Complex Terrain

Jensen, Benjamin, Breitenbauch, Henrik, Valeriano, Brandon

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COMPLEX TERRAIN
Megacities and the Changing Character of Urban Operations

Edited by Benjamin M. Jensen, Henrik Breitenbauch, and Brandon Valeriano
complex terrain
Megacities and the Changing Character of Urban Combat

Edited by
Benjamin M. Jensen, PhD
Henrik Breitenbauch, PhD
Brandon Valeriano, PhD

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This book explores military operations, including indirect support to other interagency actors and functions in dense urban terrain and megacities. Dense urban terrain describes urban areas with high population densities that, in the developing world, often outstrip the capacity of local governance systems to exert formal control. The term megacity describes a city with a population of 10 million or more. These environments define patterns of human settlement. In 1950, only 30 percent of the world’s population lived in cities compared to more than 55 percent in 2018. Much of this growth is concentrated in large, urban centers that connect a global flow of goods and ideas. By 2030, there will be more than 40 of these megacities—Provided by publisher.

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The profession of arms is the most physically and intellectually demanding profession that exists today. The main reason for this is that we rarely get the opportunity to actually practice our profession, but we need to be ready in an instant to do so. When you combine these challenges with the realization that we are not good at predicting where the next fight will occur, or the character of that fight, it makes for a pretty steep learning curve, all while we and the people we lead are in harm’s way. This is a very daunting proposition and the only reasonable response is to continuously study our profession as closely as possible, with particular attention to the changing character of warfare. This situation is directly related to technological changes, and as we have all seen, the pace of those changes has increased dramatically. The price of falling behind or ignoring key aspects of the changing character of warfare can be as dramatic as the British experience at the Battle of the Somme on 1 July 1916. Because they did not adequately understand the combined impact of the technological changes that developed prior to World War I, they had the worst day in the history of the British armed forces after suffering almost 60,000 casualties, with close to 20,000 of them killed on the first day of the battle.

The key to success in the profession of arms is continuously honing judgment through warfighting, training, and education. Warfighting refers to the conduct of war against thinking adversaries who counter your moves and decisions, as well as incorporating all the things we anticipate we will have to deal with in the future operating environment. Training prepares us for those things we know we will have to do in combat and to develop instinctive reactions to enable surviving first contact so that we can accomplish the mission. Education prepares us for what happens next, which is always unknown.
When you combine the three elements, you ensure that you have competent, confident forces who can recognize what is happening in short order and then deal with anything that is thrown at them. While we know we are challenged in predicting the next fight, Sir Michael E. Howard reminds us that we should always seek to be not too far off the target, but rather have the mental agility to adapt quickly once we get into that fight.¹

This volume represents an effort by military professionals to meet the aforementioned challenges and provide solutions to these challenges. It is an effort to understand the changing nature of urban conflict in particular, because many of the trends we are seeing now indicate that the potential for this to be our next battlefield increases every year. When you consider that the majority of the world’s population now lives in cities and the trend continues upward, it does not take much imagination to understand that urban centers will continue to be an increasing source of unrest and conflict. When you also add the consideration that many militaries around the world realize how complex and difficult urban fighting is, it is no wonder that Saddam Hussein was advised in 2003 to concentrate his forces in major urban centers to draw us into protracted and bloody fighting, which would also counter many of our technological strengths. He could win by outlasting us. Fortunately for the U.S. and Coalition forces involved, he was not smart enough to heed this advice.

I have seen the difficulty of operating in an urban environment firsthand in the 19 months I spent in and around the city of Fallujah, Iraq, after which I coauthored *Fallujah Redux: The Anbar Awakening and the Struggle with Al-Qaeda* (2014). The enemy could easily blend into the dense urban population, snipe from urban hides, emplace improvised explosive devices (IEDs) in the normal detritus on city streets and sidewalks, and use mortars and machine guns in areas where the surrounding buildings amplified the noise and made it impossible to pinpoint where the fire was coming from, which worked to our disadvantage. We had much better equipment and training, but we

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were hard-pressed in that environment to get to the point that we were clearly winning. Due to our history of overwhelming strength, if we are not clearly winning, we are losing in the eyes of all concerned. The tactics of the weak work very well in urban environments and those around the world who wish us ill are very well aware of that fact.

More recently, I was the target engagement authority approving air strikes in support of Iraqi forces as they tried to retake ar-Ramadi in 2015–16, which set the stage for the much bigger and more difficult fight to retake Mosul in 2016–17. Watching both of these fights closely, including how a technologically savvy enemy used every aspect of the urban jungle, particularly the extensive use of underground tunnels and facilities, to counter our technological advantages was eye opening. While I would never say that the Islamic State of Iraq and the Levant (ISIL or Daesh) forces were anywhere near peer competitors, they were certainly more formidable than the insurgents we had faced in Fallujah a decade before, and the Iraqi armed forces had a very difficult time rooting Daesh out of Iraqi cities and towns.

There are many other instances of urban fighting in our long history with varying degrees of complexity and difficulty. Grozny, the capital of Chechnya, was particularly rough, as has been much of the fighting in the urban areas of Syria. Whereas other forces seem to be unconcerned with collateral damage and civilian casualties, this issue is always a major consideration for the American way of war. It is part of who we are and can never be brushed aside. Our foes know this and frequently use it to their advantage. Even when not involved in large-scale combat, megacities are also the sites of massive protests that have enabled regime change; this phenomenon was seen in Egypt, Algeria, Sudan, and Ukraine, and attempted in Syria. All of this means that cities really matter because this is generally where decision makers and opinion shapers, especially the media, live and work. When they can influence millions to do their bidding, the impact of that effort cannot be ignored as we try to avoid urban centers for more favorable terrain on which to fight.

All of the above is bad enough, but when you start to look deeply into the world’s megacities, with populations in the millions and with large areas of slums and shantytowns that are a nightmare to travel
or fight through, we need to take this subject more seriously. How will our air support assets, particularly helicopters, deal with the wind patterns in urban canyons as well as people firing down on them from the higher floors of tall buildings? How do we effectively deal with mass migrations out of areas where the fighting is occurring, especially if the enemy is trying to keep them from leaving? How do we deal with infrastructure damage that allows massive amounts of raw sewage or potent industrial chemicals loose from their usual confines? These are just a few of the considerations that will have a massive impact on our ability to fight effectively in urban centers.

The answer to these challenges is that we need more members of this profession, in the words of Lieutenant General Paul K. Van Riper (Ret), to cast their net widely—read, study, and reflect on the changing character of warfare. We need to be honest about our own limitations in understanding and to seek ways to better understand these challenges through honest wargaming as well as the exploration of existing megacities with staff rides and discussions with city officials who deal with these challenges every day. We also need to be humble enough to learn from others’ experiences, such as that of the Brazilian armed forces. How did they deal with the large gangs of children running loose in the favelas of Rio de Janeiro to provide security and stability for the 2016 Olympic games? Have any of the Services asked them or visited to get a boots-on-the-ground perspective of the terrain? These are the activities professionals must perform, but we also need to ensure we listen and learn, an unfortunate and reoccurring shortfall from the past. All of the elements that left the battlefields of World War I in carnage (e.g., fast-firing artillery, barbed wire, and machine guns) existed during the 1904–5 Russo-Japanese War and European and U.S. forces sent observers to see what we could learn. Apparently, it was not much, as evidenced by the events of 1914–18. If we can get this approach right with regard to humble, inquisitive leaders who are in a never-ending quest to better understand a profession that we can never hope to master, these same leaders will build the foundation of the future force and mentor those coming along behind them who will take that force into battle.

This publication, as well as many of the efforts currently under-
way across Marine Corps Training and Education Command, pushes away from Industrial Age learning processes and gets to those more appropriate to the twenty-first century, seeking to better understand future requirements. We cannot avoid unpleasant truths or uncomfortable environments. We have to face things head-on, experiment, and fail, but then learn from those failures to ensure that we have the type of military force we need for the operational circumstances of the near future. A century ago, our predecessors did not get it right and the butcher’s bill was significant. We owe those we lead a great deal more than trying to figure it out as casualties mount from our mistakes. In most professions, that behavior would be considered malpractice, and it is simply unacceptable for the U.S. military.

Major General William F. Mullen III
Commanding General
Training and Education Command
U.S. Marine Corps
complex terrain
The future is urban, and so the future of strategic competition and warfare also reside inside the city. For millennia, people have moved from the countryside to villages and towns that have grown to cities and, increasingly, megacities. People do so to benefit from the networking advantages that a high population density provides in terms of opportunities, services, and order. In the West, this urban trend accelerated with industrialization in the nineteenth century. Globally, urbanization is now on the uptick too, and it is one of the fundamental trends driving the evolution of human societies worldwide. But as global population growth continues, so too will security problems of and in cities, including those where military means are perceived as warranted, utile, and legitimate.

This book explores military operations, including indirect support to other interagency actors and functions in dense urban terrain and megacities. Dense urban terrain describes urban areas with high population densities that, in the developing world, often outstrip the

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2 For an overview of the relationship between globalization and urbanization in this regard, see Christopher Chase-Dunn and Bruce Lerro, Social Change: Globalization from the Stone Age to the Present (New York: Routledge, 2016).
INTRODUCTION

capacity of local governance systems to exert formal control. The term megacity describes a city with a population of 10 million or more. These environments define patterns of human settlement. In 1950, only 30 percent of the world’s population lived in cities compared to more than 55 percent in 2018. Much of this growth is concentrated in large, urban centers that connect a global flow of goods and ideas. By 2030, there will be more than 40 of these megacities.

These cities act as hubs in a global network, connecting both formal and informal flows and transnational groups competing for power and influence. As such, they mark the new strategically important terrain in global competition. In the developing world, many of these rapidly growing areas are defined by informal settlements, corruption, illicit networks, and a wide range of grievances produced among competing groups. For this reason, David Kilcullen defines urbanization as one of the defining trends shaping the character of warfare. Along with population growth that amplifies scarcity and the geographic location of most megacities in the littorals, these urban areas have the potential to be sites of future great power competition, irregular warfare, and battles for the U.S. Marine Corps.

The cityscape presents the military tool, organization, and profession with a number of challenges. It offers conditions that differ radically from those found in the countryside. Some of these conditions challenge the military ethos to focus and sharpen its edge as

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3 For an overview of dense urban terrain, see David N. Farrell and Dr. Megan E. Ward, U.S. Army TRADOC G-2 Mad Scientist Megacities and Dense Urban Areas Initiative: Data Collection and Analysis (Hampton, VA: MITRE, 2016); and “Urban Warfare Project,” Modern War Institute, U.S. Military Academy at West Point.
they exacerbate well-known problems in traditional military operations by compressing space, time, and the tactical to strategic continuum.

Other aspects of cityscapes call into question issues taken for granted by many within the military profession. They challenge us to be less hell-bent on hard distinctions between military and nonmilitary tasks, and to approach security problems more holistically. For American and other militaries that are subject to the laws of war and a particular set of politically decreed normative demands about the ways of warfare that they are expected to deliver, the city’s compressed character poses a particular operational problem and operational challenge.

Because of the urbanizing megatrend, modern military organizations have no choice but to embrace and react to these conceptual and practical challenges related to warfighting as well as to stabilization, peace, and policing operations in an urban setting. This book explores how different aspects of these challenges are being identified and analyzed, how they are being solved or addressed, and how to think conceptually about them as a first step toward incorporating them into the ways—doctrinal or otherwise—of our strategic approach.

The 13 chapters in this book explore different aspects of the sociopolitical and strategic conditions underlying and shaping urban military operations. The analyses play out and examine tensions between two poles, one more traditional, linear, and purely military, the other more nontraditional, nonlinear, and less purely military. The more traditional pole includes issues related to warfighting, top-down organization, and supply driven approaches. The other includes issues related to peace and security operations, bottom-up organization, and demand-focused approaches. The analyses show that the conditions offered by the city, including its human terrain, bring out tensions between the two poles, feeding new operational dynamics. These tensions can be conceptualized through three distinctive markers.

Distinguishing between issues related to warfighting in a narrow sense on the one hand and to broader security efforts to create or sustain peace on the other makes sense in the urban environment because of the ubiquitous presence of civilians and civil society.
For example, Pakistani Marine Lieutenant Commander Muhammad Maooz Akrama explores the utility of enhanced company operations in a hybrid police-military model with a starting point in bottom-up competition for authority from embedded nonstate actors. He argues that paramilitary forces can indeed exert policing functions, provided they have the proper skills and intelligence. U.S. Marine Corps Major Alexandra V. Gerbracht proposes how, in an urban setting, military lessons can be drawn from conditions, strategies, and practices of police. David E. Johnson and M. Wade Markel examine the more war-fighting-related case of the battle of Sadr City, Iraq, in 2008. Here, the objective was “not to take and clear Sadr City, but to create conditions that would make it impossible for the insurgents to operate effectively and possible to restore security to the broader population.” The commanders were inspired by Julian S. Corbett’s defensive logic to shape the battlespace through the construction of a long wall to “bring the enemy to you.” Even if the operation had a traditional “focus on enemy fighters and their capabilities,” this was still a case where offensive and defensive operations were streamlined into a larger operational framework that included stability or reconstruction efforts.

U.S. Marine Corps Major Robert D. Barbaree’s chapter further explores the consequences of such comprehensive approaches to call for an “operational art beyond military considerations” that includes integrated interorganizational cooperation. One conclusion that emerges from this discussion is that it would be a “mistake” to “address urban warfare from a purely military perspective.” Marine Corps Major Jonathon T. Frerichs, in a comparison between a Colombian and Russian case, also draws on Alfred T. Mahan and Julian Corbett to explain the two approaches: “mass and attack” versus “influence at decisive points.” Where the Colombian government applied a political strategy, only intermittently with military means, the Russians did the opposite. For the Colombians, a Corbettian approach meant disrupting and influencing city lines of communication, including in a structural way, to produce political and social efforts to mend economic inequality, reform the political and security system, and so on. Thus, “maneuver for the Colombian government was obtained by generating and exploiting advantages simultaneously along multiple lines of
operation for systemic effect.” In conclusion, Corbett wins over Mahan as “control and isolation” are not “realistic” options in a megacity, but influence, instead, “is achievable.”

In their chapter, Henrik Breitenbauch, Mark Winther, and Mikkel Broen Jakobsen propose a new way to think about the divide between warfighting, peace operations, and special operations. They organize them as corners of a triangle whose internal space then offers logical subdivisions of practical operational challenges. They argue that, while megacities challenge militaries to think more holistically and embrace police/peace operations, their size also renders territorial control—the aim or presupposition of both war fighting and peace operations—almost impossible. Operational conditions for both thus become more like those that underlie special operations, though without territorial control.

The distinction between supply versus demand focuses on the interplay between the solutions and diagnoses offered in the shape of efforts, plans, and analyses by the military operations provider on the one hand and the problem sets and issues as they are experienced by sociopolitical states and communities, as well as on the individual level in the cities themselves, on the other. Top-down versus bottom-up captures the distinction between organized, linear problem-solving and strategy-making by centralized state and multinational authorities contrasted with more emergent, informal, and localized forms of solutions and order. Together, these distinctions help us focus on how well solutions fit the problems, and how and by whom problems are perceived and formulated.

For example, as with other contributors, Barbaree approaches the system that planners must analyze and consider addressing in a wider, interorganizational approach even at the operational level to achieve a more ground-based unity of effort between civilian and military supply-side actors. Frerichs proposes a concept of distributed influence to repair the fact that “current urban warfare concepts fail to set the conditions for maneuver by military forces in a megacity.” In essence, the military organization has a hard time understanding the complexity of the megacity. This must be understood as a system of nodes with underlying subsystems. It is the connectivity or pattern of
connection of these nodes that is decisive for planners. Frerichs pro-
poses the adoption of a systemic operational design that goes beyond
targeting to aim instead for distributed influence to critical nodes that
builds on a systems approach.

Air Force Major Christina L. Manning focuses on how the sys-
temic approach means that the opportunities for manipulation of
networks goes both ways; irregular actors can also exploit and shape
these to their advantage. Planners consequently cannot ignore the del-
icate balance that exists between population and resources. Drawing
on Kilcullen, Manning proposes a symbiotic warfare concept where
the object is to control resources without disrupting daily operations
of community—to gain influence with the destruction that follows a
siege. Colleen Borley also proposes a megacity concept of operations
that embraces the systemic and civil-military mix. Here, the analysis
and deep knowledge about weakness and connectivity of the city sys-
tem to its surroundings appear key to bringing about, in the terms of
Sun Tzu, a “victory without fighting.” 8

More specifically, Colin R. Relihan examines the opportunities
and challenges that arise from modern digital communication tech-
nologies for local populations to organize from, including those in a
counterinsurgency setting. Control of related physical infrastructure,
including the ability to destroy or protect, thus becomes a central el-
ment in a wider struggle over virtual resistance networks that the
counterinsurgent can sustain and support. Marine Corps Major Jo-
seph I. Farina also examines the role of modern communications and
social media in urban operations and notes how the utility of cyber-
space empowers both nation-states and nonstate actors relative to
the United States military. Modern communication channels enable
instantaneous, localized mobilization of a cyber levée en masse to
converge on a technologically superior adversary. Marine Corps Ma-
jor Nathan J. Storm, in examining the problem of air dominance in a
complex cityscape, points to the utility of small, distributed air systems
as a response to the practical problem it poses. An increased reliance

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8 Sun Tzu on the Art of War: The Oldest Military Treatise in the World, trans. Lionel Giles
(London: Luzac, 1910).
on unmanned aerial systems would employ less expensive schemes in higher numbers to ensure sufficient density of presence or even swarming effects. However, such practical problems also point to deeper conceptual issues, as Storm argues, and this change to support the commander would also require a change in the air theory of victory.

In the end, urban topography presents the military operator with difficult challenges regardless of the nature of the operation. Warfighting versus peace and security operations, top-down versus bottom-up, and supply versus demand are supplementary rather than mutually exclusive categories that can help us understand and navigate these challenges. Many, but not all, things that count as supply would fall under top-down. Looking for supply that is or can be bottom-up, or for how demand issues also get shaped by bottom-up dynamics may be a productive way to ask questions. Taken together, they prod us to realize how the city setting brings forth classic tensions between the intent behind military operational design and how things actually work on the battlefield. Carl von Clausewitz famously warned that the gravest error the field commanders could commit is to not clearly acknowledge the character of the conflict in which they partake. The cityscape makes this potential schism between the tools that we bring to the fight and the fight itself even more acute.

The chapters of this book testify to the rich and varied ways in which urban military operations appear as a salient policy issue and object of study. As they reflect a variety of aspects of military operations in dense urban terrain, the contributions also indicate how the city as a backdrop for military operations exemplifies a number of traits that are likely to shape future warfare and its conditions more generally. It is a truism that, in war and strategic affairs, quantity has a quality of its own. The city presents us with a comparable argument: much as diamonds result from the compression of carbon, the urban battlespace, by compressing time and space, accentuates and highlights aspects of modern warfighting as well as of broader security operations. In that way, we argue, where the cities and their military operations go, so goes the war and security agenda more generally.

Each of the chapters in this volume contribute in concrete ways to our understanding of challenges facing current urban operations.
INTRODUCTION

For that reason, it is our hope that this volume will find an audience beyond scholars and that it will be read by and shared among thinking practitioners of urban military and security issues whether they are in uniform or not. Learning and adaptation is an iterative process that begins with an open and inquisitive acknowledgment of whether formal and informal ends, ways, and means are aligned and, if not, asking what can be done to make them so. We hope this book encourages scholars and practitioners alike to ask better questions about supply-side assumptions and strategies as well as the dynamic demand side of the urban battlespace.
August 2017 in Karachi, Pakistan, was the height of a gang war in the notorious neighborhood of Lyari, people armed with rocket launchers fired on two police armored vehicles. One rocket destroyed the lead vehicle, as gunmen sprayed the officers with bullets. These veterans of Pakistan’s urban war bristled at the obstacles facing their efforts when combatants in the streets carried more modern weapons than the police force. In days not too distant, Lyari’s police would expend more than 3,500 rounds on a busy day and pick up bodies lying in the piles of garbage. Since then, paramilitary forces patrol Karachi’s streets and attacks of magnitude have become rare. While the police crackdown has been effective, it has empowered the military with a level of control that may be difficult to pull back, in spite of the costs that now strain the national budget.

INTRODUCTION
Rivers were once an important part and center of development for human civilizations. The easily cultivated land around them provided the opportunity for livelihood. As industrialization grew and science and technology advanced, the bulk of economic activity shifted from the
agricultural lands to the industrial cities. As some cities became more dynamic in their economic activities, the influx of people increased and enlarged to the point where those cities converted into megacities with a population of more than 10 million each. Prior to 1950, only New York City had achieved this population, though with the coming of the twenty-first century, 37 cities now hold this distinction. The civilizations that sprang up around the rivers are now growing around the densely populated and networked environment of megacities. This phenomenal population growth has created a control dilemma for government authorities faced with meager resources and the growing influence of nongovernmental organizations (NGOs) in most developing megacities. As cities grow, often unplanned, they become increasingly difficult to control. This control dilemma is a defining feature of conflict in dense, urban terrain.

THE RESILIENCY AND COMPLEXITY OF MEGACITIES

Resiliency

The development of cities into megacities is not a complex phenomenon in itself. The complexity arises due to its unique character and behavior, which are entirely different than that found in a basic urban environment. These cities generate the capacity to provide and absorb, attracting larger and larger populations. As the population increases, it produces the economic activities that attract multinational companies and transnational organizations, which further connects the city to the global commons.1 As the process continues, the influx of people rapidly increases—even faster in third world or developing countries—to the point where the change depletes its ability to fulfill social and security requirements of the population. However, the megacity continues to generate economic activities and opportunities. As

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1 The term global commons refers to resource domains that do not fall within the jurisdiction of any one particular country and to which all nations have access. International law identifies four global commons: the high seas, the atmosphere, Antarctica, and outer space. Nico Schrijver, “Managing the Global Commons: Common Good or Common Sink?,” Third World Quarterly 37, no. 7 (2016): 1252–67, https://doi.org/10.1080/01436597.2016.1154441.
the city expands exponentially, the governing body loses its control. As more national and international organizations, companies, political parties, and ethnic groups become part of that system, the megacity develops a complex network of different social, economic, religious, and ethnic groups. All the networks exert their influence on the society. This situation provides ample opportunity for criminals, terrorists, and illegitimate organizations to infiltrate the community and merge into its existing networks.

David Kilcullen describes the cities in this new emerging environment as a living, breathing organism. Analyzing the concept of living organisms in the context of megacities is interesting. As an analogy, the human body is an amalgam of various systems working together. No one system can work without the help of others, so they are strongly interdependent. Thousands of arteries, veins, and blood capillary networks in the human body interconnect with each system. The systems and functions of an urban setting work in the same manner. As the brain controls the function of the body parts, the state/government plays the role of the brain in the society. However, megacities’ high level of resiliency makes them self-sufficient. In the case of nonavailability of any system, or if the government is unable to provide the requisite resources, megacity organisms build their own systems through the interconnected network environments. Sociologist Manuel Castells from the University of Southern California argues that the power in the network society exercises through networks. All the legal or illegal organizations, national or multinational, nonstate or state actors, exercise their influence over the behavior of the habitats of the megacity. Castells claims that “all networks of power exercise their power by influencing the human mind predominantly.”

As the vested interests of many multinational, transnational, and national organizations, criminal organizations/gangs lie within the megacity, they all play their part to produce the necessary resources

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to run the system. The more megacities produce with their system outside the official network through NGOs, the weaker the government’s span of control becomes, which creates an illusion of control. This phenomenon is more pronounced in the megacities of developing countries than in developed countries, due to their meager resources.

A megacity’s dynamic economic activities play the role of an economic nucleus for that country. This role becomes more powerful in the developing world. According to an estimate from The Nation, Pakistan’s news agency, Karachi alone contributes 42 percent of Pakistan’s gross domestic product (GDP) and 70 percent of the total tax revenue, yet represents only 10 percent of the country’s total population.5 Megacities are efficient, dynamic entities that aggregate wealth, cluster cheap labor, and provide opportunities for advancement. Jonathan Kalan focused on the World Bank’s development unit: “As the countries develop, people and economic activities always become more concentrated in urban areas. This process of ‘agglomeration economics’ is a good thing because it reduces production costs, allows the businesses to share infrastructure, and provides large labor markets.”6

**Complexities and Networked Environment**

As the megacity generates high levels of social and economic activity, it also generates a conflict environment. Kilcullen describes the drivers of this activity as megatrends: urbanization, population growth, littoralization, and connectedness.7 He argues that most of the urbanization happens in the developing world, and population growth is becoming an urban phenomenon. He further explains that, as people concentrate in cities of poor countries with the scarcity of resources in poorly governed areas, it generates a contested environment for the resources. This hypothesis may be true for a normal urban environment, but in case of a megacity, it may be debatable. Kalan considers that millions of people may live in poverty, but the vast, dense con-

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centration of people in megacities in developing nations can benefit from the economic output the megacity generates and the opportunities it provides. He also briefly covers the idea of a resilient megacity system, which can generate self-support. For example, Karachi, a megacity of Pakistan, has a high rate of violence and accidents. The government emergency services are far from effective. The lack of resources and the government’s inability to provide adequate care to the effects of violence left the city to fend for itself, resulting in the city’s first and largest volunteer ambulance service through the Edhi Foundation begun by philanthropist, humanitarian, and social activist Abdul Sattar Edhi. The Edhi Foundation runs eight hospitals, nursing homes, orphanages, rehabilitation centers, and women’s shelters within Karachi. It also operates an air ambulance service, surgical units, mobile dispensaries giving free medical care, and two blood banks. Additionally, 15 Edhi homes provide the necessities of life to destitute, unwanted, and disabled children as well as shelter and solace to runaways and homeless people and the unwanted elderly. These homes are the main lifeline for the people living in slums. The Edhi Foundation runs solely on donations arranged by a network of thousands of volunteers and professionals working around the globe for this charitable organization.

Another distinctive characteristic of a megacity is its connectedness. Kilcullen describes it as an internal and external phenomenon. He argues that, with the advancement in communications, people living in slum areas of a megacity are still connected to the world. This social and economic connectivity of a megacity with other regions increases its sphere of influence. This connectedness, however, can cause the spillover of any conflict from the megacity into the other region. A densely populated environment also can give way to terrorists, gangsters, smugglers, and criminal organizations to nest within the society in a “black market economy.” They turn their black money

8 Kalan, “Think Again,” 70.
10 Kilcullen, Out of the Mountains, 32.
white by merging it with the legitimate network.\textsuperscript{11} These criminal organizations, as part of their connection to the system, provide resources and support to the society to gain influence, all while operating their illegitimate networks. Kilcullen expresses the view that any network is just a means of connectivity; it is the behavior within the network that is licit or illicit.\textsuperscript{12} Castells explains the importance of programmers and switchers in the megacity network system—the programmers have the ability to constitute a system, and switchers have the ability to connect that system through other networks. This is the counterargument proposed by Castells that focuses on the concept of programmers and switchers, whereby programmers constitute and reprogram a network and switchers connect it with other networks to ensure support and strategic cooperation.\textsuperscript{13} In a megacity networked environment, it is an extremely arduous process to identify black from white as its density makes everything lie in a spectrum of gray; licit activity may support an illicit cause. Thus, the credibility or status of the programmer and switcher and their objective makes a network licit or illicit.

The point of concern for the megacities is not the availability of a life support system for its inhabitants, but the transparency of the organizations in the network providing a support system while operating outside the government realm. The growing influence of the NGO over the megacity weakens the government’s span of control. This influence allows different legitimate or illegitimate organizations to move and operate freely in the megacity. In this regard, a small case study from 1992 about a political organization active in the megacity of Karachi in the late 1980s is relevant. The political party Muttahida Qaumi Movement (MQM), or United National Movement, started an ethnicity-based people’s rights movement in the rural area of the province against the ruling government. The movement gained rapid popularity among the masses of Karachi residents from all walks of life, especially the poor and middle class. As the group gained popularity,

\textsuperscript{12} Kilcullen, \textit{Out of the Mountains}, 34.
\textsuperscript{13} Castells, “A Network Theory of Power,” 776.
it exerted greater indirect influence over the government, because it controlled the laboring and working classes of the city, causing the government to lose control of the city. The movement became so influential that a militant wing gained power in its ranks, harassing the elite and business classes for ransom and occasionally violently confronting law enforcement agencies (LEAs). By way of contrast, LEAs avoided confrontation due to MQM’s strong hold on the public and its influence within government agencies. The situation worsened and reached its tipping point when Prime Minister Benazir Bhutto launched a full-spectrum army operation against MQM—Operation Clean Up.

The movement was so well-organized that MQM had a representative on every street of Karachi. As the operation pushed forward, the militant wing quickly dissipated, and some of the top leadership of MQM fled the country. The Pakistan Army’s role in this operation caused great public outcry, not just in the national media but also internationally, forcing the army to abandon it without much success. Into this vacuum, the MQM militant wing regrouped vigorously, becoming much more violent, not just toward the LEAs, but the general public as well. The organization converted into a militant party with a political wing. The government operation failed due to its lack of control over Karachi. It could not afford to eliminate the party without disrupting the city, which was now wholly controlled by MQM.14 Any disruption in the city meant the disturbance of the lifeline of the country as Karachi serves as the economic hub of the nation. This demonstrates the ease with which the government can lose control in a megacity. If a terrorist group combined forces with a party like MQM, it would give them not only a safe haven and freedom of movement, but also a larger connectivity to the world. Such situations would then require military intervention, possibly from outside the state.

In a megacity, many things can induce military intervention. Despite being resilient, the megacity cannot prevent a nonstate actor from being an irrational one, operating from a megacity while taking advantage of its dense, networked, and complicated environment.

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The military operations conducted in a megacity may range from staging a full-spectrum war to achieving a limited objective. These operations may be carried out against the state or a nonstate actor who may be in consonance with, or against the will of, the public. Regardless of the actor, operations within megacities require a special operating concept that varies from basic urban operations, keeping in view the unique, complex challenges posed by the megacities. Most of the world’s armed forces are organized, trained, and equipped to fight in a basic urban setting. It will be a significant challenge for them to prepare for operations in a megacity.

MEGACITY CHALLENGES TO MILITARY OPERATIONS: KARACHI CASE STUDY OF URBANIZATION AND ETHNIC MILITANCY

As industrialization grew with the advancement of science and technology, the bulk of economic activity shifted from the agricultural lands to the industrial cities. As cities became more dynamic in their economic activities compared to their surrounding areas, the influx of people increased and continued to the point where those cities became megacities. The rapid growth of megacities, combined with insufficient resources, creates a central dilemma for governments—a phenomenon more pronounced in developing countries. In this regard, the case study on Karachi’s ethnic militancy and failed military operation provides an opportunity to analyze how the government can lose control in a megacity, due to reasons ranging from increased urbanization, lack of resources in the hands of different nonstate actors and NGOs, and the problems inherent in a military operation in a megacity environment. This situation also explains how megacities build their resiliency in a networked environment, despite the lack of resources and government control.15

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Historical Background

In the eighteenth century, Karachi was a small fishing town until traders started to use the location as a natural port, and settlement increased as a result. By 1839, when the British captured the city, it already held significant value as a port city. Realizing the importance of this coastal town, the British built an infrastructure that included the port, roads, and railway lines and connected Karachi with the rest of India and other cities of the world. By the twentieth century, the city was well established and was the home of people from mixed ethnic and religious backgrounds, largely traders and businessmen. Four major waves of migration occurred in the decades that followed.

When Pakistan achieved independence in 1947, Karachi was chosen as its capital. The partition of India and Pakistan resulted in one of history’s largest migrations. Karachi received a massive influx of Muslim refugees from India. Those refugees were commonly known as Mohajir, or Urdu-speaking Muslims. The population of Karachi increased dramatically with their arrival, growing 432 percent between 1941 and 1961; this is a rate of growth that has never been experienced by any other city of the world in human history. The Mohajirs quickly established themselves and became a dominant force in Karachi, in government, and in trade due to their higher level of education. By the 1960s, the city was well on its way toward the economic and infrastructure development it would need to become an important hub of trade and economics of Southeast Asia, or the “City of Lights.” The development of Karachi caused a secondary wave of internal migration by other ethnic groups, of which the Pashtuns were the most prominent. The third phase of migration occurred from the

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17 Azhar, “City at War.”


1980s to the 1990s, when an Afghan refugee influx occurred due to the Soviet intervention in Afghanistan. The fourth phase of migration occurred from 2004 onward, when a large number of internally displaced people from Federally Administered Tribal Areas migrated to Karachi as a result of military operations. Presently, Karachi has the largest Pashtun population of any city in the world, even more than Peshawar, Pakistan, or Kabul, Afghanistan, representing almost 25 percent of the population. Karachi has been called a microcosm of Pakistan because of its ethnic diversity.

The Conflict
The ethnic diversity of Karachi also became the root cause of its political violence. Ethnic clashes grew in intensity as civic resources became more strained with every wave of migration. As Kilcullen describes, the drivers of conflict are megatrends, such as urbanization, population growth, littoralization, and connectedness. He explains that, because people concentrate in cities in poor countries, the scarcity of resources in poorly governed areas generates conflict over the resources. In the late 1970s and early 1980s, ethnic violence increased between university student organizations of Pashtun and Mohajir ethnicities, and it subsequently turned into political violence. Two students from Karachi University started the ethnic-based students’ organization, All Pakistan Mohajir Students Organization (APMSO), which later converted into the political party MQM, to advocate for the rights of the Mohajir community. Due to its ethnic focus, the party quickly became popular in the Mohajir community, which accounts for almost half of the population of the city. As the MQM grew in strength and numbers, the clashes
with Pashtun ethnic groups became more violent on different issues. In the early 1980s, the large influx of both legal and illegal Afghan refugees increased the size of the Pashtun community. As the Russian war in Afghanistan progressed, weapons and personnel were transported through Karachi to Afghanistan; however, not everything reached its destination. Arms and drug dealing increased drastically with the influx of refugees, and the local gangs and criminals also had easy access to weapons. The ethnic and political parties also established militant groups armed with illegal weapons. In this volatile atmosphere, the Pakistani government lost control of the city.

**The Consequences**

Megacities are efficient, dynamic entities that aggregate wealth, concentrate cheap labor, and provide opportunities for advancement. The sheer volume of economic activity makes them extremely resilient. Everybody working in the megacity has some vested interest in its success. Despite the lack of control by the government and LEAs, the system was still functioning, even with the absence of the basic necessities of life and the violent engagements between the ethnic and religious groups in Karachi in the late 1980s. The NGOs were able to support their local communities, exercising more control on those areas, which were mostly slums in the suburbs of Karachi. Few nonprofit organizations came to provide the basic facilities for the poor people in Karachi. The different ethnic groups provided security to their own communities against the other ethnic groups.

The point of concern for megacities is not the availability of life-support systems for their inhabitants but the transparency of the organizations in the network that provide support systems, operating outside of the government. The growing influence of NGOs over megacities weakens the government’s span of control. Because the vested interests of many multinational, transnational and national organizations, and criminal organizations/gangs lie within the megacities, they all contribute to produce the resources to run the system. The more megacities produce with their systems through outside official networks and NGOs, the weaker the government’s span of control
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becomes, until it finally stands largely as an illusion. Karachi is an example of this theory in practice.

The unprecedented boost in the population of Karachi puts the governing bodies in a difficult situation. Currently, the city is growing at a rate of 5.4 percent annually, making it one of the fastest growing cities of the world. An estimated 1 million people from the different parts of Pakistan migrate to Karachi and take up residence in unplanned slums, which are growing at a rate of 100,000 plots annually.²⁶ Half of Karachi’s population still lives in unplanned urban areas, where the government authorities have failed to provide even the basic facilities of life. Most of these social services are being provided by the private sector, where the mafia has filled the gap. These mafias are controlled by different ethnic groups. The major militant ethnic groups have the political backing from segments of the government. This situation has made the life of LEAs even more difficult, as they cannot operate against those groups and, in some cases, cannot even enter the militants’ safe havens. As Anthony Davis wrote of Karachi in Jane’s Intelligence Review,

Mafia bosses shelter behind politicians; politicians cultivate the mafias and hire their trigger-men; armed party activists moonlight as bandits; and common riff-raff move in on the mayhem. Intelligence agencies, meanwhile, use terrorists to counter terrorists; while the police, corrupt, demoralized and under-manned, resort to terrorist methods themselves. Normal citizens survive as best they can.²⁷

The government did not pay particular attention to the increasing ethnic violence and failed to realize the criticality of the situation until the early 1990s.

Military Operations and Lessons Learned
In the early 1990s, the lawlessness in Karachi reached its peak, with

gangs related to political parties running extortion rings, performing targeted killings, ransoming businesses, as well as stealing and robbing. A systematic weak response by the state further escalated the situation. The political affiliations of the militants with the ruling party damaged the institutions and governance of the city.\textsuperscript{28} The politicization of the police played a pivotal role in the downfall of the police department of Karachi. In many cases, the police officers who threatened politically affiliated criminals were sidelined or removed from their posts by officials. In extreme cases, militant gangs actively targeted police officials. In 1992, the Pakistan Army launched Operation Clean Up against the militants in Karachi to clear the Mohajir neighborhood of radicals.\textsuperscript{29}

The military operation launched by the Pakistan Army did not have much success. While the army did apprehend a number of gangsters, militants, and criminals, it failed to break the gang networks. The military operation also caused the defamation of the army countrywide due to extrajudicial killings and hatred among the local populace. The army also failed to install a long-term, follow-on security mechanism that could further improve the security situation. Some of the major causes of this failure include:

- The army was operating in bigger (company-size) teams, which restricted its movement in the congested areas and caused considerable delay in search operations. The militants moved in very small groups, they were swift in their movement, and they were well versed with the internal routes.
- The army did not try to maneuver through the networks in which the different gangsters and militants operated, which offered an easy escape to those network operators and to some of the higher commanders of the groups.
- The militants’ intelligence network moved much faster than the army units operating in the city. The militants’ ability to

quickly blend into the community as normal citizens made the job of search and identification more cumbersome in densely populated areas of Karachi.

- The army did not directly involve the local police department, which was better acquainted with the geography and the dynamics of the local populace.
- The army could not completely isolate the densely populated areas during their search operations, which gave the militants ample chance to escape.
- The army tried to counter the local influence of the MQM by creating another faction named MQM-Haqqi; however, the idea backfired, and the violence between the two groups further deteriorated the security situation of the city, which was already in a fragile state.\(^30\)
- Before the operation started, the government failed to realize how deeply MQM was connected to the different networks that run the daily systems of the megacity: labor unions, port organizations, industrial unions, student organizations, metropolitan organizations, and other small unions of the city. Through its networks, MQM disrupted the economic cycle of the city in retaliation for the army operation.\(^31\)

After the termination of the army operation in Karachi, the militant group slowly gathered adherents and initiated activities again in

\(^30\) Fazila-Yacoobali, “The Battlefields of Karachi.”
\(^31\) According to a report on conflict dynamics of Karachi by United States Institute of Peace, “Karachi accounts for more than 25 percent of Pakistan’s gross domestic product (GDP), 54 percent of central government tax revenues, 70 percent of national income tax revenue, and 30 percent of industrial output. In 2007 Karachi’s per capita output exceeded that of the country by 50 percent. Since Karachi generates 2 billion rupees (equivalent to $21 million) in daily tax revenues, the slightest disruption in the city’s economic activities affects the national economy.” See Huma Yusuf, “Conflict Dynamics In Karachi,” Peaceworks, no. 82 (October 2012): 4. Due to the economic importance and global connectivity of Karachi and the daily loss to the economy due to the army operation, which was becoming untenable, the central government had to cease the operation, as they did not have much control over the city. Nichola Khan, Mohajir Militancy in Pakistan: Violence and Transformation in the Karachi Conflict (New York: Routledge, 2010), 8.
1994 and 1995, though this time with more assertiveness. According to a report by *Jane’s Intelligence Review*, more than 400 of the officers who took part in operations against the MQM were subsequently murdered as retaliation. The continuing violence against and victimization of the LEAs resulted in a devastating effect on their morale and efficiency, leading to the neglect of their regular policing functions. As the lawlessness and ethnic and religious violence remains a system problem in Karachi, the people remain hopeful and able to function within the system of the megacity and its networks. Many of the people in Karachi migrated from different parts of the country in search of a better life. Even though large amounts of residents live in slums, the hope of a better future for their next generation, which they expect in the construct of a megacity, keeps them motivated to support the functioning system despite all odds. That belief builds the resiliency of any megacity.

The megacity may not provide everything to everyone, but it does provide something for everyone. The resilient nature of Karachi remains the backbone of the economy of Pakistan and the hopes of millions of people connected to it. The government, however, remained negligent and deluded about the internal security situation of Karachi and did little to address the crime, targeted killings, gang fights, religious and ethnic militancy, politicization of the police, and corruption in local government bodies. All political and religious parties, along with government agencies, are equally responsible for the chaos in this megacity. By 2006, this lack of control and lawlessness led to a bigger storm: the Talibanization of Karachi.

The continuous operation of the Pakistan military against Tehrik-e-Taliban Pakistan (TTP), one of the largest and deadliest militant umbrella organizations, in the Swat District, Waziristan, and other ungoverned areas near the Afghan border, forced a large number of Pashtuns to take refuge in Pakistan’s largest city in search of a liveli-

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However, this influx of refugees, which Karachi still receives, also included TTP members from the northern areas of Pakistan. As the stage was set for them to continue their terrorist activities without much trouble in Karachi due to the ineffective LEAs, they took full advantage of the lawless and violent environment of the megacity. As the activities of TTP increased in the city from 2009 onward, the other ethnic militant groups also became the target of the TTP. The local police, who were used to crimes such as robbery, targeted killings, kidnappings, and shootouts between armed ethnic groups, were not alarmed by the initial activity of TTP. The other ethnic groups also blamed each other for the criminal activities. However, when TTP initiated major terrorist attacks and suicide bombings against disparate government organizations and LEAs, the government and other political parties became aware of the active threat of the presence of TTP in Karachi.

Until 2014, TTP had inflicted some major blows, which included attacks on military bases, law enforcement agencies, high profile politicians, and Karachi’s Jinnah International Airport. The growing influence of TTP and its activities in Karachi are now a significant concern for the government. With an already weak economy, Pakistan cannot afford the Talibanization of its economic hub. The ethnic diversity, densely populated areas, international connectivity, weak governance, poor law and order situation, and ethnic violence in the megacity offers the perfect hideout for the TTP terrorists to carry out their activities without being threatened or detected. However, the resilient nature of the megacity did not give TTP success in the mass mobilization of the people against the government based on their so-called jihad narrative. Nonetheless, TTP did create fear among the masses and carried out its activities due to lack of governance and security in the city. The inspector general of Sindh Police reported the total strength of Karachi police at 32,524, out of which 12,000 are

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36 Bansal, “The Ongoing Talibanization of Karachi.”
37 Azhar, “City at War.”
deployed for special security details, which leaves only 20,000 for policing almost 18 million people, or 1 police officer per 992 citizens. No accurate estimate exists for the exact numbers of TTP in Karachi, but some sources hypothesize it is around 7,000. The concern for the Pakistan Army, which is fighting against TTP in tribal areas, is the fundamental shift of tactics by TTP in Karachi, which previously used the city only for sanctuary or fundraising through different criminal activities, such as ransom and bank robbery. However, now that the TTP has become emboldened and commenced more direct terrorist attacks on government organizations and personnel, the TTP has become a much greater concern for the Pakistan government and the army, which is also fighting the Taliban in the northwestern mountains of Pakistan.

Inferences
This case study of Karachi addresses the control dilemma for the difficult nature of control of megacities by governing authorities. As the trend of urbanization continues to increase rapidly in developing megacities, it will likely generate a conflict environment due to the lack of resources and the inability of governments to provide the basic facilities. The resilient nature of the megacity can generate support for its citizens, but this support ultimately weakens the span of government control in the shape of lawlessness, violence, and criminal activities. The trend can be seen in other developing megacities, such as Mumbai, India, and Lagos, Nigeria, where growing urbanization and ethnic violence has created a similar control dilemma for the governing authorities. The worst part, however, is when a nonstate actor or a terrorist organization exploits the situation and makes it harder for the LEAs to operate against them in the dense, crowded, and connected environment of the megacity. With rapid urbanization and lack of

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42 Inskeep, Instant City, 168.
control and the growing networks of terrorism, developing megacities will remain vulnerable to the nonstate actor or terrorist activities, as the construct of the megacity makes detection difficult and provides terrorists with global connectivity in a highly networked environment through illicit or licit networks. The likelihood of future intervention of the United States in a megacity may not be against a state but rather against a nonstate actor that is both connected and unconnected to the political and economic systems of the city government. Some important deductions from the case study in any such situation includes:

- The resilient nature of megacities will not help the terrorist mobilize masses. The same resilience can be used to fight against nonstate actors. The security of the community and its resources will be a key factor to repel the terrorist organizations from getting any support.
- The local police, and not the military of the host nation, remain the key players in the long-lasting fight against the militants within the megacity. The local police, who are more familiar with the local networks and organizations at street level, must be given more leverage and depoliticized before the start of any operation.
- The terrorists in megacities operate in smaller groups to avoid detection and direct confrontation. Thus, small and light forces are best suited to operate against the terrorists.
- Any operation requires a small team effort of intelligence, aviation, special operations forces (SOF), and local LEAs to operate against the target.
- The littoral connectivity of the megacities makes operations through a Marine Air-Ground Task Force (MAGTF) possible, without establishing a foothold in the host nation.
- The global connectivity and increased cooperation and information sharing of the police intelligence communities in megacities can increase the effectiveness of the LEAs against global terrorist organizations and build trust among them.

These lessons learned from Pakistan’s Army operations leads
to the conclusion that the military cannot be successful in megacities with their traditional methods of urban warfare. This situation has further increased the importance of the local police department and exploring new warfighting concepts for megacities, given their special characteristics. The importance and role of police in antiterrorist operations will be discussed next, including the shortfalls in the local police departments of developing megacities, recommendations for basic changes, and a discussion of the latest trends in policing.

**POLICING IN DEVELOPING MEGACITIES: AN ACHILLES HEEL**

From problem framing and case study discussion, we can conclude that the complexities of megacities require a different approach toward warfare from traditional urban operational concepts. Furthermore, the continual growth of megacities in developing countries, such as Mumbai and Delhi, India; Karachi, Pakistan; Lagos, Nigeria; and Mexico City, Mexico, will likely create an environment of conflict due to limited resources. Such an environment can easily be exploited by local and transnational organizations of criminals, militants, terrorists, and drug cartels. In the construct of these megacities in a developing country, they can easily establish their illicit network while staying under the radar and remain globally connected. This operational concept aims to establish a framework for the megacities of developing countries to counter the threat emerging from nonstate actors.

**The Threat Spectrum**

The primary threat in a megacity likely emanates from nonstate actors, including ethnic militants, criminals, transnational terrorists, and drug cartels. These illicit organizations can slowly grow their influence over the functioning system of the megacities through networks. Operating within the networks, the nonstate actors avoid escalation of conflict to the level where the government might be forced to take decisive action against them, particularly if they have yet to achieve any strong influence within the functioning system of a megacity. Peter M. Haas likens their strategy to the often-repeated story of the boiling of the frog that is placed in cold water that is gradually heated. In this anal-
ogy, it is the gradual buildup of danger or discomfort by the nonstate actors that make it not as noticeable or threatening to the government until it is too late.\textsuperscript{43} The recent examples from the Taliban’s operation in Karachi, drug cartels in Mexico, and gang wars in Mumbai follow this analogy, which seems implicit in the kind of conflict that megacities, particularly in developing countries, may face in the near future.

\textbf{The Approach}

We may consider whether police should only perform rule-of-law policing to secure a community and attend to public grievances, or whether they should become a highly trained force to fight and act as a bulwark against terrorism by performing counterterrorist operations. Even Western nations have dealt with this issue for some time. But the reality is that the emerging threat of terrorism and the complexity of the megacity requires police to handle both tasks simultaneously.

Police capacity to fight terrorism and insurgencies remains critical. Many scholars have established that the police force is more effective than the military to perform this task.\textsuperscript{44} Georgetown University’s Christine Fair writes that “a police-led effort would be better than one led by the army, as the history of successful insurgency movements in disparate theatres across the globe shows.”\textsuperscript{45} Kalev I. Sepp’s article “Best Practices in Counterinsurgency” also explains the centrality of the police role while describing the effectiveness of “Police in lead; military supporting,” and the importance of a diversified and expanded police force.\textsuperscript{46} To fight nonstate actors in the complex environment of megacities, this section develops an operating concept centered on policing efforts in concert with the military support of the host nation.

Some arguments for why the military should not lead counterterrorism efforts in a megacity include:

\textsuperscript{43} Peter M. Haas, \textit{Epistemic Communities, Constructivism, and International Environmental Politics} (New York: Routledge, 2016).


\textsuperscript{46} Sepp, “Best Practices in Counterinsurgency,” 8–12.
• Military operations in a megacity can disrupt the flow of the system, which can adversely affect economic activity and inflict heavy financial losses on the government, civilians, and businesses.

• The military has a larger physical footprint and centralized forces, which creates issues maneuvering forces through the dense population and the loss of surprise and speed. Conversely, terrorists operate through networks with a very small footprint. The shelf life of the intelligence in the megacity environment is very short, requiring immediate responses.

• Military operations have an inherent risk of immense collateral damage given the sheer mass of the city and its population.

• The traditional methods of cordon and search are rendered almost impossible in the dense environment of the megacity. Surge operations in urban areas have mostly proven counterproductive as a result.

• Limited relationships with the local community and knowledge of local conditions can affect the military’s intelligence operations.

• The military is more focused on countering the terrorist than securing the populace and its resources.

• The military offers a short-term solution. The long-term deployment of military forces in a megacity will degrade their conventional warfighting skills. The situation creates frustration among the troops, which may result in mistreatment of the populace by military personnel, further exacerbating the situation for the government.

The Importance of Policing a Population
Analyzing the disadvantages of military operations in a megacity, the policing option seems most suitable. The police forces are more decentralized than the military and better connected to the community. As members of the same community, police have a better intelligence network at the local level. Police also are more inclined to protect the
community and its resources. They can play a more significant role in exploiting the resiliency of a megacity with their local knowledge and networks within the community, using the NGOs and their networks to guide their efforts effectively. Police from most megacities in developing countries are organized and trained to deal with common criminals and law enforcement. However, the complexities in the megacity environment and the emerging transnational terrorist threats require militarization and mass transformation in the capability of the police force.

Most of the police forces in megacities of developing countries require modernization. Some basic problems, such as a lack of resources, technology, and manpower are made even worse due to corruption and politicization, which are common in the police forces of these areas.

Therefore, it is important to analyze some of the basic problems and capability shortfalls that have caused the police failures. Based on the case study and research work done on the problems of combating terrorism in Karachi, this section explores the fault lines in the city’s policing system. This analysis will help us understand what needs to be done and formulate the way forward to reform the police in megacities. This process also provides some insight to American counterparts about some of the problems in developing countries with regard to the police department. The Karachi Metropolitan Police (KMP) will be discussed as a case study. The problems of KMP have many similarities with those of the Mumbai, Lagos, and Mexico City police.

**Historical Factor**

Policing in many developing countries was introduced during colonial rule. The major purpose of police in the colonies was to coerce and control the local populations. Police infrastructure inherited by both Pakistan and India was established during the British Raj, or British Indian Empire, as the Police Act, 1861.\(^{47}\) Instead of using the London...
model of policing, the British introduced the Irish model of policing.\textsuperscript{48} The purpose of this police force was not to enforce the rule of law but to enforce the law of the ruler. Rule of law systems function as “transparent systems of making laws and . . . [enforcing] laws that are applied predictably and uniformly. Openness and transparency are essential.”\textsuperscript{49} In the law of the ruler system, however, police remain loyal to the rulers instead of the state. This model provided an authoritarian and unaccountable police force. Unfortunately, both India and Pakistan inherited the same model, and it continued in Karachi until 2002. Politicians continued to use the police force the way it was used during the British Raj, which created a lack of confidence in the police by the public, compounded by corruption and inefficiency in the police department. In 2002, new reforms were introduced; however, the general mind-set within the police department and the government remained the same, illustrating the elusiveness of long-lasting and effective solutions to this problem.

**Problems and Shortfalls**

The primary by-products of the politicization of the police are corruption and inefficiency. Employment with the Karachi police force is based primarily on political affiliation. The senior police officers are not promoted on the basis of merit, but on their affiliation with the ruling political party.

Police stations in Karachi are divided according to the geographic areas they cover, not based on population. In Karachi, 330,000 police personnel are placed in 113 police stations.\textsuperscript{50} This method may be effective in rural areas, where the population is more evenly distributed, while in Karachi, the population density varies across a large spectrum. The overall police population ratio is also low; out of 33,000 police personnel, approximately 12,000 are employed on different administrative, protocol, and VIP escort duties, leaving a city of almost 18


\textsuperscript{50} “Policing Karachi,” Dawn News, 23 February 2014.
million people with a law enforcement ratio of 950:1. In comparison, the overall police force ratio of Pakistan stands at 1,000:2.

Today’s police force lacks resources and funding, which in turn affects their capability to implement law and order; the military receives a majority of the resources and a large percentage of the federal budget. In Pakistan, approximately 18–20 percent of the federal budget goes to the military, whereas Sindh Police, which is part of the Sindh provincial government, only sees 8 percent of the total provincial budget. KMP receives 1 percent of the overall Sindh budget. Police personnel are severely underpaid and see few incentives or promotions. Their monthly pay amounts to about U.S. $100, and their duty hours often exceed 14 hours a day. These issues may be the basis for increased corruption and lack of motivation in KMP.

The major problem in most of the megacities is that the provincial and city governments fail to realize that, with the present threat, the police force needs to earn the trust of the public and modernize on all fronts to counter the threat of instability and violence in the megacity. Police forces who have been successful were organized to counter low-level crimes in rural and basic urban settings. With the advancement in technology, the tactics employed by the criminals have changed. The police, however, did not adopt these changes; as a result, the criminals have gained a strategic advantage with their new tactics as the police have been unable to adapt to the rapidly changing environment. The ethnically based militancy and terrorism in Karachi skewed beyond the capacity of the police to handle.

Military dominance in developing countries is another major hindrance in the modernization of the police force. According to the current Pakistani philosophy, the military can do everything, whether it is through conventional warfare, counterterrorism, or disaster relief

operations. At the time, the police position and role in the megacity was not understood or utilized. The overreliance on the military undermined the importance of the police force, and it was never able to reach beyond the status of the national military service. Counter-terrorism issues and operations are primarily dealt with by the army, and the police force had not been part of the plan. What Pakistani governments failed to realize is that the military can operate in the northwestern mountains of the country, where they can evacuate the districts and villages for operations against the Taliban; however, the military cannot operate with the same strategic mind-set in the megacity of Karachi against terrorist networks.

Lack of technology represents the most significant failing of the KMP. Prior to 2000, Pakistan’s police departments barely had access to a forensic laboratory; to date, each province houses a single forensic office. Poor data collection and matching capability resulted in lost records and inaccurate movement of criminals. The KMP lack basic electronic intelligence, surveillance, and reconnaissance capabilities, which has restricted them to relying on human intelligence only. Insufficient and old communication equipment also placed limits on operational capabilities.

Lack of coordination appears to be the most significant issue between all forms of government LEAs in Pakistan, resulting in a disconnect between KMP and other law enforcement agencies. Military forces and intelligence agencies neither trust the police nor share intelligence information with them. For example, if a police constable wants to trace the call records of any individual, they must first send an official request to the intelligence agencies. The organization houses 20 different LEAs working under a federal government (figure 1.1). These organizations rarely coordinate or share their operations. With the exception of other provincial police organizations, almost all others have a presence in Karachi, but no central authority coordinates the counterterrorism efforts in the city. Although counterterrorism is being addressed through a whole-of-government approach, the army

55 Abbaas, Reforming Pakistan’s Police and Law Enforcement Infrastructure.
56 Abbaas, Reforming Pakistan’s Police and Law Enforcement Infrastructure.

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is the main organization fighting the menace. All the resources and intelligence go to the army, which is one reason why the police never operate in Karachi at full capacity.

Differentiating between a terrorist, a militant, and a trained criminal in Karachi remains a real issue when each is tightly connected through a network. Many legitimate organizations are connected to the illicit ones, and they all operate within the spectrum of the megacity. Unfortunately, this structure lies beyond the capacity of the metropolitan police to separate and operate. The army is heavily engaged in the operations against the Taliban in the northwestern parts
of the country and also is deployed on the eastern borders. They are not ready or prepared to operate in Karachi, which is clear in the lack of strategy by the government to combat terrorism in Karachi, where more than 13,000 people died from terrorist incidents in the last five years.$^{57}$

The sole purpose of analyzing the case of Karachi is to explain the reasons for the failure of the government to implement law and order and counterterrorism. Most of the megacities in developing countries are suffering the same fate. For example, during the terrorist attack on Mumbai in September 2008, Mumbai police failed to prevent the attack or control the situation during the attack.$^{58}$ In many instances, governments in developing countries have overrelied on military operations and undermined the importance of police in the megacities. The reform of the New York Police Department (NYPD) after the attacks on 11 September 2001 serves as a perfect example of transformation for a police force to tackle the modern-day security threats that are unique to megacities due to their complexity. The NYPD made revolutionary changes in training, capability, interagency coordination, foreign partnership, intelligence gathering, and field operations.

**Basic Reforms and New Policing Concepts**

To fight counterterrorism in the megacity, the KMP needs revolutionary changes. Some of the problems are very basic, but the police force needs advanced training and innovative skills. The mind-set and culture of the police force needs to change. The colonial-era mentality, where police served the ruler and their efforts to control and coerce the people, needs to be replaced with the philosophy of the police as a service rather than a force, which would develop trust by the local community.

Police personnel salary must be increased to motivate the indi-

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vidual and to reduce corruption at an individual level. A merit-based induction and promotion system rather than political affiliation would also improve the current standard of police advancement.

Community-based policing is another important area that requires evaluation. This concept ensures that the community is part of the solution rather than the problem, which could play a vital role in exploiting the resiliency of the megacity. Community-based policing also builds relationships in the community, providing intelligence networks within the community. Most of the personnel in the KMP, however, are not from the city. The junior officers typically come from the rural parts of Sindh due to the quota system that currently supersedes merit-based selection. To support the community-based policing concept, recruitment must take place in the local community.

The police require extensive modernization and enhancement of their capabilities in everything from weapons to intelligence, surveillance, and reconnaissance (ISR) equipment. KMP’s present ISR capability is restricted to human intelligence. Otherwise, the department depends on the Inter-Services Intelligence (ISI) headquartered in Islamabad, Pakistan, and the Intelligence Bureau (IB), headquartered in New Delhi, India, for ISR. Police personnel also need to upgrade their basic communication equipment and systems. Communication scanners, jammers, and secure wireless communications must be installed at all police stations.

The KMP must participate in progressive training to learn modern tactics, training, and procedures (TTPs). They should send officers for training with world-renowned police forces, such as those in NYPD and London’s Metropolitan Police (a.k.a. Scotland Yard). The Pakistan Army can support training on basic urban warfare tactics. The main purpose is not to train only special or elite forces but to increase the skill level of the entire police force.

The interoperability of Karachi police with other LEAs remains paramount to achieving success in the complex environment of the megacity. This includes sharing information and coordinating collaborative operations, but the government must also understand that the army cannot solve the issue alone. It has to assign responsibilities to the police, especially in cities such as Karachi. A joint operation center
should be available to share information and coordinate counterterror-
ist operations.

The KMP needs to organize based on the size of the population rather than the size of the area. To cover the population of Karachi, police forces should improve their ratio from 900:1 to 400:1, which is a basic United Nations (UN) requirement to maintain law-and-order. If this is the case, Karachi needs almost twice the size of the present force strength for effective counterterrorism activity. In a counter-
insurgency scenario, Bruce Hoffman suggests the ideal police-to-
population ratio of 1,000:20.59

The police stations represent the smallest independent unit of the force. Their area of responsibility is marked geographically, and they do not operate outside their area of jurisdiction, creating an in-
flexible organization during operations. With the latest human terrain mapping concept, the city can be divided virtually on the basis of such factors as grievances, ethnicity, or religious affiliations. Those virtual boundaries can be allocated to different teams for operations, irre-

spective of geographical boundaries. Multiple social media sources can map the city according to different factors.

With some basic modernization, developing countries can apply some of the new trends in policing that have been adopted by some of the Western megacities. These trends support better strategies against terrorism and nonstate actors.

Predictive Policing
Coined in 2009 by the National Institute of Justice, the term predictive policing refers to gathering data from disparate sources and analyzing them. The results will then be used to anticipate and prevent future crimes and respond more effectively as they happen in real time.60

For example, in 2012, the New Orleans Police Department and data-

59 For more on these concepts, see Promoting Health, Security, and Justice: Cutting the Threads of Drugs, Crime, and Terrorism, 2010 Annual Report (Vienna, Austria: UN Office on Drugs and Crime, 2010); and Bruce Hoffman, Insurgency and Counterinsurgency in Iraq (Washington, DC: Rand, 2004).

mining company Palantir partnered to deploy a predictive policing system in the city in the hopes of combating New Orleans’s staggering crime rates.  

**Hot Spots Policing**
The concept of hot spots policing shifts the paradigm of crime control from personnel to places. David Weisburd, director of the Center for Evidence-Based Crime Policy at George Mason University, explains that most crimes are concentrated in specific urban areas. Plotting crime locations can show the hot spots where most of the crimes are committed. Based on those hot spots, random patrols can be directed to high-risk areas to decrease crime rates. While somewhat similar to predictive policing, the focus here shifts to where the crimes occur.

**Community Policing**
The concept of community policing promotes the systematic use of partnerships to proactively mitigate the risks of crime or social disorder due to certain conditions. Neighborhood Watch is a community crime-prevention program in the United States and the United Kingdom (UK), where residents and businesses in neighborhoods reduce crime by looking out for suspicious activity and reporting it to the police. It is based on the idea that residents of the neighborhood serve as the eyes and ears of the police, which might discourage criminals if they are aware that local residents are willing to report suspicious behavior or activity.

**Social Media**
Several police departments use social media effectively to convey their message and gather information to prevent crime. The Los An-

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63 T. Bennett et al., *The Effectiveness of Neighborhood Watch* (Oslo: Campbell Collaboration, 2008), 18.
geles Police Department (LAPD) integrated a social media branch in its structure to brief the incident commander about activities in the region. LAPD also surveils large social gatherings and adjusts its daily deployment accordingly.\(^\text{64}\) In a 2008 Mumbai attack, the terrorists were updated by their handlers about the movement of security forces from updates on social media.\(^\text{65}\)

To fight against terrorists in a megacity, it is imperative to enhance the ability and capacity of the police department to gain any kind of result. The military alone cannot take the burden of policing in an insurgency. To fight against the criminal networks, both police and military forces should complement the other’s capabilities. The next portion of this chapter will establish a combined police-military operational concept to counter terrorists and criminals.

**OPERATIONAL CONCEPT: HYBRID POLICE–MILITARY APPROACH**

The complexity of fighting wars in urban areas is not new; even Sun Tzu noted that attacking cities is the worst wartime policy.\(^\text{66}\) Densely populated areas with high connectivity and productivity make it more difficult for the operating forces to apply traditional methods of warfighting in megacities. The rapid growth of urbanization in developing countries with a significant lack of resources creates governance and law-and-order issues, which in turn provide illicit organizations an opportunity to operate in the megacity construct without constraint. The transnational terrorist and criminal organizations that used to operate from remote areas are much more comfortable and safer in megacities, whose density provides them cover. The lack of governance gives them the opportunity to merge with the local economy to raise money, and the highly connected environment provides them networks to operate globally. The global interconnectivity of the terrorist and criminal organizations are becoming a major concern for the international

\(^{64}\) Weisburd, *Future Trends in Policing*.

\(^{65}\) *Mumbai Attack Analysis* (New York: NYPD Intelligence Division, 2008), 42–54.

community. The military forces operating against illicit organizations in the megacities find it difficult to counter these organizations using basic urban warfare concepts.

**Purpose**
The concept of the police and military working together gives a framework of how the military—in support of the metropolitan police—can be task organized to fight in the megacity with a minimum footprint and disruption in the city and to establish networks to counter growing terrorist networks. This concept mainly revolves around police-military hybrid operations. It is important to note how police can take the lead generating intelligence-based targeted operations against nonstate actors in quick and efficient ways, without damaging the infrastructure and economy of the megacity, based on enhanced capability and military support.

The concept of joint police-military operations may not work in all circumstances, primarily because of the varied conditions in different countries. As in most developing countries, the military has very little role to play concerning civilian matters within the country and no single agency is responsible for antiterrorist operations within the country. Nevertheless, in many developing countries, the military is responsible for internal security, mainly because of the lack of capability of the police department. For example, Pakistan and Mexico’s militaries play a vital role in operations fighting criminal elements. In such cases, these militaries may be ready to collaborate with the police; however, the larger part of this chapter’s argument contends that they need to raise the level of police capability because these militaries cannot fight alone in the megacities. While the military in megacities may achieve temporary success against the nonstate actors, the ultimate fate of the insurgency will be decided by the performance of police due to the longer nature of such wars.

**Assumptions and Risks**
After carrying out the literature review and case study on the megacity, the concept of operations has been developed based on the following assumptions:
• The resilient nature of megacities may deny support to the terrorists. The same situation can be exploited by LEAs in favor of operating forces.
• The likelihood of a full-spectrum war against a state in a megacity remains remote due to the national and regional importance of the city; however, the possibility of operations against terrorist and criminal organizations continues to increase.
• To counter terrorist networks, LEAs have to operate within and through these networks, which will increase their speed and flexibility.
• The capability and the responsibility of the police and military forces must overlap on many domains while operating against terrorists or criminals in a megacity. Police, being more familiar with the local networks and community, represent the better option to operate within a megacity against terrorists.
• For the purpose of this concept, we assume that police in a developing megacity have upgraded their surveillance and intelligence capabilities, with requisite manpower and weapons.

**Military Problem**

Megacities pose a significant challenge for future military operations. The issues of operating in a megacity do not originate solely from its massive, dense urban setting, but also its highly networked and fluid environment. The high speed and flow of information will create a challenge for intelligence operations. The dense and connected environment will be a dilemma for maneuver, which may need to be carried out on all three planes: land, air, and space (cyber). As the enemy operates in networks, maneuvers will now be made on those networks to capture the terrorists. The concept of control, contain, and isolate may appear obsolete in a population of 20 million people connected by thousands of internal and external networks. Important tactical grounds (ITGs) may not lie in the physical plane, but rather at the nodal convergence of different networks, communication centers, and ener-
The effects of disruption within the economic system of a megacity can resonate nationally and globally. The terrorist and criminal organizations are effectively using the high density and connectivity of the megacities to coordinate and operate in hundreds of networks, while security forces are bound by physical areas of operation and beholden to fixed response time lines to operate against those illicit networks within very brief windows of time. The military requires an operating concept that gives them flexibility and mobility to operate in support of police forces in megacities through networks and multidomain capable task forces, such as enhanced company operations (ECO) with combined arms, air, logistics, and SOF elements, which can be expanded to personnel from all the branches of service and interagency organizations under one roof.

**Synopsis**

This concept of operations revolves around two concepts. First, we must rely on the resilient nature of the megacity to deny any support from the community for the terrorists and criminals, but instead to the advantage of the operating forces, including the involvement of local police forces as part of setting up the network. The growing threat of terrorism in a megacity may be best dealt with by the local police rather than the host nation or foreign military due to their inherent knowledge of the area and the local networks. By developing the capability of the police forces in megacities, especially in developing countries, and by uniting them in a network to fight against the global terrorist and criminal networks, they can better prepare for future threats. This network could share intelligence, develop common operating procedures, and establish trust among agencies. These networks also can work to benefit the operating force tasked with fighting the terrorists or providing humanitarian aid in the megacity.

Second, the task organization of the military force must be accomplished to support policing operations in the most flexible and swift manner. After analyzing the complexities of megacities and the problems of a conventional military force in the dense urban environment, particularly the second- and third-order effects of its operations,
the most suitable option may be the ECOs developed in 2008 by the Marine Corps Warfighting Laboratory. The purpose of ECO, as explained by General James T. Conway, is “an approach to the operational art that maximizes the tactical flexibility offered by true decentralized mission accomplishment, consistent with the commander’s intent and facilitated by improved command and control, intelligence, logistics, and fires capabilities.” ECOs give an infantry company the arms capability to operate independently of its battalion.

The ECO in this operational concept is used more as a theory than a model. For the purposes of our discussion, ECOs serve as a military force small enough to offer a minimum footprint inside a megacity, but large enough to support multidomain capability from combined arms for independent operations. ECOs represent a prime example for conventional militaries, such as the Pakistan Army, that still have to learn the art of decentralized operations with small teams, especially in Karachi. The smallest organization with combined arms capability in the Pakistan Army is the Independent Infantry Brigade, which is still a large force to operate in a megacity. The essence of the ECO-type small unit success relies not on the number of troops, but on the variety of capabilities across multidimensions. Depending on the situation, whether fighting a counterinsurgency in a megacity or performing a humanitarian aid mission, the ECO can provide a good platform for all the services, including interagencies, intelligence agencies, and special forces to function collaboratively. Connecting these entities who play a role in the battlespace at much smaller levels supports more cohesion and unity of effort and will save time from vertical coordinations. The multifaceted capability of this type of unit will help forces react swiftly to the identification and elimination of the enemy networks without disturbing the city system. This ECO concept

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can also generate a quick humanitarian aid response with the help of host nation forces.

The most important piece of the concept is how the ECO military unit works in collaboration with the police, whereby both forces complement the other’s efforts and capabilities. Collaboration ensures the security of the community and their resources in the megacity, further building the relationship between the operating forces and the community and exploiting the positive resiliency of the megacity for the advantage of the forces operating in the city.

APPLICATION AND INTEGRATION OF MILITARY FUNCTIONS

Command and Control

The concept of command and control is not much different to the mission-command philosophy or centralized command and decentralized control. As defined by the Department of Defense (DOD), the term command and control refers to the authority of a commander over forces to accomplish a mission. The control piece, however, makes the difference. The fusion of the police network with the military is the most critical part of command and control. The overall command of the operations will be controlled by the highest city department official assisted by a senior military advisor and city police chief. The relationship between the police and the military will work like a mutually beneficial relationship.

The initial phase of the operation—phase 0 or in phase 1 of police operations—can be supported by the military to establish networks and to enhance battlefield awareness and intelligence gathering. In phase 2 or 3, which is more kinetic in nature, the military will be supported by the police in active targeting of the criminals. In phase 4, which serves as more of a stability phase, the military will act in a supporting role to the police (figure 1.2).

A combined operations center of police and military staff, along with the staff from city government, will support all the requirements

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of field operating forces. The city can be divided into four to six sectors, with each sector having their own police operations center. Each sector can be allotted an independent ECO from the military forces. The subsequent subsectors of the police can be assisted by the platoons and squads from the ECO, but they will only be divided once required. It is important that, while operating through multiple networks in the megacity, small groups be given much more leverage to operate swiftly and independently. Depending on the situation, each independent company can be provided with representatives from the State Department, U.S. Agency for International Development (USAID), intelligence departments, air elements, and SOF teams. The ECO can operate within the battalion framework and directly report to the Marine Expeditionary Unit (MEU) commander or geographic combatant commander (GCC).

**Intelligence**

Intelligence remains the centerpiece of this concept. The entire cons-
cept of megacity warfighting hinges on intelligence operations. Intelligence operations are not only important to locate enemy networks but also to identify the strengths and weaknesses of the society and to establish friendly networks. The accuracy of the intelligence also plays a vital part in ensuring minimum destruction and disruption in the megacity. Intelligence and operations are complementary to the functionality of the process. David Kilcullen describes the relationship between maneuver and intelligence as:

Your operations will be intelligence driven, but intelligence will come mostly from your own operations, not as a “product” prepared and served up by higher headquarters. So you must organize for intelligence. You will need a company S2 [intelligence] and intelligence section.  

The notion of winning a war in the megacity is directly dependent on the success of intelligence operations. Intelligence operations combine services and interagency operations that require a wide and dynamic range of intelligence resources, from satellites to human intelligence and open source social media, all at the discretion of the independent company commanders reinforcing the intelligence-gathering efforts of the police network in the megacity. Police intelligence will come from human intelligence resources through the local community network. Some of the latest trends in policing, such as community and hot spot policing, build the network further.

Maneuver
Maneuver in the megacity is mostly done through the primary nodes of the different networks, which may lie in both physical and spatial planes. Nodes refer to the intersection of different networks created by a person, organization, or an ideology. Policing operations can be

\footnote{LtCol David Kilcullen, Australian Army, “Twenty-Eight Articles,” Marine Corps Gazette 91, no. 10 (October 2007): 53.}

\footnote{For the purposes of our discussion, maneuver refers to the “employment of forces in the operational area through movement in combination with fires to achieve a position of advantage in respect to the enemy.” DOD Dictionary, 168.}
effective to catch the terrorists and criminals operating and interacting through different social networks.

The main components of maneuver are the combined small local subsector police teams and squad-level military teams functioning under independent companies allocated to each sector. The squad-level teams under an ECO will mainly deploy on the concept of distributed operations (DO). DO refers to a form of maneuver where highly capable small unit teams are distributed across a large area of operations to achieve an advantage over the enemy through separate but coordinated tactical actions. The independent company will rely both on aerial and ground assets. These teams will travel light and move quick. Predictive analysis, crime mapping, and hot spot policing are but some of the methods to facilitate police force maneuvers. Each police station or subsector will have small, light, and well-trained quick reaction forces that will partner with the small military operation teams. An important factor of the maneuver is the ways the police can use social media networks, local partnerships with business communities, and other NGOs to support and mobilize the masses for both counterterrorism operations and relief operations.

**Fires**

Fires in a megacity require more precision than mass. In this instance, the term *fires* refers to using weapon systems to create specific lethal or nonlethal effects on a target.\(^72\) Terrorist groups typically operate in smaller units within the population centers. Smaller teams operating against them may not need heavy fire support, but what they will require is timely support given that their window of opportunity will be brief. Traditional fires from indirect weapons may not be effective in the megacity; thus, unorthodox fire capability through drones, camcopters, and micro air vehicles will work as a force multiplier for the small units.\(^73\) The fires will be coordinated at sector and company level.

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\(^{72}\) *DOD Dictionary*, 100.

\(^{73}\) Drones, micro air vehicles, and camera or quadcopters are all considered unmanned aerial vehicles (UAV). See “Quadcopter vs. Drones: What’s the Difference?,” *Fortress UAV*, 16 January 2018; and “Micro Air Vehicles,” *AVID.com*. 
CHAPTER ONE

**Force Protection**
Force protection success depends on a small footprint of collateral damage, minimal disruption to the community, and community support. In this situation, force protection refers to the preventive measures a police or military force takes to mitigate hostile acts. The military units will neither perform the patrols nor man the checkpoints, ensuring minimum exposure. They will mostly assist in targeted operations or humanitarian aid missions.

**Networking**
Networking in classical warfare is part of the intelligence process, but because of its overall importance in this operational concept, we will discuss it as a separate warfighting function. The purpose of networking is to defeat the enemy’s system, while converting the military structure into a flexible empowered web. Networking will allow forces to disseminate information faster, supporting quick decision making and action. Distributing small teams in a large area under the ECO builds that network. Networking is much more than a medium to exchange data; it leverages cultural and physical proximity, develops relationships based on trust, and contributes to the decision-making process. The police-military hybrid approach in a megacity bridges the gap between the community and security forces and builds networks to defeat and disrupt terrorist networks.

**Necessary Capabilities**
The necessary capabilities required to fight a war in the megacity may not be altogether different from combat in urban areas or in counterinsurgency operations. They do differ, however, in how they are organized and employed in the megacity. The independent military companies functioning on the lines of an ECO will require combined arms capabilities, logistics elements, intelligence and air assets, SOF teams, and personnel trained for security partnerships. The force also should be capable of employing the latest ISR available to the military. The capability of police in most developing megacities needs

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74 *DOD Dictionary*, 105.
enhancement from traditional to contemporary policing methods. ISR platforms, communication equipment, mobility assets, and enhanced combat training represent the most significant needs.

CONCLUSION
The future operating environment will bring multiple challenges for military forces. No single solution will apply to all battlespaces, reinforcing the need for continually evolving operating concepts. Megacities in developing countries will pose a unique challenge to their militaries, though not necessarily from the enemy but from its own peculiar and complex environment that renders traditional warfighting concepts ineffective and requires innovative thinking for multiple solutions. The concept of enhanced company operations within the hybrid police-military model of operations in the megacity represents an effort to move in the same direction. The concept exists at a very nascent stage in its development, and employment requires further deliberation within civilian and military agencies responsible for local security. However, the basic framework exists, which should serve as fodder for new developments for the future of urban combat in the megacity environment.
Territorialization of the Megacity
Exploiting Social Borders

Major Alexandra V. Gerbracht, U.S. Marine Corps

On 18 March 2018, police in Sacramento, California, shot an unarmed black man 20 times in his backyard. Officers claim to have been responding to calls of suspicious activities related to vehicle burglaries in the area. Without identifying themselves, they entered Stephon Clark’s property, fatally shooting a man holding only a cell phone and failing to render aid for more than five minutes after he collapsed. Mass protests erupted across the city in the midst of local and national debates on gun laws and police brutality.¹

INTRODUCTION
Within a megacity, grievances exist, stemming from social anxiety that accumulates over months and years. These grievances translate into a heated national argument while marginalized sectors of the population wait to address their grievances. Then, an event sets off the frustrated masses of a densely populated area; crisis and chaos become quickly amplified in a densely populated area. However, through preparation and understanding the social map, coupled with the fore-

sight to draw boundaries, a national security apparatus can limit the impact of a potentially costly uprising.

Megacities are defined by their dense populations, networks, resources, and life-support systems. As such, influencing possible security events—threats—by defining territories of informal social and economic similarities and civil structures, and identifying grievances is a challenge. How are megacity conflicts that arise from collective behavior limited? Government influence must limit turmoil by identifying and protecting targets, while also enabling mobility of the populace. In addition, physical constraints, grievances, and collective behavior in a megacity define territories, which affect the dynamics of a crowd and identify targets of collective violence. Mapping these informal networks within a dense environment allows maneuver around and through crisis areas; and understanding grievances allows for target identification and protection. Thus, when governments see and identify high-risk enclaves, they can limit the impact of a crisis.

Megacities foster territorial collective behavior that reflects both political and economic grievances. Existing physical constraints limit and define the behavior, though collective behavior and group dynamics can develop into collective violence. Violent actions, such as riots, result in rational targets, which stem from grievances within the population. As a result, transient masses and belligerent actions combine to form the collective behavior that defines the boundaries of a crisis. By understanding group formation and grievance development within a densely populated area, state agencies can more effectively identify areas of risk. Exploiting the nature of these territories may in fact limit the impact of conflict and increase the influence of the state. Identifying the targets of collective violence and their territorial boundaries creates mobility corridors and supports state forces with maneuver space to set up logistical operations, blocking forces, channels for the enemy, and humanitarian relief.

This chapter links territory-based collective violence with a forc-

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2 For the purpose of this chapter, territories are networks associated in time and space, the physical boundaries of a group of people, places, and/or things.

3 Collective violence generally falls into three categories: situational (e.g., barroom fight), organized (e.g., lynching), and institutional (e.g., the national guard policing a riot).
es’ ability to exploit maneuver space and define targets. The research applies to physical and nonphysical targets across international borders. Territoriality is not restricted to the megacity geography of dense human populations. To combat an unconventional enemy, formal networks must influence the informal ones that define the territories. Collective behavior is by definition an informal network. When collective behavior evolves into a crisis, state forces must limit the collective violence by mapping and estimating targets. Based on the 1992 Los Angeles and 2005–6 Paris riots, the following case study will look closely at collective behavior, existing territories, transient mass generation, security responses, and targets to develop a concept for defining territories of collective behavior threats and exploiting boundaries to increase state influence and to protect targets. Identifying key territories and targets prior to, or at the onset, of a conflict in a densely populated environment will shorten that conflict and reduce the amount of collateral damage.

COLLECTIVE BEHAVIOR

The basis of this research revolves around several key definitions that link progression from grievances and collective behavior to territorialization. The linkages are broad and derive from a variety of factors. Understanding the process and theories behind the social actions of collective behavior through transient mass to collective violence may clarify the creation of territories.

Grievances

We must first focus on the concepts of political and economic grievances. These complaints develop in megacities through the marginalization of certain ethnicities and economic classes and the limited opportunities available to them. There is a large body of work in the political economy and sociology fields comparing greed versus grievance as a motivation for conflict. Self-enrichment incentives serve as motivation to continue conflict, including access to resources, and

also as a form of greed.\(^5\) The intent of this study is to look at horizontal inequality grievances, or those among culturally defined groups that amplify the potential for conflict, to identify the territories created by grievance. These grievances relate to resource availability or unavailability and the social groups who have access to them.\(^6\) As such, physical and economic resources define both territories and the grievances created therein. For example, in a tenement house far from public transportation, physical transportation capabilities limit employment opportunities, creating obstacles to opportunity and upward mobility. This chapter focuses on physical territories but as they apply to both physical and nonphysical boundaries and targets. Grievances also derive from physically separated marginalized groups, as reflected in architecture and urban-enclavization or imposed territorialization.\(^7\)

**Collective Behavior**

The predominant theory on collective behavior comes from Neil J. Smelser’s *The Theory of Collective Behavior*, which defines collective behavior as the spontaneous emergence of social groups outside of the norm, but other definitions also focus on collective behavior between both institutional and emergent behaviors.\(^8\) Jack M. Weller and Enrico L. Quarantelli claim collective behavior links to emergent

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\(^5\) The International Peace Academy’s Program on Economic Agendas in Civil Wars case studies compiled by Ballentine and Nitzschke place both greed and grievance into the category of “incentives for self-enrichment and/or opportunities for insurgent mobilization.” Ballentine and Nitzschke, *Beyond Greed and Grievance*, 2.


\(^7\) Mike Davis, *City of Quartz: Excavating the Future in Los Angeles* (New York: Verso, 1990). Davis defines *enclavization* in Los Angeles as the separation between economically disparate communities. The Hollywood neighborhoods wall themselves off and hire armed private guards. Short distances away are low-income areas. The author describes how the obsession in Los Angeles with physical security has led to these walled private communities. Enclavization is evident in any modern city and gentrification often emphasizes the separation; southeast Washington, DC, is the perfect example. The neighborhood immediately adjacent to the Marine Barracks at 8th and I Streets and the Navy Yard is upscale, replete with expensive boutiques and bars, but just a few blocks away the community suffers frequent street crime.

and institutional social relationships and norms. As seen in figure 2.1, three out of the four quadrants of collective behavior lead to some level of violent masses.

Richard A. Berk notes evidence of rational decisions in a riotous environment as a manifestation of collective behavior. Berk studied group decision making by considering the underlying causes behind collective violence. He used game theory and an action list to determine acts based on rationality and the personal cost of involvement. Berk’s research found that the selection of targets is not a result of mass irrationality but rather the conscious and subconscious thought behind collective violence. Although the target (e.g., vehicle, store window, etc.) may be the closest object to a crowd, the target may

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actually be the neighborhood itself or the symbols of economic prosperity. His case study looked at an anti-Vietnam protest that took place on the campus of Northwestern University in Chicago. The event incited enough fervor that protestors blocked off major roads as a form of immediate protest. The act took place without a well-defined goal; however, the participants shared a grievance against the Vietnam War, whereby blocking the road served as an immediate announcement to nonparticipants of the grievance. Targets may be tied directly to the grievance or simply an unfortunate target of opportunity.

For the purposes of this discussion, collective social actions form a cohesive group or transient mass. This chapter will demonstrate that spontaneous behaviors define territories when they lead to collective violence. Roberta Senechal de la Roche sees collective violence as a deviation from social control and common norms. These manifestations of collective behavior can happen quickly in the form of transient mass, where the mass may not be violent but will respond similarly to collective behavior with shared information driving its action. Collective violence manifests in the form of violent crowds, riots, lynching, vigilantism, and terrorism. The latter two events tend to be well-organized and longer lasting in duration, although all may be evident in a megacity environment. For the state to best react to these acts of violence, it must define the space around them.

**Territories**

The *Oxford English Dictionary* defines the term *territories* as an area of knowledge, activity, or experience, or as land with a specified characteristic. Representations of regions or territories are discussed at length in conflict studies. The most prevalent border disputes are interstate, but those same definitions and historical associations of social borders apply to enclaves within a densely populated environment. In the context of this discussion, territory is much more fluid than state

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borders and reflects social rather than formal lines. The changing role of boundaries at the national and megacity level has been the subject of formal research. Friedrich Kratochwil studied territorial social organizations and their effect on the international system. His research revealed how modern attempts to create functional regimes better managed the conflict resulting from lack of access to resources and political interest. In this instance, the social organization borders were more efficient managing resources and changed the formal definitions of territory to a social focus. Another study on territories looked at social and economic borders in Los Angeles, where luxury lifestyles are physically defended to create a culture of physical security, as previously described in Davis’s book *City of Quartz*.

John Gerard Ruggie defines territory in relation to collective behavior as a "spatial extension" and "the social facility of any spatial extension in turn implies some mode of differentiating human collectivities from one another." Many sociology and political science studies on territories relate directly back to group collective behavior. For the sake of this discussion, the term *territories* represents any definable physical area containing multiple possible targets and avenues for maneuver.

**State Influence**

Our discussion will frequently focus on the goal of state influence. In a densely populated environment, collective behavior often leads to state security losing the ability to influence or minimize the negative impact of a violent situation. The case studies discussed below illustrate two such examples of local legitimate security forces losing control of a situation. Control is not the goal in a densely populated area, as one group may never have complete control. However, influencing the action of collective behavior groups to protect resources and property is the goal of state security influence.

15 Davis, *City of Quartz*, 223.
Megacities operate based on numerous variables regarding transient mass populations and collective behavior. The case studies below operate on a few assumptions. Megacities exist in a state strong enough to support existing political and economic systems in place, and these systems have the capability to respond to grievances and threats to security. In the Los Angeles and Paris riots, the existing security system was the local police force. A megacity’s characteristics also include a breadth and depth of character, meaning there will exist, in relatively small spaces, a variety of social and economic classes. Territories already exist within densely populated areas, and they are capable of fostering collective behavior.

Collective behavior and grievances drive the creation of physical territories. The physical attributes of a city can influence collective violence by allowing fluidity of forces or influence around the territories supporting collective behavior/violence. The attributes associated with territorialization from collective behavior empower a military force attempting to minimize the impact of conflict, particularly when these territories have borders and targets that can be exploited by military operations.

Drawing borders around these territories and identifying targets allows for the maneuver of security forces within an area already plagued by collective violence. The 1992 Los Angeles and 2005–6 Paris riots case studies evaluate how collective behavior developed because of existing grievances, territorialization, and transient mass formation after specific events. Our discussion will conclude with an assessment of state security responses and the specific targets of the collective behavior. These cases amplify the patterns of collective behavior based on grievance and translate the grievances into territories. In both cases, the initial security response did little to quell the riots. However, the aftereffects formed the basis for a military concept that will use territorialization to minimize the impact of collective violence and to maximize state security influence.

CASE STUDIES
On 29 April 1992 in Los Angeles, the jury’s findings from the Rodney King trial were released. The court had found the four white Los
Angeles Police Department (LAPD) officers not guilty of beating an unarmed black man, Rodney King, the previous March. Bystanders videotaped the entire attack. The court decision met with protests that spread across the city, eventually causing the mayor to request military assistance after five days of riots, looting, and arson.

On 25 October 2005 in Clichy-sous-Bois on the outskirts of Paris, a group of teens on their way home from playing soccer were loitering near their homes and a concerned citizen called the police. As squad cars approached, the youths fled from the officers and three were electrocuted when they hid near a power substation. Zyed Benna and Bouna Traoré both died as a result of their injuries. The public believed their deaths were directly linked to the officers failing to act. The unrest escalated in Clichy-sous-Bois in the form of rioting crowds, which then spread around the country in the following weeks, causing a state emergency. By January 2006, the French government passed legislation addressing the grievances about unemployment for immigrants identified as a critical factor during the riots. French citizens repealed the legislation in April 2006 after massive opposition.17

By delving into these two cases, we can correlate empirical observations about each of the events. The existing grievances and territories relate directly to how the events unfolded and what the violence targeted. Building a military concept around this logic illustrates the nature of combat stemming from these types of conflicts in a population-dense environment. The case studies highlight six concepts: collective behavior, existing grievances, existing territories, transient mass generation, security responses, and targets of violence.

**Collective Behavior**

As discussed above, Smelser breaks down social tenets in detail and describes how collective behavior actions take place in a cluster of time and in specific cultural areas. These collectivities can be broken down into physical and temporal collectives.18 Groups coalesce through social, cultural, and proximity behaviors, and collective behav-


ior stems from some level of communication and interaction. This aspect of his theory aligns with the concept of territorialization of social behaviors, where shared grievances facilitate common understanding among individuals. Territories then form from these numerous grievances and previously existing physical or social commonalities.

The combination of aggrieved and compressed populations in territories leads to collective behavior, but it can manifest into collective violence in the form of riots or civil disturbance with the right window of opportunity for transient mass creation. Both the Los Angeles and Paris events are examples of collective behavior that turned violent. Population-dense environments facilitate collective behavior through territoriality.\footnote{Ruggie, “Territoriality and Beyond,” 150.} Collective violence is a form of social control to get a group to mimic each other’s behavior. Mobs thus are a manifestation of grievances to vent anger.\footnote{Senechal de la Roche, “Collective Violence as Social Control,” 98.} Mobilizations represent the local social or kinship bonds that have been created. Creation of groups bound by collective behavior according to spatial proximity or grievance identification set the stage for collective violence.

The examples from Los Angeles and France both show existing marginalized populations who attempted to address economic and social marginalization through the political system. Modern megacities are a hybrid of networks that link people with similar interests and backgrounds; in this instance, the populations from Los Angeles and Paris shared grievances. In both cases, the grievances stemmed from systemic economic discrimination against immigrant and minority populations, resulting in physical territorialization. These obvious physical boundaries represent the first step in territorialized collective behavior of similarly aggrieved people in one area.

**Existing Grievances**

Sociopolitical differences lead to grievances within population-dense environments of vastly different social classes in close proximity, which can exemplify those differences and make grievances more prominent. Grievances develop when a population or territory does
not have access to basic life necessities or resources. These resources can be as complex as economic opportunities, political influence, and education, or as simple as clean water and sewage systems.

Grievances also are related to structures and existing territories. Common grievances are the glue that forms territories from commonalities between the aggrieved. The immigrant populations in Paris had similar religious views. With continued immigration, both legal and illegal, and a slowing economy, the job market dried up as some areas saw almost 30 percent unemployment. Attempts were made at integration policies to curb Islamic radicalism but instead limited Islamic identity. In March 2004, the Jacques R. Chirac government passed a secularization law banning religious symbols in public primary and secondary schools; for example, Islamic girls could no longer wear traditional headscarves. Despite continued cultural integration of second- and third-generation immigrants, there was a general dissatisfaction with the unfulfilled promise of economic and political integration.

Existing Territories
The creation of territories and identifying borders and targets can be done within social, nonsocial, physical, and economic borders; for example, the space between public transportation stops or a neighborhood and business area that shares a language forms physical borders. States further define territories in megacities through civil planning characteristics: zoning, property taxes, and services provided. Non-social territorialization can be seen in public transportation, which is

24 French Law No. 2004-228 from 15 March 2004 applies the principle of the separation of church and state and concerns wearing symbols or garb that show religious affiliation in public primary and secondary schools.
defined as a physical representation of network pathways and avenues of approach. These avenues delineate territories and offer utility for maneuver during a conflict scenario. Space plays a central role in social change and collective action and defines perceptual avenues for action. 26 Social space includes physical resources such as businesses or essential services. Perpetual avenues for action are represented by the major highways defining neighborhoods, causeways, or canals that form physical borders or territories. Territory creation in megacities happens through geographic, ethnic, and economic boundaries and common grievances that all lead to collective behavior. A common grievance might be poor access to employment opportunities due to the lack of public transportation. Unemployed people from one territory use the same limited resources, and frustration with the limited resources leads to collective behavior. Territories are complicated—like the stories of William Shakespeare’s *Romeo and Juliet* and Arthur Laurents’s *West Side Story*—the populations live with each other but divide socially or politically. 27

Territorialization began in France in the 1960s with an influx of immigrants from North Africa and the Maghreb regions during reconstruction. These marginalized newcomers lived in large-scale public housing projects and were subjected to the French form of cultural integration. 28 Many of the second- and third-generation immigrants had culturally assimilated but remained on the outskirts of society—physically and figuratively—because of entrenched anti-immigrant xenophobia and economic discrimination. These districts were economically isolated and physically disconnected from public transportation and city centers. In 2005, conflicts constantly erupted between police and Muslim youth. The segregation of neighborhoods

further compounded the problem by discouraging assimilation with the French population. Failed attempts at engaging political tools left these North African and Arab populations frustrated and intentionally territorialized. In October 2005, French Minister of the Interior Nicolas Sarkozy had begun a new offensive against 25 tough neighborhoods across France.

Just as in Paris, a history of racial and economic segregation was prevalent in Los Angeles. In 1992, the LAPD responsibilities were broken down by regions, bureaus, and divisions. These divisions aligned with the relative economic classification of the neighborhood. Mike Davis discusses the lack of public spaces (e.g., public restrooms kept nonresidents away from certain commercial areas) for all the classes to commune due to a defense of luxury lifestyle and an obsession with physical security. Los Angeles territories further developed along lines of economic distribution. Black gang culture evolved in the 1970s along clear territorial lines. Decades of gang and drug violence had partitioned off the city into small social and economic territories (figure 2.2). As a result, gangs as social groups act as motivation for collective behavior and collective violence. In both Paris and Los Angeles, the violence happened in the vicinity of the belligerents, and the people involved in the crimes did not leave the area. In both cases, the existing territories affected how the crowds reacted and where they operated. Decades of segregation and marginalization festered beneath the surface of a population ripe for action.

**Transient Mass Generation**

_We respect the republic; the republic has to respect us._

~Siako Karne

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30 Burke, “Fires of ‘Civil War’ Erupt in Paris.”
32 Davis, *City of Quartz*, 266.
33 Davis, *City of Quartz*, 267.
34 Brother of a teenager whose death sparked the 2005 riots as quoted in Burke, “Fires of ‘Civil War’ Erupt in Paris.”
Mobilizing agents exploit critical events and manufacture windows of opportunity. They seek to leverage a shocking event to mobilize other citizens. Smelser describes collective behavior actions as taking place in a cluster of time and in specific cultural areas.\textsuperscript{35} Physical territories created by the geographic containment of specific social and immigrant groups in both Los Angeles and across France defined areas ripe for collective behavior. The timing required a specific event, which generated action against the government’s security. Opportunities for collective violence originated in Los Angeles with the release of the results of the case against the officers who beat Rodney King, and in Paris with the death of innocent Muslim teens outside of Paris. The collective behavior actions in both cases represent transient mass generation, which evolved into collective violence.

\textsuperscript{35} Smelser, \textit{The Theory of Collective Behavior}, 23.
The Los Angeles riots spread because of the immediate news coverage of the action that began at Florence and Normandie avenues in South Central Los Angeles. The city's habit of live broadcasts for unfolding crimes had the unintended effect of serving as a call to action for other rioters. When they arrived on the scene, crowds targeted and drove out the police officers. The actions at that intersection were the flashpoint for the riot, and by early evening on 29 April, the intensity of the protests prevented the LAPD from gaining control.\textsuperscript{36}

The Paris riots also spread quickly but were not limited to that city. The North African and Muslim populations had an existing social network, and the fervor spread throughout the social organization of marginalized peoples. News articles kindled years of frustration with a system that focused on socialization and not racism, whereby citizenship provided for integration regardless of ethnicity but did not represent reality.\textsuperscript{37} France met Smesler’s time and space requirements for the collective behavior from October 2005 to spread throughout the country.

The transient mass generation in both cases had a great deal to do with the population density in small areas with groups sharing a grievance. The shared narratives led to collective action through information sharing. The aggrieved people needed a single event to set off the collective behavior and turn it into civil disobedience. The territorialized grievances separating populations and denying opportunities are the necessary condition; windows of opportunity for civil disturbance are the black swans.\textsuperscript{38} However, the government’s reaction to the violence can reduce its spread.

\textbf{Security Responses}
Collective violence refers to coordinated destruction in which groups specialize in the deployment of coercive means to “undertake programs of action that cause damage,” according the Charles Tilly.\textsuperscript{39}

\textsuperscript{36} Useem, “The State and Collective Disorders,” 364.
\textsuperscript{37} Wihtol de Wenden, “Urban Riots in France,” 51; and Murphy, “Protest or Riot?,” 981.
\textsuperscript{38} Nassim Nicholas Taleb’s definition for the term \textit{black swan} refers to an event that comes as a surprise, has a major effect, and is often inappropriately rationalized after the fact with the benefit of hindsight. See Nassim Nicholas Taleb, \textit{The Black Swan: The Impact of the Highly Improbable} (New York: Random House, 2010).
ots are a perfect example of social or political grievance manifesting into action. Social violence stems from a continuation of the politics of resistance through other means. The response of governmental security forces is imperative to understanding how territorialized collective behavior can shift.40

In 1992, LAPD responded to their first calls about rioters and protesters at 1720 in the evening at Florence and Normandie avenues. It was a primarily residential area with the two cross streets as main thoroughfares through the community. Approximately 100 people had gathered, and the police responded within minutes of the initial call with 20 officers. The officers and their vehicles immediately became the target of physical assaults and projectiles. The officers withdrew to the 77th Street community police station more than a mile away.41

As the civil disturbance expanded across numerous neighborhoods during several days, LAPD and the mayor asked for help. The National Guard mobilized and Joint Task Force Los Angeles (JTF-LA) formed with active duty military forces from the region. The military forces assigned to the civil disturbance mission conducted mostly point and area security missions.42

The immediate response to the uprising in Clichy-sous-Bois merited the action of more than 200 riot police officers who were fighting a street battle. The French police also requested support from the French Army, as they had little training for riots.43 In Paris and Lyon, France, police banned public gatherings, and the government declared a state of emergency in Paris and 30 other areas. The Paris police brought in 2,000 additional officers to handle the escalating situation.44 After almost three months of violence, the French govern-

40 Not all collective violence occurs between citizens and authorities, but for the purposes of this discussion that is the only case that will be addressed.
42 Army doctrine on civil disobedience included a large spectrum of operations to combat possible insurgent operations (e.g., snipers, bombing, and hostage situations). JTF-LA fell outside the anticipated spectrum of the mission. Operations Other than War, vol. III, Civil Disturbance—LA Riots, Newsletter No. 93-7 (Fort Leavenworth, KS: Center for Army Lessons Learned, U.S. Army Combined Arms Center, 1993); and Civil Disturbance Operations, Field Manual 3-19.15 (Washington, DC: Department of the Army, 2005).
43 Burke, “Fires of ‘Civil War’ Erupt in Paris.”
ment responded with legislation addressing economic grievances caused by lack of access to employment opportunities. This law was similar to America’s affirmative action and intended to allow the immigrant North African and Arab populations more access to the job market by encouraging employers.

The significant challenge to the security forces in both the Los Angeles and Paris cases was the requirement to respond to multiple areas of disturbance simultaneously, which required significant coordination efforts beyond that of just local law enforcement. Engagement from national security forces is often necessary for collective behavior events that spread beyond one area or city. Regular law enforcement officers are not trained to deal with large violent crowds, and the military had to step in for both situations. Aside from coordination efforts for security missions, the forces must be concerned with targeting the collective violence.

**Targets of Violence**

Collective violence can have specific targets. Targets in the Los Angeles riots started out as the responding officers and their vehicles. The collective violence spread to looting, assault, robbery, and assault with a deadly weapon. An unfortunate target of opportunity was found in Reginald Denny, a white construction truck driver, who came to a stop at the corner of Florence and Normandie due to the crowd of people blocking the street. Rioters pulled him out of his vehicle and beat him as a news helicopter hovering overhead caught the entire scene on camera for a live broadcast. The mob mentality exacted revenge for the beating of Rodney King by conducting the same kind of attack. The Paris riots also saw more than 10,000 cars burned and 200 public buildings damaged. In this case, the destruction of public buildings was a representation of grievances with the government system that marginalized these communities. The Paris riots also re-

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47 Murphy, “Protest or Riot?,” 978.
sulted in makeshift barricades canalizing any security response and accentuating existing territories. The initial targets—police and their vehicles—were clearly symbols of LAPD, whose actions were the cause of social distress.

Grievance symbols offer an easy target. The Occupy Wall Street movement was a transient mass targeted against wealth distribution in America. They targeted and physically occupied a park near the symbol of American wealth: the New York Stock Exchange. Sharing information on how the target applied to the grievance is important to targeting collective behavior. In Los Angeles, privately owned vehicles and storefronts were symbols of the economic prosperity not enjoyed by the marginalized populations in the area. It is easy for transient mass to exploit targets out in the open. Self-enrichment, looting, or greed may also encourage targeting. A collective behavior event exacerbates looting because the perceived cost of self-enrichment is low. The news helicopters showed numerous incidents of theft and burglary without repercussions from law enforcement, so other individuals made the conscious decision to conduct similar behavior.

MILITARY APPLICATION

If social violence is a continuation of resistance to policy though other means, there is basis for action—grievance and transient mass—which drives the creation of conflict territories. Understanding the social environment and grievances in a population-dense environment will make the conflict easier to fight, though megacity conflicts stemming from collective behavior are hard to predict, limit, and fight. Military units operating in dense environments can identify targets of collective violence and conflict territories as key terrain. Understanding these features of the battlefield allow for maneuver, while knowing the key terrain allows the security force to take advantage of resources. Fighting in megacities requires an understanding of social grievances, overlaid with the physical terrain that people inhabit, to

48 Burke, “Fires of ‘Civil War’ Erupt in Paris.”
see territories. Common targets, windows of opportunity, and existing grievances further define these territories.

Grievances against the government then manifest as threats to government buildings or infrastructure. Territories defined by grievances can be as simple as one side of the train tracks with all the industry and no commercial venues or as complicated as small neighborhoods of a few square blocks that share a language. Military operations must exploit the characteristics of these territories by understanding how to move around them or through them and to use the resources found there. This operational concept establishes principles for combat in population-dense environments during conflicts of collective violence to minimize damage and quickly regain state influence. Effectively operating a military force in a megacity requires an understanding of social territories to use available resources and to minimize conflict.

A megacity houses vast swaths of social identities with disproportionate resource distribution. Sociopolitical differences can lead to grievance, especially between the haves and the have-nots. Many of these groups in close proximity share grievances, which develop when a population or territory does not have access to physical, political, or economic resources. Urban areas support territories of different social classes in close proximity, which amplifies the experience of difference. Social identity theory states that individuals will categorize themselves within a specific group or groups as part of their social identity, and they will act on behalf of that group’s interests. Territories of social difference define urban terrain, and within these

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50 Ballentine and Nitzschke, *Beyond Greed and Grievance*; and Davis, *City of Quartz*.
51 Ballentine and Nitzschke, *Beyond Greed and Grievance*, discusses the concepts of justice-seeking grievance versus loot-seeking greed.
52 Jan E. Stets and Peter J. Burke, “Identity Theory and Social Identity Theory,” *Social Psychology Quarterly* 63, no. 3 (September 2000): 225, https://doi.org/10.2307/2695870. Through the process of self-categorization or identification, an identity is formed. Social categories in which individuals place themselves are part of a structured society and exist only in relation to other contrasting categories (e.g., black versus white); each has more or less power, prestige, status, and so on. Further, these authors point out that the social categories precede individuals; individuals are born into a prestructured society. Once in society, people derive their identity or sense of self largely from the social categories to which they already belong.
territories exists the possibility of collective action. As such, collective behavior territories evolve from common grievances and existing social boundaries. Understanding key terrain allows militaries to narrow operations in a megacity conflict. Physical territories created by the geographic containment of specific groups defined by grievance are ripe for collective behavior or the spontaneous emergence of social groups outside the norm.\textsuperscript{53} These groups can evolve into collective violence in the form of violent crowds, riots, and terrorism.\textsuperscript{54}

The Marine Corps’ concept publication \textit{Expeditionary Force 21} embraces fighting in small units in a distributed fashion.\textsuperscript{55} Fighting in a megacity against collective violence requires fighting in a dispersed manner. Security operations during a conflict in a population-dense environment would mimic local policing in many ways. Local law enforcement has the advantage of understanding the local areas, grievances, and existing territories. Community-based policing focuses on understanding the low-level local dynamics of a neighborhood. Crime prevention and quality of life improvement are the focus of community-oriented policing.\textsuperscript{56} However, information gained from close involvement with a community would be invaluable to determining territorial borders, grievance targets, and resources available during a collective violence event. Coordination with local law enforcement or community organizers is imperative to any security action taken in a megacity.

**WARFIGHTING FUNCTIONS**

Meeting the demands of combat in a population-dense environment requires in-depth understanding of the social terrain and locally available resources. The following principles tailor warfighting functions to operating in a population-dense environment by taking advantage of collective behavior territories:

\textsuperscript{53} Smelser, \textit{The Theory of Collective Behavior}.

\textsuperscript{54} Senechal de la Roche, “Collective Violence as Social Control.”


CHAPTER TWO

- **Command and Control:** megacity conflict environments require distributed operations and effective communication.
  - Mission orders with clear constraints enable small units to operate independently.
  - All elements must remain connected with local law enforcement and joint forces to coordinate efforts at all levels.
  - Take advantage of existing law enforcement relationships and command and control assets.
  - Coordinate with community-oriented police officers, and use existing police facilities where possible.
- **Force Protection:** fight in small units.
  - Understanding the culture and the specific identifying symbols of social groups will help the force identify individuals as part of the conflict. Additional cultural understanding symbols prevent a force from offending the local population or preventing positive influence.
- **Intelligence:** maximize human terrain mapping.
  - Identification of grievances, collective violence targets, and existing physical boundaries (e.g., a bad neighborhood) creates territories within a megacity.
  - Any intelligence preparation of the battlefield must include social groups, income levels, age of neighborhoods, and assessments of horizontal inequality (e.g., existing gang territories).
  - Investigate local grievances or historical protests to better identify possible targets (e.g., local government buildings, schools, or police stations) if there is a grievance with government representation.
- **Fires:** use precision and small caliber fires.
  - The goal is to minimize impact to a densely populated area.
  - Ensure targeting does not amplify the initial grievance

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(e.g., destroying the only water-purification plant in a desert is counterproductive).

- Use smaller caliber weapons will reduce ordnance approval requirements.

- **Logistics:** use lines of communication that flow between territories and take advantage of existing resources or create your own.
  - Take the road that runs between two rival factions. Lack of coordination between groups works in favor of military forces.
  - Use all the dimensions of an urban environment for resupply. Small, unmanned aerial delivery systems (e.g., KMAX or CRUAS) provide fast resupply without long supply lines.\(^5^8\)
  - Use three-dimensional printing or existing resources (e.g., water sources that can be purified or local food) to further minimize resupply requirements and improve maintenance and repair part requirements.

- **Maneuver:** move in small units from different assembly areas and simultaneously converge on one objective.
  - Territory borders form from social, nonsocial, physical, and economic borders, including racially or economically exclusive neighborhoods, areas physically confined by infrastructure, or neighborhoods with shared traits for marginalization.
  - Establish maneuver corridors between neighborhoods and factions.

These principles for combat in megacities are attainable with minimal adjustments to existing acquisition plans. The Department of Defense has already invested in developing the technology needed

for improved logistics. A number of strategic and operational implications are associated with operating under this concept. Doctrine, organization, training, materiel, leadership, education, personnel, and facilities changes are minimal with this operating concept.

CONCLUSIONS
Concepts from *Expeditionary Force 21* and the new *U.S. Army Operating Concept* note the character of conflict in dense urban environments, but it will take more than simple tactics to win in a population-dense environment. Knowing the ground and the social possibilities helps inform the warfighter of possible targets, available resources, and maneuverability corridors. An emphasis on understanding the social terrain of the urban battlefield is imperative to minimizing the long-term impact of conflict. If social violence is a continuation of resistance to policy through other means, then the military must understand the cause of resistance to combat the violence. Fighting in a megacity requires an understanding of the social environment and how existing grievances and boundaries form territories. Knowing what the territories hold allows effective maneuver on the battlefield by a security force, thus minimizing the impact of a conflict formed by collective violence.

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The 2008 Battle of Sadr City
Implications for Future Urban Combat

David E. Johnson and M. Wade Markel

U.S. and Iraqi troops clashed in Sadr City, where many of the Shiite militants are loyal to cleric Muqtada al-Sadr and his Mahdi Army (Jaysh al-Mahdi). The fighting intensified on 25 March, when the Iraqi government announced a crackdown on criminal elements in al-Basrah, a Shiite stronghold in southern Iraq. The violence soon spread through southern Iraq’s Shiite heartland and into Shiite neighborhoods in the capital. The number of Iraqi civilians killed and wounded nationwide continued to increase—February saw 633 deaths and 701 wounded; March saw 923 deaths and 1,358 wounded; and April saw 969 deaths and 1,750 wounded.

The U.S. military, particularly the Army, devotes considerable effort to the difficult challenges of combat in urban areas, particularly in megacities.¹ The strategic importance of cities is timeless. From Troy to Baghdad, their significance remains consistent because, as Carl von Clausewitz wrote in Principles of War: “In order to seize the enemy’s

CHAPTER THREE

material forces we should direct our operations against the places where most of these resources are concentrated: principal cities, storehouses, and large fortresses. On the way to these objectives we shall encounter the enemy’s main force or at least a considerable part of it.”2 Capital cities were of particular importance to Clausewitz: “Public opinion is won through great victories and the occupation of the enemy’s capital.”3

Russia’s experiences in Grozny, Chechnya (1999–2000), and the U.S. fight in Fallujah, Iraq (2004), are two recent examples of modern urban combat operations that accomplished their objectives. In both of these cases, the objective was to destroy enemy forces that had made the city their base of operations. The battles of Grozny and Fallujah were remarkably similar: the city was surrounded, noncombatants urged to flee, and combined arms forces went block-by-block killing or capturing their adversaries until the city was cleared. Unsurprisingly, the levels of destruction and friendly casualties were both high in Grozny and Fallujah.4

In 2008, Sadr City, Iraq, presented a different problem than either Grozny or Fallujah. Built in 1959 to address a severe housing shortage in Baghdad, the suburb was originally named al-Thawra or Saddam City. It would later be renamed in honor of Ayatollah Mohammad Sadeq al-Sadr. Sadr City was part of the larger Coalition effort to bring stability to greater Baghdad. The ability to shrink the problem by evacuating noncombatants was not an option, as there was nowhere in Baghdad for more than 2 million noncombatants to go. U.S. forces could face similar issues in large urban areas in the future.

3 Clausewitz, Principles of War, 46.
4 On Grozny, see David E. Johnson et al., In the Middle of the Fight: An Assessment of Medium-Armored Forces in Past Military Operations (Santa Monica, CA: Rand, 2008), 114–22. On Fallujah, see Matt M. Matthews, Operation Al Fajr: A Study in Army and Marine Corps Joint Operations (Fort Leavenworth, KS: Combat Studies Institute Press, 2006). The Russians were much less discriminate in their use of fires in Grozny than Coalition forces in Fallujah. See Timothy L. Thomas, “Grozny 2000: Urban Combat Lessons Learned,” Military Review (July–August 2000). Thomas notes that Grozny was essentially a free-fire zone and that the Russians led with massive fires and followed up with maneuver.
A new approach to urban combat grew out of the challenges the U.S. brigade commander faced in the 2008 Battle of Sadr City. The defeat of the relatively small number of Jaysh al-Mahdi (JAM) militia was the objective in Sadr City, just as it had been with the Chechen militia in Grozny and the al-Qaeda terrorists in Fallujah. What evolved from it, however, parallels Julian S. Corbett’s classic treatise Some Principles of Maritime Strategy more so than lessons from Grozny or Fallujah, much less Stalingrad or Berlin: “That seeing that the defensive is a stronger form of war than the offensive, it is prima facie better strategy to make the enemy come to you than to go to him and seek a decision on his own ground.”

BACKGROUND AND METHODOLOGY
In late March 2008, a key battle took place in Sadr City, a Shia area of Baghdad with an estimated 2.4 million residents. This battle solidified the authority of Iraqi prime minister Nouri al-Maliki and enabled him to extend government control to the whole of Baghdad. Thus, the battle created some of the conditions that eventually allowed the United States to realize its objectives in Iraq.

The authors used after action reports, briefings, and other primary and secondary sources to support their research. The most valuable sources, however, came from interviews conducted between August 2009 and April 2011 with a broad range of military participants from the units involved in the following phases: the prebattle surge in the vicinity of Sadr City, the Battle of Sadr City, and the post-battle stabilization and reconstruction efforts. These participants ranged from lieutenants to the commanding general of the U.S. Army’s 4th Infantry Division. Interviews were conducted primarily with Army officers but also included a U.S. Air Force offi-

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6 This chapter summarizes the analysis from David E. Johnson et al., The 2008 Battle of Sadr City: Reimagining Urban Combat (Santa Monica, CA: Rand, 2013). The monograph provided an operational analysis of the battle, explained how the tactics developed and employed contributed to the outcome, and derived implications for the future conduct of military operations. To that point, little had been written about the battle.
cer, a former Iraqi intelligence official, and U.S. government officials. These interviews provided critical information about not only what happened but also why it happened.

SETTING CONDITIONS
The 2008 Battle of Sadr City took place nearly 15 months after the beginning of the U.S. surge in Iraq. When President George W. Bush announced the surge in a 10 January 2007 speech, he stated the mission of U.S. forces was “to help Iraqis clear and secure neighborhoods, to help them protect the local population, and to help ensure that the Iraqi forces left behind are capable of providing the security that Baghdad needs.”7 The Operation Enforcing the Law, or Baghdad Security Plan, was a key element of the surge.8 Its purpose was announced by Major General Joseph F. Fil Jr., commander of the Multinational Division–Baghdad (MND-B), on 16 February 2007:

This new plan involves three basic parts: clear, control and retain. The first objective within each of the security districts in the Iraqi capital is to clear out extremist elements neighborhood by neighborhood in an effort to protect the population. And after an area is cleared, we’re moving to what we call the control operation. Together with our Iraqi counterparts, we’ll maintain a full-time presence on the streets, and we’ll do this by building and maintaining joint security stations throughout the city. This effort to reestablish the joint security stations is well under way. The number of stations in each district will be determined by the commanders on the ground who control that area. An area moves into the retain phase when the Iraqi security forces are fully responsible for the day-to-day security mission. At this point, Coalition Forces begin to move out of the neighborhood and into locations where they can respond to requests for assistance as needed. During these three phases, efforts will be ongoing to stimulate local economies by creating

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employment opportunities, initiating reconstruction projects and improving the infrastructure. These efforts will be spearheaded by neighborhood advisory councils, district advisory councils and the government of Iraq.\(^9\)

By March 2008, implementation of the Baghdad Security Plan had achieved several results that set conditions for a battle in Sadr City. First, al-Qaeda in Iraq had been badly hurt, and its ability to create mass-casualty events was significantly reduced. This allowed Coalition forces to turn their attention to other destabilizing elements, such as the movement led by and identified with Moqtada al-Sadr.\(^10\) Second, the plan had strengthened the position of the government led by Prime Minister al-Maliki, enabling it to survive a rupture with the Sadrist Movement.\(^11\) Indeed, al-Maliki was moving to confront the Sadrist militias in al-Basrah, and preparations were well under way by March 2008. Third, Coalition forces had largely contained JAM, the Sadrists’ armed militia, to Sadr City, a circumstance that would severely constrain JAM’s capabilities in the coming battle.

Moving U.S. troops from their forward operating bases into smaller outposts throughout Baghdad was fundamental to the execution of the Baghdad Security Plan. Key components of the unfolding operations included:

- Directly confront insurgent elements in Baghdad, thereby leading to better local security, cooperation, and human intelligence.
- Use concrete barriers and checkpoints to:
  - Limit the ability of insurgents to create mass-casualty events with improvised explosive devices (IEDs), particularly large, vehicle-borne IEDs.


\(^11\) In 2003, al-Sadr headed a Shiite political movement known as the Sadrist Movement that attracted millions of Shiite followers from across Iraq, though primarily the youth, poor, and downtrodden, to whom he offered social, educational, and health services. Al-Sadr also maintained tight security over the areas he controlled and established a court system based on Sharia (Islamic law).
Disrupt the enemy’s ability to move freely and resupply its forces.

- Integrate special operations forces (SOF), conventional forces, and all means of intelligence to locate and kill or capture insurgent leaders.
- Improve the capability and capacity of Iraqi security forces, including the Iraqi Army and police.\(^\text{12}\)

One notable exception remained, however, to the trend of decreasing levels of violence in Baghdad: Sadr City. The U.S. Army’s 4th Infantry Division, which by then was serving as MND-B and commanded by Major General Jeffery W. Hammond, had isolated Sadr City to some degree. Within Sadr City’s boundaries, however, the militantly anti-American JAM firmly controlled the population. Although SOF and conventional force raids against JAM leadership had resulted in the capture, death, or flight out of Iraq of much of its senior leadership, the raids also caused significant tension between the government of Iraq and JAM. Most notably, U.S. activity in Sadr City had largely ceased by October 2007 in the aftermath of an air strike that killed a number of Iraqi civilians.\(^\text{13}\) Prime Minister al-Maliki declared Sadr City off-limits to U.S. ground operations. JAM’s firm control of the population already had severely limited U.S. awareness of what was going on inside Sadr City. Following the repercussions of the October 2007 incident, U.S. forces remained largely blind when it came to the JAM stronghold.\(^\text{14}\)

It seems likely that al-Maliki’s government offensive against militias in al-Basrah, especially JAM, precipitated JAM’s own offensive in Baghdad. The al-Maliki government had been making obvious preparations for the al-Basrah offensive since January 2008. Few U.S.


\(^\text{14}\) Col John H. Hort, USA, interview with David E. Johnson and M. Wade Markel, Carlisle Barracks, PA, 5 November 2010.
officers seemed convinced that Prime Minister al-Maliki was serious about the attack, much less that it would begin as soon as 25 March. JAM apparently believed that attacks in the capital would force the government to return its focus and forces to Baghdad, thus discrediting the al-Maliki government. Besides the apparent logic of the situation, militia members told Washington Post reporters at the time that this was in fact their objective.

On 23 March 2008, a barrage of rockets fired from Sadr City hit targets in Baghdad, including the International Zone (a.k.a. the Green Zone), which houses Iraqi government offices and foreign embassies. The 23 March rocket fire appears to have been JAM’s initial response to the movement of Iraqi forces into al-Basrah. Between 23 and 25 March, JAM overran Iraqi checkpoints in and around Sadr City. Other checkpoints were simply occupied by JAM fighters in collusion with their nominal adversaries in the Iraqi police.

The scale of JAM’s Sadr City offensive emerged slowly. JAM had fired rockets before. Indeed, it had launched several just a few days earlier on 21–22 March, according to a company commander in the Army’s 1st Squadron, 2d Stryker Cavalry Regiment. Taking checkpoints and intimidating government forces was something JAM forces did more or less continuously during this period. The magnitude of the March offensive became apparent after several days.

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17 LtCol Michael Pemrick, USA, interview with M. Wade Markel, Fort Belvoir, VA, 26 February 2010; Maj Brian North, USA, interview with M. Wade Markel and Brian Shannon, Fort Carson, CO, 12 January 2010; LtCol Christopher J. Keller, USA, interview with M. Wade Markel, Arlington, VA, 4 August 2010; and LtCol Robert S. Ballagh, USA, interview with M. Wade Markel, Pentagon, 8 February 2011.

CHAPTER THREE

By 25 March, however, a major battle was clearly underway. That day, the government of Iraq launched its offensive in al-Basrah. Al-Sadr therefore publicly ended a self-imposed cease-fire that had been in place since August 2007, and JAM forces throughout Baghdad attacked Coalition and government targets with rocket and mortar fire. By the day’s end, JAM had overrun about one-half of the Iraqi security force’s checkpoints in and around Sadr City. It also stepped up rocket and mortar attacks against the International Zone. In response, Prime Minister al-Maliki directed Coalition forces to stop the rocket attacks and defeat the criminal militias in Sadr City. The Battle of Sadr City was on.

THE AREA OF OPERATIONS

The battle centered on the Baghdad district of Thawra, which contains the neighborhoods of Sadr City, Ishbiliyah, and Habbibiyah (figure 3.1). Sadr City’s area spans approximately 35 square kilometers, roughly half the size of the island of Manhattan at 59 square kilometers. At the time of the battle, Sadr City had, by U.S. military estimates, approximately 2.4 million residents. From the Ishbiliyah and Habbibiyah neighborhoods below Route Gold (al-Quds Street), JAM forces were firing 107mm rockets and mortars into the International Zone. The Ishbiliyah neighborhood also contained the Jamiliyah Market, Baghdad’s largest market east of the Tigris River. Protection money from merchants in this market supplied JAM with much of its resources. Coalition forces also had to combat and contain the Sadrist uprising in the adjacent areas east and north of Sadr City.

The International Zone sat at the maximum range of the 107mm rockets and mortars that JAM was firing from its positions below Route Gold. Taking these firing points and pushing JAM above Route Gold

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19 Throughout the text, we refer to the same terrain feature, al-Quds Street, by its Iraqi name and the name it took on U.S. graphic control measures as Route Gold.
20 Hort interview; Farris interview; Hammond interview; Graham interview; Maj Bryan R. Gibby, USA, telephone interview with M. Wade Markel, 27 January 2010; and LtCol Barry F. Graham, USA, interview with M. Wade Markel, Pentagon, 19 January 2010.
would therefore significantly limit JAM’s ability to conduct effective indirect fire attacks against the International Zone.\textsuperscript{21}

**MISSION: STOP THE ROCKETS AND DEFEND CRIMINAL MILITIAS IN SADR CITY**

As noted earlier, on 25 March, Prime Minister al-Maliki directed the Iraqi Army and Coalition forces to stop the rocket attacks and defeat the criminal militias in Sadr City. The task fell to Army Colonel John H. Hort, commander of the 3d Brigade Combat Team, 4th Infantry Division, within whose area of operations Sadr City fell.

General Hammond focused on going after JAM leaders and keeping a lid on the rest of Baghdad. Within Sadr City, operations unfolded in four phases as MND-B responded to developments. During the first phase, U.S. forces seized control of rocket points of origin.

\textsuperscript{21} Hammond interview; Hort interview; and Maj William Downing, USA, interview with M. Wade Markel and Brian Shannon, Fort Carson, CO, 12 January 2010.
south of Route Gold while Iraqi forces attempted to secure the Ishbilii-yah and Habbibiyah neighborhoods. During the second phase, when it became clear that maneuver forces alone could not control JAM’s infiltration without a barrier, U.S. forces isolated Ishbiliiyah and Habbibiyah from the rest of Sadr City by building a wall 12 feet tall along Route Gold. JAM more or less exhausted itself contesting the wall’s construction. During these first two phases, 3d Brigade Combat Team, 4th Infantry Division, and MND-B employed aerial intelligence, surveillance, and reconnaissance (ISR) and strike assets to neutralize JAM’s remaining rocket capability. In the third phase, MND-B exploited the success of its security operations by orchestrating an intensive reconstruction effort. In the fourth and final phase, Iraqi security forces, hardened by their earlier fight, occupied the remainder of Sadr City.

The Ground Fight in Sadr City: Armor Matters
The fight in Sadr City involved two phases: Operation Striker Denial (26 March–14 April) and Operation Gold Wall (15 April–15 May). In the first phase, 1st Squadron, 2d Stryker Cavalry Regiment, attacked and seized JAM rocket-firing positions in Ishbiliiyah and Habbibiyah, while Task Force, 1st Combined Arms Battalion, 68th Armored Regiment, quelled the Sadrist uprising in areas west and north of Sadr City proper.22

When Operation Striker Denial began, U.S. forces immediately encountered JAM forces in prepared positions who were ready and willing to fight. According to U.S. commanders, however, these JAM forces did not fight particularly well.23 Nevertheless, resistance proved tougher than expected. Within a week, 1st Squadron, 2d

22 Hammond interview; Hort interview; and Col James E. Rainey, USA, interview with M. Wade Markel and Brian Shannon, Fort Carson, CO, 11 January 2010.
23 U.S. soldiers to whom we spoke were more or less in complete agreement on this subject, particularly those operating at the tactical level. Col Michael F. Pappal, USA, commanding the task force in 2008, fought in Sadr City in 2004 as major in the 1st Cavalry Division; he felt that the enemy’s proficiency had declined significantly since then. Col Pappal, telephone interview with David E. Johnson, M. Wade Markel, and Brian Shannon, 2 July 2010; SgtMaj Steven Lewis, USA, telephone interview with M. Wade Markel, 28 July 2010; Capt Kyle Morse, USA, telephone interview with M. Wade Markel, 6 July 2010; and Northrop interview.
Stryker Cavalry Regiment, lost six of its Stryker vehicles to IEDs and rocket-propelled grenades (RPGs). Colonel Hort decided to reinforce the fight with armor (M1 Abrams tanks and M2 Bradley fighting vehicles) and General Hammond surged five additional companies to 3d Brigade Combat Team, 4th Infantry Division.\textsuperscript{24} Armor proved important in the fight, providing firepower and an ability to withstand hits from IEDs and RPGs. Iraqi security forces joined the fight on 5 April, and by 6 April, had fought their way to positions near Route Gold. In that fight, conducted more or less independently from U.S. forces, the Iraqi security forces held their positions against incessant JAM attacks, gaining confidence that proved critical in subsequent phases of the battle.

Unfortunately, occupying key terrain below Route Gold did not confer control of those areas to U.S. and Iraqi forces. Unimpeded movement north of Route Gold allowed JAM to assemble and attack U.S. and Iraqi forces at will. The warren of alleyways and small buildings provided routes for JAM fighters to infiltrate the area below Route Gold. Thus, to hold what they had taken, U.S. and Iraqi forces had to deny JAM the ability to attack south of Route Gold. Access to the area below Route Gold was vital to JAM, so it represented key terrain for Colonel Hort. Operation Gold Wall, the effort to construct a barrier along the length of Route Gold, was intended to deny JAM the ability to operate in the Jamiliyah Market area.\textsuperscript{25}

During the 30 days of Operation Gold Wall, Colonel Hort's soldiers emplaced approximately 3,000 12-foot-tall and 5-foot-wide reinforced concrete T-wall sections to create a 4.6-kilometer barrier. JAM fought hard to prevent the establishment of the wall. According to Colonel Hort, the wall in effect “became a magnet for every bad guy in Sadr City.” As JAM fighters attacked to stop completion of the wall, the surrounding area became a killing ground. JAM had few good options.

\textsuperscript{24} Hammond interview; Hort interview; Lewis interview; Morse interview; and Northrop interview.

\textsuperscript{25} It was never clear with whom the idea to isolate the area of operations using T-walls along Route Gold originated. Most of those interviewed credited either Col Hort or Col Farris. Hort credits Farris with the idea, as does Col Daniel R. Barnett, the commander of 1st Squadron, 2d Cavalry Regiment, during the battle.
A completed wall would curtail JAM’s access to the population and the market. JAM leaders depended on that access.26

Operations Striker Denial and Gold Wall were tough fights, involving three U.S. battalions and Iraqi security forces in continuous operations for six weeks. During this period, Abrams tanks and Bradley fighting vehicles were heavily engaged, firing 818 120mm tank rounds and 12,091 25mm rounds against JAM fighters and to detonate IEDs. Additionally, U.S. forces had to constantly adapt to JAM tactics; for example, JAM snipers used .50-caliber sniper rifles to attempt to knock out the crane that lifted the T-wall sections into place. U.S. forces responded by employing organic U.S. Army and SOF snipers in a countersniper campaign.27 As the battle wore on, JAM fighters showed up in ever-decreasing numbers as U.S. and Iraqi forces steadily wore them down. The efforts of other U.S. government agencies and SOF complemented the conventional fight to hunt and keep the pressure on JAM leaders in Sadr City. Ultimately, six U.S. soldiers died in these operations, while JAM lost an estimated 700 fighters, and much of its leadership fled for Iran or Syria.28 On 11 May 2008, al-Sadr asked for another cease-fire.29

The Counter-Rocket Fight
As ground maneuver elements fought to isolate Sadr City with the Gold Route wall, Colonel Hort and General Hammond worked to end JAM’s indirect-fire attacks on the International Zone. By this point in Operation Iraqi Freedom, Multinational Corps–Iraq (MNC-I) and

26 Hort interview; Gibby interview; and Col John P. DiGiambattista, interview with M. Wade Markel and Brian Shannon, Fort Carson, CO, 12 January 2010.
27 Hort interview.
28 The official estimate from the interviews was 700. According to the British medical journal The Lancet, municipal officials in Baghdad estimate that the fighting killed 925 people and wounded 2,605; however, this estimate does not distinguish combatants from noncombatants. See Paul Webster, “Reconstruction Efforts in Iraq Failing Health Care,” Lancet 373, no. 9664 (2009): 617–20, https://doi.org/10.1016/S0140-6736(09)60382-2. For the exfiltration of JAM’s leadership to Iran, we relied on Maj Bryan Gibby, email to M. Wade Markel, “Further Inquiries,” 14 January 2011.
MND-B were employing a broad range of U.S. ISR and strike assets in Baghdad.

Colonel Hort had resources directly allocated to him that were unprecedented for a brigade commander, including two U.S. Air Force General Atomics MQ-1 Predator unmanned aircraft systems (UASs) armed with AGM-114 Hellfire missiles, two U.S. Army AAI Corporation RQ-7B Shadow UASs, three aerial weapons teams (or six Boeing AH-64 Apache attack helicopters), fixed-wing close air support, and the Guided Multiple Launch Rocket System—all available 24 hours a day. Unlike previous operations, Colonel Hort controlled the assets without having to go through intervening headquarters. Although most of these systems were used to engage JAM fighters or rockets, on occasion, large weapons (e.g., 500-pound guided bombs) were used to destroy buildings sheltering snipers. While other fights were taking place in Iraq and Baghdad, Colonel Hort’s fight in Sadr City represented the main effort, and he had priority. 30

The brigade executed a plan, developed in collaboration with MND-B, in which 3d Brigade Combat Team focused on JAM fighter and rocket teams, while the division continued key leader attacks of strategic importance to the government of Iraq, MND-B, and MNC-I. As was the case in other parts of the battle, the counter-rocket fight was a learning process. In his tactical operations center, Colonel Hort received continuous feeds from U.S. Air Force Predators (both armed and unarmed) and U.S. Army Shadow UASs. He also received information from Rapid Aerostat Initial Deployment (RAID) sensors, counterfire radars, and other ISR assets. 31 His battle staff integrated this information and communicated it to operational units down to the company level via a number of relatively new technologies. For example, they used Raytheon’s Persistent Surveillance and Dissemination System of Systems (PSDS2) to integrate the various sensors. Addition-

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31 See “The USA’s RAID Program: Small Systems, Big Surveillance Time,” Defense Industry Daily, 24 August 2011. The article states: “The RAID [rapid aerostat initial deployment] program is a combination of cameras and surveillance equipment positioned on high towers and aerostats, in order to monitor a wide area around important locations and bases.”
ally, Colonel Hort was able to communicate in a secure chatroom environment via a secure Microsoft Internet Relay Chat (mIRC) client and to pass classified information via the Secret Internet Protocol Router Network (SIPR Net) down to the company level.\textsuperscript{32}

All of these integrated sensors, communications systems, and strike assets gave 3d Brigade Combat Team the ability to find and kill JAM rocket teams and destroy other targets (e.g., mortars). Engagements happened in several ways. First, a radar or other sensor detected a rocket launch; a Shadow UAS was then vectored to the location of the launch and followed the target; and then finally, a Predator or Apache killed the target. Predators were particularly useful because JAM was expected to have SA-7 Grail MANPADS (man-portable air-defense systems) and the UASs enabled attacks on JAM without putting Apache crews at risk. Second, skilled intelligence personnel in 3d Brigade Combat Team headquarters were tasked with watching the ISR feeds on large screens in the tactical operations center. These individuals were dedicated scouts who observed the area under surveillance for enemy activity; when such activity was identified, the process of bringing assets to bear was initiated. Third, ground maneuver forces that detected JAM activity commenced the acquisition and attack processes. It is important here to note that the brigade commander and his battle staff had these resources pushed down to them—without intervening levels of command and authority—and could execute mission command. Higher echelons resourced the fight and managed the deeper operations beyond the brigade.\textsuperscript{33}

Like the countersniper fight, the counter-rocket fight evolved over time. At first, rocket launch teams were attacked immediately after they had fired. However, the brigade battle staff soon developed tactical patience, realizing that it was likely hitting only low-level operatives with vehicles and launch rails. Eventually, the staff adopted a best practice of using an ISR platform to “watch the rail” and follow it. When the operatives returned to a supply point or a command location to get additional rockets and instructions, the staff saw the oppor-

\textsuperscript{32} Hort interview; and Downing interview.
\textsuperscript{33} Hort interview.
tunity to strike, hitting not only the operatives but higher elements of the network as well.34

**Exploitation**

MND-B exploited its success in neutralizing JAM with stability operations to secure Ishbiliyah and Habbibiya. These efforts intensified after al-Sadr declared a cease-fire on 12 May. Focused reconstruction efforts and information operations in those neighborhoods were intended to influence popular perceptions north of Route Gold as well. Even before fighting subsided completely, U.S. forces resumed applying relentless pressure against JAM’s organization. As the reality of JAM’s defeat became clearer, the area’s inhabitants provided a flood of reliable intelligence that greatly facilitated this effort.35

As the battle subsided, two key realities became apparent to Iraqis living south of the wall along Route Gold. First, Iraqi Army and national police forces were in place and providing security. For residents, this hearkened back to pre–Operation Iraqi Freedom days, where Iraqis were in charge and not the Coalition forces who would eventually leave Iraq. Second, as security was restored to the area south of Route Gold, General Hammond, his subordinate commanders, and the reserve engineer brigade commander working for General Hammond, Brigadier General Jeffrey W. Talley, began an intense effort to improve conditions below the wall. Much of this effort was accomplished by enabling Iraqi small businesses, which gave Sadr City’s population a stake in the new order. Thus, the population saw more permanent progress, and as conditions improved, the local citizenry became invested in maintaining their security and providing intelligence to Iraqi and U.S. forces.36

When, on 12 May, al-Sadr declared a unilateral cease-fire, it is likely that he was simply putting the best face possible on the existing situation. His forces had suffered huge losses, and key leaders had either fled or been killed. The population was growing restive, not only

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34 Hort interview; DiGiambattista interview; and Downing interview.
35 Hammond interview; BGen Jeffrey W. Talley, interview with M. Wade Markel, Dallas, TX, 2 June 2010; and Gibby interview;
36 Hammond interview; Talley interview; and Hort interview.
because JAM was perceived as provoking confrontations that resulted in civilian casualties but also because of JAM’s depredations. On 20 May, unopposed elements of the Iraqi Army’s 44th Brigade occupied the remainder of Sadr City.37

KEY INSIGHTS FROM THE FIGHT

The defeat of JAM in Sadr City during the six weeks of high-intensity operations yields several insights that bear highlighting:

- Protecting the population requires a balance between offensive, defensive, and stability operations.
- Persistent ISR, technical intelligence, and precision-strike capabilities enable the attacker to seize the initiative.
- Technical capabilities must enable decentralized decision making and small unit initiative.
- Isolating the enemy enables the counterinsurgent to seize the initiative.
- Ground maneuver remains indispensable for shaping the battle and achieving decision.
- Heavy armored forces have enduring utility in counterinsurgency and urban operations.
- Integrating SOF into conventional operations achieves synergy.
- Snipers remain an important enabler in urban operations.
- Enduring success depends on capable indigenous security forces.
- Urban counterinsurgency requires forces to transition rapidly between offensive, defensive, and stability operations.

REIMAGINING URBAN OPERATIONS AS WIDE-AREA SECURITY MISSIONS

Two general models for dealing with insurgent control of urban areas have become apparent in recent years. The first approach was taken by the Russian Federation in the Chechen city of Grozny in December 1999–February 2000 and the second by U.S. forces in the Iraqi city of

37 Hammond interview; and Hort interview.
Fallujah in November 2004. Insurgents in these cities were viewed as cancers that had to be excised. In both of these cases, the cities were essentially besieged and then stormed, a course of action made possible by their geographic isolation. Noncombatants were told to leave before military operations within the cities commenced. Anyone who remained was, in general, viewed as a combatant in what became a block-by-block clearing operation supported by massive amounts of firepower.

Not surprisingly, both cities suffered significant damage. Additionally, casualties among Russian and U.S. forces were high. Although reliable figures are difficult to ascertain, the Russian Federation suffered at least 600 dead (mostly in Grozny) and likely many more wounded in Chechnya between December and early January. In Fallujah, U.S. forces suffered 70 dead and more than 600 wounded. Thus, this model of urban warfare anticipates and accepts extensive collateral damage and relatively high numbers of friendly casualties.

The 2008 Battle of Sadr City offers a second model for wresting control of a city from insurgents: treating an urban area as a wide-area security mission. In Sadr City, unlike in Grozny and Fallujah, telling the civilians to leave what was about to become a high-intensity battlefield simply was not feasible. Sadr City held 2.4 million residents, and there was nowhere for them to go. Sadr City is a suburb of Baghdad and, unlike Grozny and Fallujah, is not geographically isolated. These conditions in Sadr City may be representative of the future challenges of urban operations, and they will likely worsen as urban areas around the globe become more densely populated. The objective was not to take and clear Sadr City, but to create conditions that would make it both impossible for the insurgents to operate effectively and possible to restore security to the broader population.

Thus, in the Battle of Sadr City, the focus was on enemy fighters and their capabilities. U.S. forces deprived the enemy of the ability to affect events at the operational and strategic levels of war. JAM’s control of Sadr City represents a perennial problem, but what made its March 2008 offensive problematic was JAM’s ability to strike the Green Zone with indirect fires (mainly via rockets). Attacks on the Green Zone threatened to derail the al-Basrah offensive and thereby
reveal that the al-Maliki government was fatally ineffective. However, 3d Brigade Combat Team, 4th Infantry Division, took JAM’s offensive capability away by employing determined ground maneuver, which combined infantry and armored vehicles, with support from pervasive ISR and precision-strike capabilities provided by UASs, attack helicopters, artillery, and close air support. Without its indirect-fire capability, JAM could only react locally as Coalition forces exploited human and technical intelligence to hunt down its remaining leaders under extremely one-sided conditions.

Finally, Sadr City demonstrates that one of the keys to fighting an urban adversary is to create a situation that forces the enemy to surrender the advantages of the city. This is the art of reimagining urban warfare, and it clearly has doctrinal, organizational, materiel, and training implications both for the U.S. Services and the Joint force. In the Battle of Sadr City, building the wall along Route Gold threatened to deny JAM access to key terrain and, as Colonel Hort related during an interview with the authors, “agitated the enemy.” Quite simply, JAM had to contest the wall or face isolation. In the words of one U.S. officer, the wall was the equivalent of a Roman siege engine about to breach a city’s defenses. It created a situation that was intolerable to JAM, and JAM had to come out and fight. In so doing, the enemy attacked U.S. forces that now had the initiative and were in a position of enormous advantage. JAM lost, and the Coalition victory in the Battle of Sadr City offers important lessons for the prosecution of future urban operations.