

The Campaign to Liberate Mosul: An Illustration of the Challenges of Large-Scale Combat Operations in Urban Terrain

A Monograph

by

MAJ Kyle Stilwell
US Army



School of Advanced Military Studies
US Army Command and General Staff College
Fort Leavenworth, KS

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Name of Candidate: MAJ Kyle Stilwell

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Approved by:

_____, Monograph Director
Bruce E. Stanley, PhD

_____, Seminar Leader
Jürgen Prandtner, COL German Army

_____, Director, School of Advanced Military Studies
Brian A. Payne, COL

Accepted this 21st day of May 2020 by:

_____, Acting Director, Office of Degree Programs
Prisco R. Hernandez, PhD

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Abstract

The Campaign to Liberate Mosul: An Illustration of the Challenges of Large-Scale Combat Operations in Urban Terrain, by MAJ Kyle D. Stilwell, US Army, 79 pages.

The purpose of this monograph is to better understand how the military can achieve political and military objectives through the employment of force in urban operations. The 2016-2017 campaign to liberate Mosul from ISIS offers the most relevant lessons to the operational artists, commanders, and statesmen seeking to understand a contemporary large-scale urban campaign conducted by a coalition and joint force. The study posed that the failure to properly account for the fundamentals of urban operations in large scale ground combat prolongs the conflict, increases risk, and decreases the likelihood of achieving the political objectives. To increase the likelihood for success, an operational approach must start with a systematic assessment, then balance military and non-military actions to simultaneously defeat or isolate the enemy, protect the population and key infrastructure, and set the conditions to rapidly transition power to a legitimate authority. The study yielded mixed outcomes in support of the original hypothesis. These findings demonstrate key implications for employing the operational art within a diverse coalition, employing expeditionary advisors, and the multitude of detractors from mission success while conducting urban operations. Broadly, the study finds that even with the application of current US doctrinal concepts, decision-makers and staffs should anticipate circumstances where the political and military objectives shift, and for state and non-state actors to act in unpredictable ways. As a result, the long-term outcomes of an urban campaign may fail to achieve the original aims.

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Abbreviations

AQI	Al-Qaeda in Iraq
CTS	Counter-Terrorism Services
FEDPOL	Iraqi Federal Police
FFIS	Funding Facility for Immediate Stabilization
FOUE	Fundamentals of Operations in Urban Environments
IA	Iraqi Army
IDPs	Internally Displaced Persons
IED	Improvised Explosive Device
IS	Islamic State
ISF	Iraqi Security Forces
ISI	Islamic State in Iraq
ISIS	Islamic State of Iraq and al Sham
LSCO	Large Scale Combat Operations
MDO	Multi-Domain Operations
NGO	Non-government Organization
OIR	Operation Inherent Resolve
PMF	Popular Mobilization Force
SVBIED	Suicide Vehicle-Borne Improvised Explosive Device
UAS	Unmanned Aerial Systems
UN	United Nations
UNDP	United Nations Development Program
UNOCH	United Nations Office for the Coordination of Humanitarian Affairs
UNAMI	United Nations Assistance Mission for Iraq
USAID	United States Agency for International Development

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Introduction

During the transition to armed conflict, adversary forces will rapidly seize vulnerable urban areas to enable swift consolidation of gains and protection of lines of communications. Dense urban terrain's advantages thus lay in the potential for providing early warning and slowing enemy operational tempo. To capitalize on these advantages, the Army must understand, organize, and train to operate in strategically and operationally significant urban areas.

—US Department of the Army, *The US Army in Multi-Domain Operations 2028*

In April of 2013, the Islamic State of Iraq and al Sham (ISIS) began a terror campaign to seize territory in Syria and Iraq.¹ Mosul, Tikrit, Ramadi, and Fallujah fell as ISIS sought to secure major population centers and resources for its caliphate.² Upon the Iraqi government's request, US forces and coalition partners initiated Operation Inherent Resolve (OIR) to restore Iraqi sovereignty, defeat ISIS, and increase regional stability. Throughout 2015 and 2016, the coalition fought to regain Fallujah, Ramadi, and Tikrit, leaving Mosul as the last major city held by ISIS in Iraq. From October 2016 to July 2017, the US government enabled an Iraqi led coalition to liberate the Iraqi city of Mosul from ISIS.

The campaign to liberate Mosul demonstrated the continued relevance of urban operations to modern combat. First, with over 100,000 security personnel, the campaign illustrated the potential complexity of Corps-sized elements engaged in large scale combat operations in urban terrain.³ Second, bitter fighting reinforced the risks and challenges armed forces face when required to clear an entrenched enemy from urban terrain. Third, the conflict demonstrated the apparent inevitability of urban operations, despite a preference for a force with the initiative to avoid urban areas. In contrast, the US Army's 2018 operating concept

¹ Mosul Study Group 17-24U, "What the Battle for Mosul Teaches the Force" (Fort Eustis: US Army Training and Doctrine Command [TRADOC]), September 2017, 4.

² Mosul Study Group, "What the Battle for Mosul Teaches the Force," 5.

³ Thomas Arnold and Nicolas Fiore, "Five Operational Lessons from the Battle for Mosul" *Military Review* (January - February 2019), 58.

acknowledges that “dramatically increasing rates of urbanization and the strategic importance of cities ensure that operations will take place within dense urban terrain.”⁴ Given the challenges posed by urban operations, and the near-certainty of their future execution, military professionals should pay special attention to recent examples. Using the 2016-2017 campaign to liberate Mosul as a case study, this paper seeks to develop a broader understanding of the future of urban operations in large scale ground combat.

To state the problem explicitly, urban operations present a multitude of complex challenges for civilian and military planners and practitioners. The terrain, structures, and dense population create a dynamic environment that requires significant effort to understand and operate within. Natural and manmade obstacles restrict maneuver and the ability to achieve standoff to take advantage of weapons platforms and technologies. Communication and information collection systems are impeded by the dense structures, and the sheer scope and scale of a city rapidly consumes maneuver units, enablers, and information collection assets. Furthermore, failure to adequately protect the population and critical infrastructure places the likelihood of achieving the political and military objectives at risk.

Given the stated problem, this study proposes that the failure to properly account for the fundamentals of urban operations in large scale ground combat prolongs the conflict, increases risk, and decreases the likelihood of achieving the political objectives. Therefore, to increase the likelihood of success, an operational approach must start with a systematic assessment, then balance military and non-military actions to simultaneously defeat or isolate the enemy, protect the population and key infrastructure, and set the conditions to rapidly transition power to a legitimate authority.

⁴ US Department of the Army, TRADOC Pamphlet 525-3-1, *The US Army in Multi-Domain Operations 2028* (Fort Eustis: TRADOC, 2018), vi.

Accordingly, a study of the 2016-2017 campaign to liberate Mosul from ISIS is significant for its value as a contemporary example of the US Army's approach to urban operations. While the US Army did not commit large ground units to the fighting in Mosul, it played a major role in shaping the coalition's operational approach, and resourcing the execution of operations. The United States committed joint fires, information collection, and special operations forces to ensure the success of the coalition's efforts to counter ISIS. An analysis of these efforts provides a deeper understanding of the considerations for modern urban operations in large scale combat operations. Given the increased risk to lives, resources, and mission success, a contemporary application of urban operations merits considerable study.

Furthermore, the findings of the study are of significance to the operational artists, commanders, and statesmen seeking to understand a contemporary large-scale urban campaign conducted by a coalition and joint force. These practitioners are likely to be most interested in the observation of and implications from the multitude of detractors from mission success. Broadly, the study finds that even with the application of current doctrinal concepts, decision-makers and staffs should anticipate circumstances where political and military objectives shift, and state and non-state actors act in unpredictable ways. As a result, the long-term outcomes of an urban campaign may fail to achieve the original aims. While these observations are found in other forms of warfare, these findings apply in a more severe way with urban operations.

Before endeavoring to parse the nuances of theory and doctrine related to the case, it is essential to define key terms and concepts. Urban operations are defined as "the range of military operations planned and conducted on, or against objectives within, a topographical complex and its adjacent natural terrain, where manmade construction or the density of population are the dominant features."⁵ Dense urban terrain is characterized as "extraordinarily closely-packed

⁵ US Department of the Army, Army Techniques Publication (ATP) 3-06, *Urban Operations* (Washington, DC: Government Printing Office, 2017), G-4.

manmade infrastructure and high population density, potentially including concentrations of high-rise buildings, subterranean features, and densely packed slums.”⁶ Unless otherwise stated, “the campaign” refers to the 2016-2017 operations to liberate Mosul, and not the broader “Defeat ISIS” campaigns across Operation Inherent Resolve.

There are three theoretical frameworks that help to develop an understanding of the campaign and its impact. First, Clausewitz’ theory of war points to the impact that the population of each side plays in the conflict. Second, operational art merits considerable discussion to tie tactical victories to strategic objectives. Third, the monograph will consider a systems approach to understanding the relationships and effects of infrastructure, and the population and terrain on the operating environment. Ultimately, the risk of strategic catastrophe in urban operations increases when these theoretical aspects are not adequately considered.

The theoretical framework will inform three main hypotheses. First, if urban operations are required to achieve the political objective, and they are part of the broader campaign plan, there is a greater likelihood of mission success. Second, if adequate steps to understand the city as a system and leverage opportunities in time and space are taken, the effectiveness of large-scale combat operations are enhanced, and risk is reduced. Finally, if authority does not transition to a legitimate local authority rapidly, then the likelihood of achieving the original political objective decreases.

For this work to be most useful, it is necessary to acknowledge the limitations of this analysis. This work is based on the body of English language-based research. When possible, Arabic translations are used, however, the majority of sources are US military and English based coalition documents. As such, there are limited non-propaganda sources currently available that represent ISIS’ position in their own words. Correspondingly, the classification of sources limits this paper and, given the proximity to the event, many documents remain classified. The recency

⁶ US Department of the Army, *The US Army in Multi-Domain Operations 2028*, GL-4.

of events precludes a final determination of the overall impact of decisions and events. Finally, the accuracy of coalition documents could not be further verified within the scope of this research. Despite these limitations, the potential value of these observations for current and future operations outweighs the risk of a premature assessment.

Moreover, for the sake of clarity and precision, this paper will focus on the operational and strategic aspects of urban operations during the campaign. Although there are implications from the conflict at the tactical level, these aspects will remain for future research. This monograph will focus an analysis on the campaign to liberate Mosul from August of 2016 to July of 2017, the period of major combat operations as most relevant to liberating the city. That is not to say that there are not important aspects from the defeat of ISIS forces in Fallujah, Ramadi, and parallel efforts in Syria in 2015 and 2016. However, discussion of these battles is only for context, as required.

Furthermore, there are several assumptions that underpin this research. It assumes that the US military will fight in urban terrain in the future. Furthermore, it also assumes that historical cases such as these can provide insights into future operations, despite the size of the enemy force. While not directly applicable across all domains, the campaign offers lessons that are scalable to future conflicts against peer adversaries fighting in urban terrain.

Finally, the organization of this monograph follows an introduction, a literature review, the methodology, a case study, findings and conclusions. The main concepts of urban operations are explored within the introduction, then the literature review establishes the doctrinal and theoretical foundation for operational approaches to urban operations. The methodology establishes the roadmap used to later analyze the campaign as a case study, followed by the findings section, which establishes key takeaways from the case study. Finally, the conclusion section extrapolates the implications of the campaign to future urban operations.

Literature Review

Operational art is a key aspect of conducting large scale combat operations in urban terrain. For this reason, before seeking to examine the LSCO as conducted in the campaign to liberate Mosul, it is necessary to deconstruct the foundations upon which modern urban warfare stands. This section will seek to demonstrate the most relevant theoretical, conceptual, and empirical concepts found in the body of literature on operations in urban terrain. Specifically, this paper uses a combination of Carl von Clausewitz, Everett Dolman, and Sun Tzu to establish the theoretical and conceptual basis for war and strategy.

Next, key aspects of the theory of operational art are examined to set a foundation for later evaluating the use of operational art during the campaign. What follows is a conceptual examination of the Fundamentals of Operations in Urban Environments (FOUE), which provide a basis to evaluate the conduct of urban operations. The final section of the literature review focuses on an empirical evaluation of the body of knowledge surrounding urban operations and the campaign to liberate Mosul. Ultimately, the synthesis of these key theoretical, conceptual, and empirical elements prepares the reader for a nuanced analysis of the campaign and its implications for the future of urban combat.

Foremost, it is useful to consider urban operations within a broader theory of war. Given the purpose of this monograph is to better understand how the military can achieve political and military objectives through the employment of force in urban operations, multiple foundational concepts inform a modern theory of war. Although many contemporary scholars seek to refine and interpret his works, arguably no theorist better demonstrates the complexities of war than Carl von Clausewitz. Throughout his works, he examines the construct of war within the broader institution of policy and politics, for this reason Clausewitz's ideas are some of the most cited and debated within the field of political and military science. Clausewitz defines strategy as "the use of engagement for the purpose of the war. The strategist must therefore define an aim for the

entire operational side of the plan of the war that will be in accordance with its purpose.”⁷

Clausewitz goes on to discuss the need to nest and adapt military objectives and military aims, with the broader national strategy," as reflected within Field Manual (FM) 3-0 *The Operations Process*.⁸ The US Army defines strategy as "a foundational idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve national and multinational objectives."⁹

Clausewitz warned those who might mistakenly separate military strategy from its broader political context. He states, "War is nothing but the continuation of political efforts by other means. In my view, all of strategy rests on this idea, and I believe that whoever refuses to recognize that this must be so does not yet fully understand what really matters."¹⁰ Clausewitz largely laid the foundation for the discourse that resulted in the current understanding of the US military's theory of war and the development of military strategies that support the political objective.¹¹

The US Army further examines the theory of war and implementation of strategy through the use of three levels of warfare: strategic, operational, and tactical. The strategic level primarily focuses on the national level, with the combatant commanders linking military action to strategic objectives.¹² The operational level of warfare is the level of warfare at which campaigns and major operations are planned, conducted, and sustained to achieve strategic objectives within

⁷ Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1989), 177.

⁸ Clausewitz, *On War*, 177.

⁹ US Department of the Army, Army Doctrine Publication (ADP) 5-0, *The Operations Process* (Washington, DC: Government Printing Office, 2019), 2-7.

¹⁰ Clausewitz, *On War*, 87.

¹¹ Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War* (New York: Oxford University Press, 2001), 251.

¹² US Army, ADP 5-0, 2-7.

theaters or other operational areas."¹³ Finally, the tactical level of warfare is the level that plans and executes battles and engagements to achieve military objectives.¹⁴ These levels of warfare underpin the US Army doctrinal understanding of the theory of war and the operational art.

Strategy is not a thing that can be poked, prodded, and probed. It is an idea, a product of the imagination. It is about the future, and above all it is about change. It is anticipation of the probable and preparation for the possible. It is, in a word, alchemy; a method of transmutation from idea into action.

—Everett Dolman, *Pure Strategy*

After reviewing broader theories of war, this section provides key linkages between strategy, urban operations, and the operational art. In *Pure Strategy*, Dolman seeks to reconcile a theory of operational strategy for air and space warfare within the broader theory of war.¹⁵ He states, “strategy, in its simplest form, is a plan for attaining continuing advantage.”¹⁶ He then offers one of the most useful examinations of linking tactical action to strategic outcomes at echelon.¹⁷ Grand strategy occurs at the highest levels and refers to the national strategy.¹⁸ Military strategies seek to link military means to political objectives.¹⁹ Operational strategy, similar to operational design, utilizes campaigns and battles to achieve the military strategy.²⁰ At the tactical level, actions are sequenced by commanders and staffs to achieve the tactical end: victory on the battlefield.²¹

¹³ US Army, ADP 5-0, 2-8.

¹⁴ US Army, ADP 5-0, 2-9.

¹⁵ Everett Dolman, *Pure Strategy. Power and Principles in the Space and Information Age* (New York: Frank Cass, 2005), 30.

¹⁶ Dolman, *Pure Strategy*, 6.

¹⁷ Dolman, *Pure Strategy*, 28.

¹⁸ Dolman, *Pure Strategy*, 28.

¹⁹ Dolman, *Pure Strategy*, 28.

²⁰ Dolman, *Pure Strategy*, 28.

²¹ Dolman, *Pure Strategy*, 29.

Dolman cites that the operational strategist balances the logic of the strategy with the logic of setting the conditions to fight and win the most important battles.²² For example, the operational artist may be required to task a unit to delay an enemy for a period of time before withdrawing.²³ While withdrawing may not seem immediately aligned with the political aim of defeating the enemy, if it allows for the massing of overwhelming force that compels the enemy to sue for peace without fighting, a superior state is achieved.²⁴ This is similar to arguably one of Dolman's greatest contributions -- his description of devising strategies that adapt toward future conditions rather than end-states.²⁵ Ultimately, Dolman contributes to the body of theory surrounding operational art and aids in the development of an adaptive strategy that links tactical action to strategic purposes.

Next, this study requires an evaluation of urban operations frameworks. Following a review of the body of literature concerning urban operations, this study poses that the best criteria to evaluate this case are the Fundamentals of Operations in Urban Environments (FOUE) in Joint Publication (JP) 3-06: *Joint Urban Operations*. The FOUE (see table 1) is the best fit for three reasons. First, this framework places emphasis on the strategic and operational context requiring and shaping the urban operations. Second, this framework offers the linkages of tactical action to the strategic national objectives through operational design and planning. This includes a comprehensive operational design that goes beyond targeting the adversary, but leveraging the system of systems to achieve the operational effects required.²⁶ Third and finally, joint fundamentals refer to the integration of partners, governmental and non-governmental agencies throughout the process, to set the conditions for transition.

²² Dolman, *Pure Strategy*, 29.

²³ Dolman, *Pure Strategy*, 29.

²⁴ Dolman, *Pure Strategy*, 29.

²⁵ Dolman, *Pure Strategy*, 114.

²⁶ US Department of Defense, Joint Staff, Joint Publication (JP) 3-06, *Urban Operations* (Washington, DC: Government Printing Office, 2013), III-13.

While the Fundamental Tasks of Urban Operations found in Army Techniques Publication (ATP) 3-06, *Urban Operations* were initially considered, this framework was assessed as overly tactical, with less emphasis on an operational approach that is nested within the strategic objectives. The introduction of ATP 3-06 acknowledges this observation by referring to headquarters serving as a Joint Task Force. A thorough review demonstrates a significant overlap between the two manuals. However, the US Joint Publication 3-06, *Urban Operations* offers greater emphasis on the design and execution of urban operations within the context of campaigns and strategies.

Table 1. The Fundamentals of Operations in Urban Environments.

The Fundamentals of Operations in Urban Environments
Conduct a systemic assessment.
Integrate all actions within the context of an overarching major operation or campaign.
Learn and adapt.
Selectively isolate the urban environment.
Apply highly discriminate destructive or disabling force to disrupt an adversary's ability to pursue its objectives.
Establish and extend control and protection of urban sectors and subsystems.
Persuade municipal governments, groups, and population segments to cooperate with joint force operations.
Provide essential support into the urban environment to sustain it during the ordeal of combat operations to improve its ability to survive.
Make improvements to urban institutions and infrastructure.

Source: Created by author referencing United States Joint Staff, Joint Publication (JP) 3-06, *Urban Operations* (Washington, DC: Government Printing Office, 2013), I-11.

Next, it is possible to conduct an empirical evaluation of the relevant literature for the campaign to liberate Mosul. This study initially asserts that the failure to properly account for the fundamentals of urban operations in large scale ground combat prolongs the conflict, increases risk, and decreases the likelihood of achieving the political objectives. To increase the likelihood of success, the operational approach must start with a systematic assessment, then balance military and non-military actions to simultaneously defeat or isolate the enemy, protect the population and key infrastructure, and set the conditions to rapidly transition power to a legitimate authority. The literature indicates three hypotheses support this thesis. First, if urban operations are required to achieve the political objective, and they are integrated within the

broader campaign plan, then there is a greater likelihood of mission success. Second, when FOUE are part of planning and execution, there is maximum effectiveness of large-scale combat operations and risk is less. Third, if authority does not transition to a legitimate local authority rapidly, then there is less likelihood of achieving the original political objective. Finally, it proposes that these hypotheses are directly relevant to an examination of the application of operational art during the fighting for Mosul.

The first hypothesis states: if urban operations are required to achieve the political objective, and they are part of the broader campaign plan, then there is a greater likelihood of mission success. This hypothesis emphasizes the concurrence between military theorists and military doctrine that urban operations occur only out of strategic or operational necessity. So important is the strategy to urban operations, that Sun Tzu offered strategy for operations in cities as well. He states, “Attaining one hundred victories in one hundred battles is not the pinnacle of excellence. Subjugating the enemy’s armies without fighting is the true pinnacle of excellence.”

²⁷ Certainly, given the concentration of people, capital, and resources within them, cities played a strategic role in Sun Tzu's era as well. Despite this, he warned against a direct approach for cities.²⁸ An indirect approach to achieve the objective is preferred, as it often results in the preservation of forces.²⁹ Current US Joint Doctrine also posits that urban operations should only be conducted when the urban infrastructure has significant “strategic or operational value, it is required to isolate the enemy within the urban area to facilitate a broader campaign, the location dominates a region or avenue of approach, or the political or cultural significance of the area presents itself as a strategic or operational center of gravity.”³⁰

²⁷ Sun Tzu, *The Art of War*, ed. and trans. Ralph Sawyer (Boulder: Westview Press, 1996), 50.

²⁸ Sun Tzu, *The Art of War*, 46.

²⁹ Sun Tzu, *The Art of War*, 46.

³⁰ US Joint Staff, JP 3-06, I-10.

The second hypothesis states: if the fundamental tasks of urban operations are part of planning and execution, then the effectiveness of large-scale combat operations are enhanced and risk is reduced. Sun Tzu recognized that there existed critical steps to prepare to conduct urban operations. “This tactic of attacking walled cities is adopted only when unavoidable. Preparing large movable protective shields, armored assault wagons, and other equipment and devices will require three months. Building earthworks will require another three months to complete.” Like General Ulysses S. Grant at Vicksburg, Sun Tzu describes the tendency of generals to attack without making appropriate preparations, only to suffer heavy losses without taking the city.³¹ He applied the same concept to the enemy's armies, posing that superior strategy destroys their will without fighting.³² Current US joint doctrine seeks to encapsulate these requirements through a comprehensive and systematic approach to urban operations. US JP 3-06 provides the FOUE framework to develop an operational approach that effectively balances “isolating, protective, improving, sustaining, persuasive, destructive, and disruptive actions or capabilities.”³³

The third hypothesis states: If authority does not transition to a legitimate local authority rapidly, then the likelihood of achieving the original political objective decreases. Sun Tzu refers to the risks of prolonged conflict stating, “No country has ever profited from protracted warfare.”³⁴ He implored strategists to fight with the aim of preservation.³⁵ In doing so, his “weapons will not become dull, and the gains can be preserved.”³⁶ Similarly, the longer a conflict, the greater the risks to the army, and to the achievement of the political objectives. The enmity of the population has a direct impact on the choices of the decision makers.³⁷ Just as the passion of the

³¹ Sun Tzu, *The Art of War*, 50.

³² Sun Tzu, *The Art of War*, 50.

³³ US Joint Staff, JP 3-06, I-10.

³⁴ Sun Tzu, *The Art of War*, 50.

³⁵ Sun Tzu, *The Art of War*, 50.

³⁶ Sun Tzu, *The Art of War*, 50.

³⁷ Clausewitz, *On War*, 94.

population can drive decision makers towards a conflict that may not be in the best interest of the nation, it may lead a nation to withdraw prematurely from a conflict before conditions are set for conflict termination. From US support to Vietnam, to Operation Iraqi Freedom, history is replete with examples where mounting casualties negatively impacted the enmity of the US population and the political will of the government. The US joint doctrine reinforces that setting the conditions for conflict termination must start with and continue throughout the planning process.³⁸ This entails the integration of local and regional authorities into security operations and restoration of essential services of government.³⁹ The doctrine also reinforces that it is best for all services to transition as quickly as possible to civilian authorities for the burden they place on the joint force.⁴⁰ The cost of failing to effectively transition authorities rapidly, increases the risk of achieving the original objectives.

Finally, after examining the literature concerning urban operations, there is an opportunity to further analyze the campaign. A survey of the literature on urban terrain yields volumes of books, articles, and military doctrine that describe fighting in an urban environment and the tactical challenges and opportunities it poses. However, a select few focus on the political and military strategies and operational approaches to conducting urban warfare to achieve political objectives within their broader campaigns. Still fewer take this approach to analyzing the 2016-2017 campaign to liberate Mosul. There are a growing number of scholarly books and articles that establish the discourse of events during the battle. However, there is largely a gap in understanding the operational design and decision-making throughout the operation. There are also few works that clearly demonstrate the linkages between tactical actions to achieve strategic

³⁸ US Joint Staff, JP 3-06, III-13.

³⁹ US Joint Staff, JP 3-06, III-13.

⁴⁰ US Joint Staff, JP 3-06, III-14.

political and military objectives. Although there are other recent examples of urban operations, few have come close to reaching a scope and scale unobserved until now, since World War II.

Ultimately, there are few contemporary works that seek to examine their implications for the application of the operational art in large-scale combat operations in urban terrain. Although there are significant continuities in urban operations throughout time, the 2016-2017 campaign to liberate Mosul demonstrated such a convergence of technologies and effects across domains that it should cause operational artists to examine it closely. It also demonstrates an opportunity to further analyze the tactical, operational, and strategic perspectives of the coalition to expand theoretical understanding of urban warfare for application to future combat.

In summation, a review of the current literature offers the context on urban operations within the broader theories of war. This section examined the relevant theoretical foundations of war and the operational art. This section also reviewed the key conceptual elements of urban warfare, which establish the evaluation criteria for the case study that follows. Next, the review of relevant literature revealed three major hypotheses with regards to urban operations. Lastly, this review also identified a gap in the literature evaluating the application of the operational art in the 2016-2017 campaign to liberate Mosul from ISIS. The next section will demonstrate the approach to the test these hypotheses against the campaign for Mosul as an exemplary case.

Methodology

The purpose of this section is to establish the methodology that informs the focused analysis that follows. It includes a discussion of the structured, focused questions approach, the selection of the historical case, expected outcomes, and the data sources utilized. Together, these will demonstrate the approach to test the hypotheses against the initial thesis.

In order to test the hypotheses, this study uses the structured, focused questions approach. The selected approach demonstrates rigor in qualitatively evaluating historical events in social sciences to contribute to theory. Specifically, the method is “structured” through the disciplined use of questions to guide the analysis.⁴¹ The method is focused in scope to specific aspects of the event in the interest of addressing targeted research objectives that contribute to theory development.⁴²

This monograph utilizes a single case for analysis. Although comparing multiple cases is often valuable, a single case is preferred when the investigator seeks to expand the theory surrounding a topic.⁴³ Similarly, studying a single case is most appropriate when analyzing a deviant case, or a case that appears anomalous, and has the potential to expand understanding of the range of what is possible.⁴⁴

An initial evaluation of the 2016-2017 campaign to liberate Mosul demonstrates the potential to fill a perceived theoretical gap in understanding modern urban operations. The chosen campaign illustrates the scale, recency, and potential to illuminate emerging trends in modern urban combat. Specifically, the fighting involved more troops than any other since World War II, involved every domain (including space and cyber), and involved an Iraqi-led, US-enabled

⁴¹ Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005), 67.

⁴² George and Bennett, *Case Studies and Theory Development in the Social Sciences*, 67-71.

⁴³ George and Bennett, *Case Studies and Theory Development in the Social Sciences*, 80.

⁴⁴ George and Bennett, *Case Studies and Theory Development in the Social Sciences*, 81.

coalition of over 100,000 security personnel. The campaign offers a glimpse into the future of modern large-scale operations in urban terrain.

This study uses five questions to test the proposed hypotheses. The first two questions seek to develop an understanding of the strategic context. Foremost, what were the US national interests and strategic objectives? Second, is the operational approach tied to strategic objectives? An initial proposition was that if urban operations are required to achieve the political objective, and they are part of the broader campaign plan, then there is a greater likelihood of mission success.

The next research question seeks to understand the conduct of the operation. Specifically, how were the FOUE applied? A thought is that the study will demonstrate if FOUE are part of planning and execution, then the effectiveness of large-scale combat operations is enhanced and risk reduced.

The final two research questions concern setting conditions for transition and conflict termination. The first specifically asks: how did authority transition to local authorities? The second asks: how were coalition partners, government agencies, and non-governmental agencies integrated into planning, preparation, execution, and assessment? The concept is that the study will demonstrate that if authority does not transition to a legitimate local authority rapidly, then the likelihood of achieving the original political objectives is decreased.

Next, it is useful to understand the sources used for data collection within the design of the study. Given the recency and classification of many sources, the preponderance of sources are limited to military lessons learned publications, published interviews with senior leaders, and media reports. The Operation Inherent Resolve public affairs press releases provide open-source material documenting actions, decisions, and objectives. Government funded studies, like the RAND study of ISIS in Mosul, also offer significant sources of data for this study.

In summation, the concept for this section was to describe the methodology for the deliberate study of the 2016-2017 campaign for the liberation of Mosul. This section discussed

the structured, focused questions approach, the specific questions used, and the expected outcomes of the study. Finally, this section discussed the sources used for data collection to inform the study.

Case Study

The campaign to liberate the city of Mosul is an illustrative case with the potential to demonstrate lessons about urban warfare within large scale combat operations. In this section, the liberation of Mosul is qualitatively examined as a case study to develop a better understanding of LSCO in urban terrain. The case study section provides an overview of the campaign, then transitions to a deliberate examination of the previously discussed five structured, focused questions. Although the broader history of Iraq and US involvement is useful to understand the campaign for Mosul, antecedents to the operations discussed here focus only on what is most necessary to understand the case. Ultimately, such an examination provides the data to inform our findings and analysis of the campaign to liberate Mosul in later sections.

Before examining the five structured, focused questions, it is useful to provide the broader context before, during, and after the campaign to liberate Mosul. This begins with the historical significance of Mosul, discusses recent conflicts in the region, and the rise of ISIS. For centuries, the city was a major economic hub in the region. As one of the stops on the Silk Road, Mosul became a key cultural and economic center between modern-day Syria, Turkey, and Iran.⁴⁵ Over the centuries, the city of Mosul transitioned from Assyrian rule, to the Mongols, and the Ottoman Turks, before the British settled the current borders to establish Iraq in 1926.⁴⁶ Mosul's role as a regional hub for commerce, and intense history of conflict and transition, make it a diverse city with unresolved tensions.⁴⁷ These tensions manifested in Mosul during Operation Iraqi Freedom, as many political and military organizations struggled for power within the region.

⁴⁵ *Encyclopedia Britannica*, s.v. "Mosul," accessed October 10, 2019, <https://www.britannica.com/place/Mosul>.

⁴⁶ *Encyclopedia Britannica*, s.v. "Mosul."

⁴⁷ *Encyclopedia Britannica*, s.v. "Mosul."

Relevant to the study of this case are Operation Iraqi Freedom, the Iraqi Civil War, and Operation Inherent Resolve. Operation Iraqi Freedom occurred from March 19, 2003 to December 18, 2011 in order to remove the Saddam Hussein regime and prevent the use of weapons of mass destruction by terrorists. Following the 2003 US invasion of Iraq, many of President Saddam Hussein's loyalists fled to Mosul.⁴⁸ There, many former military and political leaders joined the insurgency to resist the US presence in Iraq.⁴⁹ One such group, Al-Qaeda in Iraq (AQI), was an organization of Sunni Salafi jihadists, led by Abu Musab al-Zarqawi.⁵⁰ The group's brutality against other Muslims even drew the concern of al-Qaeda leadership. In 2006, Zarqawi declared the formation of the Islamic State in Iraq (ISI), without consulting with al-Qaeda. Zarqawi led ISI until his death in 2013.⁵¹ Following Zarqawi's death, leadership of ISI transitioned to Abu Bakr al-Baghdadi, who made a declaration merging the al-Nusra Front in Syria and ISI.⁵² Together, they formed the Islamic State of Iraq and al-Sham (ISIS).⁵³

Although sectarian violence occurred throughout Operation Iraqi Freedom and continues today, the Iraqi Civil War is the period where ISIS conducted large-scale offensive and defensive operations to control territory in Iraq. Specifically, this paper defines the start of the Iraqi Civil War at the transition to large-scale coordinated attacks in June of 2013, as ISIS prepared to go on the offensive, and concludes with President Abadi's declaration of victory over ISIS in December

⁴⁸ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 3.

⁴⁹ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 3.

⁵⁰ William McCants, *The ISIS Apocalypse: The History Strategy and Doomsday Vision of the Islamic State* (New York: Saint Martin's Press) 2015, 19.

⁵¹ McCants, *The ISIS Apocalypse*, 19.

⁵² McCants, *The ISIS Apocalypse*, 19.

⁵³ ISIS, ISIL, and Daesh all reference the international terror organization founded by Zarqawi and Baghdadi.

of 2017.⁵⁴ Throughout 2013 and 2014, ISIS went on the offensive, seizing territory, economic infrastructure, and swelling its ranks. By June of 2014, over a thousand ISIS fighters attacked into Mosul.⁵⁵ Iraqi Security Forces offered weak resistance or outright fled.⁵⁶ As a result, ISIS then possessed the social, economic, and human capital necessary to publicly declare the realization of their objective- an Islamic State governed under Sharia Law.

Faced with the rapid advance of ISIS and its atrocities in Iraq and internationally, a broad coalition formed to conduct Operation Inherent Resolve (OIR). OIR formally began on September 10, 2014 with the announcement of the establishment of an international coalition to defeat ISIS and continues as of the publication of this work.⁵⁷ The coalition's mission was to "militarily defeat ISIS in the Combined Joint Operations Area in order to enable whole-of-coalition governmental actions to increase regional stability."⁵⁸ To accomplish this mission, the campaign's design was broken into four phases: degrade, counterattack, defeat, and support stabilization.⁵⁹

Phase I (Degrade), formally began when the US declared the establishment of an international coalition on September 10, 2014.⁶⁰ Phase one was largely characterized by airstrikes to stall ISIS momentum and decrease their military capabilities in Iraq and Syria.⁶¹ It also represented the start of the coalition's efforts to train, equip, advise, and assist anti-ISIS forces.

⁵⁴ Maher Chmaytelli and Ahmed Aboulenein, "Iraq declares final victory over Islamic State," December 9, 2017, accessed January 23, 2020. <https://www.reuters.com/article/us-mideast-crisis-iraq-islamicstate/iraq-declares-final-victory-over-islamic-state-idUSKBN1E30B9>.

⁵⁵ McCants, *The ISIS Apocalypse*, 121.

⁵⁶ McCants, *The ISIS Apocalypse*, 121.

⁵⁷ US Department of Defense, "Operation Inherent Resolve," accessed 30 October 2019, <https://dod.defense.gov/OIR/>.

⁵⁸ US Department of Defense, "Operation Inherent Resolve."

⁵⁹ US Department of Defense, "CJTF Campaign Design," accessed 30 October 2019, <https://www.inherentresolve.mil/campaign/>.

⁶⁰ US Department of Defense, "Operation Inherent Resolve."

⁶¹ US Department of Defense, "CJTF Campaign Design."

Most notably, the efforts focused to rescue Yazidis facing extermination by ISIS on the Sinjar Mountains, secure the Mosul and Haditha Dams, as well as prevent ISIS' offensive from penetrating to Baghdad.⁶² Key events during this phase were the seizure of lines of communication to Ramadi, seizure of Ramadi itself in December of 2015, and the overall reduction of ISIS territory and influence in Iraq and Syria.⁶³

In April of 2016, Phase II (Counterattack) began. This represented a shift in the initiative as coalition forces transitioned from strategically defensive to strategically offensive operations.⁶⁴ During this phase, the coalition successfully defeated ISIS' ability to conduct conventional attacks in Mosul and Raqqah, to eliminate much of ISIS' means and will to fight.⁶⁵ Key events during this phase were the seizure of Fallujah in June of 2016 and the seizure of key lines of communication to Mosul and Raqqah.⁶⁶

Whether for concerns over operational security, or narrative control, CJTF OIR never publicly announced the transition to Phase III (Defeat) or Phase IV (Support to Stabilization). However, the CJTF's description of Phase III in the campaign history frames the phase to include the operations to seize Mosul and Raqqa, and is ongoing today.⁶⁷ While Iraq's Prime Minister Abadi declared victory of ISIS in Iraq on December 9, 2017, the campaign to defeat ISIS in Syria

⁶² US Department of Defense, "Combined Joint Task Force: Operation Inherent Resolve – History," accessed 30 October 2019, https://www.inherentresolve.mil/Portals/14/Documents/Mission/HISTORY_17OCT2014-JUL2017.pdf?ver=2017-07-22-095806-793.

⁶³ US Department of Defense, "Combined Joint Task Force: Operation Inherent Resolve – History."

⁶⁴ US Department of Defense, "Combined – Joint Task Force Operation Inherent Resolve (CJTF – OIR)," *The Coalition Military Campaign to Defeat the Islamic State in Iraq and Syria 21 Aug 2016 – 05 Sep 2017* (2017), 13.

⁶⁵ CJTF – OIR, "The Coalition Military Campaign to Defeat the Islamic State," 35.

⁶⁶ CJTF OIR Press Release, "Syrian Democratic Forces Liberate Raqqah," CJTF OIR Press Release, October 20, 2017, accessed 30 October 2019, <https://www.inherentresolve.mil/Media-Library/Article/1348988/syrian-democratic-forces-liberate-raqqah/>.

⁶⁷ US Department of Defense, "CJTF Campaign Design."

continued.⁶⁸ The Syrian Defense Forces and coalition partners continued to fight to wrest the last of the territory from ISIS' control until March 23, 2019 in Baghouz, Syria.⁶⁹ Shortly following this defeat, Abu Bakr al-Baghdadi published a video for the first time since 2014 to signal the transition to global terrorism as the main strategy in a long war against those who oppose ISIS.⁷⁰ Although ISIS continues to conduct small-scale attacks in Iraq and Syria, the organization appears to lack the ability to wage conventional warfare against coalition forces. Instead, ISIS concentrates most of its efforts in rural support zones of majority Sunni populations near Anbar, Ninewa, Salah ad Din, Kirkuk, and Diyala.⁷¹ These remaining forces continue to conduct assassinations and burn crops to support a narrative that the government cannot protect the population.⁷²

A broad summary of the outcome of the follows. As of publication, there remains no formal announcement of a transition to Phase IV: Support to Stabilization. Coalition airstrikes and support to ISF continue today to prevent a resurgence of ISIS. Meanwhile, coalition partners and international organizations seek to set the conditions for a lasting peace in the region.⁷³ This includes reconstruction, resettlement, and reintegration. Years later, Mosul and the surrounding towns and villages bear the scars of intense fighting and are largely uninhabitable without significant investment.⁷⁴ Thousands of families of ISIS fighters remain in camps under poor

⁶⁸ Chmaytelli and Abouenein, "Iraq declares final victory."

⁶⁹ Rudaw News, "ISIS chief Baghdadi makes first video appearance since 2014," April 24, 2019, accessed 30 October 2019, <https://www.rudaw.net/english/world/29042019/>.

⁷⁰ "ISIS chief Baghdadi makes first video appearance."

⁷¹ US Department of Defense, "Operation Inherent Resolve Lead Inspector General (IG) Report to the United States Congress," August 6, 2019, accessed 31 October 2019, <https://www.dodig.mil/Reports/Lead-Inspector-General-Reports/Article/1926689/lead-inspector-general-for-operation-inherent-resolve-quarterly-report-to-the-u/>.

⁷² US Department of Defense, "OIR Lead IG Report," 2018, 22.

⁷³ US Department of Defense, "OIR Lead IG Report," 2018, 40.

⁷⁴ US Department of Defense, "OIR Lead IG Report," 2018, 39.

conditions, and despite continuing efforts of the international community, many of the same challenges that led to the rise of ISIS remain.⁷⁵

With a better understanding of the broader conflict, this section provides an overview of the belligerents, the key events, and the outcome of the campaign to frame the case for further analysis. The campaign began on October 16, 2016 and concluded with a declaration of the liberation of Mosul on July 10, 2017.

The belligerents in the ground campaign to liberate Mosul are known as ISIS and the anti-ISIS Coalition. ISIS consisted of approximately 5,000 fighters.⁷⁶ ISIS was led by Abu Bakr al-Baghdadi, however, Ahmad Khalaf al-Jabouri led ISIS' ground campaign in Mosul initially.⁷⁷ Coalition raids and airstrikes resulted in a significant turnover of leadership throughout the operation.⁷⁸ The anti-ISIS Coalition's ground forces during the campaign for Mosul consisted primarily of the Iraqi Army (IA), Counter-Terrorism Services (CTS), and the Federal Police. The IA units consisted of the 9th Armored Division (IA), 1st Infantry Division (IA), 15th Infantry Division (IA), and the 16th Infantry Division (IA).⁷⁹ The CTS, an elite special operations formation within the Ministry of Defense, also played a major role in offensive operations.⁸⁰ The Iraqi Federal Police (FEDPOL), a national-level, paramilitary organization, provided an infantry division equivalent to the fighting. Also, US governmental agencies served in an advise and assist

⁷⁵ US Department of Defense, "OIR Lead IG Report," 2018, 40.

⁷⁶ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 5.

⁷⁷ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 5; Shelly Kittleson, "Iraqi Forces Advance from North Ahead of Extremely Violent Fight," *Al Monitor*, May 29, 2017, accessed 31 October 2019, <https://www.al-monitor.com/pulse/originals/2017/05/iraq-forces-mosul-isis-abadi-civilians.html/>.

⁷⁸ Cheryl Pellerin, "Shaping Operations Continue in Iraq, Syria as ISIL Leaders Targeted," September 8, 2016, accessed 31 October 2019, [9https://www.defense.gov/Explore/News/Article/Article/938218/shaping-operations-continue-in-iraq-syria-as-isil-leaders-targeted/](https://www.defense.gov/Explore/News/Article/Article/938218/shaping-operations-continue-in-iraq-syria-as-isil-leaders-targeted/).

⁷⁹ Arnold and Fiore, "Five Operational Lessons from the Battle of Mosul," 58.

⁸⁰ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 7.

capacity at echelon from the Division to the Ministerial levels in support operations.⁸¹ Finally, countless joint and multinational forces contributed to the precision fires that enabled the campaign.⁸²

Another organization, the Popular Mobilization Force (PMF), merits additional attention for their part in the Mosul campaign, and the strategic implications of their role. The title PMF describes a number of loosely aligned militias formed across Iraq to secure their communities against ISIS in 2014.⁸³ Of note, the Iranian Republican Guards Corps Quds Force, led by General Qassem Soleimani, directly advised many of the PMF.⁸⁴ Along with coalition airstrikes and the ISF, the PMF played a key role in the defense of Baghdad against ISIS in the summer of 2015.⁸⁵ While the Iraqi Parliament voted to formalize the PMF under the Government of Iraq in 2016, few mechanisms existed to control or limit their actions.⁸⁶ The PMF are significant to this study for their immediate impact on the campaign, as well as the long term impact on security within Iraq. Specifically, a 2017 CJTF-OIR report captured concerns that the establishment of the PMF likely would result in competition for scarce resources, command and control issues, and long-term risks for reconciliation and political stability.⁸⁷

Next, focus shifts to establishing a broad understanding of the operational design and execution of the campaign to liberate Mosul. Given the differences in operational planning across

⁸¹ Brett Sylvia, interview by author, October 29, 2019, Fort Leavenworth, KS, transcript retained by author.

⁸² The Global Coalition, “81 Partners United in Ensuring Daesh’s Enduring Defeat,” accessed December 30, 2020, <https://theglobalcoalition.org/en/partners/>.

⁸³ Julie Ahn, Maeve Campbell, and Pete Knoetgen. “The Politics of Security in Ninewa: Preventing an ISIS Resurgence in Northern Iraq.” May 7, 2018, accessed December 12, 2019, https://www.hks.harvard.edu/sites/default/files/degree%20programs/MPP/files/Finalized%20PAE_Ahn_Campbell_Knoetgen.pdf/, 13.

⁸⁴ CJTF – OIR, “The Coalition Military Campaign to Defeat the Islamic State,” 11.

⁸⁵ CJTF – OIR, “The Coalition Military Campaign to Defeat the Islamic State,” 11.

⁸⁶ CJTF – OIR, “The Coalition Military Campaign to Defeat the Islamic State,” 21.

⁸⁷ CJTF – OIR, “The Coalition Military Campaign to Defeat the Islamic State,” 21.

coalition headquarters and national governments, this paper will utilize the CJTF-OIR timeline for its thoroughness and consistency. Planning to retake Mosul began in early 2016, with coordination across local, provincial, and coalition partners.⁸⁸ The plan to liberate Mosul conceptually followed three phases: Attack to isolate Mosul, defeat ISIS in Eastern Mosul, and defeat ISIS in Western Mosul. Throughout August, 2016, the anti-ISIS coalition of over 94,000 security forces occupied tactical assembly areas South and East of Mosul, outside of the rural areas occupied by ISIS.⁸⁹ On October 16, 2016, Iraqi Prime Minister Haider al-Abadi announced the start of the first phase of the campaign.⁹⁰ Phase one consisted of shaping operations prior to the attacks into the city of Mosul from October 16, 2016 to December 31, 2016.⁹¹ Phase two consisted of the battle for East Mosul from January 1 to February 27, 2017,⁹² and Phase three consisted of the battle for the Old City from February 18 to July 10, 2017.⁹³ For clarity, additional aspects of the battle for Mosul remain for question three of the structured, focused questions below.

Finally, although it is still too soon to evaluate all of the outcomes, the campaign resulted in the destruction of ISIS' conventional capability in Mosul and the restoration of sovereign governance. Civilian and military casualty numbers vary widely due to the inability of independent organizations to validate the claims of both sides in a warzone.⁹⁴ While the United

⁸⁸ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 6.

⁸⁹ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 6.

⁹⁰ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 6.

⁹¹ Arnold and Fiore, "Five Operational Lessons from the Battle of Mosul," 63.

⁹² Arnold and Fiore, "Five Operational Lessons from the Battle of Mosul," 63.

⁹³ Arnold and Fiore, "Five Operational Lessons from the Battle of Mosul," 63.

⁹⁴ United Nations Assistance Mission for Iraq (UNAMI), "Report on the Protection of Civilians in the Context of the Ninewa Operations and the Retaking of Mosul City, 17 October 2016 – 10 July 2017," accessed December 10, 2019, http://www.uniraq.org/images/factsheets_reports/Mosul_report%2017Oct2016-10Jul201731%20October_2017.pdf, 10.

Nations (UN) reported a minimum of 2,521 civilians killed and 1,673 wounded,⁹⁵ multiple other methodologies concluded the death toll was closer to 9-11,000 civilians dead.⁹⁶ The UN also republished CJTF OIR estimates of 12-1,500 ISF killed with nearly 8,000 wounded.⁹⁷ Equally problematic are the casualty estimates for ISIS fighters killed in Mosul.⁹⁸ The ISF buried ISIS fighters in mass graves with limited to no documentation after hasty information collection efforts.⁹⁹ With the defeat of ISIS in Mosul, ISIS lost their symbolic capital in Iraq. They lost their most populous city, revenue streams, and infrastructure to claim their legitimacy as an Islamic state. ISIS forces that stayed in the area reverted to a strategy of insurgency and destabilization in the region.¹⁰⁰ Other ISIS forces consolidated in support of the fight to maintain Raqqa and rural support zones. For the anti-ISIS coalition, they successfully demonstrated the ability to persevere and bear the burdens necessary to defeat an entrenched and committed enemy. Through years of conflict, the coalition developed the capabilities to integrate each partner and their unique capabilities and resources to defeat ISIS. Lastly, the civilians within Mosul and the surrounding areas suffered greatly. ISIS' atrocities and brutal approach to governance caused thousands of casualties.¹⁰¹ Their intentional use of the population as human shields to deter strikes and slow coalition movement resulted in heavy civilian casualties.¹⁰² Nearly the entire population of over

⁹⁵ UNAMI, "Report on the Protection of Civilians," 9.

⁹⁶ Susannah George, "Mosul is a graveyard: Final IS battle kills 9,000 civilians," December 20, 2017, accessed December 10, 2019, <https://apnews.com/bbea7094fb954838a2fdc11278d65460/Mosul-is-a-graveyard:-Final-IS-battle-kills-9,000-civilians>.

⁹⁷ UNAMI, "Report on the Protection of Civilians," 9.

⁹⁸ *The Straits Times*, "Once Promised Paradise, ISIS Fighters End Up in Mass Graves," *The Straits Times* October 15, 2017, accessed January 26, 2020, <https://www.straitstimes.com/world/middle-east/once-promised-paradise-isis-fighters-end-up-in-mass-graves>.

⁹⁹ *The Straits Times*, "Once Promised Paradise, ISIS fighters End Up in Mass Graves."

¹⁰⁰ Hassan, "Insurgents Again: The Islamic State's Calculated Reversion to Attrition in the Syria-Iraq Border Region and Beyond," *CTC Sentinel* 10, no. 11 (December 2017): 2.

¹⁰¹ UNAMI, "Report on the Protection of Civilians," 14.

¹⁰² UNAMI, "Report on the Protection of Civilians," 15.

2 million citizens fled Mosul before, during, or after the fighting.¹⁰³ Although some returned, nearly 1.6 million Iraqis still reside in displaced persons camps.¹⁰⁴ Despite pledges for billions of dollars in investments, corruption and mismanaged projects leave much of Mosul in disrepair.¹⁰⁵

Next, this study uses five questions to test the proposed hypotheses. The first question seeks to develop an understanding of the strategic context and national interests. The next two research questions seek to understand how the operation was conducted, and the final two research questions concern setting conditions for transition and conflict termination. It is thought that the answers to these questions will result in a deeper understanding of the campaign to liberate Mosul and the implications for future warfare.

The first question is: what were the national interests and strategic objectives? To answer this question, this paper will describe the most relevant national interests of ISIS, the Iraqi Government, and the US. The national interests and strategic objectives explain the rationale for participation, policy decisions, and the level of effort by each side in the conflict.

Beginning with ISIS, who gained the initiative prior to the campaign to liberate Mosul, their interests were to forcibly establish and maintain a state governed by Sharia law.¹⁰⁶ In the short term, ISIS sought to maintain control of the territory it seized.¹⁰⁷ In the mid-term, ISIS aims

¹⁰³ The French Institute for International and Strategic Affairs, "Iraq 2018 Scenarios: Planning After Mosul," March 6, 2017, accessed December 3, 2019, <https://www.iris-france.org/wp-content/uploads/2017/07/Obs-ProspHuma-Iraq-july-2017.pdf>, 2.

¹⁰⁴ United Nations Assistance Mission for Iraq (UNAMI), "UN Representative Hennis-Plasschaert urges continued funding for Iraq's post-conflict recovery, welcomes government efforts to spare Iraq regional tensions, calls on political actors to work together to face the country's challenges," August 29, 2019, accessed January 26, 2020, <https://reliefweb.int/report/iraq/un-representative-hennis-plasschaert-urges-continued-funding-iraq-s-post-conflict>.

¹⁰⁵ Dlawer Ala'Aldeen, "Reconstructing Iraq: Where Do We Stand?" *Italian Institute for International Studies*, March 8, 2019, accessed January 26, 2020, <https://www.ispionline.it/en/pubblicazione/reconstructing-iraq-where-do-we-stand-22465>.

¹⁰⁶ "The Islamic State (ISIS, ISIL)," *The Clarion Project*, August 23, 2016, accessed November 3, 2019, <https://clarionproject.org/the-islamic-state-isis-isil/>.

¹⁰⁷ *The Clarion Project*, "The Islamic State (ISIS, ISIL)."

to expand its territorial control throughout Iraq and Syria.¹⁰⁸ and ultimately, ISIS' stated goal is to ensure ISIS' global domination.¹⁰⁹ To achieve this, ISIS needed to do more than seize and defend territory.¹¹⁰ It needed to demonstrate the legitimacy of the caliphate and fulfill the basic needs of any state.¹¹¹ In order to provide these services, ISIS needed to rapidly establish government institutions and fill positions. It was concerned with replicating this process in each city it seized. Given the costs of funding fighting and conducting governance, another major interest was revenue generation. ISIS established departments for taxation, extortion, kidnapping, and its most lucrative revenue stream- the illegal smuggling of over 1 million barrels of oil per day.¹¹² Therefore, ISIS' objectives were to defend the territory it held, control its people, and maintain an Islamic state. While ISIS explicitly stated these interests, objectives, and approach to governance were for the broader caliphate, they are especially relevant to the case as they were fully operationalized in and around Mosul before and during the campaign.

The national interests of the Iraqi government were to protect its citizens, liberate its second-largest city, and restore a key economic center.¹¹³ This also required a delicate balance of socially and politically acceptable solutions to defeat ISIS without increasing internal tensions.¹¹⁴ Foremost, the Iraqi government sought to protect its citizens from ISIS' atrocities.¹¹⁵ Two of the

¹⁰⁸ *The Clarion Project*, "The Islamic State (ISIS, ISIL)."

¹⁰⁹ *The Clarion Project*, "The Islamic State (ISIS, ISIL)."

¹¹⁰ McCants, "*The ISIS Apocalypse*," 79.

¹¹¹ McCants, "*The ISIS Apocalypse*," 79.

¹¹² *The Clarion Project*, "The Islamic State (ISIS, ISIL)."

¹¹³ Stephen Kalin and Maher Chmaytelli, "Iraq PM vows to defeat ISIS in 2016 after army's first major victory," December 28, 2015, accessed January 14, 2020, <https://www.reuters.com/article/us-mideast-crisis-iraq-ramadi-idUSKBN0UB0TW20151228>.

¹¹⁴ Julie Ahn, Maeve Campbell, and Pete Knoetgen, "The Politics of Security in Ninewa: Preventing an ISIS Resurgence in Northern Iraq," May 7, 2018, accessed December 12, 2019, https://www.hks.harvard.edu/sites/default/files/degree%20programs/MPP/files/Finalized%20PAE_Ahn_Campbell_Knoetgen.pdf/, 25.

¹¹⁵ Ahn, Campbell, and Knoetgen, "The Politics of Security in Ninewa," 33.

fundamental responsibilities of any government are to control its territories and safeguard its citizens.¹¹⁶ Many were critical of the Iraqi government for its inability to defend against the attacks of a numerically inferior force.¹¹⁷ Similarly, the savage attacks against Iraqi citizens were politically damaging to leaders who ran on strong governance and security.¹¹⁸ Additionally, with a population of over 2 million citizens, Mosul was a major social and economic hub in the country; as such, Iraqi leaders made clear the importance to rapidly liberate Mosul.¹¹⁹ Lastly, centuries of conflict between Sunnis, Shia, Kurds, and Turks created undesirable conditions that got in the way of cooperation against ISIS. This made it necessary for political and military leaders to develop options that were suitable to the interests of major groups inside Iraq.¹²⁰

Similarly, the United States also maintained national interests for involvement in Operation Inherent Resolve, as evidenced in President Barack Obama's 2015 National Security Strategy (NSS). Among others, this includes "the security of the United States, its citizens, and U.S. allies and partners," as well as "rules-based international order that promoted global security and prosperity as well as the dignity and human rights of all peoples."¹²¹ Another US national interest is to ensure that, whenever possible, violent extremists are stopped abroad before their ideology can spread to the United States.¹²² Furthermore, the 2015 NSS states it is in the US

¹¹⁶ Jeffrey Herbst, *States and Power in Africa: Comparative Lessons in Authority and Control* (Princeton: Princeton University Press, 2003), 3.

¹¹⁷ Ahn, Campbell, and Knoetgen, "The Politics of Security in Ninewa," 25.

¹¹⁸ Ahn, Campbell, and Knoetgen, "The Politics of Security in Ninewa," 25.

¹¹⁹ Stephen Kalin and Maher Chmaytelli, "Iraq PM vows to defeat ISIS in 2016 after army's first major victory," December 28, 2015, accessed January 14, 2020, <https://www.reuters.com/article/us-mideast-crisis-iraq-ramadi-idUSKBN0UB0TW20151228>.

¹²⁰ Brett Sylvia, interview by author, October 29, 2019, Fort Leavenworth, KS, transcript retained by author.

¹²¹ Barack Obama, "National Security Strategy," February, 2015, accessed October 29, 2019, https://obamawhitehouse.archives.gov/sites/default/files/docs/2015_national_security_strategy_2.pdf, 1.

¹²² Obama, "National Security Strategy," 7.

interest to “prevent the causes and consequences of conflict” to support global stability.¹²³

Finally, in the case of the campaign to liberate Mosul, the US interests aligned with the Iraqi government’s strategic and operational necessity to liberate Mosul.

While each state may have some divergent interests, the mission of Operation Inherent Resolve best captures the unifying purposes for the campaign. The foremost purpose was “defeat ISIS as a military force on the battlefield in Iraq and Syria.”¹²⁴ Second, was to deconflict coalition actions with other regional actors (including Iran, Russia, and the Assad Regime).¹²⁵ Third, set the conditions for follow on operations by leveraging the full national power of members of the global coalition.¹²⁶ Finally, use “diplomatic, information, economic, law enforcement, and other aspects of national power” to defeat and mitigate the effects of ISIS.¹²⁷

The second question states: is the operational approach tied to strategic objectives? An operational approach consists of a mission, an operational concept, and the tasks and actions required to accomplish the mission.¹²⁸ Given their initiatives, it follows to start with ISIS’ operational approach, then transition to the coalition forces.

The mission of ISIS in Mosul was to maintain the self-described caliphate in the city and the surrounding areas.¹²⁹ During the campaign for Mosul, the operational approach of ISIS was a tactical and operational defense to maintain control of one of its greatest sources of revenue.

¹²³ Obama, “National Security Strategy,” 7.

¹²⁴ Department of Defense, “Combined Joint Task Force Operation Inherent Resolve (CJTF-OIR) Fact Sheet,” January 11, 2017, accessed October 29, 2019, <https://www.inherentresolve.mil/Portals/14/Documents/Mission/20170717-%20Updated%20Mission%20Statement%20Fact%20Sheet.pdf?ver=2017-07-17-093803-770/>.

¹²⁵ Department of Defense, “CJTF-OIR Fact Sheet.”

¹²⁶ Department of Defense, “CJTF-OIR Fact Sheet.”

¹²⁷ Department of Defense, “CJTF-OIR Fact Sheet.”

¹²⁸ US Department of the Army, Army Doctrine Publication (ADP) 3-0, *Operations* (Washington, DC: Government Printing Office, 2019), 2-3.

¹²⁹ Mosul Study Group, “What the Battle for Mosul Teaches the Force,” 4.

Specifically, ISIS would defend in-depth from the rural areas, to the outer lines of the defense around the city, and finally defend in the Old City.¹³⁰ ISIS would support these lines of defense with massing of vehicle-borne improvised explosives devices (VBIEDS), attacks on lines of communication, and massed attacks on infrastructure throughout Iraq to compel ISF to dilute its forces attacking its capital in Mosul.¹³¹ ISIS also recognized it needed a media strategy to counter Western media and inspire future jihadis.¹³² It needed to focus on savagely attacking outposts on the periphery to instill fear in future ISF recruits and cause the ISF to abandon areas they could not control.¹³³

Accordingly, the operational approach for Iraqi Security Forces and the coalition directly countered that of ISIS. The mission was to defeat ISIS in Mosul and liberate the population of the city held hostage.¹³⁴ The operational concept followed three phases: Attack to Isolate Mosul, Defeat ISIS in Eastern Mosul, and Defeat ISIS in Western Mosul (see figure 1). Phase one consists of the shaping operations before the attacks into the city of Mosul from October 16 to December 31, 2016.¹³⁵ Phase two consists of the battle for East Mosul from January 1 to February 27, 2017.¹³⁶ Phase three consists of the battle for the Old City from February 18 to July 10, 2017.¹³⁷

¹³⁰ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 14.

¹³¹ McCants, *The ISIS Apocalypse*, 81.

¹³² McCants, *The ISIS Apocalypse*, 82.

¹³³ McCants, *The ISIS Apocalypse*, 80.

¹³⁴ Stephen Kalin and Maher Chmaytelli, "Iraq PM vows to defeat ISIS in 2016 after army's first major victory," December 28, 2015, accessed January 14, 2020, <https://www.reuters.com/article/us-mideast-crisis-iraq-ramadi-idUSKBN0UB0TW20151228>.

¹³⁵ Arnold and Fiore, "Five Operational Lessons from the Battle of Mosul," 63.

¹³⁶ Arnold and Fiore, "Five Operational Lessons from the Battle of Mosul," 63.

¹³⁷ Arnold and Fiore, "Five Operational Lessons from the Battle of Mosul," 63.

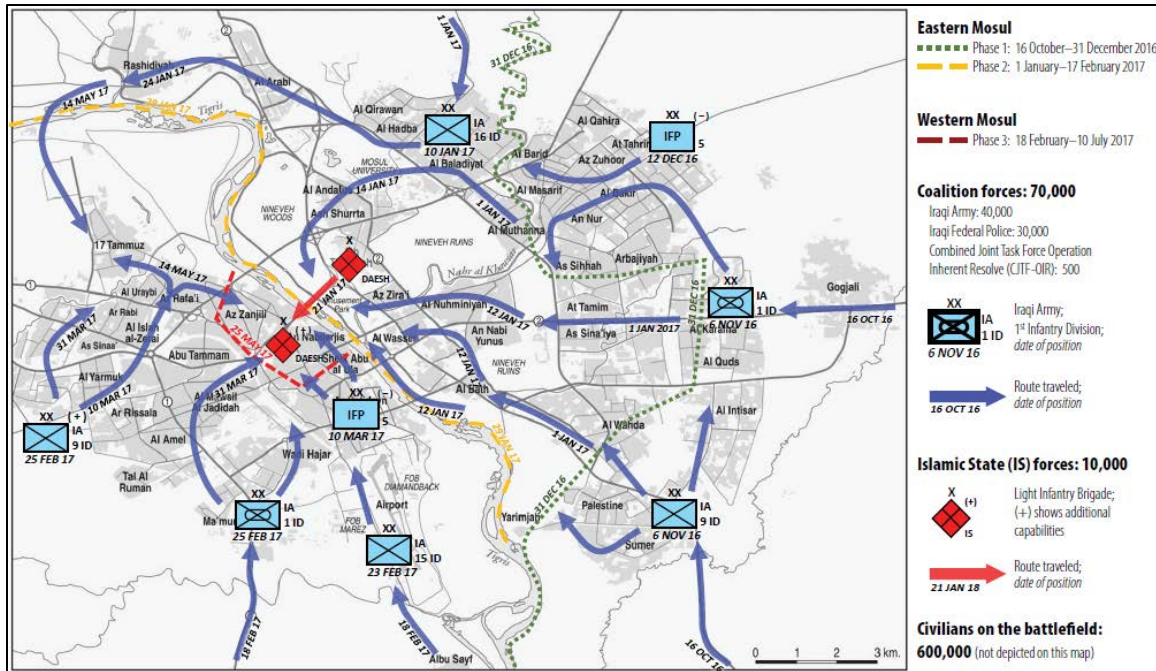


Figure 1. Map of the Battle of Mosul.

Source: Thomas Arnold and Nicolas Fiore, “Five Operational Lessons from the Battle for Mosul,” *Military Review* (January-February 2019): 63.

To achieve their design, the coalition initially attacked along two lines of operations from the south and east of Mosul.¹³⁸ The Federal Police, the Counter Terrorism Service and the Iraqi Army attacked north towards Mosul.¹³⁹ Elements of the Iraqi Army, Kurdish Peshmerga, and the PMF attacked toward the city from the east and the north.¹⁴⁰ During this portion of the campaign, the objectives were to seize the rural areas outside of Mosul and cut the lines of communication to these support areas. By the end of the phase, the coalition seized the small cities of Qaraqosh,

¹³⁸ Arnold and Fiore, “Five Operational Lessons from the Battle of Mosul,” 63.

¹³⁹ Mosul Study Group, “What the Battle for Mosul Teaches the Force,” 6.

¹⁴⁰ Mosul Study Group, “What the Battle for Mosul Teaches the Force,” 6.

Bartallah, and Bashiqaq in the East, as well as Qayyarah, al-Hamdaniyah, and Ashura to the South of Mosul.¹⁴¹

The next stage of the campaign began when Coalition forces entered East Mosul on November 1, 2016, and on January 24, 2016, Prime Minister al-Abadi declared East Mosul was secure.¹⁴² Following a brief operational pause to refit and train reinforcements, ISF prepared to assault West Mosul.¹⁴³ They planned to further isolate ISIS defenses by encircling the North and West sides of the city with CTS and FEDPOL, while IA and the tribal militias attacked from the south and southeast.¹⁴⁴

The attack to seize West Mosul began February 19, 2017.¹⁴⁵ Fighting in Western Mosul was more difficult, as ISIS had more time to deliberately prepare mutually-supporting defenses and engagement areas.¹⁴⁶ This was especially the case in the Old City, where ISIS prepared to make their last stand. Due to poor weather and stalled coalition progress in the Old City, the ISF conducted an operational pause on March 24, 2017 to plan a new offensive from the North.¹⁴⁷ When this plan did not achieve penetration, the ISF then attempted a new offensive from the south on May 4, 2017.¹⁴⁸ The fighting continued block-by-block to ultimately wrest the last of terrain from ISIS along the Tigris River in July.¹⁴⁹ Despite the steady occurrence of small clashes

¹⁴¹ Baxtiyar Goran, "Iraqi Army Liberate New Villages in Second Day of Mosul Operation," Kurdistan24, October 18, 2016, accessed 31 October 2019, <http://www.kurdistan24.net/en/news/620fd9a5-43c2-437f-98b8-5b234e130eee/iraqi-army-liberate-new-villages-in-second-day-of-mosul-operation->.

¹⁴² Mosul Study Group, "What the Battle for Mosul Teaches the Force," 7.

¹⁴³ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 7.

¹⁴⁴ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 7.

¹⁴⁵ Arnold and Fiore, "Five Operational Lessons from the Battle of Mosul," 63.

¹⁴⁶ CJTF – OIR, "The Coalition Military Campaign to Defeat the Islamic State," 4.

¹⁴⁷ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 8.

¹⁴⁸ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 8.

¹⁴⁹ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 8.

with ISF from pockets of ISIS resistance, Prime Minister al-Abadi declared the liberation of Mosul on July 10, 2017.¹⁵⁰

Question three asks, how were the FOUE applied? As stated earlier, the FOUE establish a framework for conducting and assessing some of the essential tasks in urban warfare. Answering how the coalition applied the FOUE logically follows the nine fundamentals established in JP3-06. Given the broad nature of each fundamental, and the length of the campaign to liberate Mosul, the discussion focusses only on the most salient indicators for and against each fundamental.

The first fundamental is to “conduct a systemic assessment.”¹⁵¹ The purpose of the systematic assessment is to develop an understanding of the complexities of the urban operating environment actors, systems, and processes associated with it.¹⁵² Coalition forces demonstrated near-continuous reassessment of the operating environment and the enemy.¹⁵³ Before operations to liberate the surrounding areas, the Mosul Dam was assessed as key infrastructure that must be immediately secured as a strategic resource and critical vulnerability.¹⁵⁴ Before the liberation of Mosul, the coalition sought to update its assessment of the city.¹⁵⁵ Although the ISF maintained better situational understanding of Mosul than their coalition partners, they too lacked up to date information on the systems and structures, since ISIS seized control of the city nearly two years prior. The use of human intelligence assets within the city and information collection from freed

¹⁵⁰ Mosul Study Group, “What the Battle for Mosul Teaches the Force,” 8; Jason Awadi, *Insights from the Liberation of Mosul: Revisiting Counterinsurgency Strategy* (Fort Leavenworth: Center for Army Lessons Learned, 2017), 82.

¹⁵¹ US Joint Staff, JP 3-06, III-13.

¹⁵² US Joint Staff, JP 3-06, III-13.

¹⁵³ Pat Work, “Their Leadership and Ownership: Concepts for Warfare By, With, and Through,” *Infantry* (January - March 2018), 32.

¹⁵⁴ “What the Battle of Mosul Teaches the Force,” Mosul Study Group, 4.

¹⁵⁵ “What the Battle of Mosul Teaches the Force,” Mosul Study Group, 10.

internally displaced persons (IDPs) increased situational understanding as the fight developed.¹⁵⁶ Given ISIS' control of utilities and key infrastructure, the Coalition knew that they could not use these systems against ISIS.¹⁵⁷ This human intelligence helped to shape an understanding of the extent ISIS had prepared defenses, booby-trapping infrastructure, and consolidated human shields.¹⁵⁸

The second fundamental is to “integrate all actions within the context of an overarching major operation or campaign [and to] combine the various isolating, protective, improving, sustaining, persuasive, destructive, and disruptive actions, military and nonmilitary, into a cohesive, mutually reinforcing whole.”¹⁵⁹ A review of multiple accounts of the operations before and during the battle of Mosul demonstrated considerable effort to integrate all actions within the broader campaign. However, the case offers a few examples that most indicate the level of effectiveness achieved by these efforts throughout the operation. In the early stages of the campaign, ISF and coalition partners seized terrain in the Ninewah Valley to establish ground lines of communication to support operations in Mosul.¹⁶⁰ ISF also seized Qayyarah West Airfield to establish a base for sustainment and air operations to support operations in Mosul.¹⁶¹ The coalition integrated the effects of non-military operations to isolate ISIS from using banking

¹⁵⁶ “What the Battle of Mosul Teaches the Force,” Mosul Study Group, 46.

¹⁵⁷ “What the Battle of Mosul Teaches the Force,” Mosul Study Group, 46.

¹⁵⁸ “What the Battle of Mosul Teaches the Force,” Mosul Study Group, 46.

¹⁵⁹ US Joint Staff, JP 3-06, III-13.

¹⁶⁰ “What the Battle for Mosul Teaches the Force,” Mosul Study Group, 6.

¹⁶¹ Ryan Wylie, Aaron Childers and Brett Sylvia, “Expeditionary Advising: Enabling Iraqi Operations from the Gates of Baghdad through Eastern Mosul,” accessed December 12, 2019, <https://smallwarsjournal.com/jrnl/art/expeditionary-advising-enabling-iraqi-operations-gates-baghdad-through-eastern-mosul>.

institutions to receive foreign financial support.¹⁶² Iraqi and non-governmental agencies also supported IDPs and prepared to mitigate the humanitarian crisis in the region.

Despite efforts to integrate actions, there is evidence that initially the cumulative effect of these efforts was suboptimal. From November to December 2016, ISF made steady progress in Mosul. However, December was marked by a major ISIS counter-attack that destroyed the majority of an Iraqi Army Battalion, followed by a broader stalemate.¹⁶³ A brief operational pause allowed for ISF to regroup and assess the contributing factors to the success of ISIS' attack.¹⁶⁴ Broadly, it appeared that the lack of synchronization of efforts across FEDPOL, CTS, and the Iraqi Army Divisions created a salient that allowed ISIS to encircle a portion of the 9th Armored Division (IA).¹⁶⁵ Following the operational pause, LTG Stephen Townsend, the CJTF-OIR Commander, issued a tactical directive that increased the ability of the advisors to better integrate and synchronize the effects of the coalition.¹⁶⁶ The directive delegated the approval authority for advise and assist operations closer to the frontlines and delegated strike authority to the ground commanders.¹⁶⁷ These two decisions increasingly allowed US advisors to directly embed in Iraqi Brigade and Division command posts with the ability to integrate joint assets into the planning

¹⁶² US Department of Treasury, "Treasury Sanctions Networks Providing Support to the Government of Syria, Including for Facilitating Syrian Government Oil Purchases from ISIL," November 25, 2015, accessed January 28, 2020, <https://www.treasury.gov/press-center/press-releases/pages/jl0287.aspx>.

¹⁶³ Wylie, Childers and Sylvia, "Expeditionary Advising: Enabling Iraqi Operations."

¹⁶⁴ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 7.

¹⁶⁵ Michael Knights and Alexander Mello, "Defeat by Annihilation: Mobility and Attrition in the Islamic State's Defense of Mosul," *CTC Sentinel* (April 2017), 3.

¹⁶⁶ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 41.

¹⁶⁷ Wylie, Childers and Sylvia, "Expeditionary Advising: Enabling Iraqi Operations."

and execution of ISF operations.¹⁶⁸ Similarly, by being embedded at echelon, it enabled rapid situational understanding up and down the advisor network.¹⁶⁹

The third fundamental is to “learn and adapt.”¹⁷⁰ *JP 3-06* states, “Since an urban environment will defy comprehensive understanding because of its complexity, and since it is ever-evolving, design operations with flexibility to adjust timing, forces, and other aspects to seize opportunities and react to unforeseen challenges.” The coalition forces adapted throughout the fight to liberate Mosul at the tactical and operational levels.

At the tactical level, the coalition repeatedly adapted to gain an advantage over or mitigate risk from ISIS. Given the volume of suicide vehicle-borne improvised explosive devices (SVBIEDs) used by ISIS, the coalition forces adapted their use of precision-guided munitions for counter-mobility purposes.¹⁷¹ Specifically, as ISF seized terrain, they used PGMs to rapidly crater avenues of approach and create opportunities for ISF to defeat a slower-moving SVBIED.¹⁷² The coalition forces also recognized the need to defeat commercially purchased unmanned aerial systems (UAS) that ISIS was using for reconnaissance, adjusting indirect fires, and even dropping ordnance.¹⁷³ Coalition forces adapted their tactics and use of available technology to counter and defeat ISIS UAS. As the use of UAS by ISIS increased, Soldiers modified the Anti-UAS Defense System to make it a mobile system that provided protection at the forward edge of the battle area.¹⁷⁴ The enemy’s use of “mouse holes,” or holes knocked in roofs or sides of

¹⁶⁸ Wylie, Childers and Sylvia, “Expeditionary Advising: Enabling Iraqi Operations.”

¹⁶⁹ J. Patrick Work, “Fighting the Islamic State By, With, and Through: How Mattered as Much as What,” *Joint Force Quarterly* 89 (2nd Quarter 2018): 58.

¹⁷⁰ US Joint Staff, *JP 3-06*, III-13.

¹⁷¹ Mosul Study Group, “What the Battle for Mosul Teaches the Force,” 36.

¹⁷² Wylie, Childers and Sylvia, “Expeditionary Advising: Enabling Iraqi Operations,” page #.

¹⁷² Mosul Study Group, “What the Battle of Mosul Teaches the Force,” 36.

¹⁷³ Mosul Study Group, “What the Battle of Mosul Teaches the Force,” 68.

¹⁷⁴ Mosul Study Group, “What the Battle of Mosul Teaches the Force,” 68.

building to mask their fires, required coalition forces to adapt their rules of engagement and TTPs to conduct counter-fire. The use of PGMs from multiple launch rocket systems reduced the collateral damage while also allowing for responsive fires.¹⁷⁵ Similarly, given the political constraints and concern over missions forward of the FLOT, the US adapted a technique of using Manned-Unmanned Teaming to effectively target ISIS fighters.¹⁷⁶ The technique paired unarmed ISR assets to identify and designate the target, while the Apache Attack Helicopter released the ordnance from a safer location.¹⁷⁷ This also prevented fighters from fleeing upon audible detection of the Apache.

Operationally, commanders and staffs across the coalition adapted their planning and advising approaches to best leverage their understanding of the operational environment and integrate their capabilities. For example, the brigade staff for the 2nd Brigade Combat Team, 101st Airborne Division, concurrently analyzed intelligence and the progress of operations and recommended courses of action for future operations.¹⁷⁸ Advisors at echelon suggested these courses of action, where they were adapted to meet the ISF commander's intent.¹⁷⁹ This process occurred on a continuous basis throughout the campaign.

The fourth fundamental is to “selectively isolate the urban environment”.¹⁸⁰ *JP 3-06* further defines this as “control the influx into the urban environment of people, materiel, and information that could help support the adversary.”¹⁸¹ As described broadly in the concept of the operation, there were multiple lines of effort to isolate ISIS prior to and during the fight to

¹⁷⁵ Mosul Study Group, “What the Battle of Mosul Teaches the Force,” 59.

¹⁷⁶ Kris Osborn, “Army expands manned-unmanned helicopter teaming,” December 13, 2016, accessed December 12, 2019, <https://defensesystems.com/articles/2016/12/13/apache.aspx>.

¹⁷⁷ Osborn, “Army expands manned-unmanned helicopter teaming.”

¹⁷⁸ Wylie, Childers and Sylvia, “Expeditionary Advising: Enabling Iraqi Operations.”

¹⁷⁹ Wylie, Childers and Sylvia, “Expeditionary Advising: Enabling Iraqi Operations.”

¹⁸⁰ US Joint Staff, JP 3-06, III-13.

¹⁸¹ US Joint Staff, JP 3-06, III-13.

liberate Mosul.¹⁸² On the ground, ISF severed vital lines of communication from Baghdad and Mosul by seizing Fallujah, Ramadi, and other the support zones.¹⁸³ As fighting progressed, the ISF sought to completely encircle Mosul and cut it off from any reinforcements.¹⁸⁴ By January 27, 2017, the eastern side of Mosul was seized and most attempts to cross the Tigris were effectively defeated by air.¹⁸⁵ By March 19, 2017, ISF seized Badush to the North of Mosul and completed the encirclement of the city.¹⁸⁶

The fifth fundamental is to “apply highly discriminate destructive or disabling force to disrupt an adversary’s ability to pursue its objectives.”¹⁸⁷ JP 3-06 further defines this concept as the process of “actively [locating] and [attacking] enemy elements while minimizing impact on other elements of the urban environment.”¹⁸⁸ The ISF and supporting coalition used a multi-domain approach to disrupt or destroy ISIS in the city.¹⁸⁹ The coalition synchronized kinetic, electronic warfare, information operations, cyber, public affairs, and military deception means to achieve effects against ISIS while minimizing civilian casualties where possible.¹⁹⁰ With nearly a Corps sized formation of over 100,000 security personnel on the ground, the coalition applied a highly destructive force against ISIS’ capabilities. The intentional combination of PGMs and ground forces enabled coalition forces to more accurately target enemy forces while attempting to

¹⁸² Zana Gulmohamad, “Unseating the Caliphate: Contrasting the Challenges of Liberating Fallujah and Mosul.” *CTC Sentinel* (October 2016): 16.

¹⁸³ Gulmohamad, “Unseating the Caliphate,” 16.

¹⁸⁴ Gulmohamad, “Unseating the Caliphate,” 21.

¹⁸⁵ Mosul Study Group, “What the Battle of Mosul Teaches the Force,” 7.

¹⁸⁶ Mosul Study Group, “What the Battle of Mosul Teaches the Force,” 8.

¹⁸⁷ US Joint Staff, JP 3-06, III-13.

¹⁸⁸ US Joint Staff, JP 3-06, III-12.

¹⁸⁹ Gary Volesky and Roger Noble, “Theater land operations: Relevant observations and lessons from the Combined Joint Land Force experience in Iraq,” *Military Review* 97, no. 5 (2017): 4.

¹⁹⁰ Volesky and Noble, “Theater Land Operations,” 4.

mitigate civilian casualties.¹⁹¹ Some critics pose that there was not adequate discrimination between combatants and non-combatants in the prosecution of street-to-street fighting.¹⁹² However, some historians assess the civilian casualties to be lower than found in similar conditions during past conflicts, such as Hue or Stalingrad.¹⁹³ Although collecting casualty statistics in a combat zone is difficult, data from the UN report on the subject (Table 1) illustrates how the lack of discrimination by ISIS fighters in shelling (artillery or mortar fire), suicide bombers, and SVBIEDs led to a disproportionate number of civilian deaths.¹⁹⁴

Table 2. Civilian Casualty Statistics

Civilian Casualty Statistics		
	<u>Coalition</u>	<u>ISIS</u>
Shelling	64	1357
Airstrikes / Drones	1091	42
Executions	0	741
VBIEDS	0	233
Total:	1155	2373

Source: Created by author referencing United Nations Assistance Mission for Iraq (UNAMI), "Report on the Protection of Civilians in the context of the Ninewa Operations and the retaking of Mosul City, 17 October 2016 – 10 July 2017," accessed December 10, 2019, http://www.uniraq.org/images/factsheets_reports/Mosul_report%2017Oct2016-10Jul201731%20October_2017.pdf, 10.

The sixth fundamental is to “establish and extend control and protection of urban sectors and subsystems, create a secure environment that allows enabling actions to occur and may help gain the allegiance of the population, while at the same time denying the adversary access to segments of the population and other key resources.”¹⁹⁵ As the ISF liberated territory from ISIS,

¹⁹¹ “What the Battle of Mosul Teaches the Force,” Mosul Study Group, 55.

¹⁹² Jane Arraf, “More Civilians Than ISIS Fighters Are Believed Killed in Mosul Battle.” December 19, 2017, accessed December 10, 2019, <https://www.npr.org/sections/parallels/2017/12/19/570483824/more-civilians-than-isis-fighters-are-believed-killed-in-mosul-battle>.

¹⁹³ Arraf, “More Civilians Than ISIS Fighters.”

¹⁹⁴ UNAMI, "Report on the Protection of Civilians," 10.

¹⁹⁵ US Joint Staff, JP 3-06, III-13.

the coalition took steps to prevent it from falling back into ISIS control. During the operations to clear large towns outside of Mosul, ISIS' defensive technique was to fight fiercely initially, but eventually withdraw to supplemental defensive lines to consolidate their defensive power. ISIS' operational approach further enabled coalition forces to consolidate control over these areas and begin essential stability tasks. Securing these areas fell largely to local militias and elements of the PMF, and the FEDPOL, and the Emergency Response Division.¹⁹⁶ Within the consolidation area, ISF and the local population faced suicide bombers, SVBIEDS, and assassinations as ISIS sought to spread a narrative that ISF could not protect them.¹⁹⁷ At the time, western observers were gravely concerned for the long-term security implications of pro-Iranian Badr military and political organizations working openly with the Iraqi government.¹⁹⁸

Furthermore, within the city itself, the ISF cleared block-by-block to secure sectors of the city. However, in the operations to liberate East and West Mosul, ISIS fiercely contested every major advance of the ISF, and repeatedly counter-attacked to retake lost terrain. Similarly, platoon-sized elements of ISIS fighters routinely infiltrated cleared areas under the cover of poor visibility to strike in the rear area of the ISF.¹⁹⁹ Despite these efforts, ISF developed the habit of integrating hasty, then deliberate, protective measures to prevent the flow of ISIS fighters and VBIEDs into controlled areas.²⁰⁰ Specifically, ISF used tractors to build berms, cratered roads, and destroyed replaceable sections of bridges to hinder ISIS freedom of maneuver.²⁰¹

¹⁹⁶ Emily Anagnostos, "The Campaign for Mosul: February 1-21, 2017," February 21, 2017, accessed January 18, 2020, <http://www.understandingwar.org/backgrounder/campaign-mosul-february-1-21-2017>.

¹⁹⁷ Knights and Mello, "Defeat by Annihilation," 4.

¹⁹⁸ Anagnostos, "The Campaign for Mosul."

¹⁹⁹ Knights and Mello, "Defeat by Annihilation," 3.

²⁰⁰ Knights and Mello, "Defeat by Annihilation," 6.

²⁰¹ Knights and Mello, "Defeat by Annihilation," 6.

The seventh fundamental is to “persuade municipal governments, groups, and population segments to cooperate with joint force operations, and to influence indigenous perceptions and attitudes through the military’s contribution to strategic communication efforts.”²⁰² The coalition attempted to influence the population through traditional leaflet drops.²⁰³ Coalition information campaigns encouraged the local population to flee, resist ISIS through guerilla tactics, and provide information to ISF. However, the Mosul Study Group found that these were largely ineffective due to a failure to adequately understand tribal and community differences, as well as the high risk from ISIS snipers to anyone who attempted to pick them up.²⁰⁴ ISIS publicly executed and displayed the corpses of those accused of providing information to ISF or attempting to flee.²⁰⁵ Similarly, the Mosul Study Group also found that not simultaneously compiling the effects of multiple forms of information operations left a space for ISIS to compete within the information domain.²⁰⁶

The eighth fundamental is to “provide essential support into the urban environment to sustain it during the ordeal of combat operations to improve its ability to survive.”²⁰⁷ While JP 3-06 does not define essential support to the urban environment, US Army Field Manual (FM) 3-0 states that the minimum essential stability tasks are to “provide security, food, water, shelter, and medical treatment when there is no legitimate local authority present.”²⁰⁸ The current body of research does not demonstrate that there were efforts to provide essential support into the urban environment prior to the initial clearance of ISIS beginning in October of 2016. The process of

²⁰² US Joint Staff, JP 3-06, III-13.

²⁰³ Mosul Study Group, “What the Battle of Mosul Teaches the Force,” 67.

²⁰⁴ Mosul Study Group, “What the Battle for Mosul Teaches the Force,” 67.

²⁰⁵ UNAMI, “Report on the Protection of Civilians,” 14.

²⁰⁶ Mosul Study Group, “What the Battle for Mosul Teaches the Force,” 67.

²⁰⁷ US Joint Staff, JP 3-06, III-13.

²⁰⁸ US Department of the Army, Field Manual (FM) 3-0, *Operations* (Washington, DC: Government Printing Office, 2017), 5-6.

providing essential support into the urban environment was hindered by the tight control ISIS maintained over Mosul and the surrounding areas.

The ninth and final fundamental is to “make improvements to urban institutions and infrastructure. Restore or create essential subsystems as a means to enable the urban environment to better sustain itself.”²⁰⁹ Building on lessons learned from ongoing stabilization efforts in Ramadi, Fallujah, and elsewhere, the coalition integrated the UN Development Program Funding Facility for Immediate Stabilization (FFIS) in Mosul.²¹⁰ Even as the fighting continued in Western Mosul, the coalition conducted operations to provide essential support to the urban areas.²¹¹ By March of 2017, the coalition used FFIS to begin over 100 projects to restore key infrastructure, upgrade government facilities, and provide job programs to support rubble removal.²¹² By May of 2017, the US Agency for International Development (USAID) supported the coalition with over 200 projects to restore key infrastructure, provide essential services, provide jobs, and restore local police forces.²¹³ The coalition took steps to de-mine and restore water treatment facilities, electrical infrastructure, and police stations to increase the city’s ability to provide essential services and improve the conditions for resettlement.²¹⁴ These efforts demonstrated the coalition’s emphasis on restoring essential services as a key factor in showing

²⁰⁹ US Joint Staff, JP 3-06, III-13.

²¹⁰ United Nations Development Program, “EU and UNDP to support millions of Iraqis in liberated areas get back on their feet,” March 6, 2017, accessed December 3, 2019, <https://www.undp.org/content/brussels/en/home/presscenter/pressreleases/2017/03/06/eu-and-undp-to-support-stabilization-in-iraq/>.

²¹¹ Combined Joint Task Force – Operation Inherent Resolve (CJTF-OIR), “Department of Defense Press Briefing by Secretary Mattis, General Dunford and Special Envoy McGurk on the Campaign to Defeat ISIS in the Pentagon Press Briefing Room,” May 19, 2017, accessed December 9, 2019, <https://www.inherentresolve.mil/Media-Library/Article/1251693/departement-of-defense-press-briefing-by-secretary-mattis-general-dunford-and-sp/>.

²¹² United Nations Development Program, “EU and UNDP to support millions.”

²¹³ CJTF-OIR, “Press Briefing by Secretary Mattis,” May 19, 2017.

²¹⁴ CJTF-OIR, “Press Briefing by Secretary Mattis,” May 19, 2017.

effective governance and its importance to achieve reconciliation at the regional and national level.²¹⁵

The fourth question asks: what were the actions taken towards transitioning authority to local authorities? In July of 2016, even before the campaign for Mosul began, some of the greatest strategic concerns of the coalition's political and military leadership were the deliberate planning and resourcing of stabilization efforts in conjunction with combat operations.²¹⁶ US Defense Secretary Ashton B. Carter emphasized the need to rapidly restore legitimate governance to the region in order to gain and maintain the support of the local population of the city.²¹⁷ However, the exact execution of this transition is based upon the sector of government. A description of the transition of control is described in this section with respect to overall leadership, security, and administration of the city.

Foremost, there was not a formal transition of governance to traditional civilian authorities during the time period defined by the scope of this study. As ISIS invaded, the civilian leadership of the province withdrew east to Erbil.²¹⁸ There, it served mostly in a symbolic role during ISIS' occupation and during the campaign to liberate the province. After ISIS was cleared from areas, Iraqi Security Forces provided immediate essential services, to include limited civilian governance. Following the declaration of victory over ISIS in Mosul, limited skirmishes continued, which necessitated continued clearance operations. As of August 2017, the city of Mosul remained under the control of Iraqi Security Forces and the Ninewah Operations

²¹⁵ United Nations Development Program, "EU and UNDP to support millions."

²¹⁶ Dan Lamothe, "The 'biggest strategic concern' about Mosul? Putting it back together after ISIS loses," *Washington Post*, July 20, 2016, accessed December 3, 2019, <https://www.washingtonpost.com/news/checkpoint/wp/2016/07/20/the-biggest-strategic-concern-about-mosul-putting-it-back-together-after-isis-loses/>.

²¹⁷ Lamothe, "The 'biggest strategic concern' about Mosul?"

²¹⁸ Benjamin Bahney, Patrick Johnston, and Patrick Ryan, "The Enemy You Know and the Ally You Don't," *Foreign Policy*, June 23, 2015, accessed 12 December 2019, <https://foreignpolicy.com/2015/06/23/the-enemy-you-know-and-the-ally-you-dont-arm-sunni-militias-iraq/>.

Center.²¹⁹ Furthermore, much of the city was uninhabitable based on the destruction of homes, infrastructure, and the proliferation of booby-traps and explosives.²²⁰ These factors slowed the transition of cleared areas to civilian governance.

As ISF cleared the city, some observers feared a return to the alleged, sectarian-based, authoritarian-rule of the city that characterized governance after US troops withdrew in 2011.²²¹ Specifically, the activities included retribution against civilians that benefited from ISIS occupation, restrictive curfews, and rampant illegitimate arrests.²²² These fears were reinforced when allegations surfaced that ISF had committed extra-judicial killings when there was limited or no evidence that the detainees were fighters.²²³ As of 2018, the US State Department assessed that the Government of Iraq failed to make tangible progress to address human rights abuses by the ISF, to include: “unlawful detention, torture, and extrajudicial killings.”²²⁴ A US DoD Inspector General report further warned, “The PMF’s lack of professionalism and training, along with sectarian divides and political agendas, will likely continue to generate friction with civilians in areas it controls, potentially weakening governance and undermining confidence in the state.”²²⁵

Mosul’s prolonged military administration created a contentious national and regional debate over the broader governance of Iraq. Given the history of transgressions between the

²¹⁹ Global Public Policy Institute, “Iraq after ISIL: Mosul,” August 21, 2017, accessed November 27, 2019, <https://www.gppi.net/2017/08/21/isil-after-iraq-mosul>.

²²⁰ CJTF-OIR, “Press Briefing by Secretary Mattis,” May 19, 2017.

²²¹ Michael Knights, “How to Secure Mosul: Lessons from 2008—2014,” The Washington Institute for Near East Policy, accessed November 27, 2019, <https://www.washingtoninstitute.org/uploads/Documents/pubs/ResearchNote38-Knights.pdf>.

²²² Knights, “How to Secure Mosul.”

²²³ Human Rights Watch, *Iraq: US-Trained Forces Linked to Mosul War Crimes*, 27 July 2017, accessed 12 December 2019, <https://www.refworld.org/docid/5979e9884.html/>; IRIN, “Captive IS fighters face extrajudicial killings on fringes of Mosul conflict,” 25 April 2017, accessed 12 December 2019, <https://www.refworld.org/docid/591312224.html/>.

²²⁴ US Department of Defense, “OIR Lead IG Report,” 2018, 41.

²²⁵ US Department of Defense, “OIR Lead IG Report,” 2018, 29.

Sunnis, Shias, Christians, and Kurds in the city, the collapse of Mosul presented an opportunity for each group to seek to swing the balance of governance in their favor. Political groups raised local militias to support the cause, protect their communities, and further their interests locally.²²⁶ Even Atheel al-Najafi, the Governor of Mosul at the time of the ISIS invasion, raised and led a large militia within the PMF after his ouster as governor.²²⁷

Another aspect of the transition to civilian control was the steady stream of officials fired or arrested under charges of corruption or pursuing their own interests during or following the campaign. As alluded to above, Atheel al-Najafi was fired and later charged with corruption.²²⁸ Corruption was only one of the charges against him. He publicly pushed for three autonomous zones for Sunni, Shia, and Kurds around Mosul. Al-Najafi was also relieved by the Government of Iraq for repeatedly coordinating with Turkish Forces without the consent of Baghdad.²²⁹ In 2015, Nofal Hammadi was elected to replace al-Najafi.²³⁰ Similarly, Hammadi was relieved and charged with corruption in 2018.²³¹ Then, his successor, Nofal al-Akoub, was also fired and arrested for corruption charges in 2019.²³² Although it can be argued that the system historically functioned on some degree of the western view of corruption, it appears that the systemic corruption and the frequent changeover of leadership, hurt the transition to stability for the city.

²²⁶ Bahney, Johnston, and Ryan, “The Enemy You Know and the Ally You Don’t.”

²²⁷ Bahney, Johnston, and Ryan, “The Enemy You Know and the Ally You Don’t.”

²²⁸ *The Baghdad Post*, “Abadi issues arrest warrants against many corrupt senior officials,” December 13, 2017, accessed November 27, 2019, <https://www.thebaghdadpost.com/en/Story/20910/Abadi-issues-arrest-warrants-against-many-corrupt-senior-officials/>.

²²⁹ *The Baghdad Post*, “Abadi issues arrest warrants,” page #.

²³⁰ Julie Ahn, Maeve Campbell, and Pete Knoetgen, “The Politics of Security in Ninewa: Preventing an ISIS Resurgence in Northern Iraq,” 25, May 7, 2018, accessed December 12, 2019, https://www.hks.harvard.edu/sites/default/files/degree%20programs/MPP/files/Finalized%20PAE_Ahn_Campbell_Knoetgen.pdf/.

²³¹ Ahn, Campbell, and Knoetgen, “The Politics of Security in Ninewa,” 25.

²³² *Middle East Monitor*, “Iraq orders arrest of sacked governor for ‘corruption’ charges,” March 28, 2019, accessed November 27, 2019, <https://www.middleeastmonitor.com/20190328-iraq-orders-arrest-of-sacked-governor-for-corruption-charges/>.

The transition of authority over the city's administrative control was similarly problematic. Prior to the conflict, citizens criticized the administration of the city of Mosul for being corrupt, slow to respond, and inefficient.²³³ Residents perceived that unfair policies and budget allocations from the GOI were the cause of unreliable electricity, sanitation, and public works.²³⁴ However, when ISIS invaded the city, they ordered all employees to work and threatened extreme punishments for those who failed to return.²³⁵ ISIS undertook an overhaul of these public works and surprised residents and observers at their effectiveness.²³⁶

Following the liberation of the city, the decimation of the workforce and destruction of infrastructure created serious challenges to governance and the transition of authority. The demographic engineering practices of ISIS to resettle Sunni populations on seized lands, coupled with the destruction of records, created lasting challenges to stability in the region.²³⁷ The destruction of homes of families limited the number of employees that returned. Similarly, the systematic targeting of non-Sunni workers greatly depleted the experienced workforce available to return to work. While reconstruction was a priority for the Government of Iraq and Ninewah Province, security against sporadic attacks and the restoration of essential services consumed most of the available resources. Given these challenges, the evidence of significant growth in government capacity near the end of the campaign to liberate Mosul appears limited.

The campaign to liberate Mosul demonstrated significant integration of coalition partners and government agencies, across all phases of the operations process. Led by the Government of Iraq, and supported by a diverse multi-national coalition, planners developed an operational

²³³ Rukmini Callimachi, "The ISIS Files," April 4, 2018, accessed December 3, 2019, <https://www.nytimes.com/interactive/2018/04/04/world/middleeast/isis-documents-mosul-iraq.html>.

²³⁴ Ibid.

²³⁵ Callimachi, "The ISIS Files."

²³⁶ Callimachi, "The ISIS Files."

²³⁷ The French Institute for International and Strategic Affairs, "Iraq 2018 Scenarios: Planning After Mosul," 17.

approach that leveraged the capabilities and resources of all entities. This section provides evidence for and against the most salient indicators of their integration within the campaign.

The campaign offered examples ranging in scale from large scale multi-domain operations to seize Qayyarah West Airfield, to smaller scale economy of force missions where ISIS was compelled to flee without fighting. In each case, multi-national and interagency partners integrated kinetic, electronic warfare, information operations, cyber, public affairs, and military deception means to achieve decisive effects.²³⁸ However, leaders at each echelon described the challenges of federated planning, information sharing, and decentralized execution when operating as a partnered coalition.²³⁹ This was especially relevant to leveraging effects that were outside of a services control or even national command structure.

There is significant evidence of unified action by the coalition and its partners under IA Lieutenant General Abdul Amir Alamy, who served as the overall commander for the operation.²⁴⁰ As such, the coalition advisors enabled the IA to synchronize the FEDPOL, CTS, and local militias throughout the deep, close, rear and consolidation areas.²⁴¹ The parallel and supporting structures between the Iraqi Ministry of Defense, the coalition, and the US advisor network identified opportunities at echelon to enhance operational effectiveness.²⁴² Additionally, while outside of the scope of this unclassified paper, there were considerable special operations that enabled each phase of the operation.²⁴³ The ISF integrated and synchronized the effects of special operations and conventional forces. Similarly, US special operations forces acted in advise

²³⁸ Volesky and Noble, "Theater Land Operations," 4.

²³⁹ Volesky and Noble, "Theater Land Operations," 5.

²⁴⁰ Brett Sylvia, interview by Richard Marsh, August 12, 2019, transcript, Center for Military History, Washington, D.C.

²⁴¹ Brett Sylvia, interview by author, October 29, 2019, Fort Leavenworth, KS, transcript retained by author.

²⁴² Brett Sylvia, interview by author, October 29, 2019, Fort Leavenworth, KS, transcript retained by author.

²⁴³ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 23.

and assist roles to further synchronize the effects of each force.²⁴⁴ Although the integration and synchronization of conventional and special operations forces is challenging, having an advisory force that spanned conventional and special operations forces further enhanced the effects each force's operations.²⁴⁵

There were many examples where coalition partners, NGOs, and locals came together to provide humanitarian assistance. The global coalition contributed greatly to humanitarian and reconstruction efforts in Iraq, filtering down to Mosul as well. By November 2017, the US government contributed over \$1.7 trillion USD to humanitarian aid in support of the Iraqi people.²⁴⁶ Another example occurred in the establishment of medical programs to meet the needs of the population of Eastern Mosul during the offensive to liberate West Mosul. Together, the Government of Iraq, the Ninewah Department of Health, USAID, and the World Health Organization, established three forward field hospitals by April 2017, with another two under construction.²⁴⁷

USAID served as one of the lead integrators of non-governmental agencies and coalition partners in support of the Government of Iraq. USAID reports demonstrate that the majority of services offered support to restore essential services. One of the largest roles ISF and coalition partners played towards achieving stability proved to be to screen, secure, and resettle IDPs.²⁴⁸

²⁴⁴ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 23.

²⁴⁵ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 25.

²⁴⁶ United States Agency for International Development, "USAID Administrator Green Announces Additional Humanitarian Assistance for Iraqi People," United States Agency for International Development, September 20, 2017, accessed November 25, 2019, <https://www.usaid.gov/news-information/press-releases/sep-20-2017-usaid-administrator-green-announces-additional-humanitarian-assistance-for-iraqi-people>.

²⁴⁷ United States Agency for International Development (USAID), "Iraq - Complex Emergency Fact Sheet #3 Fiscal Year (FY) 2017," 4, May 5, 2017, accessed November 25, 2019, https://www.usaid.gov/sites/default/files/documents/1866/iraq_ce_fs03_05-05-2017.pdf.

²⁴⁸ United States Agency for International Development (USAID), "Iraq - Complex Emergency Fact Sheet #4, Fiscal Year (FY) 2017," 1, June 9, 2017, accessed November 25, 2019, https://www.usaid.gov/sites/default/files/documents/1866/iraq_ce_fs04_06-09-2017.pdf.

Even before the offensive began, the Government of Iraq and USAID recognized that fighting would likely displace upwards of 1 million civilians.²⁴⁹ The Government of Iraq and supporting NGOs established six logistical hubs to pre-stage humanitarian relief stocks to support IDP camps.²⁵⁰ They forecasted and planned for the increased need for medical transportation and increased capacity at trauma centers.²⁵¹

Coalition planners coordinated with the UN to establish IDP camps, screening procedures, and further integrate other supporting agencies. The Mosul offensive alone displaced more than 1.1 million people in the city and Ninewah province, and necessitated the construction of 19 camps around Mosul throughout the campaign.²⁵² The Government of Iraq, coalition partners, and NGOs worked to resettle Eastern Mosul even as ISF fought to seize Western Mosul. As part of this resettlement, the government of Iraq and coalition partners initially prioritized the minimum essential services of food, water, shelter, security, and medical care.²⁵³ However, it appears that despite the significant efforts of USAID and other NGOs to restore essential services, there were challenges in the scope and scale of infrastructure that needed restoration. As of 2019, over 1.6 million Iraqis remain displaced, in conditions that hurt reconciliation and reconstruction efforts.²⁵⁴

²⁴⁹ United States Agency for International Development (USAID), “Iraq - Complex Emergency Fact Sheet #6, Fiscal Year (FY) 2016,” 1, September 30, 2016, accessed November 25, 2019, https://www.usaid.gov/sites/default/files/documents/1866/iraq_ce_fs06_09-30-2016.pdf.

²⁵⁰ USAID, “Iraq - Complex Emergency Fact Sheet #6, 2.

²⁵¹ USAID, “Iraq - Complex Emergency Fact Sheet #6, 3.

²⁵² United States Agency for International Development (USAID), “Iraq - Complex Emergency Fact Sheet #1, Fiscal Year (FY) 2018,” 1, November 3, 2017, accessed November 25, 2019, https://www.usaid.gov/sites/default/files/documents/1866/iraq_ce_fs01_11-03-2017.pdf.

²⁵³ USAID, “Iraq - Complex Emergency Fact Sheet #6, 1.

²⁵⁴ United Nations Office for the Coordination of Humanitarian Affairs, “Iraq: 2019 Summary of Humanitarian Response Plan Monitoring Report (January - May 2019),” September 15, 2019, accessed January 30, 2020, <https://reliefweb.int/report/iraq/iraq-2019-summary-humanitarian-response-plan-monitoring-report-january-may-2019/>.

Finally, although it is evident that there were significant efforts to integrate partner groups and organizations, US policy established intentional constraints. The emphasis was on local and national government to prioritize reconstruction projects and relief efforts.²⁵⁵ Such an emphasis meant to limit US long-term involvement and avoid engaging in nation-building.²⁵⁶ Given the US' recent experiences with stability operations over the last two decades, this policy appears logical. However, years later, the city still contains destroyed buildings, debris-filled streets, and stalled reconstruction efforts.

In summation, this section examined the campaign to liberate the city of Mosul as a case study. Following a brief overview of the historical significance and strategic context, a structured, focused question approach was used to dissect the case. The answers to these five focused questions provided critical data from the campaign to liberate Mosul that will inform a qualitative analysis of the findings in the next sections.

²⁵⁵ CJTF-OIR, "Press Briefing by Secretary Mattis," May 19, 2017.

²⁵⁶ CJTF-OIR, "Press Briefing by Secretary Mattis," May 19, 2017.

Findings

As a result of a structured and focused examination of the campaign to liberate Mosul, there are a number of significant findings. An analysis of these findings allows for a deeper understanding of the subordinate hypotheses within the case. Ultimately, an evaluation of the evidence yields an assessment of the accuracy of each hypothesis and the validity of the thesis.

The first question asked was: what were the national interests and strategic objectives? The empirical evidence demonstrated that the strategic objectives linked to the national interests. The Government of Iraq's national interests were to protect its citizens, the liberation of its second-largest city, and the restoration of a key economic center. Another key strategic objective was to ensure the operational approach maintained a delicate balance of socially and politically acceptable solutions to defeat ISIS without further increasing internal tensions.²⁵⁷ Similarly, the United States had multiple interests: "the security of the United States, its citizens, and US allies and partners."²⁵⁸ Similarly, a "rules-based international order that promoted global security and prosperity as well as the dignity and human rights of all peoples."²⁵⁹ Another stated national interest for the United States was to ensure that, whenever possible, violent extremists are stopped abroad before their ideology can spread to the United States.²⁶⁰ Furthermore, the 2015 NSS stated it is in the US interest to "prevent the causes and consequences of conflict" to support global stability.²⁶¹ Ultimately, the case demonstrated that the liberation of Mosul was necessary to achieve the stated interests and objectives of the Government of Iraq and the United States.

²⁵⁷ Ahn, Campbell, and Knoetgen, "The Politics of Security in Ninewa," 27.

²⁵⁸ Barack Obama, "National Security Strategy," 1, February 2015, accessed October 29, 2019, https://obamawhitehouse.archives.gov/sites/default/files/docs/2015_national_security_strategy_2.pdf.

²⁵⁹ Obama, "National Security Strategy" (2015), 1.

²⁶⁰ Obama, "National Security Strategy" (2015), 7.

²⁶¹ Obama, "National Security Strategy" (2015), 7.

The second question asked: is the operational approach linked to the strategic objectives? The empirical evidence demonstrated that the operational approach linked to the strategic objectives. At the national level, to defeat ISIS in Mosul, and liberate the citizens they held hostage, were directly linked to US and Iraqi national interests. To reiterate, the Iraqi national interests were to protect its citizens, to liberate its second-largest city, and to restore a key economic center in a politically acceptable manner. The operational approach to penetrate and bypass other ISIS held territory achieved the liberation of Mosul. Further, the operational approach to liberate Mosul and the surrounding areas included a diverse force that represented all the key political actors in the region (i.e., Sunni, Shia, Kurds, IA, FEDPOL, and the CTS.)

The third research question asked: How were the fundamentals of operations in urban environments applied? The empirical evidence was assessed for each subcomponent. From this examination, a collective assessment of the empirical evidence of the coalition's application of the fundamentals of operations in urban environments demonstrated a mixed result. Although there are numerous observations from examining each fundamental, the only ones discussed here are those with the greatest implications for the achievement of the strategic political and military objectives.

For example, while the coalition conducted systemic assessments prior to and during the campaign, there was evidence of potentially flawed assessments. Overall, coalition assessments leveraged available resources to better understand the operating environment and design an operational approach that accounted for its complexities. Although the operational approach demonstrated a desire to achieve a socially and politically acceptable solution, it failed to anticipate the consequences of the proliferation of armed sectarian militias.

Similarly, data shows that coalition forces struggled to rapidly isolate the urban environment. Prior to achieving a complete encirclement of the city, the coalition's destruction of bridges and air interdiction on avenues of approach contributed to the city's isolation from the East. However, the coalition initially lacked adequate forces to isolate the city from the West. By

March of 2017, complete encirclement enabled the isolation of the city. Even then, when faced with an enemy in plain clothes, the coalition struggled to distinguish between fleeing IDPs and escaping ISIS fighters. The coalition's inability to provide additional resources to isolate and screen displaced persons likely increased the risk to lasting security and of a future insurgency.

Additionally, in the case of “apply[ing a] highly discriminate destructive or disabling force to disrupt an adversary’s ability to pursue its objectives,” the data demonstrates a mixed result.²⁶² Although the coalition went to great lengths to reduce civilian casualties and increase transparency, a large number of civilian casualties occurred. It is assessed that the measures taken to preserve civilian life were appropriate, and increased the risk to coalition forces in order to reduce the risk to civilians. When an adversary intentionally takes advantage of an aversion to civilian casualties as a tactic tool, the risk of civilian casualties increases. However, if the coalition causes civilian casualties and severe damage to the city, it provides a narrative opportunity for the coalition’s adversaries.

Another key finding refers to efforts to “persuade municipal governments, groups, and population segments to cooperate with joint force operations.”²⁶³ Data demonstrates that the coalition went to great lengths to persuade municipal governments, groups, and population segments to cooperate with joint force operations. However, data also demonstrates the potential for unintended consequences of inviting anyone willing to fight ISIS into the area of operations. More explicitly, even before ISIS was completely defeated, it was clear that many of the armed actors were using the opportunity to improve their influence within the country and their strategic position within the region.

Lastly, the data demonstrates the coalition and the international community made significant efforts to “make improvements to urban institutions and infrastructure.”²⁶⁴ A large

²⁶² US Joint Staff, JP 3-06, III-13.

²⁶³ US Joint Staff, JP 3-06, III-13.

²⁶⁴ US Joint Staff, JP 3-06, III-13.

number of countries, multi-national corporations, and NGOs provided billions of dollars in aid to rebuild Mosul. However, data also demonstrated significant room for improvement in the prioritization of funds and project supervision, to prevent fraud, waste, and abuse.

In summation, the case broadly demonstrates the implementation of the FOUE and its contribution to the achievement of the strategic objectives. While most fundamentals were part of planning, their execution shows multiple instances where ignorance or neglect likely hurt the coalition's ability to achieve military and national objectives. These observations present opportunities for further study in the analysis section.

The fourth question asked: what actions were taken towards transitioning authority to local authorities? The empirical evidence yielded a mixed result. Although the coalition and the Government of Iraq took steps to transition authority to local authorities, their efforts were impaired by the effects of ISIS, sectarian hostility, and the interference of internal and external actors seeking to influence the balance of power in the region. ISIS demographic engineering attempts decimated the population of skilled workers capable of governing the city. Centuries-old sectarian hostilities were at a fever pitch based upon recent transgressions of each side before and during the rule of ISIS in Mosul. While many of the PMF were to support local security and governance, it presented an opportunity for sectarian groups and state actors to increase their power and influence in the ensuing peace. State actors such as Iran, Jordan, and others who sent intelligence personnel to sponsor and arm friendly militias were able to increase their long-term influence in the region. The security vacuum enabled the rise of these forces and their ability to influence Iraqi governance. Arguably, the actions towards transitioning should include additional actions to safeguard against unwanted internal or foreign influence.

The fifth question asked: how were coalition partners, government agencies, and NGOs integrated into planning, preparation, execution, and assessment? The data demonstrates that the campaign to liberate Mosul required the integration of partners from around the globe. A host of organizations contributed throughout the operations process, from international banking seizures

to multi-national special operations missions, or humanitarian aid.²⁶⁵ Although there are opportunities for lessons learned or for codifying efficiencies, the majority of the evidence demonstrates how organizations came together to overcome bureaucracy and achieve results in a time constrained environment.

²⁶⁵ US Department of Treasury, “Treasury Sanctions Networks Providing Support.”

Analysis

The first hypothesis states that if urban operations are required to achieve the political objective, and they are integrated within the broader campaign plan, then there is a greater likelihood of mission success. The empirical evidence suggests that hypothesis one has a mixed outcome. While evidence shows that urban operations were required in order to meet the political objective of defeating ISIS in Mosul and liberating the captive population, the hypothesis fails to account for the demonstrated detractors from achieving mission success. The data demonstrated that failure to account for state and non-state actors that seek to take advantage of a power vacuum or instability may result in a long-term inability to achieve the original objectives.

The second hypothesis states that if the fundamentals of operations in urban environments are implemented in planning and execution, then the effectiveness of large-scale combat operations are enhanced and risk is reduced. Empirical evidence suggests that hypothesis two has a mixed outcome. While the fundamentals offer logical maxims, they appear insufficient or inadequately defined for planners to operationalize. They do not speak sufficiently to the relative effect or consequences of the duration an opponent possesses the territory. Most notably, the urban defender seeks to prolong the urban fighting in order to increase the coercive effect on the population, consolidate dissenters or undesirables as human-shields, destroy infrastructure, and further prepare defensive positions. Additionally, the use of the US military in an advise and assist role demonstrated the limitations of ensuring the fundamentals are implemented by coalition partners. Despite these limitations, there is a continuing trend to expand organizations of advisors that afford the US DoD the ability to achieve the US strategic objectives without placing large combat formations on the ground. However, the case demonstrates this may increase the likelihood of US involvement in foreign campaigns with limited ability to implement a strategic vision. In other words, it may appear that advisory forces offer a way to achieve one's national

interests at a lower cost initially, but there is a high likelihood of increased involvement in a protracted conflict that fails to meet the original aims.

The third hypothesis states that if authority is not transitioned to a legitimate local authority rapidly, then the likelihood of achieving the original political objective is decreased. The empirical evidence suggests that hypothesis three is a mixed result. The key element of this argument is the use of “legitimate.” Perceptions and evidence of extrajudicial killings by Shia ISF units against “accused” ISIS fighters and sympathizers fuels the enmity that sets conditions for the resurgence of ISIS or a similar group. Similarly, the inability of the local and national government to restore essential services and rebuild the city, despite billions of dollars of foreign aid, reduces the legitimacy of the local government among the population. Although most residents detested the manner with which ISIS ruled, many Iraqis pointed to their ability to achieve results in public works projects and essential services. Ultimately, a review of the conditions and factors that led to the rise of ISIS, against the current challenges in Iraq invoke concern for a resurgence of ISIS. Security challenges, sectarian governance, sectarian violence, and vast numbers of underrepresented populations continue to negatively impact reconstruction and reconciliation efforts. It is posed that even in an advise and assist role, there must be a mechanism to ensure a whole of government approach that more effectively sets and maintains the conditions for transition. Given these findings, one proposition is that the US government undergo a reform movement to better enable long-term support to nations following conflict termination. More specifically, like the Goldwater-Nichols Act, this reform movement would study and restructure the Department of Defense, State Department, USAID, and other agencies to better perform stability operations and manage the transitions in time, space, purpose, and risk.

The data demonstrates the need for further investment in emergent technologies for urban operations. Given the two years ISIS had to fortify its defenses, as well as their absolute aims to maintain the Caliphate, they were determined to fight ISF for every inch of the city. While preventing destruction is preferable, the pitched fighting created considerable destruction. The

evidence demonstrated that the coalition used PGMs to defeat deeply entrenched fighters and enable maneuver. Although the coalition utilized mostly PGMs, ISIS' determination, and the volume of ordnance used in the campaign, resulted in significant damage to most of the city and its infrastructure. ISIS' intentional consolidation of civilians around their fighting positions, command and control nodes, and leadership, resulted in increased civilian casualties.²⁶⁶

Therefore, in order to reduce the destruction of infrastructure and civilian casualties, the military should invest in emergent technologies. For example, experimentation with low-cost thermal imaging technology in urban operations has yielded positive results to increase the identification of threats. There should also be further development of small-scale, armed drone swarms that move autonomously through complex terrain to locate possible threats, before handing them off to a networked soldier to positively identify and authorize the destruction of the threat. These investments have the potential to reduce civilian casualties and the destructiveness of necessary operations in urban terrain.

Finally, while outside the initial time scope of the paper, a contemporary assessment of the campaign yields an unanticipated conclusion. Specifically, the data demonstrates that the coalition's failure to adequately account for foreign and internal organizations' attempts to improve their positions in Iraq likely contributed to ongoing sectarian conflict and instability in the country. Just one example of this in the Iranian backed PMF militia Kata'ib Hezbollah's attacks against coalition installations and the US embassy in late 2019.²⁶⁷ In response, the United States conducted a strike that killed the heads of Kata'ib Hezbollah and the Iranian Republican

²⁶⁶ Mosul Study Group, "What the Battle for Mosul Teaches the Force," 5.

²⁶⁷ US Department of Defense, "CJTF-OIR Statement on the ongoing Defeat Daesh Mission," January 5, 2020, accessed January 30, 2020, <https://www.defense.gov/Newsroom/Releases/Release/Article/2049534/statement-by-the-department-of-defense/>.

Guard Corps – Quds Force Commander at Baghdad International Airport.²⁶⁸ Although it sent a strong message to Iran, the militia remains powerful in Iraq and swore to seek revenge.²⁶⁹ These actions demonstrate that instability within a region is likely to allow other state and nonstate actors to pursue their interests within a sovereign territory. The complexity of conducting operations within urban terrain complicates the identification of these personnel and mitigation of their efforts. Although JP 3-06 references the need to isolate the city, it inadequately addresses the need to account for competing external interests within the urban area. It is proposed that more adequately addressing these factors in doctrine, as well as in strategic and operational planning, increases the likelihood of preventing effective foreign influence.

In summation, the research demonstrates multiple findings that inform a deeper understanding of the urban operations to liberate the city of Mosul. The empirical evidence suggested mixed outcomes for each of the three hypotheses. These findings enabled a richer analysis of the implications of the conflict for future urban operations. Ultimately, an analysis of the data and findings enabled a more nuanced understanding of the two components of the thesis. First, the failure to properly account for the fundamentals of operations in urban environments in large-scale ground combat prolongs the conflict, increases risk, and decreases the likelihood of achieving the political objectives. The data further supports the conclusion that to increase the likelihood for success, the operational approach must start with a systematic assessment, then balance military and non-military actions to simultaneously defeat or isolate the enemy, protect the population and key infrastructure, and set the conditions to rapidly transition power to a legitimate authority. However, even with the application of these concepts, decision-makers and

²⁶⁸ US Department of Defense, “Statement by the Department of Defense,” January 4, 2020, accessed January 30, 2020, <https://www.defense.gov/Newsroom/Releases/Release/Article/2049534/statement-by-the-department-of-defense/>.

²⁶⁹ Qassim Abdul-Zahra, “Iran-backed Iraqi militia vows revenge to US strikes,” December 30, 2019, accessed January 30, 2020, <https://apnews.com/cde30d5913e29ad7aa067fd09e84909e/>.

staffs should anticipate circumstances where the political and military objectives shift, and state and non-state actors behave in unforeseen ways.²⁷⁰ As a result, long-term outcomes of the campaign may not be what the plan intended.

²⁷⁰ Henry Mintzberg, *Rise and Fall of Strategic Planning: Reconceiving Roles for Planning, Plans, and Planners* (New York: Simon and Schuster, 1994), 291.

Conclusions

The purpose of this monograph was to better understand how the military can achieve political and military objectives through the employment of force in urban operations. To accomplish this, an extensive literature review contributed to the development of the theoretical framework to analyze the campaign within its strategic and operational context. Key to this theoretical framework was understanding urban operations within the broader framework of war. Within the broader framework of war, was the essential need to tie urban operations and the operational approach to the strategy that achieves national interests. The FOUE provided a framework to evaluate the campaigns actions and their contributions to achieving the operational and strategic objectives.

The literature review demonstrated the gaps in current literature that this work sought to fill. This study initially asserted that the failure to properly account for the fundamentals of urban operations in large scale ground combat prolongs the conflict, increases risk, and decreases the likelihood of achieving the political objectives. To increase the likelihood for success, the operational approach must start with a systematic assessment, then balance military and non-military actions to simultaneously defeat or isolate the enemy, protect the population and key infrastructure, and set the conditions to rapidly transition power to a legitimate authority. The literature pointed to three hypotheses that support this thesis. First, if urban operations are required to achieve the political objective, and they are integrated within the broader campaign plan, then there is a greater likelihood of mission success. Second, if fundamental tasks of urban operations are part of planning and execution, then the effectiveness of large-scale combat operations is greater and risk reduced. Third, if authority does not transition to a legitimate local authority rapidly, then the likelihood of achieving the original political objective decreases. Finally, it was found that these hypotheses are directly relevant to an examination of the application of the operational art during the liberation of Mosul.

Next, the study utilized the structured, focused questions approach to examine each hypothesis. The study used five focused questions to gather the most relevant data about the case for further analysis. With this data, a qualitative analysis was conducted of the campaign. An empirical analysis of the data yielded a mixed result for each hypothesis. These findings enabled a deeper analysis of the implications of the conflict for future urban operations.

Accordingly, an analysis of the data and findings enabled a more nuanced understanding of the two components of the thesis. First, the failure to properly account for the fundamentals of operations in urban environments in large-scale ground combat prolongs the conflict, increases risk, and decreases the likelihood of achieving the political objectives. The data further supports the conclusion that in order to increase the likelihood for success, the operational approach must start with a systematic assessment, then balance military and non-military actions to simultaneously defeat or isolate the enemy, protect the population and key infrastructure, and set the conditions to rapidly transition power to a legitimate authority. On the other hand, even with the application of these concepts, decision-makers and staffs should anticipate circumstances where political and military objectives shift, and state and non-state actors behave in unpredictable ways. As a result, the long-term results of the campaign may not model the original intent.

Furthermore, the study yielded a number of recommendations. First, the scope and scale of the destruction caused while attempting to remove a well-entrenched enemy from dense urban terrain demonstrates the need for continued investment in enhanced technologies for urban warfare. Next, the study found the need to ensure doctrine and operational planning account for, and respond to foreign attempts to improve their position in a conflict zone, or ultimately risk long-term stability in the country. Lastly, a proposition that the US government undergo a reform movement similar to the Goldwater-Nichols Act reform, may better enable long-term support to nations following conflict termination. This reform movement would study and, as necessary,

restructure the Department of Defense, State Department, USAID, and other agencies to better perform stability operations and manage the transitions in time, space, purpose, and risk.

The study also demonstrates multiple opportunities for future research. For example, theories of urban warfare would benefit by expanding an examination of these questions to the broader campaign prior to the liberation of Mosul; specifically analyzing Fallujah, Ramadi, and other urban operations. Similarly, the profession of arms would benefit from a longitudinal study of the effectiveness of the combined efforts of the Government of Iraq, the coalition, and the international community's attempts to stabilize Mosul post-conflict. Future research should also seek to analyze the role of operational maneuver and munitions employment authorities for expeditionary advisors in influencing the tempo of operations. Lastly, future research should examine the effectiveness and moral considerations for the modern employment of siege warfare as a means to hasten the defeat of an enemy without destroying a city. Together, these topics can greatly contribute to theories of urban warfare.

In summation, the 2016-2017 campaign to liberate Mosul from ISIS offers valuable lessons to operational artists, commanders, and statesmen. Together, this consolidates the lessons of a contemporary large-scale urban campaign with a diverse coalition. Although the US Army did not commit large quantities of conventional ground units to the fighting in Mosul, it played a major role in shaping the coalition's operational approach, and resourcing the execution of operations. The United States applied forward advisors, joint fires, information collection, and special operations forces to enable the success of the coalition's efforts to defeat ISIS. The campaign to liberate Mosul contains valuable lessons that should influence a shift in current theories of urban warfare, the operational art, and coalition warfare. Closely studying this campaign yields a deeper understanding of the tactical through strategic considerations for modern urban operations in large scale combat.

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