executing the mission. A commander and a subordinate must accept such risks to decide on a course of action. The course of action is chosen based on orders and intent from the commander delivered during the orientation phase. This is what allows for disciplined initiative under uncertainty.

Through the relationships outlined in Figure 3, mission command provides the subordinate with the means to act effectively toward the shared objective. The Boyd Cycle is iterative and cycled through many times until mission completion.²⁷¹ The principles will continue influencing the operation until achieving the end state. Thus, mission command allows the commander to effectively guide subordinates through the OODA Loop towards organizational objectives without direct supervision.

2. Assessment

Due to the numerous changes to the HSE over the past twenty years, it is impossible to pin improvements on one factor or determine the degree of impact of any one factor. However, the analysis of the case studies suggests a positive correlation between mission command principles and effective responses. It suggests that the effective application of mission command likely contributed to the successful response in these cases and the improvement in the HSE over the last few decades.

The subsequent chapter discusses the role mission command should play in HSE doctrine. Finally, it examines the formal incorporation of mission command doctrine into FEMA doctrine and how to achieve this.

²⁷¹ Osinga, 3.

THIS PAGE INTENTIONALLY LEFT BLANK

VII. CONCLUSION

This chapter first summarizes the key findings of this thesis. It then answers the second research question: Are there elements of mission command that the HSE could incorporate more broadly, including NIMS? Next, it examines recommending the incorporation of mission command formally into the HSE. Finally, it suggests areas for future research.

A. KEY FINDINGS

This thesis has five significant findings from the look at mission command in the HSE:

- Mission command is present in many areas of the HSE to varying degrees in different agencies
- Mission command is not formally the HSE doctrine
- Mission command in HSE is heavily influenced by military doctrine
- Application of mission command principles can be linked to the success of the response to Super Storm Sandy, the Camp Fire, and the 1 October shooting
- Mission command is positively correlated with improvement in the HSE

The first key finding from this thesis is that mission command is already present in the HSE enterprise. The introduction discussed how the wildland fire community formally incorporated mission command. The literature review showed how talks and journal articles within the law enforcement and fire communities promoted mission command concepts. The introduction also discussed how the high percentage of veterans in the HSE influenced the HSE. The case studies showed how mission command was implemented during a large-scale incident by the NYNG, CAL FIRE, and LVMPD. Each agency had its own doctrine or training curriculum influenced by military doctrine.

Second, despite military doctrine's influence on the HSE, it is not currently part of the national HSE doctrine. The main elements of HSE are NIMS and ICS. As noted in the introduction, these documents have elements from military doctrine but do not incorporate all the elements necessary to be considered mission command. Certain agencies like the NWCG have incorporated mission command formally. FEMA's exclusion of mission command as a formal part of its doctrine inhibits its refinement for the HSE community.

Third, mission command in HSE is heavily influenced by military doctrine. This thesis discussed the origins of mission command and how mission command became integrated into the HSE. It looked at previous studies of mission command in the HSE enterprise and their conclusions. This thesis also showed that even though mission command is increasingly present in the HSE, the military still largely defines the literature on and inspiration for using mission command. It then linked the literature on mission command to the training and doctrine of the agencies involved in the three case studies. From this evidence, one can conclude that mission command is still largely a military doctrine but is becoming more of an integral part of the HSE.

Fourth, the application of mission command principles can be linked to the success of the response to Super Storm Sandy, the Camp Fire, and the 1 October shooting. This thesis examined these three cases in detail, showing the use of the mission command principles during these events. This thesis then showed how the use of the principles by the agencies could predict mission success. It also examined areas in which improved application of mission command principles could increase mission success. Thus, this thesis demonstrated a strong correlation between the use of mission command and effective HSE response.

Fifth, mission command is positively correlated with improvement in the HSE over the last two decades, in which HSE practitioners have increased the use of mission command. Major disasters such as 9/11, Hurricane Katrina, and COVID-19 have resulted in more use of the National Guard and the active-duty military in the HSE. The NWCG implemented mission command in the early 2000s, and many fire agencies have aligned their training with the NWCG, such as CAL FIRE. It has also been more integrated into law enforcement, as seen in MACTAC and in law enforcement articles about mission

command. Furthermore, popular leadership books such as *Team of Teams* have also had significant influence. As discussed in Chapter VI, these practitioners improved their response performance during this period. Mission command principles can be linked to improvements in HSE, specifically in the areas of military domestic operations, fire, and law enforcement response. Although many other factors during this timeframe likely influenced the HSE, the use of mission command was likely a key factor.

These findings lead to the second question that this thesis aims to answer: Are there elements of mission command that the HSE could incorporate more broadly, including NIMS? The key findings of this thesis indicate a positive response to this question. The following section looks at how the HSE could effectively incorporate mission command into more aspects of the enterprise.

B. RECOMMENDATIONS

Given that mission command can be correlated with mission success and improvement, the HSE should formally incorporate mission command to better propagate the framework and allow for improved performance.

There are several reasons to incorporate mission command formally into the HSE. First, as the NWCG concluded in its study, the ICS system was insufficient to allow for effective response in complex incidents, and thus there is a need for mission command in the HSE. Second, this thesis has shown a positive correlation between mission command and successful responses. Third, mission command in whole or in parts is already present in many organizations that are part of the HSE. Formally incorporating the mission command in doctrine will allow for standardization across agencies, facilitating interoperability and unity of effort. Furthermore, adding standardized terminology and concept will allow better study and continuous improvement.

There might be some potential barriers to incorporating mission command as a formal part of the doctrine. Civilian agencies like the DHS and FEMA might hesitate to incorporate a philosophy from the military to avoid a perception of militarizing the HSE. Perception of law enforcement as being overly influenced by the military has resulted in

criticism of police training.²⁷² However, it is possible to incorporate military aspects without a warfare mindset. The NWGC incorporation of mission command shows that this is possible. Another negative is that the public might perceive it as too much federal interference at the local level. The NWGC mitigates such criticisms by making implementation of such procedures and training voluntarily by the agencies. The advantages of having a standard approach to leadership will outweigh these negatives.

If DHS is to integrate mission command formally into its doctrine, it raises the question: should the DHS adopt the U.S. Army framework as the basis of its version of mission command? The main advantage of starting with the U.S. Army's version of mission command and adjusting it slightly for the HSE is that it makes learning from the Army's experience and achieving an integrated approach easier. It also allows for more straightforward dialogue on mission command to improve leadership in the future. Furthermore, it allows for easy cross-agency understanding and coordination between DHS and DOD during large-scale responses. Adopting a framework that significantly differs from the Army's version will inhibit the exchange and the dialectic needed to improve the leadership philosophy. However, the military's version of mission command is war focused. The DHS would tweak the definitions to fit civilian applications; particularly, the DHS would probably define risk acceptance for the HSE differently than for the DOD.

In conclusion, this thesis recommends that the DHS and FEMA adjust NIMS and the ICS to incorporate mission command as a doctrinal element with only necessary adjustments fitting the HSE. This will further develop homeland security as a professional field of knowledge. The result will improve the response of agencies and organizations in the HSE. Additionally, the HSE will have to improve inter-agency interoperability.

C. FUTURE RESEARCH

For DHS to successfully integrate mission command, additional research and discussion in the HSE community is required. This research should focus on necessary adjustments to fit the HSE, how to gain buy-in from key stakeholders, and developing

²⁷² Brooks, "Stop Training Police Like They're Joining the Military."

practical training requirements. Incorporating mission command formally in the HSE enterprise is a multi-year process. To effectively incorporate this change, the DHS can again look to the U.S. Army's success in developing new doctrine. In *Forging the Sword: Doctrinal Change in the U.S. Army*, Benjamin Jensen shows how the Army repeatedly executed doctrinal change. According to Jensen, the key to the Army's ability to change was using incubators that relied on training, exercises, and education to develop and test new ideas.²⁷³ Jensen notes that incubators were outside the normal military chain of command structure where participants had the "safe space" to explore new ideas.²⁷⁴ Jensen elaborates that these incubators had three main characteristics. First, problems were framed to allow for a detailed study.²⁷⁵ Second, the new doctrine creators used simulations to allow the participants to refine their ideas and create novel solutions.²⁷⁶ Third, Jensen notes that small groups were best suited to developing new doctrine.²⁷⁷

The DHS should use the means Jensen outlines to flesh out mission command and gain buy-in from various agencies. It should encourage the development and study of mission command outside the military, fire service, and law enforcement, which have been the primary users thus far. For example, the Emergency Management Institute should be used as an incubator to test concepts around mission command in large disasters and emergencies. By expanding mission command principles to areas such as public health, transportation, and public affairs, the DHS will increase the nation's responsiveness and adaptability to large-scale incidents.

Another tactic the Army used to change and promote new doctrine was using military journals. Jensen notes that the Army's Training and Doctrine Command in 1992 encouraged the production of articles for professional military journals such as *Military*

²⁷³ Benjamin M. Jensen, *Forging the Sword: Doctrinal Change in the U.S. Army* (Stanford, California: Stanford University Press, 2016), 149.

²⁷⁴ Jensen, 142.

²⁷⁵ Jensen, 143.

²⁷⁶ Jensen, 144.

²⁷⁷ Jensen, 144.

Review and *Parameters* to promote the new doctrine in FM 100–5.²⁷⁸ They did so again in the mid-2000s to promote the new counter-insurgency doctrine.²⁷⁹ Such articles helped promote the new doctrines and gain the soldiers’ participation in applying the new doctrine.²⁸⁰ Thus, the DHS should similarly encourage the discussion of mission command in Homeland Security Affairs and other related journals to engage the HSE in a vibrant discussion on mission command and how to apply it to the HSE. Journals allow the ideas to spread further outside small peer-to-peer networks, facilitating rapid dissemination. Discussion in professional journals will be critical to successfully establishing mission command as a part of the HSE.

Transitioning to mission command as an integral part of HSE doctrine will take time and substantial effort. To enable improved implementation and fast propagation, the DHS should conduct case studies on organizations as they implement mission command into their training and doctrine. These studies will allow the DHS to document lessons learned that can be used to further refine mission command in the HSE. A well-developed lesson learned process will allow the DHS to spread best practices for instruction and implementation in the HSE. Additionally, incident after-action reports should require a section that discusses the application of mission command. After action reviews, reports focusing on mission command applications will allow for more lessons learned and continuous improvement. By leading such efforts, the DHS can ensure the HSE is a learning enterprise that will provide more value to the American people and increase their security and safety.

²⁷⁸ Jensen, 117.

²⁷⁹ Jensen, 117, 131, 132.

²⁸⁰ Jensen, 140.

LIST OF REFERENCES

- Anguiano, Dani. *Fire in Paradise*. New York, NY: W.W. Norton & Company, 2020.
- Baltos, Corey. "Army North Helps Prepare Future Dual-Status Commanders." U.S. Army, December 18, 2012. https://www.army.mil/article/93121/army_north_helps_prepare_future_dual_status_commanders.
- Ben-Shalom, Uzi, and Eitan Shamir. "Mission Command between Theory and Practice: The Case of the IDF." *Defense & Security Analysis* 27, no. 2 (June 2011): 101–17. <https://doi.org/10.1080/14751798.2011.578715>.
- Bharthapudi, Kiran. "How to Become a Firefighter Lieutenant." *Career Trend*, September 26, 2017. <https://careertrend.com/how-to-become-a-firefighter-lieutenant-13640193.html>.
- British Ministry of Defence Crown. *Land Operations*. Army Doctrine Publication AC 71940. Bristol, UK: British Ministry of Defence Crown, 2017.
- Brooks, Rosa. "Stop Training Police Like They're Joining the Military." *The Atlantic*, June 10, 2020. <https://www.theatlantic.com/ideas/archive/2020/06/police-academies-paramilitary/612859/>.
- Brown, Hutch. "The Camp Fire Tragedy of 2018 in California." *Fire Management Today* 78, no. 2 (August 2020): 11–20.
- Bucci, Steven, David Inserra, Jonathan Lesser, Matt Mayer, Brian Slattery, Jack Spencer, and Katie Tubb. "After Hurricane Sandy: Time to Learn and Implement the Lessons in Preparedness, Response, and Resilience." Special Report. Washington, DC: The Heritage Foundation, October 25, 2013.
- Buck, Dick A, Joseph E Trainor, and Benigno E. Aguirre. "A Critical Evaluation of the Incident Command System and NIMS." *Journal of Homeland Security and Emergency Management* 3, no. 3 (January 13, 2006). <https://doi.org/10.2202/1547-7355.1252>.
- Burke, Ryan, and Sue McNeil. *Toward a Unified Military Response: Hurricane Sandy and the Dual Status Commander*. Carlisle, PA: U.S. Army War College Press, 2015.
- California Department of Forestry and Fire Protection. "Camp Fire Incident." Accessed November 24, 2021. <https://www.fire.ca.gov/incidents/2018/11/8/camp-fire/>.
- . *Command 1C: WUI Command Operations for the Company Officer: Student Manual*. Sacramento, CA: California Department of Forestry and Fire Protection, 2013.

- . *Company Officer Certification Task Book*. Sacramento, CA: California Department of Forestry and Fire Protection, 2014.
- . “Green Sheet: Burn Injuries Camp Incident.” Sacramento, CA: California Department of Forestry and Fire Protection, November 8, 2018. <https://s3.documentcloud.org/documents/5628194/18-CA-BTU-016737-Camp-Green-Sheet.pdf>.
- Cocker, Philip A. “Mission Command: Retooling the Leadership Paradigm for Homeland Security Crisis Response?” Master’s thesis, Naval Postgraduate School, 2015.
- Department of Defense. *Defense Support of Civil Authorities*. JP 3-28. Washington, DC: Department of Defense, 2018.
- Department of the Army. *Commissioned Officer Professional Development and Career Management*. DAPAM 600–3. Washington, DC: Department of the Army, 2014.
- . *Defense Support of Civil Authorities*. ADP 3–28. Washington, DC: Department of the Army, 2019.
- . *Mission Command: Command and Control of Army Forces*. ADP 6–0. Washington, DC: Department of the Army, 2019.
- Duke, Nick. “Expert: Mission Command Is a Culture.” U.S. Army, November 6, 2013. https://www.army.mil/article/114570/expert_mission_command_is_a_culture.
- Durr, Eric. “Massive Logistical Effort Marks N.Y. Guard Response to Hurricane Sandy.” U.S. Army, November 13, 2012. https://www.army.mil/article/91055/massive_logistical_effort_marks_n_y_guard_response_to_hurricane_sandy.
- Evarts, Ben, and Gary P Stein. “US Fire Department Profile – 2018.” Quincy, MA: National Fire Protection Association, February 2020.
- Federal Emergency Management Agency. “1 October After-Action Report.” Washington, D.C., August 24, 2018.
- . “Emergency Management Institute – Independent Study (IS) | Course List.” Accessed November 22, 2020. <https://training.fema.gov/is/crslist.aspx>.
- . “National Planning System,” n.d., 10.
- . “PrepTalk Released: Brian Fennessy’s ‘Building a Mission-Driven Culture.’” Federal Emergency Management Agency, July 30, 2019. <https://www.fema.gov/news-release/20200220/preptalk-released-brian-fennessys-building-mission-driven-culture>.

- Finney, Nathan K., and Jonathan P. Klug, eds. *Mission Command in the 21st Century: Empowering to Win in a Complex World*. Fort Leavenworth, Kansas: The Army Press, 2016.
- Flynn, Michael. "Applying Mission Command through the Operations Process." *Military Review* 93, no. 2 (April 2013): 25–32.
- French, Glenn. "Command and Control in Tactical Environments." *Police1*, February 28, 2012. <https://www.police1.com/active-shooter/articles/command-and-control-in-tactical-environments-LHHtWrV4EfLc6GOC/>.
- Frontline. "Fire in Paradise." Directed by Jane McMullen, October 29, 2019. <https://www.pbs.org/wgbh/frontline/film/fire-in-paradise/>.
- Giles, David. *A Cascade of Emergencies (A): Responding to Superstorm Sandy in New York City*. Cambridge, MA: Harvard Kennedy School, 2017.
- . *A Cascade of Emergencies (B): Responding to Superstorm Sandy in New York City*. Cambridge, MA: Harvard Kennedy School, 2017.
- Glenn, Russell. "Mission Command in the Australian Army: A Contrast in Detail." *Parameters* 47, no. 1 (Spring 2017): 21–30.
- Godio, Mili. "At Least 20 Police Chiefs Have Resigned since Protests Began in May." *Newsweek*, September 9, 2020. <https://www.newsweek.com/least-20-police-chiefs-have-resigned-since-protests-began-may-1530723>.
- Greenhill, Jim. "12,000 National Guard Members Helping 11 States Recover from Hurricane Sandy." *National Guard*, October 30, 2012. <https://www.nationalguard.mil/News/Article/574966/12000-national-guard-members-helping-11-states-recover-from-hurricane-sandy/>.
- . "Task Force Born on 9/11 Still Guards New York." U.S. Army. Accessed January 10, 2022. https://www.army.mil/article/27232/task_force_born_on_911_still_guards_new_york.
- Hart, Jeremiah J. "Strategic Mutual Aid Response to Terrorism: A New Approach." Master's thesis, Naval Postgraduate School, 2020.
- Jensen, Benjamin M. *Forging the Sword: Doctrinal Change in the U.S. Army*. Stanford, California: Stanford University Press, 2016.
- Justice, Joel M. "Active Shooters: Is Law Enforcement Ready for a Mumbai Style Attack?" Master's thesis, Naval Postgraduate School, 2013.

- Keller, John. "ASTARTE Project to Create a Strong Common Operating Picture Using Artificial Intelligence (AI) Algorithms." *Military Aerospace*, April 29, 2020. <https://www.militaryaerospace.com/computers/article/14174896/common-operating-picture-artificial-intelligence-ai-algorithms>.
- Las Vegas Metropolitan Police Department. "1 October After Action Review." Las Vegas, NV: Las Vegas Metropolitan Police Department, June 6, 2019.
- Link, Howard, Dylan Montes, and Richard Schultz. "Learning Lessons From Hurricane Sandy." *NEXT* 1, no. 1 (2013): 24.
- McChrystal, Stanley A. *Team of Teams: New Rules of Engagement for a Complex World*. New York, NY: Portfolio/Penguin, 2015.
- Meyer, Thomas E. "The Leadership Imperative: A Case Study in Mission Command." *Infantry* 103, no. 1 (March 2014): 26–33.
- Moody, Theodore J. "Filling the Gap between NIMS/ICS and the Law Enforcement Initial Response in the Age of the Urban Jihad." Master's thesis, Naval Postgraduate School, 2010.
- Muhlbaum, David. "The Most Expensive Natural Disasters in U.S. History." Kiplinger. Accessed December 15, 2021. <https://www.kiplinger.com/slideshow/business/t019-s001-most-expensive-natural-disasters-in-u-s-history/index.html>.
- National Wildfire Coordinating Group. *Leading in the Wildland Fire Service*. PMS 494–2. Boise, ID: United States Department of Agriculture, 2007.
- . "NWCG Report on Wildland Firefighter Fatalities in the United States: 2007–2016." Boise, ID: National Wildfire Coordinating Group, December 2017.
- . "NWCG Training Catalog." National Wildfire Coordinating Group. Accessed November 22, 2020. <https://www.nwcg.gov/publications/training-courses/leadership>.
- . *Report of the Leadership Task Group to the Training Working Team, Feb 2001*. Boise, ID: United States Department of Agriculture, 2001.
- Oldenburg, Matthew. "Mission Command, Fire Command, and Synchronization." *Fire Engineering* 168, no. 8 (August 2015): 53–59.
- Orsi, Doug. "Will New Doctrine Fix Mission Command?" War Room (blog). U.S. Army War College, October 9, 2019. <https://warroom.armywarcollege.edu/articles/new-doctrine-mission-command/>.
- Osinga, Frans. *Science, Strategy and War: The Strategic Theory of John Boyd*. Delft, Netherlands: Eburon Academic Publishers, 2005.

- Phibbs, W. Michael. "Commander's Intent: A Framework for Success." FBI. Law Enforcement Bulletin, October 6, 2016. <https://leb.fbi.gov/articles/featured-articles/commanders-intent-a-framework-for-success>.
- Poston, Walker, Christopher K Haddock, Sara A Jahnke, Nattinee Jitnarin, Rena Sue Day, and I David Daniels. "Health Disparities Among Racial and Ethnic Minority Firefighters." *Journal of Health Disparities Research and Practice* 7, no. 5 (2014): 28.
- Reid, Tim. "How the Las Vegas Shooter Foiled a Well-Drilled Counter-Terrorism Plan." Reuters, October 5, 2017. <https://www.reuters.com/article/us-lasvegas-shooting-plan/how-the-las-vegas-shooter-foiled-a-well-drilled-counter-terrorism-plan-idUSKBN1CA29N>.
- Shachtman, Noah. "NY National Guard Suddenly Decides Hurricane Relief Trumps Mock Disaster Drill." Wired, October 31, 2012. <https://www.wired.com/2012/10/new-york-sandy/>.
- Shamir, Eitan. *Transforming Command: The Pursuit of Mission Command in the U.S., British, and Israeli Armies*. Palo Alto, CA: Stanford University Press, 2011.
- Stenson, Randi, and Ted Crisco. "Combined Arms Center Launches New Mission Command Doctrine." U.S. Army, August 23, 2019. https://www.army.mil/article/225414/combined_arms_center_launches_new_mission_command_doctrine.
- Tolman, Fred. "Mission Command: A Senior Enlisted Leader's Perspective." Army University Press. NCO Journal, May 15, 2020. <https://www.armyupress.army.mil/Journals/NCO-Journal/Archives/2020/May/Mission-Command/>.
- Vandergriff, Donald E., and Stephen Webber, eds. *Mission Command II: The Who, What, Where, When and Why: An Anthology*. Self-published, 2018.
- , eds. *Mission Command: The Who, What, Where, When and Why: An Anthology*. Self-published, 2017.
- Vespa, Jonathan E. "Those Who Served: America's Veterans from World War II to the War on Terror." Washington, DC: U.S. Census Bureau, June 202AD.
- VetsHQ. "Federal Government Statistics." Accessed February 20, 2022. <https://www.vetshq.com/federal-government-statistics/>.
- Winters, Nicholas E. "The DSCA Corps: Bridging the Gap between the Profession of Arms and Domestic Operations." Naval Postgraduate School, 2017.
- Wright, Donald P. *16 Cases of Mission Command*. Fort Leavenworth, KS: Combat Studies Institute Press, 2013.

THIS PAGE INTENTIONALLY LEFT BLANK

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
Ft. Belvoir, Virginia
2. Dudley Knox Library
Naval Postgraduate School
Monterey, California



DUDLEY KNOX LIBRARY

NAVAL POSTGRADUATE SCHOOL

WWW.NPS.EDU

WHERE SCIENCE MEETS THE ART OF WARFARE