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14. ABSTRACT The US military can successfully operate in a megacity conflict. However, a change to doctrine is required to prevent destruction of the city itself. If current military doctrine is applied, the result will most likely be the destruction of the city itself. The Colombian government demonstrated the ability to systemically affect the operating environment through applying influence at critical nodes and connectors across the entire system. The concept of Distributed Influence proposes a systems approach to understanding the problem and defining the desired state. It proposes how to identify critical nodes and connectors, and how to influence these in order to have systemic effects. This multi-domain and multi-line influence will enable future commander's to maneuver in a megacity conflict. This study begins with a look at why the US military must prepare for a megacity conflict. Next, this study defines and analyzes two different operational approaches to urban conflicts through a comparative case study of the 1994 Russian operation in Grozny, Chechnya, and the Colombian operation in Medellin, Colombia, in the 1990s and early 2000s. Finally, this study proposes an operational concept to gain maneuver space in a megacity. This study begins with a look at why the US military					
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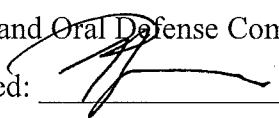
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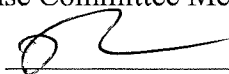
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Executive Summary

Title: Distributed Influence: Enabling Maneuver in a Megacity

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Thesis: The interconnectedness, size, and density of a megacity will invalidate current military doctrine for conducting operations in urban terrain. Traditional mass, isolation, and control will not be achievable in megacity conflicts. A new operating concept is required to succeed in a future megacity conflict.

Discussion: Future conflicts will emerge in megacities that will require unified United States Government (USG) action. While not a desirable operational environment, the US military must develop a concept to operate in the interconnectedness and density of a megacity. Established and emerging networks (physical and cognitive) require influence to enable maneuver. An attempt to control will lead towards the destruction of the network. Positive resiliencies of the megacity must be reinforced to create and exploit advantages, while negative resiliencies must be disrupted until the city can organically neutralize or destroy them. Defining the objective (desired state) and employing economy of force (as traditional mass cannot be achieved) will be critical principles to success. No current operating concept within the Department of Defense (DOD) maximizes the ability to gain maneuver space in a megacity.

This study begins with a look at why the US military must prepare for a megacity conflict. It identifies weaknesses in the ability of the US military to analyze problems in an operating environment as complex as a megacity. Next, this study defines and analyzes two different operational approaches to urban conflicts through a comparative case study of the 1994 Russian operation in Grozny, Chechnya, and the Colombian whole of government operation in Medellin, Colombia, in the 1990s and early 2000s. Finally, this study proposes an operational concept to gain maneuver space in a megacity.

Conclusion: The US military can successfully operate in a megacity conflict. However, a change to doctrine is required to prevent destruction of the city itself. If current military doctrine is applied, the result will most likely be the destruction of the city itself. The Colombian government demonstrated the ability to systemically affect the operating environment through applying influence at critical nodes and connectors across the entire system. The concept of Distributed Influence proposes a systems approach to understanding the problem and defining the desired state. It proposes how to identify critical nodes and connectors, and how to influence these in order to have systemic effects. This multi-domain and multi-line influence will enable future commander's to maneuver in a megacity conflict.

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THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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Preface

The interconnectedness, density, and size of cities are increasing. While the US military and US government may not want to fight in a megacity, history has demonstrated that the US will fight wherever US interests are threatened. During research of this paper, many people asked a fundamental question – why would we ever fight in a megacity? While a great question, upon outlining multiple different scenarios I concluded that the *why* is less important than the ability to do so when directed. This paper will not identify why are we fighting in a megacity, but will propose an operating concept for how we can fight and win in a megacity. Bottom-line - we do not get to choose our operating environment, sometimes it chooses us.

While researching and writing this paper, I received guidance and assistance from a variety of professionals at Marine Corps University, Marine Corps Command and Staff College. My Faculty Advisors, Lieutenant Colonel Carolyn Bird, United States Marine Corps, Professor Michael Lewis, and Dr. Joseph Ryan provided superb instruction, guidance, and mentorship throughout the academic year. I would like to thank and acknowledge the Advanced Studies Program Professors, Dr. Jonathan Phillips, Dr. Eric Shibuya, and Commander Russell Evans, who provided guidance, mentorship, and advice while I developed this paper. I would like to express my gratitude to Dr. Benjamin Jensen, Advanced Studies Faculty Advisor and my mentor during this research, for guiding, challenging, and assisting me during this study.

Finally, I would like to thank my wife, Lisa, for giving me the motivation, determination, and happiness in life.

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Defining the Problem: Why the US Military is Not Prepared for a Megacity Conflict

Why Prepare for a Conflict in a Megacity?

The United States military is not prepared to fight in a megacity. The United States (US) National Security Strategy of 2010 states that the “globalization has...intensified the dangers we face – from international terrorism and the spread of deadly technologies, to economic upheaval and a changing climate.”ⁱ This globalization includes an increasing proportion of the population and wealth consolidating inside dense urban areas. While the US military may not want to become embroiled in a megacity conflict, the US President may decide that US involvement is required to protect US national interests.ⁱⁱ History demonstrates that the US will fight wherever necessary to secure and protect its enduring interests. Whether to counter a direct threat such as a terrorist cell in a megacity that threatens US citizens or allies, or to reinforce a failing megacity of an allied partner to promote peace and security, US involvement in a megacity is a necessary scenario for which to plan.ⁱⁱⁱ

Accepting that US involvement in a megacity is in fact reasonable, why is the US military not prepared for a conflict in a megacity? Most planning processes start with understanding the problem. The US military is not prepared for a megacity conflict because they do not possess a valid operating concept to achieve unified action (see below for definition). From the military framework of joint operational planning, the process of operational design should drive the operational approach. The design process should answer three key questions: 1) Where are we? (current situation), 2) What is the problem?, and 3) Where do we want to go?^{iv}

Where Are We? Defining the Operating Environment

As defined by the US Army 2014 study on megacities, a megacity is a city with a population of ten million or more. By this definition there are currently twenty megacities in the world, and by 2025 there will be close to forty.^v Several different frameworks exist to facilitate understanding of an operating environment. PMESII-PT (Political, Military, Economic, Social, Infrastructure, Information, Physical Environment, and Time) is a common framework used by the military. However, the military has an inherent problem using this framework, or any other, to define the operating environment of a megacity. The military does not have the expertise to fill in the blanks for the different elements of this framework because of the complexity of a megacity. For example, the military does not have the technical expertise to understand the physical and social infrastructure for a megacity. The density, connectedness, and ever-changing nature of a megacity preclude a clear understanding of these elements by a standard military staff.

What is the Problem?

Military staffs plan by researching their environments and defining problems. The US Army study on megacities identifies that the traditional reductionist method of identifying the problem is not sufficient for the complexity of operating in a megacity.^{vi} The interconnectedness and complexity of a megacity does not allow the problem to be reduced. The study suggests that to understand the problem an appreciation for the characteristics of a megacity (context, scale, density, connectedness, flow and a threat

profile) must be combined with an appreciation for the drivers of instability and capacity.^{vii}

Where do We Want to Go?

National strategic objectives will drive megacity operations. These objectives require “collaboration, synchronization, and coordination”^{viii} with interorganizational partners. A 2011 report on *Joint Operations and Best Practices* states, “We continually hear our operational commanders saying that they cannot achieve strategic objectives solely through military action, but must depend on the full government team to achieve success.”^{ix} Maneuvering towards a desired state must integrate and synchronize all elements of national power to achieve any strategic objective.

Why is the US military not prepared?

Current urban warfare concepts fail to set the conditions for maneuver by military forces in a megacity. *The Capstone Concept for Joint Operations: Joint Force 2020* provides a vision from the Chairman of the Joint Chiefs of Staff of how the US military will secure and protect US national interests in the future. In the introduction, the concept states it “recognizes [the military] is only one element of national power...success will turn on our ability to operate with other allied governments and their armed forces, and non-governmental organizations.”^x The concept paper highlights “integrated operations” which involve a network of forces and partners.^{xi} While integrated operations sounds promising, it focuses only on interagency coordination, not interorganizational coordination (see definitions below). It may seem a nuanced difference, but interagency

coordination is framed from the Department of Defense (DOD) perspective – relegating the problem to a military perspective. As previously stated, the military does have the capacity to independently achieve strategic objectives in a megacity conflict.

Interorganizational coordination frames problem solving from a whole of government approach (to include foreign governments and military forces, intergovernmental organizations, and non-governmental organizations). Unity of effort from a DOD perspective can be achieved through interagency coordination. However, to achieve unified action in a megacity conflict, the military must participate in interorganizational coordination. The US will only be successful in a megacity conflict through unified action to systemically affect the system.

Key Definitions:

- Expeditionary Force: An armed force organized to accomplish a specific objective in a foreign country.^{xii}
- Unity of Effort: Coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization – the product of successful unified action.^{xiii}
- Unified Action: The synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort.^{xiv}
- Interagency Coordination: Within the context of Department of Defense involvement, the coordination that exists between elements of the Department of Defense and engaged U.S. government agencies, for the purpose of achieving an

objective.^{xv} The key in this definition is “within the context of DOD.”

Interagency coordination allows for unity of effort from DOD, but not unified action from all the other players who are critical to achieving strategic interests.

- Interorganizational Coordination: The interaction that occurs among elements of the DOD; engaged USG agencies; state, territorial, local, and tribal agencies; foreign military forces and government agencies; intergovernmental organizations (IGOs); nongovernmental organizations (NGOs); and the private sector.^{xvi}
- Control: Physical or psychological pressures exerted with the intent to assure that an agent or group will respond as directed.^{xvii}

Key Assumptions

The list of assumptions below provided an initial frame for understanding the problem of maneuvering in a megacity. First, a conflict in a megacity will occur. As previously stated, while a conflict in a megacity is not desirable, this assumption is critical to initiate planning.

- A conflict in a megacity will occur that will result in USG engagement.
- The drivers of instability / root causes of the problem in a megacity are not apparent. If they were apparent, then the conflict could be easily resolved and/or reconciled.
- Control is not possible. *Joint Publication 3-06: Joint Urban Operations* states that a fundamental step of operations in urban terrain is to “Establish and extend control and protection of urban sectors and subsystems.” The complexity and

interconnectedness of a megacity, defies control (in accordance with the joint definition) – nothing can be assured.

- Similar Rules of Engagement (ROE) under which the US military currently operates will apply – at least until US vital national interests are threatened by a force that cannot be managed with the current ROEs. For the purposes of this paper, the cure cannot kill the patient (preventing total destruction of a city as a course of action).

Literature Review and Framework Analysis

Historical Perspective – Another Large, Complex Operating Environment

Has the US government and US military experienced the problem of operating in a large complex, unknown operating environment before? Of course – operating in the open seas in the late 1800s / early 1900s. Similarities include: increasing globalization and connectedness, size (relative), and the lack of clear doctrine. The two most notable theorists of the time, Alfred Mahan and Julian Corbett, developed two theories that are applicable to a conflict in a megacity. Mahan argued for control of the sea through massing strength at decisive points to neutralize the enemy fleet – only through destruction of the enemy fleet could a country gain control of the sea. In contrast, Corbett argued that the sea was not susceptible to ownership. He proposed that only local superiority could be gained through securing lines of communication as required to enable commerce and transit. Additionally, he argued that massing forces only provided the enemy with an easier target.^{xviii} The megacity lends itself to similar theories – can the

US mass and destroy the enemy at a decisive point, or does the scale and complexity of the megacity lend itself to an operating concept of securing key lines of communication to enable other action?

Complexity

Megacities are complex – no source of literature denies this claim. The US Army study on megacities states, “The nature of each megacity’s complexity makes it unique. No two cities exhibit the same emergent properties, or are connected (internally or externally) in the same way.”^{xix} Case studies of individual megacities will identify that each city has unique, individual complexities. Additionally, the cities are ever changing and adapting. In *Out of the Mountains*, renowned counterinsurgency expert David Kilcullen discusses the rapid urbanization and increasing connectedness as key factors to the complexity of operating in urban environments.^{xx} Joint Doctrine agrees – throughout *JP 3-06: Joint Urban Operations*, the complexity and difficulty of operating in an urban environment is a prevailing consideration. This complexity will prevent and/or degrade traditional military maneuver. The US military must identify an alternative concept to gain maneuver room and achieve operational objectives in this complex environment.

Control or Influence?

Just as Corbett and Mahan failed to agree, literature fails to agree on whether a megacity can be controlled (Mahan) or merely influenced (Corbett). As mentioned earlier, *JP 3-06: Joint Urban Operations* states that control of an urban area is a fundamental element to success in an urban operation. Steven Metz, the Director of

Research at the Strategic Studies Institute, in *World Politics Review*, wrote a series of articles that suggest control should not be the focus, but rather influence to obtain the strategic objectives. He hypothesizes two scenarios: 1) short term disaster relief, and 2) reinforcing the inherent resiliencies and systems of the megacity.^{xxi} The key component of his argument is that the US military is not designed, or capable, of controlling the megacity (without a large scale draft to dramatically change the size of the military). Kilcullen reinforces the weakness of current task organizations with a contrasting, biological perspective in which he views conflicts in megacities as malignancies. He identifies the need for a force that is capable of a limited footprint that can contain or remove the source of instability without causing too much damage to the city itself.^{xxii}

Operational Design

Both military and US government doctrine identify a gap in operational design. As previously discussed, planners need to comprehend the environment, the problem, and the desired endstate. General Luck stated in *Joint Operations Insights and Best Practices*, “To a greater degree than ever, diplomatic, informational, and economic factors, as well as the military, (our elements of national power) affect and contribute to national security in this complex environment.”^{xxiii} The Department of State places similar importance on interorganizational coordination in both their Bureau of Conflict and Stabilization Operations and Foreign Emergency Support Team doctrine.^{xxiv xxv} Unfortunately, while the military and other departments of the US government agree that understanding the operating environment and interorganizational coordination are critical elements to

success in the future, current doctrine and task organizations do not support achieving either element.

Implications / Conclusions

- The US military, in support of a whole of government approach, must re-assess current doctrine with regards to how to gain maneuver space in a megacity.
Assuming that control is not possible to achieve a military endstate in a megacity conflict, how does the military contribute to achieving success in a megacity conflict?
- US must develop an expeditionary force that is capable of identifying and influencing established and emerging networks within a megacity conflict in order to set the conditions for follow-on USG action. The following are key characteristics of this force:
 - o Expeditionary – capable of deploying on short notice
 - o Flexible and adaptable – task organized for conflict
 - o Interorganizational – capable of leveraging the full spectrum of assets to appropriately influence the environment

Maneuvering in a Megacity: Comparative Analysis of Grozny and Medellin

In 2013, 100 percent of the world's conflicts were categorized intrastate conflicts.^{xxvi} Approximately 27 percent of these were “internationalized intrastate” conflicts – intrastate conflicts with an international actor involved. Upon reviewing trends from the Uppsala Conflict Data Program of conflict types by year, it can be reasonably

assumed that future megacity conflicts will be intrastate conflicts (either pure or internationalized). Intrastate conflict is the way of the future.

The operational design process and resulting operational approach to solving an internal conflict (with or without external support) significantly affects the role of the military in the solution. The Russian action during the Battle of Grozny in 1994-94 and Colombian government actions in Medellin in the 1990s and 2000s represent two different operational approaches to gaining maneuver space for the government to operate. The Russians applied military mass to systematically clear Grozny of the enemy threat, while the Colombians applied influence at decisive points to neutralize the enemy threat and reduce the sources of instability.

The goal of researching these two cases is to analyze two different operational approaches to gaining maneuver space by government forces in an intrastate conflict that takes places, at least in part, in urban battlefields. The research focused on initially determining how the country viewed the current situation, the problem, and the endstate. During problem framing, the theory of control versus influence was critical to the operational approach of the two different governments. The Russians cleared Grozny to control the urban terrain. In contrast, the Colombians used influence at decisive points to achieve success. Additionally, the role and task organization of the security forces were compared as to how they contributed to achieving the endstate of the government. Finally, the naval theories of Mahan and Corbett were compared to the government strategies – applying mass against the enemy compared to influencing lines of communication. Drawing lessons learned from these case studies provides US military planners two different operational approaches to gain maneuverability in a megacity.

Background of Grozny and Medellin Conflicts

Grozny is the capital city of the Chechen Republic of Russia. It is situated along a critical ground line of communication from the Caspian Sea to Moscow that facilitates the movement of oil.^{xxvii} With a current estimated population of less than 300,000 people, it is by no means a megacity.^{xxviii} However, Grozny has been the location of over 10 conflicts during the previous 100 years, and is the origin for many US military techniques, tactics, and procedures for conducting urban operations.^{xxix xxx} Following the collapse of the Soviet Union in 1991, Grozny became the capital of the Chechen separatist movement led by Dzhokhar Dudayev. The conflict between Moscow and Grozny ripened between 1991 and 1994 as the Chechen separatist movement consolidated political and social forces towards independence.^{xxxi} Throughout 1994, Moscow attempted multiple subversive operations to regain influence over Grozny. These operations all ended in failure to achieve the Russian objectives. On New Year's Eve 1994, the conflict transitioned to a new phase – the Russian strategy matured to one of domination.^{xxxii} Despite a failed New Year's Eve offensive, Russian forces consolidated and systematically cleared the city, sector by sector with heavy application of fires from both artillery and air.^{xxxiii}

Employing a total force of approximately 60,000, the Russian's suffered approximately 1,800 killed in action. Chechen total force estimates vary significantly from source to source, but are estimated to be 2,000-12,000 with a resulting undetermined number of casualties. Most striking are the civilian casualties – an estimated 35,000 civilians were killed during these four months.^{xxxiv xxxv}

Medellin is the second largest city of Colombia. Located in the Aburra Valley, it is situated along a critical ground line of communication for the Colombian government to both the Caribbean Sea and the southern countries of North America. With a current population of approximately 5.5 million, it is also not a megacity by definition, but its history of conflict does resemble many current fragile and feral megacities.^{xxxvi} During the 1980s, the Medellin Cartel under the leadership of Pablo Escobar, established a social order based on the application of violence. In 1991, Medellin was the “murder capital of the world” with 381 murders per 100,000 people in the city.^{xxxvii} While the violence and deterioration of Medellin is often attributed solely to the Medellin Cartel, the problem was much more complicated. The power brokers of Medellin in the 1991 included: the Medellin Cartel, the economic elite (coffee and mining), the FARC (Fuerzas Armadas Revolucionarias de Colombia – a Marxist Guerilla movement), multiple militias and paramilitary forces working for different groups, and the Colombian government.^{xxxviii}

The state of Colombia recognized it could not longer provide for the safety and security of Medellin citizens. The death of Pablo Escobar in 1993, along with international recognition as the “murder capital of the world,” catalyzed the Colombian government to action.^{xxxix} They implemented social, political, and structural changes to the city. These changes in conjunction with military operations to neutralize non-state actors assisted the government to regain influence of the city. While the process has taken decades, the result has been revolutionary. Medellin recently won the Citi Award for Most Innovative City – beating out Tel Aviv and New York.^{xl}

Similarities and Differences

Although they are oceans apart, there are striking similarities between the conflicts of Grozny and Medellin:

- Both conflicts are intrastate conflicts, and are based around a large urban population. Grozny represents an intrastate pure conflict.^{xli} Medellin represents an internationalized intrastate conflict with the United States as the primary external actor.
- In both conflicts, the problem centers on the inability for the formal government to provide for the people. Specifically, formal political forces lacked the monopoly over the legitimate use of force.^{xlii}
- The enemy of the state was a complex mix of actors. In Grozny, the separatist government of Dudayev was the face of the enemy, but on the ground it was a complex mix of different groups and organizations with competing agendas. In Medellin, Pablo Escobar and the Medellin Cartel was the face, but in reality there were multiple organizations and groups competing for power and influence as previously discussed. In both cities however, the enemy was competing for legitimacy and influence.
- Both operations had successes and failures. In Grozny, the Russian failure was more evident as they were displaced from the city in 1996. However, the Russians once again seized and destroyed the city in 1999-2000 and have maintained relative control of it since then. In Colombia, the displacement of the Medellin Cartel allowed the Cali Cartel to consolidate power and influence throughout the country. Despite the US involvement to reduce drug trafficking into the US, research suggests no noticeable metrics of success in this objective.^{xliii} Finally, the

FARC remains as an active organization in Colombia that garners attention from the Colombian government.

While the similarities are important, the differences must be also acknowledged:

- The biggest difference is the history of conflict between the enemy and the state.

In Grozny, the Chechen separatist movement originated in the Caucasian War from 1817-1864, during which Russia conquered and annexed the Caucasus.

Associated with this period and subsequent conflicts are cases of mass displacement, mass murder, and general mistreatment of Chechen nationals. The Colombian conflict with enemy in Medellin can only be traced back to the 1950s when migration and economic policies laid the foundation for discontent against the Colombian government.

Operational Design – Control vs. Influence

As previously discussed, the design process should answer three key questions: 1) Where are we? (current situation), 2) What is the problem?, and 3) Where do we want to go?^{xliv} In Grozny, the Russian perspective on the current situation was significantly influenced both by the long history of conflict with the Chechens and recent collapse of the Soviet Union. The Russian state lacked legitimacy as a governing institution and did not have the monopoly on the use of violence. When they backed the failed pro-Russian opposition in the fall of 1994, the Russian government was embarrassed in the international arena.^{xlv} This resulted in the Russian President, Boris Yeltsin, to view the problem with a narrower perspective. The problem was no longer that the Russian state was failing to provide a legitimate, functioning government to the Chechens – the

problem was simply the existence of the Chechen separatists. The separatists' were largely based in Grozny. Therefore it became a simple solution – clear Grozny and destroy the Chechen separatist movement. The Russian operational approach became complete control of the city, which would enable destruction of the Chechen separatists' – an enemy centric approach.^{xlvi}

In Medellin, the Colombian government was more introspective in their approach. While Pablo Escobar and the Medellin Cartel were the representatives of violence, members of the Colombian government and the city believed that the problem was more complex than the face of one man. Additionally, there was a consensus that change was needed in Medellin – being named the “murder capital of the world” was not acceptable. The government identified that the problem was a complex web of socioeconomic (inequality), governmental (security architecture, representation), and structural (physical access and opportunities) issues.^{xlvii} While it did not have a clear endstate, Colombia knew that it could not continue along its current course. The operational approach focused on influence rather than control. It employed a course of action that focused on influencing all of the identified problems in a comprehensive way – often anticipating the second and third order effects before taking action.

Role of the Military – Main Effort vs. Supporting Effort during Phases of the Operation

The US military uses a six-phase model as a guideline for planning operations and most military operations are planned in accordance with these phases.^{xlviii} Phase 0: Shape,

Phase 1: Deter, Phase 2: Seize Initiative, Phase 3: Dominate, Phase 4: Stabilize, and Phase 5: Enable Civil Authority.^{xlix} Typically, the military will be the main effort in a whole of government (WOG) approach from Phase 1-4 and assume a supporting role in Phase 0 and Phase 5. This model is applicable to Russian operations in Grozny. During Phases 0 through 1, the main effort was Russian diplomatic engagement with the Chechen separatists. From November 1991 when Dudayev declared Chechnya independent until the New Year's Eve offensive in 1994, the Russian military played a supporting role.¹ Tasks included occupying Grozny as a deterrent and peace-keeping force, isolating Chechnya in support of an economic siege, and culminated in the direct support of pro-Russian armed rebels in the fall of 1994. Russian diplomatic efforts failed and resulted in the military assuming the main effort in the winter of 1994. Phase 2 (Seize Initiative) started with the attack of Grozny on New Year's Eve 1994. Phase 3 (Dominate) lasted approximately three months. Unfortunately, for the Russians the seizure of Grozny never enabled the government to transition to Phase 4 or 5 – domination or control of the city never defeated the Chechen opposition. This chapter of the Grozny conflict ended with the Russians expelled from the city in 1996 by Chechen separatists.

In Medellin, the military was a supporting effort throughout the entire operation; diplomacy was the main effort. The Colombian government viewed the problem holistically. Security was a primary concern, but the government recognized that the military could not solve all the problems. The military (to include US military and intelligence) played a vital role in disrupting the organizations that had assumed influence within Medellin (most visibly by killing Pablo Escobar in the fall of 1993).^{li} Applying the

phasing framework to the operation would classify the period from 1991-1993 as Phase 0 – Shaping. Phases 2-5 are overlapping, with no significant delineation from phase to phase. What is notable, however, is a steady progress towards re-establishing formal government legitimacy through reconciling social, political, and structural problems.

Task Organization – Military centric to Whole of Government

In Grozny, once the problem was determined to be enemy-centric, the Russian government employed a military-centric task organization to solve the problem. During the 1994 New Year's Eve invasion of the city, the Russian force consisted of three Army groups, each with distinct objectives in Grozny (called the Northern Group, Western Group, and Eastern Group as a result of their direction of attack). These three groups advanced in columns on the city with a combination of reconnaissance and airborne troops in the lead, followed by a mix of armored, mechanized, and dismounted troops in trace.^{lii} The Chechen leadership allowed these large formations to enter the city. These Russian troop formations enabled Chechen individual small-units to attack isolated Russian units. The result was devastating for the Russians – as an example, the Russian 131st Brigade lost 20 of its 26 tanks, and 102 of 120 Armored Personnel Carriers.^{liii} The New Year's Eve failure caused the Russian's to withdraw and reevaluate their scheme of maneuver. Over the next three months, Russian artillery and air power enabled maneuver of ground forces to systematically clear each section of the city. Fires applied with little discretion allowed maneuver elements to clear the enemy block by block with little to no resistance. While successful, the operation left the city destroyed. The techniques, tactics,

and procedures developed during this battle continue to serve as doctrine for the US military to clear urban areas.

Medellin never bore witness to large-scale military operations. Two task-organized security forces are worthy, however, of analysis: the US task force, and the Colombian militia. US military operations in support of Colombia were focused and intelligence driven, and executed in the context of the US anti-drug initiative of the 1980s and 1990s.^{liv} Notably, the Colombian and US government restricted US participation to the limited objective of disrupting illegal drug operations. This limitation on US operations relegated the military to a supporting effort as previously discussed. The US task force represented an interorganizational force that successfully integrated the US military, US DEA (Drug Enforcement Agency), Department of State, and other intelligence organizations to achieve unified action. While there were turf wars between the different organizations, their synchronized efforts enabled the Colombian government to gain maneuver room in Medellin.

The Colombian militia emerged in 1991 as a transitional security force in Medellin. Recognizing that one of the essential services that the Colombian government could not provide for was security, the city of Medellin (with Colombian government approval) entered into peace talks with local militias. These groups were one of the many power brokers that were already providing local security. The peace talks, however, legitimized their role in providing security for the populace. It is important to note that there was a historical precedence for non-traditional security forces. Legislation dating back to the 1960s legalized civilians to take up arms in their own defense. In 1994, paramilitarism was legalized and provided legitimate private security forces to

neighborhoods, businesses and families.^{lv} While these groups were later dismantled in 1997 after being declared unconstitutional and criticized by international human rights groups, they provided an effective, local solution to the security problem. They temporarily secured a line of communication to enable subsequent government maneuver.

Mahan vs. Corbett: How was Maneuver Space Generated?

Historically, mass has been a critical planning element for Soviet and Russian military doctrine. Analysis of the Soviet development of Operational Art or the Deep Battle Concept reveals the importance of mass at the decisive point to obtain victory.^{lvi} At the tactical level, the principle of mass was applied to the battle of Grozny in 1994-95. While the initial attack force on New Year's Eve was approximately 30,000, the Russians ended up employing close to 60,000 total military personnel against an enemy force no larger than 12,000.^{lvii} This approach was similar to Mahan's theory of victory at sea – mass and attack the enemy force.^{lviii} The Russians determined that control of the network could only be achieved by destroying the enemy. At the tactical level, the Russians maneuvered with the application of combined arms. During the systematic clearance of Grozny, the application of artillery and air power generated an advantage for the Russian mechanized and armored forces. They exploited advantage and were able to clear the city sector by sector. Maneuver was limited to this spatial perspective.

In Medellin, the Colombian government focused on disrupting and influencing critical lines of communication (networks) throughout the city. These lines of communication included mending the social inequality between the elites and the city's

poor, restructuring the political and security system, and enabling physical access and opportunities for social advancement within the city. This approach represented an approach similar to Corbett's theory of victory – disrupting and influencing specific lines of communication to enable maneuver.^{lix} Maneuver for the Colombian government was obtained by generating and exploiting advantages simultaneously along multiple lines of operation to have a systemic effect.

Findings

The main findings of the 1994-95 Battle of Grozny and the Medellin conflict are as follows:

- Different approaches to operational design led to extremely different operational approaches. In Grozny, the Russian government viewed the enemy as the singular problem. Upon this assumption, the destruction of the enemy became the sole objective of the Russian government. In Medellin, it was tempting to label Pablo Escobar as the problem. Introspective analysis by the Colombian government, however, revealed several social, political and structural problems – a holistic view of the problem that led to a holistic operational approach.

- Interorganizational coordination led to unity of action. While the Russian military as the main effort was effective during the decisive phase of Grozny and was able to clear the city of Chechen separatists, the second and third order political and social effects were tremendous. The Russian government's failure to transition to civil authority resulted in the Russians losing the city again in 1996 (albeit they re-seized Grozny in 1999-2000 and have held it since). The supporting role of the military in the

interorganizational effort by the Colombian government (state in the lead with multiple contributing agencies both internal and external to Colombia) in Medellin was effective in achieving unity of effort and the desired endstate.

- This research identified two different operational approaches to enable maneuver within a megacity: mass to gain numerical superiority and gaining relative superiority through securing critical lines of communication. The Russians gained physical maneuver space through the application of combined arms and tactical movement of ground forces. The Colombian government did not apply mass, but was able to gain relative superiority through the execution of a holistic operational approach that secured critical lines of communication throughout the city.

Conclusion of Comparative Analysis of Grozny and Medellin

Maneuver in a megacity is obtainable. The US military is capable of massing and systematically clearing a city as the Russians did in Grozny. Should the US military do this in megacity conflict? Current social and political restraints would not allow the wholesale destruction of a city. Therefore, to succeed in a megacity conflict, the US military concept of maneuver must expand from a spatial one focused on creating and exploiting an advantage on the enemy in the physical domain to creating and exploiting advantages that will holistically move the situation towards the desired endstate. Established and emerging networks must be disrupted and influenced – an attempt to control will only lead towards the destruction of that network. Positive resiliencies of the megacity can be reinforced to gain and exploit an advantage, while negative influences should be disrupted until the resiliencies of the city can destroy them. Further research

will focus on how the US military can best be employed to gain relative superiority for USG efforts in a megacity conflict and gain critical maneuver space for the commander. Research will focus on techniques to integrate the US military in an interorganizational effort.

Operational Concept: Distributed Influence

Purpose of the Concept

The purpose of this concept is to propose an operational approach to gain maneuver space for military forces in a megacity. Maneuvering in a megacity will be challenging. The interconnectedness and complexity of a megacity demands an operational approach that respects these factors. In comparison, the operating environment in Iraq and Afghanistan will be simple in comparison to operating in a megacity. Population density, urban terrain, and connectedness will exponentially increase the complexity. To overcome this complexity, this operating concept proposes a systems approach to understanding the environment and defining the desired state. Once an understanding is achieved, multi-domain combined arms is applied across a distributed battlefield to influence the megacity towards the desired state. Before proceeding, several key terms must be defined.

Key Terms and Definitions

- Maneuver warfare: The identification or creation of an advantage, and subsequent exploitation to enable advancement towards a desired state.

- Maneuver space: the freedom to advance (physically and/or cognitively) towards a desired state.
- Multi-domain combined arms: the application of traditional fires (aviation, air, artillery, etc) combined with information operations (the synchronization of all information related capabilities (IRCs) to influence, disrupt, corrupt, or usurp the decision making of a target) across all five operational domains (sea, land, air, space, and information).^{lx}
- Network: the structure of different nodes and connectors that make up a model.
- Influence: the capacity to have an effect on the system.
- Nodes: a connection point. The intersection of different connections. This can be a place, a person, a group, an idea, etc. Physically or conceptually, it is simply a connection point.
- Connectors: the element that establishes a relationship between two or more nodes.

Time Horizon, Assumptions, and Risks

In 2012, the Chairman of the Joint Chiefs of Staff in The Capstone Concept for Joint Operations: Joint Force 2020, describes the future security environment as “more unpredictable, complex, and potentially dangerous than today.”^{lxi} Additionally, he suggests that a general retrenchment in defense accounts will lead to a smaller military force. An increasingly complex operating environment, coupled with a shrinking military requires a shift in operational approaches. This concept does not require any additional materiel or structure. While developments in technology and force structure will enhance

its effectiveness, they are not required. This operational concept is viable now, and is flexible enough to be applied in a major theatre of war to humanitarian assistance and disaster relief scenario in a large urban environment.

Construction of this operating concept is grounded in four assumptions. First, destruction of the city is not desirable. The destruction of a city has been used as an operational approach numerous times throughout history. Employment of this option inevitably results in a difficult, if not impossible recovery of the city. Second, this concept assumes the US is most likely engaging in an internationalized intrastate conflict in a megacity. While this concept is optimized for this scenario, it remains relevant to other scenarios. Third, this concept assumes that traditional “mass” is not achievable due to size and density of a megacity. As discussed in the case study on Grozny, the Russians required a force of nearly 60,000 soldiers to secure Grozny, a city of less than one million people. As previously discussed, the US defense budget is shrinking, and accordingly its force. Using Russian forces as a basis, a minimum force of 1.2 million would be required for a megacity. Based on this projection and recent history of US force commitments to conflicts, the US will not commit this large of a force to a megacity conflict. Finally, this concept assumes that “influence” encompasses a positive and negative connotation. As defined above, it is simply the capacity to have an effect on the system. For example, compare the two tactical tasks of reinforce and disrupt. Reinforce focuses on increasing capacity to sustain (positive), while disrupt focuses on denying the enemy the ability to employ his forces in accordance with his desire (negative). While both tasks describe an influence to the system, one is positive and one is negative.

Applying this concept assumes two primary risks. The first is associated with any application of economy of force: the mass to destroy the enemy at the decisive moment will not be available. If the means to exploit maneuver space is not available, the conflict is needlessly prolonged. The second risk is associated with maneuver warfare: catastrophic failure. The Marine Corps Doctrinal Publication 1 states it best, maneuver warfare “incompetently applied carries with it a greater chance for catastrophic failure. With attrition, potential losses tend to be proportionate to risks incurred.”^{lxii} Unintended effects can cause the system to irreversibly advance towards an undesirable state. However, the better the system is defined the more likely a solution will develop.

Description of the military problem:

Future conflicts will emerge in megacities that will require unified United States Government (USG) action. Operations must influence established and emerging networks (physical and cognitive) to enable maneuver. An attempt to control will lead towards the destruction of the network. Positive resiliencies of the megacity must be reinforced to create and exploit advantages, while negative resiliencies must be disrupted until the city can organically neutralize or destroy them. Defining the objective (desired state) and employing economy of force (as traditional mass cannot be achieved) will be critical principles to success. No current operating concept within the Department of Defense (DOD) maximizes the ability to gain maneuver space in a megacity conflict.

Synopsis of the Central Idea

The Distributed Influence operating concept proposes multi-line and multi-domain influence along critical nodes and connectors. This influence results in a systemic effect on the operating environment that enables maneuver. This concept synthesizes elements from the following operating concepts:

- Maneuver Warfare: While there exists many different interpretations of maneuver warfare, the concept of creating and exploiting an advantage to achieve the desired state is central to Distributed Influence. These advantages are not limited to the physical, and can include the cognitive.^{lxiii}
- Distributed Operations: This is another concept with many different definitions and interpretations. Colonel Goulding from the Marine Corps Warfighting Lab wrote a series of papers and articles on distributed operations and the applicability to the Marine Corps. In summary, he envisioned operations with small, highly capable units spread across a large area of operations to create an advantage over an adversary through the deliberate use of separated and coordinated independent tactical actions. Simplified even further, it can be viewed as combining tenets of maneuver warfare with economy of force to have systemic effects.^{lxiv}
- Cognitive Joint Force Entry: Army Special Operations Command proposed this operating concept in a 2014 White Paper. In summary, it describes how to apply influence and information activities to counter new challenges, and the availability of scalable options for senior leadership to shape environments in the earliest stages. This is a great description of applying influence in the cognitive realm of operations to achieve the desired state.^{lxv}

Principles of Distributed Influence: Define, Identify, Influence, Exploit

Define: A systems approach to understanding the problem and identifying the desired state.

The megacity is a complex system comprised of different nodes interconnected through interactions with one another. These nodes include physical structures (skyscrapers, roadways), people (city mayor, trash collectors), and sub-systems (transportation system, economic system, security system). These nodes are not limited to the physical world – they are also cognitive. Thoughts and ideas interact within the system and serve as both nodes and connectors (the internet, social media, religion, etc). Problems in a megacity exist within this interconnectedness. These problems are not subject to a reductionist approach.

Networks are mental models of the nodes and connectors within a complex system. This architecture of complexity allows planners to understand how nodes are connected. Modeling these networks in a megacity demonstrates that the megacity is different than the sum of its parts.^{lxvi} Consequently, planners cannot isolate problems in an interactively complex system.^{lxvii} Additionally, the outcome of any operation is the product of multiple interactions with different nodes and is not predictable with a cause and effect approach.^{lxviii} To succeed in this environment, planners benefit from applying systemic operational design.

Systemic operational design is an approach intended to help planners understand the interconnectedness of nodes in a system and to develop an operational approach to achieve a desired state. In *A Systemic Concept For Operational Design*, John Schmitt

describes how a systemic understanding of the situation will result in a course of action.^{lxix} Embracing the interactive complexity of a situation enables simplicity. Zooming out and embracing the complexity allows one to zoom in on the nodes and connectors that matter most and to develop an effective operational approach.^{lxx}

Identify: While defining the problem and modeling the system, specific nodes and connectors will emerge as susceptible to influence. Three key considerations are: susceptibility, impact, and sustainability.

Once the problem and a desired state are defined, planners identify nodes and connectors dispersed throughout the megacity that are susceptible to influence and will enable maneuver. Some connectors and nodes are not susceptible to influence. For example, disrupting the drinking water supply to a megacity could be very influential. However, deliberate targeting of civilian infrastructure is prohibited by international law. The identification of nodes and connectors to influence must make the following considerations: susceptibility, impact, and sustainability. Susceptibility is simply whether or not the specific node or connector can be influenced based on the planning limitations (constraints and restraints). Impact is looking for disproportionate effects. It is the ability to influence a single node or connector and yet have an effect across the whole system. Finally, sustainability relates to the temporary or long-term effect of the influence. Operations to influence occur once the nodes and connectors to influence are identified.

Influence: Operations taken to positively and negatively affect the system in order to advance it towards a desired state.

During influence, operations must be focused to disrupt the negative and reinforce the positive aspects of the system. During this phase, the role of supported and supporting units must rapidly transition relationships to achieve maximum influence. The relationship between supported and supporting units and or activities is unlimited and based upon the susceptibility and access to key nodes and connectors. For example, in many conflicts commanders direct that everything must support the ground-based maneuver as the Main Effort. During Distributed Influence, the Main Effort can rapidly change, and is often not the physical movement of ground forces. Information Operations (IO) can support physical movement just as easily as physical movement supports IO. Intelligence can support operations, just as operations can support intelligence. Fires can support maneuver, just as maneuver can be employed to support fires. The transition between supported and supporting can rapidly change based on the opportunities that are identified or created. Flexibility and adaptability achieved through an understanding of the system (achieved in Design) are critical in enabling this rapid transition from supported to supporting.

Exploit: Take advantage of the distributed influence and achieve “quasi homeostasis.”

In standard military jargon, this principle is focused on neutralizing the problem. While not destroying it (which is oftentimes impossible), it is focused on rendering the problem to a manageable state. If the focus is enemy-centric during an internationalized conflict, homeostasis is achieved when the host-nation security forces are capable of maintaining dominance over the enemy. However, this is also applicable to other sources of instability. Bottom-line it is the isolation or neutralization of the problem such that

when US forces are removed, the system will reach a “quasi homeostasis” which is defined as the desired state.

Application in Operational Phasing:

- Phase 0 (Shaping): Actions required to *define* the problem within the operational environment. Poke the system to gain a better understanding of the problem and *identify* critical nodes and connectors that are susceptible to influence.
- Phases 1-2 (Deter-Seize the Initiative): Multi-line, multi-domain maneuver by semi-independent, task organized cells to *influence* critical nodes and connectors across a distributed area in order to gain maneuver space (influence across the spectrum). Flexibility and adaptability to rapidly change tasks to *exploit* uncovered gaps. Physical dispersion and influence across the system prevents a coordinated enemy response. Methods to achieve this influence include:
 - o Offensive Operations
 - Raids
 - Limited Penetration (penetration concept scaled down from the Brigade and applying the raid concept of a planned withdrawal)
 - Military Deception (coercion, confusion)
 - o Defensive Operations
 - Secure/protect key infrastructure
 - Reinforce friendly positions
 - o Stability Operations
 - Foreign Internal Defense support to HN security forces

- Phase 3 (Dominate): *Exploit* the advantage that has been created. This is ideally achieved with HN unified action (WOG approach). The enemy is effectively neutralized to a state so that the HN effectively maintains the equilibrium or quasi-homeostasis.
- Phases 4-5 (Stabilize-Enable Civil Authority): Employment of semi-independent cells continues under the request of HN government as required until the internationalized aspect of the conflict can be concluded.

Theory of victory is defined by:

- o If distributed influence is applied at critical nodes and connectors across the system, then the system can be advanced to a desired state.
- o The desired state must be limited to achieving “quasi homeostasis”. Quasi homeostasis is defined as establishing and maintaining an equilibrium that is acceptable to conclude internationalized support to an intrastate conflict.

Application and Integration of Military Functions

Distributed influence requires synchronized application across the joint warfighting functions to be effective.

- o C2: Requires the capacity to effectively prioritize and synchronize the application of intelligence, fires, and movement and maneuver as supported and supporting efforts. Movement and maneuver will not always be the main effort. Command and control must enable the rapid transition between supported and supporting units and allow for

decentralized decision-making by subordinate commanders (enabled through everyone having an understanding of the system and the desired state).

- o Intelligence: Flexible and responsive enough to enable an understanding of influence on the system. The quicker intelligence can aggregate different inputs and assess the effects on a system, the quicker a commander can make decisions to exploit opportunities. ^{lxxi}
- o Fires: Fires must be centralized enough to rapidly exploit targets, and yet responsive enough to provide effective fire support for decentralized, dispersed units. Additionally, IO must be prioritized and planned for with the same detail as traditional fires. IO is not just a subset of fires.
- o Movement and Maneuver: Synchronized with intelligence and fires to systemically influence the megacity towards a desired state.
- o Protection: Economy of force employment will create greater force protection concerns when conducting traditional relative combat power assessments (RCPA). This is mitigated through the multi-domain influence on the system and the dispersed nature of maneuver elements.
- o Sustainment: One of the greatest challenges in distributed operations. Planning must enable the greatest adaptability of maneuver cells to prevent reliance on a traditional push/pull sustainment plan. Sustainment can include foraging and host nation acquisition. However, the second and third order effects of these techniques must be assessed when looking at how these actions will positively or negatively affect the system.

Necessary Capabilities

As previously discussed, there are no critical shortfalls to apply this operating concept in a current conflict. However, advances in technology will have significant impacts on the effectiveness of this concept.

Conclusion

While the military and the US government may not desire to enter a conflict in a megacity, the circumstances may require it. Current military doctrine for fighting in an urban environment is not sufficient for operations in a megacity. For example, the principles of control and isolation, central to current doctrine, are not realistic to operations in a megacity. If control and isolation are not obtainable to enable maneuver, an alternative concept must identify how a commander can maneuver to achieve the objective.

The operating concept of Distributed Influence proposes an operational approach to gain maneuver space for military forces in a megacity. Distributed Influence provides a concept to exploit the interconnectedness and complexity of a megacity while taking into consideration the assumption that traditional mass will not be achievable by the military force. Through a systems approach to understanding the environment and defining the desired state, influence (both positive and negative) can be applied to have systemic effects and achieve the desired state. While control and isolation are not possible, influence is achievable. Advances in technology and other capabilities will enhance the ability of the US military to apply Distributed Influence in future conflicts, but are not

required to apply Distributed Influence in a current operation.^{lxxii} Operational testing of this concept is recommended to evaluate the applicability in future megacity conflicts.

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^{lxxii} Of note, in 2014 the US Army released an Operating Concept called *Win in a Complex World*. This concept identifies and outlines changes to doctrine, manpower and equipment that if applied will enhance the US Army's ability to apply the concept of Distributed Influence.

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