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TITLE Ready for Armageddon: Proceedings of the 2001 RAND Arroyo-
U.S. Army ACTD-CETO-USMC Non-Lethal and Urban Operations Program
Urban Operations Conference

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Preface

On March 22–23, 2001, four organizations co-hosted the fourth annual Urban Operations Conference overseen by the RAND Arroyo Center. These organizations were the United States Army Military Operations on Urban Terrain Advanced Concepts Technology Demonstration, the Center for Emerging Threats and Opportunities, and the United States Marine Corps Non-lethal and Urban Operations Program in addition to the Arroyo Center itself. Consistent with the first three Urban Operations Conferences, the objective of this cooperative effort was to identify and investigate notably critical topics of concern to those responsible for making decisions regarding, preparing for, and conducting operations in urban areas anywhere in the world. This document summarizes the results of the two-day conference.

This research was sponsored by the Assistant Secretary of the Army for Acquisition, Logistics, and Technology [ASA(ALT)] and was conducted in the Force Development and Technology Program of the RAND Arroyo Center. The Arroyo Center is a federally funded research and development center sponsored by the United States Army. The document will be of interest to individuals in the government and commercial sector whose responsibilities include doctrine, training, leader, organization, materiel, policy, and facilities (DTLOMP-F) in support of full spectrum operations on urban terrain in both the immediate future and longer term.

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Acknowledgments

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The success of the fourth annual conference was very much due to the extraordinary efforts of Donna Betancourt, Director of Operations, Army Research Division, RAND Arroyo Center. Terri Perkins exhaustively managed all preliminary interfaces with speakers and audience members as well as assisting on the days of the event. Another whose help was fundamental in conducting the event was Barbara Kenny; her volunteering to step in during the conference itself was invaluable.

The conference has maintained the interest of so many year in and year out only because of our good fortune in unceasingly being fortunate enough to have excellent speakers. Those kindly accepting our invitations this year were especially kind. Each gave his or her presentation not once, but twice. In addition, they spent a further hour of discussion time with each group to whom they presented. Our thanks to them all for such exceptional dedication and uniformly superb performances.

Two reviewers ensured that the readers benefited maximally from the excellent presentations given at the conference; Brian Nichiporuk of RAND and Fred DuPont of the U.S. Army Soldier and Biological Chemical Command Liaison Officer to the Dismounted Battlespace Battle Lab were superb. Nikki Shacklett, our editor, is once again the power behind the scenes that made this publication the offering that it is. If errors persist, they are ours, not those of this most able lady.

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Summary

General

This document summarizes a March 22-23, 2001 conference conducted in Santa Monica, California under the auspices of four groups:

- RAND Arroyo Center
- United States Army Military Operations on Urban Terrain Advanced Concepts Technology Demonstration
- Center for Emerging Threats and Opportunities
- United States Marine Corps Non-lethal and Urban Operations Program.

It contains an overview of major findings drawn from speaker presentations and extensive discussion periods, a condensation of individual briefings, and two appendixes. The first appendix provides biographical sketches of each speaker; the second is a compilation of lessons passed on by six veterans of fighting in 1968 Hue, Republic of Vietnam.

Among their many varied interests, the sponsors share a desire to improve the readiness of the U.S. and allied armed forces to conduct operations in urban areas, domestically and worldwide. This fourth annual event featured speakers from the United States, Israel, Jordan, and the United Kingdom addressing the following topics:

- The effects of urbanization on national military strategy
- Actions needed to improve urban operations readiness in the near term
- Determining how to focus limited capabilities in urban environments
- Coordination of civil and military objectives during stability operations and the coordination of both civil and military organizations in serving those objectives
- The psychological implications of conducting actions in densely populated areas
- Training military personnel for stability missions conducted in villages, towns, and cities

Findings

Cities are systems and parts of larger systems.

The first finding is an extension of a fairly widely accepted concept: urban areas are a hierarchy of systems. They are composed of systems. They are themselves systems. They are components

of yet larger systems. Various means of communicating this have made their way into the literature to greater or lesser positive effect; one of the most popular is the metaphor of cities as living organisms. Regardless of the intellectual construct, it is essential for the planner or operator to recognize the pervasively dynamic character of modern urban entities. Individual components (e.g., individual residents, buildings, demographic groups, labor affiliations, government entities, power supply infrastructure) in many cases vary in character and content from town to town, city to city, and even minute to minute within a given urban area, making the operating environment arguably the most challenging a commander can confront. Homogeneity is the exception; even seemingly similar structures or groups of individuals differ in details both general and specific. Attitudes, affiliations, loyalties, and motivations are in constant flux.

The complexity of urban environments and the challenges associated with them demand exceptional mental agility and robustness.

Decision-making and the intelligence needed to support it therefore require constant mental agility so as to allow rapid adaptation in the service of mission accomplishment. Command estimate processes and course of action development tools that have proven themselves over decades of use may be found inadequate. There is a need to develop effective means to conceptualize urban systems in a manner that promotes better understanding, just as there is a call for improving the decision tools originally designed for Cold War battles on Europe's plains.

Organizations committed to urban operations must prepare for cases of psychological fatigue.

This constant demand on cybernetic resources puts extraordinary burdens on participants. There is a need for more training in the recognition of and proper response to combat stress reactions (CSR). Such preparation can mitigate CSR's impact, helping both the affected individual and his unit to maintain higher levels of effectiveness in an environment known to cause extraordinary manpower attrition due to enemy fire and injuries from building debris in addition to psychological stress reactions.

The primacy of the population should come to the fore in the development of urban doctrine, training, and plans.

Even in cases where civilians are in hiding or have left the city, concerns regarding the population should assume primacy when preparing for and conducting urban operations. Influencing urban citizens' allegiances is fundamental to success during virtually any undertaking. Too great a number of innocent lives lost tarnishes even the most glowing military victory. It can in fact turn a dramatic tactical triumph into strategic failure. After the fighting,

assisting in efforts to return the host nation's villages, towns, or cities to normalcy will often be the warrior's ultimate task before the return home.

An early and realistic appraisal of urban rules of engagement is essential.

As is noted by speakers and veterans of fighting in 1968 Hue Nick Warr and Scott Nelson, military and civilian leaders need to make difficult decisions regarding rules of engagement (ROE). These decisions have to be made before friendly force and noncombatant casualties begin to mount. Their experiences do not stand alone. American commanders imposed stringent restrictions on engagement in 1968 Saigon at the same time marines and soldiers struggled with them in Hue to the north. Douglas MacArthur sought to minimize civilian Filipino loss of life and damage to Manila's infrastructure in 1945. These are by no means isolated instances. Empirical evidence supports an observation that the restrictiveness of ROE is directly proportional to friendly force casualties: the greater the restrictions, the higher the numbers of killed and wounded. The difficult decisions should be made beforehand, balancing political, operational, tactical, and moral factors so as to develop rules of engagement that best meet the demands of the situation. Subsequent adjustments may be necessary, but they should not be reactions to overly stringent initial ROE that were developed in hopes that urban actions could purge a city of enemy without risking loss of both friendly force or civilian life. Such hopes have too often proved groundless before.

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Glossary

AFB	Air Force Base
ARVN	Army of the Republic of Vietnam
ASIS	American Society for Industrial Security
AT-4	Model designation for a light anti-tank weapon
ATAP	Association of Threat Management Professionals
AZ	Arizona
BA	Bachelor of Arts
BAS	Battalion Aid Station
BICEPS	Brevity, Immediacy, Centrality, Expectancy, Proximity, and Simplicity
C/1/5	C Company, 1st Battalion, 5th Marine Regiment
C ²	Command and Control
CasEvac	Casualty evacuation
CG	Commanding General
C&GSC	Command and General Staff College
CO	Commanding Officer
CP Group	Command Post Group
CPR	Cardiopulmonary Resuscitation
CS (gas)	o-chlorobenzalmalononitrile, a riot control agent
CSR	Combat Stress Reaction
D-CA	Democrat-California
DoD	Department of Defense
E-8	A CS gas launcher used by U.S. forces during the Vietnam War
FBI	Federal Bureau of Investigation
FM	Field Manual
FRAG	Fragmentation grenade
G3	Operations, Plans, and Training staff section for a general officer-level command (U.S. Army and USMC)

GAO	General Accounting Office
GHQ	General Headquarters
GIRH	Generic Intelligence Requirements Handbook
HUMINT	Human Intelligence
IFOR	[NATO] Implementation Force
IPB	Intelligence Preparation of the Battlefield
J-9	Joint Experimentation directorate
JCATS	Joint Conflict and Tactical Simulation
JTF	Joint Task Force
LAAW (LAW)	Light Anti-Tank Weapon
M-72	Model designation for the LAW
MA	Master of Arts
MCWL	Marine Corps Warfighting Lab
MDMP	Military Decision Making Process
MIOTC	Military Intelligence Officer Transition Course
MNF	Multinational Force
MOUT	Military Operations on Urbanized Terrain
M.P.S.	Master of Professional Studies
MLRS	Multiple Launch Rocket System
MSW	Multiple Shrapnel Wound
NCO	Noncommissioned Officer
NGO	Non-Governmental Organizations
NVA	North Vietnamese Army
OCOKA	Observation and fields of fire, Cover and concealment, Obstacles, Key terrain, and Avenues of Approach
OCS	Officer Candidate School
OP	Observation Post
OPFOR	Opposing Force
PDD 56	Presidential Decision Directive 56 designating how U.S. government agencies are to prepare for peacekeeping operations

PFC	Private First Class
PSYOP	Psychological Operations
PVO	Private Volunteer Organizations
R&D	Research and Development
RAOC	Rear Area Operations Center
RAS	Regimental Aid Station
ROE	Rules of Engagement
RPG	Rocket Propelled Grenade
RSA	Research Security Administrators
RSTA	Reconnaissance, Surveillance, and Target Acquisition
SAMS	School of Advanced Military Studies
SFOR	Stability Force
SO3 G3	Operations and Plans staff officer position normally filled by a captain (British Army)
SOP	Standing Operating Procedure
T₁	Time 1 (a point in time)
T₂	Time 2 (a subsequent point in time)
UAV	Unmanned Aerial Vehicles
UGV	Unmanned Ground Vehicles
UNPROFOR	United Nations Protection Force
UNTAC	United Nations Transitional Authority Cambodia
WMD	Weapons of Mass Destruction
WP	White Phosphorus
XO	Executive Officer

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1. Introduction

The 1479 BC struggle at Megiddo was the first battle in recorded history.¹ There, over one hundred generations ago, the Egyptian Pharaoh Thutmose III led his army to triumph in what is now known as the Jezreel Valley of Israel. His force of ten thousand infantry and charioteers soundly defeated a Canaanite coalition on the broad, flat ground conducive to unencumbered maneuver. Yet this initial success failed to bring Thutmose conclusive victory. The battle ended only after another seven months of besieging the city of Megiddo into which the Canaanites fled after their reverse in the surrounding valley.² It was the fall of a city that concluded the mankind's first recorded battle; the decisive phase was an urban one.

Megiddo is Armageddon, the biblical site for the ultimate struggle of Good versus Evil.³ The historical beginnings of conflict and the ultimate battle are therefore both urban events for those that take the prognostication literally. There have been and will be many others between.

The title of this conference, "Ready for Armageddon," is not meant to be a descriptive one. Today's armed forces are not prepared for combat in the world's densely populated areas and are in many ways no better prepared for other urban operations that will not involve fighting. "Ready" as used here is instead an urging, a suggestion that there is a need to prepare for events to come. Those events might someday include humankind's ultimate battle; they will undoubtedly include "Armageddon" in its alternative sense as an "event of great destruction."⁴

The attendees and speakers at the 2001 RAND Arroyo-MOUT ACTD-CETO-USMC Non-lethal and Urban Operations Program Urban Operations Conference sought to move themselves and their organizations one step closer to urban operations readiness. Eleven speakers addressed the audience over the two-day period, each presenting to half of the attendees and then joining those listeners for a second hour of discussion and analysis. The process was then repeated with the remainder of those attending. The emphasis throughout was on the identification of outstanding issues and addressing potential solutions; each of the presenters had been asked to focus on a question of relevance to the field rather than simply describing past personal experiences.

¹ Many agree that Megiddo is the first recorded battle in history, but they are less in accord with regard to its date. J.F.C. Fuller and David Eggenberger set the event in 1479 BC, Ernest and Trevor Dupuy in 1469, renowned archaeologist Yigal Yidael 1468, and Kern in 1458. See J.F.C. Fuller. *A Military History of the Western World, Volume 1: From the Earliest Times to the Battle of Lepanto*. Minerva, 1954, 5; David Eggenberger. *A Dictionary of Battles*. NY: Thomas Y. Crowell, 1967, 271; R. Ernest Dupuy and Trevor N. Dupuy. *The Encyclopedia of Military History from 3500 BC to the present*, s.v. "Megiddo." NY: Harper & Row, 1977, 6; Yadin Yigael. *The Art of Warfare in Biblical Lands*. NY: McGraw-Hill, 1963, 101; and Paul Bentley Kern. *Ancient Siege Warfare*. Bloomington: Indiana University Press, 1999, 20.

² David Eggenberger. *A Dictionary of Battles*, s.v. "Megiddo I." NY: Thomas Y. Crowell, 1967, 271.

³ From Revelations 16: 14-16. Armageddon means "the mount of Megiddo." See <http://www.tau.ac.il/~archpubs/megiddo/history.html>, January 30, 2001.

⁴ *Cambridge Dictionaries Online*, s.v. "Armageddon." http://dictionary.cambridge.org/define.asp?key=armageddon*1%2B0, January 30, 2001.

Together the presentations and subsequent analysis sessions provided significant progress toward recognizing capability shortfalls and approaches to remedy them. The following pages summarize the results of these combined efforts and consider their value in preparing for the urban challenges to come.

The members of the audience reflected the myriad backgrounds of those professionally and personally interested in modern urban operations. Attendees numbered roughly 130 including the ladies and gentlemen presenting. Most of the latter group also attended the entire conference. In addition to officers and senior enlisted representatives from the United States Army and Marine Corps, presenters (that group itself representing the United States, Israel, Jordan, and the United Kingdom) looked out on officers from the armed forces of Belgium, Canada, France, Switzerland, and the United Kingdom. Senior political and research delegates found themselves in conversation with members of police forces, authors, and medical professionals. Doctrine writers exchanged views with line officers and intelligence analysts. Policy makers, academics, and scientists traded concerns and discussed potential innovations with tacticians from both regular force and special operations units. The discussions ranged from basic techniques and procedures to strategic policy covering the entire operational spectrum from domestic support missions to episodes involving weapons of mass destruction. Much was accomplished over the two days of formal and informal interaction; much more remains to be done.

Those preparing their militaries for the future can learn even from events as remote as that early battle in Canaan. Historical studies of military urban operations offer the open mind many potentially valuable lessons. Some have direct application; others have value only as chronological anomalies; the great majority can be of notable value when applied with good judgment. Thutmose III's doctrinal hieroglyphics would have listed the same five basic ways of reducing a fortified city as were regularly employed by commanders as late as the nineteenth century:

- Penetration by force from above the fortifications
- Penetration through surrounding defenses
- Penetration from below
- Siege
- Penetration by ruse.⁵

Though the technologies have changed considerably over time, similar deceptions and virtually identical tactics (e.g., cutting off water supply, bombardment, defending against outside relieving forces) have been successful for three and a half millennia and may still find use in that just started. The original *raison d'être* for many urban areas has long since expired or become but one of many other functions, but their attractiveness as targets shares much with previous eras. Early fortified cities owed their creation to locations along important transportation routes, water

⁵ Yigael, 16.

supply, or the edges of frontiers.⁶ Megiddo was key to controlling the main route between Egypt and the Euphrates River valley. Chicago, St. Louis, and New Orleans at one time vied for status as primary gateway to the American west. Bath in England drew purpose and name from its waters.⁷ Detroit was a fort on the periphery of Britain's North American corner of its empire. Today's cities are hubs of political control, economic influence, cultural dominance, and social power. Their predecessors have been coveted, attacked, and razed for the same reasons. Though Megiddo was originally a target due to its location along an ancient highway, Thutmose III ultimately sought its capture because of what status it held and what nodes of power it contained when his enemy fled therein:

Capture ye effectively, my victorious army! Behold all the foreign countries have been put in this town by the command of Re on this day, inasmuch as every prince of every northern country is shut up within it, for the capturing of Megiddo is the capturing of a thousand towns!⁸

So, to varied extents, was the case with New Carthage for Scipio Africanus in 209 BC, Constantinople in 1453, Moscow in 1812, Washington, D.C. in 1814, Mexico City in 1848, Richmond in 1865, Paris in 1870, Stalingrad in 1942, Berlin in 1945, Jerusalem in 1948, Seoul in 1950, Hue and Saigon in 1968, Panama City in 1989, Kuwait City in 1991, Grozny in 1994, and Brcko in 1997, to note but a small sample. So it will be for many cases to come.

Yet much has changed. Megiddo was a walled "city" of a mere three and a half acres. Sun Tzu's oft-quoted advice to avoid attacking cities had its origins in the well-established extraordinary costs of having to go over, through, or under defended walls, in spending treasure and time on a siege that could last months if not years, or gambling that fortune might favor a clever deception. Today's cities, equally attractive to attacker, terrorist, or insurgent as those of the past, have grown to such massive proportions and populations that their sheer magnitudes are their own defenses. Sun Tzu's guidance to avoid attack is formal doctrine for the U.S., Russian, and many other armies worldwide. Walls are no longer necessary. More often than not, modern armies desire to avoid densely populated built-up areas if at all possible due to urban actions' history of brutal fighting, consequential numbers of casualties, and extraordinary demands in terms of time and logistical support. For naught—a city's sway is often too great to ignore.

When the first RAND co-sponsored conference was held in 1998, urban operations were only beginning to reemerge as an area of concern. At that point RAND's research in the field sought to identify the many problems inherent in urban operations and address those most demanding. Subsequent efforts expanded to encompass a more macro perspective, one addressing the entirety of command and control processes and the initial steps toward a coherent and useful urban operations theory. The progress made by those within RAND had its counterpart in the community at large. After three years of identifying shortfalls, investigating new demands on

⁶ Yigael, 51.

⁷ Lewis Mumford. *The City in History: Its Origins, its Transformations, and its Prospects*. NY: MJF, 1989, 142.

⁸ Yigael, 103.

doctrine, and committed studies of the relevant literature, the primary emphasis of the fourth conference shifted from education to problem solving. None of the four conferences ever treated the objectives of education and problem solving as independent, but the initial three had as their primary objective a review of urban operations' character. The speakers at the 2001 event assumed the mantle of seminar leaders rather than instructors. The conference organizers' goal was to capitalize on both briefers' expertise and that of a very talented audience in the service of confronting relevant challenges head-on. Three very different urban case studies facilitated debate in 2001: the combat of 1968 Hue, Republic of Vietnam; the intensely multinational and interagency effort to rebuild the ethnically diverse community of Brcko, Bosnia-Herzegovina; and the United Kingdom's internal commitment to bringing peace to Northern Ireland.

The period during which these four conferences were held has been a fruitful one for those dedicated to better preparing their nations for urban contingencies. Such undertakings are now universally recognized as combined arms, joint, and multinational operations. Recognition that they will require interagency cooperation is also approaching the status of an accepted norm.

The objectives of the conference were to develop solutions addressing the following questions, each of which was considered by the speaker or speakers noted:

- *How should the operational level commander conduct operations in regions with extraordinary levels of urbanization?*
Speaker: BG (IDF, ret.) Gideon Avidor
- *What steps can leaders take now to improve urban operation readiness?*
Speaker: Mike Hammon, Center for Emerging Threats and Opportunities
- *What doctrinal, training, intelligence collection, and technology changes will be keys to success during future worldwide operations in urban areas?*
Speakers: Nick Warr and Scott Nelson, 1st Battalion, 5th Marines, Hue, Vietnam, 1968
- *How can a force focus its limited assets to best address mission requirements during urban operations?*
Speakers: Dr. Russell W. Glenn, Jamison Jo Medby, Scott Gerwehr, RAND Arroyo Center
- *How should the operational level commander coordinate special operations, intelligence, police, and ground force operations during urban internal security operations?*
Speaker: MG Mohammed Majid Al Aitan, Commanding General, Jordanian Special Operations Command
- *Stress and urban military operations: Preparing for it, dealing with it during active operations.*
Speaker: CAPT Myron Almond, Psychiatry Division, Naval Aerospace Medical Institute
- *What are the civil and military challenges confronting a coalition during urban stability operations and how can they best be addressed?*
Speaker: Ambassador Robert W. Farrand, Supervisor of Brcko and Deputy High Representative for Bosnia

- *The strategic corporal's war: How can a force train to its requirements?*
Speaker: Major Douglas Chalmers, British Army, Royal Irish Rangers

Key Findings

In addition to the many other points of importance that emerged from speaker sessions, several were of especially notable concern:

Finding One: Cities are systems and parts of larger systems. Effectively conducting urban operations therefore demands an understanding of:

- The city as a whole
- The character of its many components and sub-components, to include the civilian population
- The urban area's role as part of a greater system
- The interactions between these many elements.

Several speakers called for a fundamental change in the way urban operations are envisioned and executed. Presentations by Gideon Avidor, Jamison Jo Medby, and Russell Glenn overtly or inherently emphasized that urban areas are systems. Effective operations require recognition of both key system components and how these various elements interact. Concepts regarding envisioning cities as systems and components of systems are not new, but the presentations offered at this conference sought to provide a cohesion, breadth of scope, and articulateness to the conceptualizations that have at times been missing in previous efforts.

The inanimate and human infrastructures found in urban areas are among the most complex in the world. The medical infrastructure of any metropolitan area demonstrates this in microcosm. Each node, be it a hospital, clinic, ambulance service, or another, consists of multiple hardware subsystems. A cardiac unit has beds, monitors, crash carts, and myriad other supplies and equipment, all complementary components that together provide the means to treat patients. Yet these many parts and the system in total are of value only because of the human subsystem that meshes with the inanimate elements to create the larger system that is the unit. Technicians that maintain, install, or repair the equipment; nurses that oversee patient care; doctors that perform the surgeries; and service suppliers that provide special diets and maintain essential levels of cleanliness are fundamental to ensuring the otherwise nearly useless equipment is employed to potential. The cardiac unit relies on other systems—power supply, water provision, sewerage, heating and cooling—that are themselves fragments of the greater whole that is the city. The unit is part of the hospital; it draws on and provides skills that symbiotically serve patients, medical personnel, and others in the providing or receiving populations. That same cardiac unit is linked to others in rural and urban regions proximate and remote. So it is with the city writ large. No less important than realizing that military forces within a built-up area impact those outside, the military man must understand the intra-urban, inter-urban, and urban-regional implications of operations in villages, towns, and cities. Efforts to deal with the myriad problems inherent in

returning Brcko, Bosnia-Herzegovina to normalcy were brilliantly presented by Ambassador Robert W. Farrand during this conference. As the pages that follow will reflect, success demanded an understanding of Brcko's place in the larger Posovina Corridor and the country as a whole. Such an achievement would have been impossible without an understanding of Brcko as a system and as a component of larger systems. General Eisenhower sought to bypass Paris in 1944, recognizing that its capture was but part of a greater scheme, a campaign that could suffer dramatically were the resources needed to feed and fuel his armies reoriented to supporting the French capital's residents. That he eventually was denied the alternative of avoiding the city further demonstrated that the fall of Paris was a part of political and diplomatic inter-workings as well as those military and social. That operations within an urban area can have implications that go well beyond their immediate tactical implications is no less true today. The availability of access to worldwide communications access via cell phones and the Internet, combined with the presence of media representatives, almost ensures that one or more parties in a conflict will attempt to favorably mold local, regional, national, and/or international opinion. As several military commanders have learned over the past decade, neglecting to incorporate the struggle for public support in one's campaign plan is tantamount to surrendering key terrain without a fight.

Urbanization has a destructive facet as well. While urban areas both host systems and are themselves parts of a highly complex structure of systems, they can also act to tear long-standing social structures apart. This may have a positive impact in terms of education, economic welfare, and individual freedoms. It can open seams for exploitation in the service of friendly force objectives. But the rending of the social fabric can also be disastrous. The July 2001 CIA *Long-Term Global Demographic Trends: Reshaping the Geopolitical Landscape* notes:

Cultural anthropologists argue that rural to urban migration breaks down religious, family, and social structures, often making it difficult to reinforce positive behaviors among youth and thereby contributing to violence and in some cases ideological extremism. In African cities the communal existence of villages no longer holds, so young men in particular slip gradually into crime.⁹

The resultant pressures on national, regional, and local governments are likely to increase. The World Bank estimates that eighty percent of future worldwide economic growth will take place in cities. The urban magnet will continue to attract the ambitious, starving, and destitute with its promise of improved living. The resultant often unscheduled growth not only tasks existent support systems and threatens long-standing social ones, but also introduces new frictions that disrupt the efficiency of proven systems. Urbanization is heterogeneous by nature. Too often cities bring antipathetic groups in close proximity. The proximity of the poor and the wealthy precipitates resentment in the former, fear in the latter. Those occupying the lower rungs of the economic ladder view new arrivals as potential usurpers. The implications for military operations

⁹ *Long-Term Global Demographic Trends: Reshaping the Geopolitical Landscape*. United States Central Intelligence Agency, July 2001, 55. Accessed at http://www.cia.gov/cia/publications/Demo_Trends_For_Web.pdf on September 17, 2001.

are obvious. Any organization hoping to operate effectively in an urban area must seek to not only identify the many seemingly separate components, but also to understand the functional and dysfunctional workings of the systems comprised completely or in part of those elements. In an urban area, to a greater extent than in most other environments, even representatives of the smallest minorities can have a dramatic influence on the daily routine of a city or the success of a military undertaking.

Military leaders recognize the systems character of urban operations. The “Three Block War” concept as recently introduced by the United States Marine Corps validates that service’s comprehension that activities within a larger urban undertaking may have combat, stability, and support elements, all of which are going on simultaneously and each of which requires the military man’s attentions. Similarly, a military commander should see urban operations in the context of the larger operation or campaign plan. Scipio Africanus recognized that the seizure of New Carthage in what is now Spain was the key to ousting Carthaginian forces from the peninsula. By surprising and toppling that port he deprived his foe of the means to support inland armies that could have defeated him had he confronted them directly. General Zhukov recognized that the decisive actions during the 1942-1943 fighting around Stalingrad were those taken to isolate the city and defeat von Manstein’s efforts to relieve it. Soviet forces actually within the urban area itself served to “tie down enemy forces” while this larger operation took place.¹⁰ Operations within Stalingrad were but part of a larger “system” of operations that in total comprised the campaign to defeat the Germans and destroy Paulus’s Sixth Army.

Gideon Avidor sees five systems (other than those inherent in the friendly force itself) as particularly applicable to success during military combat operations in built-up areas:

- The national government system, the target of the friendly force
- The opposition’s military command
- The local government handling the daily tasks of urban governance
- The city police
- The media

General Avidor envisions the achievement of objectives as a struggle between six additional systems (he calls them “battles”) that are components of any adversary forces:

- Command and control
- Logistics
- Intelligence
- Maneuver
- Mobility
- Fires

¹⁰ Georgi K. Zhukov. *Marshal Zhukov’s Greatest Battles*. NY: Harper & Row, 1969, 165.

Opposing forces apply resources in support of these complementary and synergistic “battles” to influence the five systems listed immediately above in ways supportive of their operations.

Jamison Jo Medby and Russell Glenn propose procedures that facilitate orchestration of all military and nonmilitary capabilities in the service of mission accomplishment. They posit that far greater attention must be paid to systems that have heretofore received insufficient emphasis. Ms. Medby provides guidance regarding how the proven intelligence preparation of the battlefield (IPB) process can be tailored to meet the needs of the military commander whose unit is committed to an urban undertaking. Dr. Glenn suggests a means of identifying critical points key to understanding and targeting pertinent elements, whether inanimate or human, and the need to consider the first and higher order implications of interactions between these elements. Both find coordination of military and private volunteer and non-governmental organization (PVO and NGO) support to a local populace essential when large numbers of noncombatants are exposed to malnutrition, starvation, insufficient potable water supplies, disease, and other threats. Military organizations are simply not manned or equipped to support both their own forces and larger numbers of noncombatants. There is a symbiotic character to the relationship: noncombatant groups need to identify public welfare tasks for which the military is especially qualified (e.g., mine removal and explosive ordnance neutralization).

Mike Hammon and those conducting Project Lincolnia recognize these requirements as well. They find that the current doctrinal control infrastructure is insufficient for the task of coordinating these many parts. Military organizations’ rear area operations centers (RAOCs) were unable to adequately coordinate PVO/NGO and military actions. A far more robust approach to the problem is essential, one that seeks to maximize efficiencies and resolve disagreements prior to deployment. Such inefficiencies will exist even between the workings of military organizations from various nations or various agencies from a given country. Efforts to mitigate these frictions should not wait until operations are underway. Better understanding the inter-workings of the many participating components is an essential first step toward finding the lubricants necessary to effective system operation.

William Farrand also calls for improvements in this regard, stating that “better international civil-military linkages are essential during peace operations.”¹¹ He recommends that the National Defense University, service colleges, or a similar institution be designated to provide a pertinent course of instruction.

The past provides sufficient evidence of shortcomings to convince all but the most skeptical. The need for integrated intelligence operations serves as an example. Intelligence collection in the Republic of Vietnam (RVN) during U.S. involvement in the 1960s and 1970s suffered from a lack of inter-governmental (between U.S. and RVN intelligence agencies) and intra-governmental (between U.S. military and other American departments and organizations) coordination. The

¹¹ All quotations are from the speaker’s briefing summary as presented in the following section unless otherwise noted.

result was that a single reporting source at times became self-confirming when it provided information through multiple channels. Ambassador Farrand cites NGOs and PVOs as valuable sources of intelligence, noting that “adaptive and coordinated actions by civilian and military personnel, each with a well-informed current intelligence picture, is vital to the longevity and effectiveness of any agreement.” Participants in Project Lincolnia found the same, recommending “increased contact and better management of military-NGO interactions.” Without an effective means of coordinating intelligence collection and other activities of concern, the lessons of past generations will be re-taught at cost.

Finding Two: The complexity of urban environments and the challenges associated with them demand exceptional mental agility and robustness. Decision-making tools and training that address this demand have heretofore been insufficient.

Speaker Gideon Avidor stated it most succinctly: “While technical and technological capabilities are important, the greatest need is for mental agility.”¹² The comment applies to every level and aspect of actions during urban contingencies. Limited lines of sight mean that short-range engagements (most are less than one hundred meters and many are less than twenty-five meters) are the norm. The decision cycle of Sighting->Identifying (Friend? Foe? Noncombatant?)->Reaction (Engage/Seek cover/Hold fire) demands both accuracy and speed of judgment. Nicholas Warr’s description of how successful the unexpected use of CS gas was during fighting in 1968 Hue demonstrates the benefits of innovation born of mental agility. His related recalling of the enemy’s resultant localized collapse similarly provides insights on the costs of being unprepared for surprise. Douglas Chalmers reinforces the call for mental agility, noting that operations in urban Northern Ireland “tend to develop more quickly than those in rural areas. The speed of transition from event to reaction is also faster paced.” Were the more rapid pace of friendly-adversary interactions not challenge enough, Major Chalmers goes on to report that “the media and local population are quick to react and will often become an integral part of events” when activities are taking place in densely populated areas.

The incidence of surprise is only one of many elements that psychologically task military personnel during urban undertakings. The likelihood that they may incidentally kill or wound civilians, that treatment for themselves or wounded comrades may be delayed due to the difficulty of medical evacuation, and the constant close proximity of danger wear on all involved.

Insightful design of decision-making aids likewise offer advantages. Jamison Jo Medby posits that the traditional categorization of groups into “friendly,” “neutral,” or “adversary” not only lacks sufficient resolution for proper analysis, but also predisposes the analyst to a “we-they” mentality. Her refinement, which she designates the “Continuum of Relative Interests,” forces greater sophistication when considering urban scenarios. That a particular group’s status is dynamic (in that it can change from one category to another or in that individuals or sub-groups

¹² See Gideon Avidor briefing summary.

can occupy categories different from others in the group) both facilitates and makes greater demands on analysts' mental agility.

Ms. Medby's modification of the IPB process provides an analytical tool of value to Scott Gerwehr's call for intelligent adaptation and counter-adaptation. Mr. Gerwehr argues that urban areas are superb catalysts for military force adaptation. The pace of activities, close proximity of friend and foe, and availability of multiple and redundant means of communications speeds adaptive reactions in a never-ending effort to gain or maintain advantage, whether in combat or day-to-day activities. Those that adapt more rapidly and effectively are more likely to survive and thrive, a powerful argument for a mental agility that abets development of this advantage. Counter-adaptation, efforts to block or misdirect competitors' adaptation, makes equally stringent demands on such intellectual prowess.

Mental agility and organizations flexible enough to capitalize on it rely on effective military education and quality training. They also require a firm foundation, one sufficiently sturdy to withstand the sudden intellectual or operational pivot that alters a course of action. Appropriate doctrine, pertinent standing operating procedures, adaptation of battle drills, suitable organizations, and effective leadership provide such a foundation. In short, those elements that make an organization effective in any other environment are still essential to success in meeting the extraordinary demands of urban operations.

Finding Three: Participants in urban contingencies need to be aware of how to recognize signs of psychological fatigue both in others and themselves; preparation should ready armed forces personnel for these stresses to the extent possible.

As is the case for so many shortcomings, much of the answer lies in better training. Stressing the soldier, marine, airman, or sailor before he or she has to first experience the unexpected readies the individual for surprise confronted during actual operations. The training event need not exactly replicate the actuality; it is the ability to deal with the unexpected that helps to forestall and limit the effects of CSR. Speaking of combat stress reaction (CSR), Myron Almond reflected that

The best way to mitigate CSR is with realistic, frequent training. Individuals who have experienced instances of shock, surprise, deprivation and other conditions inherent in active operations are better prepared to deal with similar experiences during subsequent operations.

In short, training and experience better prepare the individual for the demands of urban operations. Lacking experience, training must ably replicate and realistically task those who might one day have to undergo the pressures inherent in urban operations.

Finding Four: The primacy of the population, the human element, should come to the fore in doctrine development, exercises, studies, and plans for future urban contingencies.

Whereas the traditional approach gives the terrain, weather, and adversary primacy during the command estimate process, the influence of civilians during urban contingencies means that such

an approach may need reevaluation. Jamison Jo Medby's expansion of the overly simplified "Friendly-Neutral-Adversary" spectrum is a vital step both in terms of actual practice and in influencing the conceptualization of actions in densely populated areas. Perhaps even more important than the above-noted addition of two additional categories of resolution is the emphasis on the dynamic nature of her Continuum of Relative Interests. That groups can migrate right or left on the continuum, altering alliances, support relationships, and the extent to which they are purely self-interested, is crucial to gauging the intelligence situation. Equally important is the lack of homogeneity within groups and subgroups; that interests, motivations, and allegiances can span the continuum even when one considers only a single group dramatically complicates intelligence collection, monitoring, and analysis. Nevertheless, knowledge that this represents reality will make those processes far more effective than would an overly simplified construct.

The primacy of the population and the related increased importance of human intelligence (HUMINT) during urban operations mean that commanders will eventually have to confront the current situation awareness-force protection conundrum. As noted in the summary of Ambassador Farrand's briefing, "successful HUMINT operations require mixing with noncombatants. This involves a force protection risk for the military, but HUMINT are unlikely to be effective in an atmosphere where friendly personnel are in full combat attire and standing behind protective wire barriers."

Douglas Chalmers further clarifies the need for interpersonal interactions:

Technology can decrease the number of personnel required during a war, but it can only augment operations in which stability or support missions dominate. The technological solution is often not appropriate when dealing with civilians. A woman whose car has been bombed does not want to deal with a robot or talk to a commander over a radio; she wants to deal face-to-face with a human being. No matter how sophisticated the technology, there are missions that will demand soldiers to be on the ground in tomorrow's urban areas.

Mohammed Majid Al-Aitan provided the ultimate summary in this regard, reminding his audiences that a force must "always handle people with care, for the military, police, other agencies, and the people must all live together after an operation's end."

Finding Five: An early and realistic appraisal of urban rules of engagement is essential. Historically the ROE have initially been very restrictive, subsequently being made less so only after Americans have suffered casualties directly attributable to the stringency of restrictions.

Manila in 1945 and Hue in 1968 are only two examples of instances in which U.S. soldiers and marines have died and were wounded due to initially strict ROE that limited the use of supporting fires and/or constrained tactics in the interest of limiting civilian casualties and infrastructure damage. There may be politically motivated, moral, tactical, or other reasons influencing ROE decisions during urban contingencies. However, given the historical lessons, it is unforgivable to rely *post facto* on fine-tuning ROE to find the appropriate level of restriction after American lives are unnecessarily lost. Nicholas Warr and Scott Nelson recalled that:

Marines could call in a torrent of external fire support during their operations in the jungle. In the city, by contrast...the use of large caliber fire support was limited by U.S. rules of engagements in the battle's early days. Air support was often unavailable due to poor weather thereafter. In an effort to save the historically significant city of Hue from total destruction, marines were initially ordered not to use high explosive weaponry to capture enemy positions. This prohibition cost many marines their lives.

Notably, Army of the Republic of South Vietnam (ARVN) units in Hue at the same time felt little compunction to limit the use of heavy weapons in an effort to save historical structures in their own city.

Barring dramatic advances in situational awareness and weapons capabilities (lethal and non-lethal), urban combat will be costly in friendly force, noncombatant, and enemy lives and loss of property. The hard decisions regarding which take priority need to be made before the commitment of friendly forces. Fine-tuning can occur thereafter, but initial decisions made in "hope" that both friendly force and non-military losses can be kept low are likely illusory.

As alluded above, the U.S. should also develop tactics and technologies to (as speakers Warr and Nelson put it) "apply overwhelming firepower 'surgically,' to destroy a specific target or target area but not the entire city." These gentlemen also called for non-lethal capabilities that allowed for precision application.

A summary of each speaker presentation follows. Speaker biographical sketches appear in Appendix A. Appendix B contains a summary of observations, lessons learned, and recommendations compiled by USMC veterans of fighting in Hue, Republic of Vietnam, during Tet 1968.

Conclusion

Speaker Gideon Avidor observed that dramatic changes to an armed force's doctrine generally come about in one of three ways:

- The emergence of a new technology
- Battlefield disaster
- The emergence and acceptance of innovative thinking

"The rarest by far," he observed, is "the emergence and acceptance of innovative thinking." His comment reflects depth of insight and understanding. Forums such as the conference described herein provide ample opportunity for the creation and maturation of innovative concepts. Far more difficult is gaining acceptance of the new and unordinary in the long hallways and myriad compartments of bureaucracies before the shock of disaster or expenditure of billions of dollars on technologies with less than dramatic impact. Urban warfare within the confines of current doctrine is a disaster biding its time. No single white knight technology will prevent it.

Nor can improved doctrine alone keep disaster at bay. Doctrine is by nature an evolutionary mechanism; the intellectual, training, and fiscal burdens of revolution act to return even its most brilliant conceptualizations to the confines of extant expectation. The challenges of urban operations are vast in scope and highly complex. For those involving combat, their established legacy is one of considerable loss and costly recovery. Historically the only choice has been between how to allocate the losses and costs. Actions were designed so as to (1) risk greater numbers of friendly force dead and wounded so as to save noncombatants and their infrastructure, or (2) sacrifice the innocent to preserve the fighting force. It was a matter of selecting one of two bad alternatives.

Today there is an unprecedented convergence of innovative urban concepts, doctrine, technology, and training that could make it possible to fight in cities with dramatically fewer friendly and noncombatant casualties alike. Existent and soon attainable improvements offer future forces the capability to accomplish much of what the speakers and audience at the 2001 Urban Operations Conference identified as necessary to future success, e.g., avoiding surprise, reducing stress-inducing factors, speeding information processing, and delivering munitions with pinpoint accuracy. Doctrinal needs have been identified and technologies tested; some are already making their way into the field. Other initiatives and concepts are being developed, under consideration, or just emerging. What is needed is recognition of the challenge and appropriate action before it spawns disaster so that the unprecedented opportunity is not foregone.

A final note before considering the individual briefings provided by each of the conference speakers. Lieutenant General Hal Moore, writing in the classic *We were soldiers once...and young: Ia Drang, the battle that changed the war in Vietnam*, recalled his efforts to obtain a teaching position upon his return from combat. His objective was to educate so that younger officers could benefit from the knowledge gained at so great a cost in his men's lives. He found that "it was not to be. In fact, only one of the hundreds of officers who had gone through airmobile training and a year in the field with the 1st Cavalry Division was assigned to the Infantry School."¹³ The numbers of American military personnel who have flown over or fought on urban terrain during the past decade is miniscule in comparison with the size of the force. They are an invaluable asset. Given the inevitability of urban operations to come, the services should act to capitalize on the expertise and ruminations of those who have "seen the urban elephant." It would be another in the many steps yet needed to prepare the armed forces for this most difficult of challenges.

The pages immediately following provide a summary of each presentation in turn.

¹³ Harold G. Moore and Joseph L. Galloway. *We were soldiers once...and young: Ia Drang, the battle that changed the war in Vietnam*. NY: HarperCollins, 1993, 405.

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2. Summary of Presentations

The Revolution in Military Affairs: From Landscape and Linear Dimension to Systems and Centers of Gravity

Brigadier General (Israeli Defense Forces, retired) Gideon Avidor

Overview

Dramatic changes in an armed force's doctrine generally occur in response to one or more of three conditions:

- The emergence of a new technology, e.g., the long bow, black powder, and steam engine
- Battlefield disaster. Defeat is the best teacher; the Egyptian Army's recovery from its defeat in 1967 is an excellent example
- Rarest by far: the emergence and acceptance of innovative thinking. Successful examples include the Mongols under Genghis Khan and the Grand Armee under Napoleon.

Today's militaries face another motivation for change, a combination of geographical and cultural developments that together have already rendered much of current doctrine inadequate. Urbanization and the physical and cultural changes that it manifests require a revolution in military affairs. Military operations in an increasingly urbanized world demand that military forces change doctrine, tactics, and even fundamental perspectives in order to tackle the challenges of operating in built-up, densely populated areas.

The Problems of the Urban Battle

Urbanization proceeds at such a pace that it is bypassing the development of defense doctrine, creating a gap that threatens to make current doctrine increasingly less relevant. In terms of geography, operational areas are getting bigger and becoming more concentrated and centrally controlled. In the realm of cultural development, the mass production of information, entertainment, and goods threatens to effectively disconnect citizens from their local community.



Figure 2.1—The Current Ground Operations Paradigm

Current U.S. doctrine reflects paradigms rooted in combat operations that are conducted on open terrain. The land is flat, and terminology and organization for battle reflect this, as reflected in Figure 2.1.

Further, this doctrine is based on two dominant views of warfare, each of which dictates a different means of achieving success. Clausewitz suggested that leaders should pursue annihilation of the opposing force. Sun Tzu believed that annihilation should be the last resort, that influencing the will of the people was a more productive means of achieving political and military ends. It may instead be that some combination of both of these thoughts is necessary for success in urban areas.

It is crowded and complex

- The decisive objectives are inside the city
- The opposing army is an obstacle, not the target
- Seek isolation, neutralization, and paralysis rather than destruction
- Fight systems
 - Try to gain control over the systems
 - Do not destroy them unless it is a must
- Identify and fight for decisive objectives as soon as possible

***Avoid army destruction if possible—
Fight the systems***

Figure 2.2—Destruction Is Not the End Sought

Urbanization changes not only our landscapes but also our lives. The urban world is not two-dimensional; it is composed of systems that keep a city operational. The systems that are relevant for consideration during military operations are shown in Figure 2.3 and include:

- The national government system, which is what the friendly force is after
- The military command that is defending the city
- The local government that deals with the daily life of the population
- The police that control the streets
- The media that influences opinion.

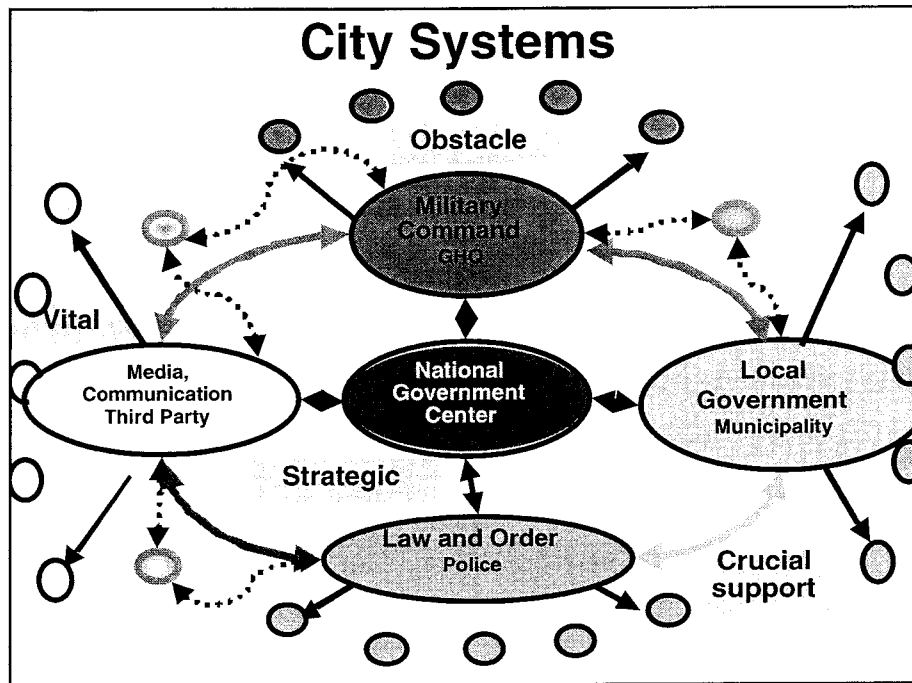


Figure 2.3—The City As a System of Systems

When preparing for urban operations, the composition of the military force should also be thought of in terms of systems. Battles can be combined flexibly in order to suit the unique needs of a mission. [Editor's note: General Avidor uses "battles" in lieu of "battlefield operating systems," which he considers have come to have application only to friendly forces rather than both friendly and enemy.] These battles (see Figure 2.4) are conducted in parallel. They are complementary and synergistic, support a common goal, and should be coordinated and directed by a single commander. Four factors constantly influence the planning and conduct of any battle:

- Time (tempo, speed, duration)
- Space (terrain, density, line of sight, fields of fire)
- Forces (type, means, capabilities, quantity, dispersion)
- Outcome (objectives, consumption, casualties, damage)

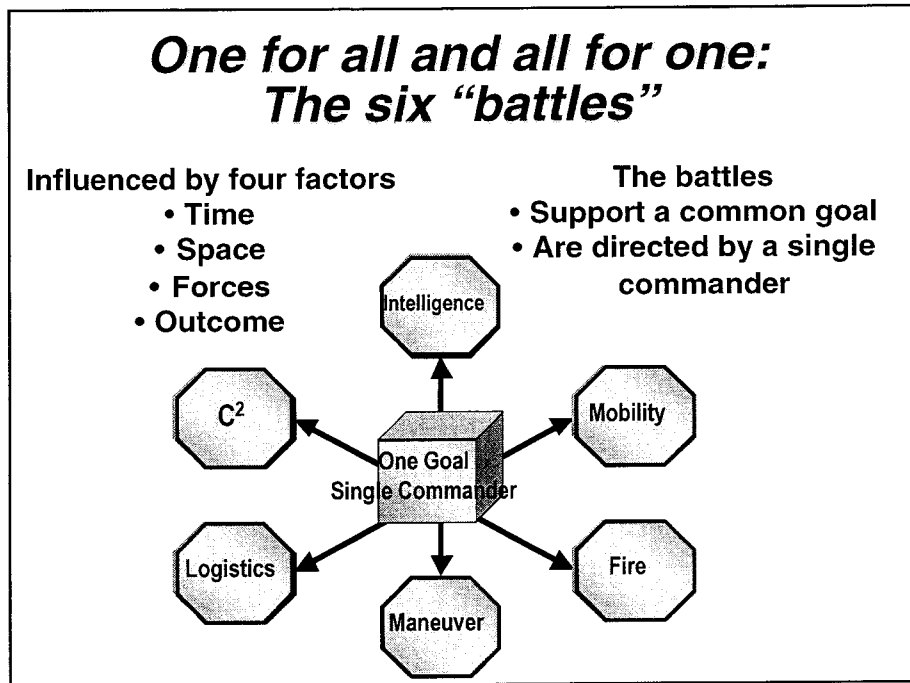


Figure 2.4—Mission Accomplishment Requires Coordination of Six Systems

Necessity for Change

As changes are made to doctrine, the aforementioned elements need to be considered. How should doctrine accommodate the media's ability to influence all levels of war in real time? How should the effects of the local population be evaluated at all levels of war? What is most important: sustaining the population, controlling it, or influencing its behavior? How can this determination be made? How can a commander seek to influence enemy decision-makers rather than have to annihilate their forces and the populations that surround them? All of these questions are increasingly relevant as the friendly force of the future considers changing doctrine and TTP to accommodate urban specific or urban derivative dilemmas.

Several changes are required when contemplating urban combat. A force fighting on open ground expands, seeking to drive into the enemy's core, to move deeper into his rear. The areas of interest and influence expand as an operation progresses; the combat area is enlarged. On an urban battlefield, however, forces move inward. The battle becomes concentric; linear motion is replaced by circular motion. The core that is being sought is in closer proximity to friendly forces. Areas of interest and influence shrink and areas of operation become smaller. In the flat world a force moves *on the ground*; in the urban world it moves *inside it*. There is no "frontline" in urban combat. Further, warfare is more nodal in character. "Winning" is about influencing military and popular decision-makers while keeping the opposing force at bay rather than destroying it. While technical and technological capabilities are important, the greatest need is for mental agility.

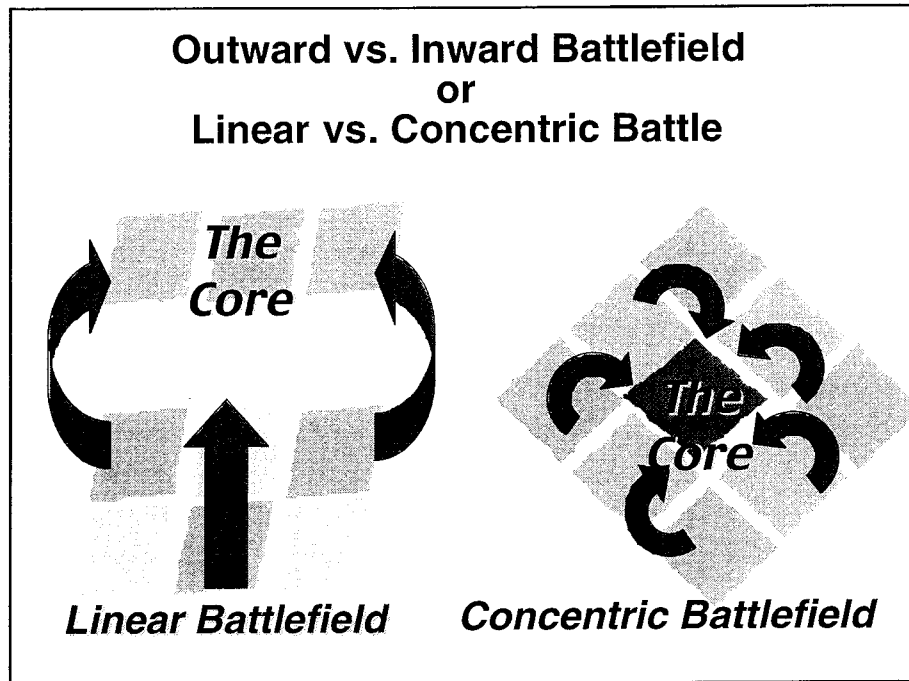


Figure 2.5—The Urban Battle Fundamentally Differs from That in Open Terrain

Recommendations

The systems approach, rather than a rigid, force-on-force perspective, is essential if a commander is to retain the initiative. This conceptualization provides the flexibility to act and respond to any type of situation.

An especially critical component of the urban battle, one that rarely has the same level of importance in any other type of operating area, is the battle for noncombatant hearts and minds. The will of the people can shift the balance of success from one side to the other more readily than weapons or technology. Great care should therefore be taken to consider the needs and thoughts of the resident population.

Other specific considerations for operating in the three dimensional urban area include:

- Operations should be orchestrated so that each battlefield operating system (“battle”) is orchestrated to achieve the desired end state.
- Task forces should be designed to fight a specific enemy capability. These task forces can include outside expertise. They should be trained to fight in isolated sectors.
- Concentrate on the friendly force ability to reduce or control the enemy.
- Winning the city battle requires gaining and maintaining the initiative.

- Be alert at all times. Remember that you are always on hostile ground. Never allow a compromise of internal area security.
- Considering the human factor of military operations is critical. The attitude and morale of the enemy's personnel should be attacked because the fight depends very much on the individual soldier's will to fight.
- Use local leaders to influence the population. The police and media are key tools in this process.
- Overwhelming force is not necessary

Figure 2.6 summarizes the basic differences between urban and conventional warfare on other types of terrain.

Conventional vs. Urban War	
Conventional	Urban
• Use maximum power to achieve destruction • The army is build for deep penetration and annihilation • Armed forces vs. Armed forces battlefield	• Use sufficient/minimal power to achieve the objectives. • Demonstrate overwhelming power if necessary • The army is built to encircle and influence first; annihilation is second • Armed forces vs. decision makers' battlefield

Figure 2.6—Urban Warfare vs. That on Other Terrain

Project Lincolnia Assessment

Mike Hammon, Research Fellow, Potomac Institute for Policy Studies

Overview

Project Lincolnia I was the first of a series of war games that had the object of testing:

- The Department of Defense's (DoD) capability to manage urban combat operations,
- The interoperability of the DoD with other executive branch agencies,
- Advanced technologies that might be applicable to the urban warfare venue.

The project came about in the wake of a Government Accounting Office (GAO) report criticizing the DoD for too great a concentration on tactical urban issues while not exercising the processes that would have driven the U.S. forces to tactical employment: executive branch interagency strategic planning, operations, and policy development. With funding provided by the Office of the Secretary of Defense, a coalition of some twenty agencies worked together on Project Lincolnia I as an initial step toward addressing these concerns. The project was and continues to be comprised of three linked games, strategy-policy, operational, and tactical.

The Lincolnia I scenario centered on the collapse of a failed Persian Gulf island archipelago nation-state named Nicholesia. Nicholesia's government; weak, plagued by warring factions, unable to support its own citizens' welfare, and corrupted by a powerful drug cartel; requested UN assistance. That international body in turn asked for a U.S.-led multinational force (MNF) to stabilize the situation and provide security for international relief agencies already present and providing services. This scenario was designed to facilitate joint, multinational, and interagency planning at all three levels of war: the strategic, operational, and tactical.

OVERALL PROJECT OBJECTIVES

- Address Congressional concerns regarding DoD preparation for employing forces in urban settings (GAO Report NSIA-00-63NI, Feb 00)
 - Experimentation is too focused on tactical and small unit operations
 - Not enough joint experimentation with other services or allies
 - Inadequate intelligence support for urban warfare
 - Little information about likely countries to which U.S. troops could be employed in urban ops
- Begin an urban military operations learning process using various experimentation formats
 - Political-military strategy game
 - Experimental JTF headquarters operational game
 - Tactical game with on-the-ground advanced technology experiments
 - Reconnaissance, Surveillance and Target Acquisition (RSTA) cloud
 - Non-lethal directed energy weapons

Figure 2.7—Project Lincolnia Objectives

Jakarta served as the notional “Lincolnia” (Nicholesia’s capital). Combat zones within the city were based on two real-world training facilities. The first was “Georgetown,” the family housing area at the former George Air Force Base (AFB) in Victorville, California. The second, Yodaville, took its name from an air combat range by the same name at Marine Corps Air Station, Yuma, AZ. United States Marine Corps ground forces actively supported the project. They were actually on the ground at Victorville participating in the Marine Corps Warfighting Lab’s Project Metropolis. Action at Yodaville was simulated using the JCATS urban warfare simulation at Quantico Marine Corps Base, Virginia. The notional forces creating instability for the host nation government, and therefore challenging the U.S.-led coalition, included narcotics traffickers and three separate paramilitary ethnic factions designed to replicate the Tamil Tigers, Sierra Leone’s Revolutionary United Front (RUF), and the Hezbollah.

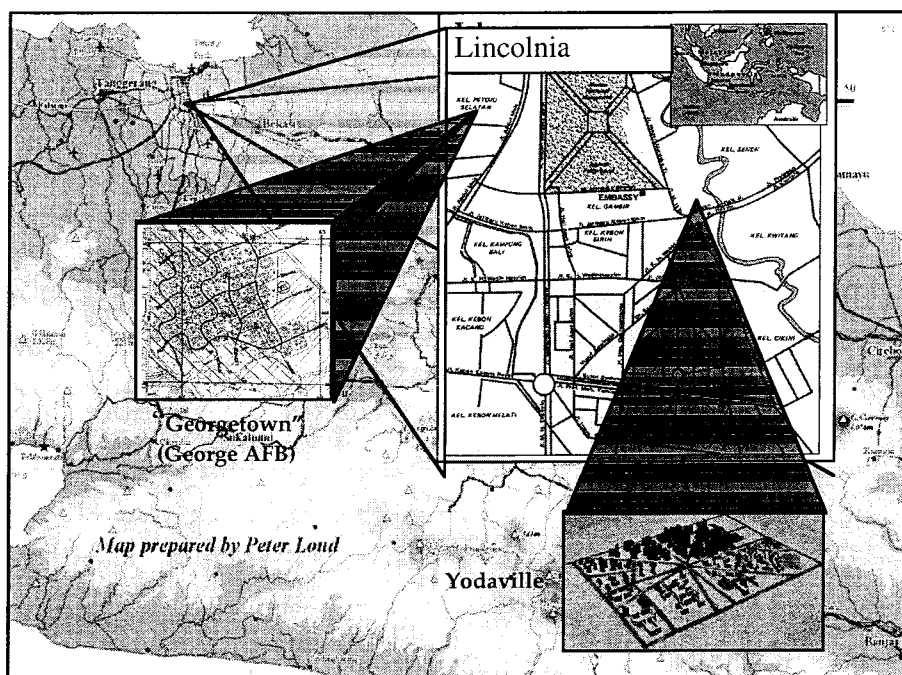


Figure 2.8—Project Lincolnia Scenario Construct

Project Conduct

Project Lincolnia I's three-level game structure (strategy-policy, operational, and tactical) was a deliberate effort to address GAO concerns and test the PDD 56 political-military planning process. That process, sponsored by the National Defense University, produced a political-military plan for Nicolesian operations, the goals of which influenced game play at all levels.

In the strategy-policy tabletop war game, the American country team chief used the plan's guidance to negotiate safe entry into the city of Lincolnia for U.S. personnel, their equipment, logistical support, and humanitarian relief supplies. The operational-level war game was designed to test the ability of the JTF staff to deal with difficult civil issues such as children being killed by terrorists, religious leaders protesting government policies, and breakdowns in the humanitarian aid delivery process. The JTF commander had to operate within the terms of the political-military plan and the agreement negotiated in the strategy-policy game. In the tactical game/experiment, Project Lincolnia I sought to gather data on applications for, the potential value of, and the strategic implications involved in applying new technologies during urban stability missions. In particular, air and ground robotic, directed energy non-lethal, and thermobaric capabilities were either tested, or simulated at Quantico and George AFB.

In order to foster understanding of the challenges presented by militia and insurgent organizations, three cultural intelligence seminars were undertaken to familiarize participants with the goals, objectives, beliefs, and terrain of Lincolnia's ethnic factions. Representatives with relevant cultural backgrounds actively participated in the seminars and war games at the strategic and operational levels of the project. Participants were therefore provided with first hand knowledge of multi-cultural factors in a manner that many felt allowed them to overcome the steep learning curve they believed would otherwise have been encountered by a short-notice deploying force.

Negotiations were complicated by the very real world behaviors of threat elements. Factions and the narcotics cartel unexpectedly formed alliances. On the other hand, friendly force internal cooperation was found wanting. Non-governmental organizations (NGO) objectives clashed with those of the military; there was a demonstrated need for an effective military-NGO coordination mechanism beyond the doctrinal establishment of a rear area operations center (RAOC). A need for better coordination of actions in support of operational and tactical level objectives was apparent.

Strategy-policy game participants established Humanitarian and Security Committees to address those issues and create an atmosphere of common understanding to improve coordination of actions and promote common goals. Nevertheless, further work in this area is essential; outstanding issues will be addressed in Project Lincolnia II scheduled for the summer of 2001.

The Project Lincolnia I operational-level war game occurred at Quantico, simultaneously with the tactical experiment at George AFB. Information and direction were passed between the two locations by phone and computer, simulating the radio communications to be found during an actual operation. The operational level focus was on the Joint Task Force (JTF), in particular the testing of a J-9 Joint Forces Command JTF design concept. The JTF's mission was to conduct operational planning and provide command and control of American troops in Nicholesia as they attempted to restore order to the capital and provide security for the relief effort. Drug cartel and paramilitary factions remained active, as did humanitarian aid organizations. The JTF worked with coalition forces from France, Australia, New Zealand, and the United Kingdom that were dispersed throughout the archipelago. U.S. forces were controlled the capital city of Lincolnia with the assistance of four hundred British marines.

Observations and Lessons Learned

Exercise lessons learned pertained both to exercise-specific observations and others with "real world" application.

- A future exercise dedicated to coalition urban warfare would be desirable. The complexity of coalition warfare was not adequately simulated, a deliberate exercise design decision as replication was thought to be too complex for the time allotted for Lincolnia I.

- There is a need for advanced technology and non-lethal weapons rules of engagement (and employment tactics, techniques, and procedures) in addition to those for more familiar engagement systems.
- It is essential that American participants be familiar with all relevant aspects of the political-military plan. Many participants had not previously worked together. An exercise structure that put participants into separate cells abetted misunderstandings stemming from this lack of familiarity. The result was well-intentioned actors working at cross-purposes as players were unaware of each other's efforts.
- Participants also recognized problems in the J-9 staffing model and related doctrinal guidance. Currently, planning doctrine calls for a small forward staff with significant "reach back" to assets available in the United States. This concept lacked the robustness necessary to meet the demands of Nicholesia's complex military-political environment.
- It appeared that the JTF commander needs to establish intelligence collection nodes throughout his operational area in order to ensure that he maintains up-to-date situational awareness and understanding. He must also establish and maintain links with key political players such as the U.S. ambassador, faction leaders, and media representatives. Ultimately it was concluded that the JTF staff structure as tested was insufficient to meet the needs of the commander; an alternative will be considered during Lincolnia II.
- Other elements that will be further evaluated or newly incorporated during the Lincolnia II exercise include heavy weapons confiscation, violence management, and the decision-making process for employing new technologies.
- There is a critical need for manning the JTF staff with personnel able to manage tactical issues in order to prevent the commander from becoming consumed by the need for personally making tactical decisions.
- There is a need to incorporate weapons of mass destruction (WMD) considerations in future Project Lincolnia exercises.
- Unmanned Aerial Vehicles (UAV) showed great promise. Unmanned Ground Vehicles (UGV) also showed utility, but were very susceptible to destruction by ground fires and would benefit from further development.
- The early emplacement of sensors and their use to enhance the situational awareness of tactical level leaders, before and during an operation, may be helpful in reducing friendly force casualties.
- NGOs were a vital link in determining militia group motivations and behaviors. Increased contact and better management of military-NGO interactions is highly recommended.

Lincolnia I was a successful first step in enhancing U.S. readiness to engage in urban operations. It demonstrated a need for better interagency policy decisions at senior government levels, new

robotic technologies, adjustments to the Joint Task Force headquarters structure, and other requirements, many of which will be explored during the forthcoming Lincolnia II exercise.

To Be Ready, Not Reacting: Adapting For Future Urban Operations

Russell W. Glenn, Jamison Jo Medby, and Scott Gerwehr

General

The RAND Arroyo Urban Operations Team briefing was conducted in three parts:

- An overview of an initial effort to develop an urban operations theory (presented by Russell W. Glenn)
- A summary of work done regarding the adaptation of the Intelligence Preparation of the Battlefield (IPB) analytic process to urban operations (Jamison Jo Medby)
- A consideration of the role of adaptation in urban operations (Scott Gerwehr)

Urban Operations Theory (Dr. Russell W. Glenn)

Urban areas can be extraordinary in their level of complexity. An individual standing atop Nam San (mountain) in Seoul or a skyscraper in Los Angeles would look down on a three-dimensional volume filled with millions of people and thousands of structures, roadways, potential firing positions, vehicles, and far more, all inter-linked in myriad activities that continue day and night. The following initial steps toward an urban operations theory seek to make this complexity manageable and thereby to abet better planning and execution. It has two fundamental conceptual elements: critical points and density. Each is handled in turn.

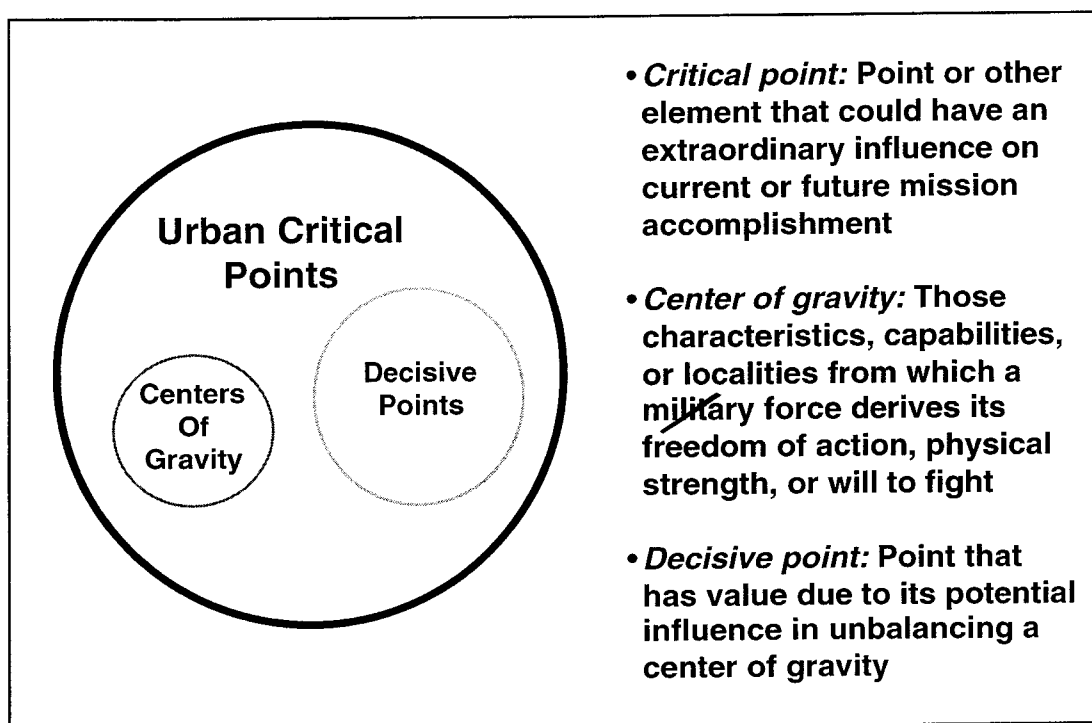


Figure 2.9—The Basic Elements of the Critical Point Concept

Critical points include key and decisive terrain and analogous components of friendly and enemy forces and the noncombatant population. Centers of gravity and decisive points are subsets of critical points; they possess additional properties of importance to planners and those that must execute assigned missions. Each is defined below:

- Critical point: Point or other element that could have an extraordinary influence on current or future mission accomplishment
- Center of gravity: Those characteristics, capabilities, or localities from which a military force derives its freedom of action, physical strength, or will to fight¹³
- Decisive point: Point that has value due to its potential influence in unbalancing a center of gravity.

Critical points might include key infrastructure nodes, influential segments of the noncombatant population, media concentrations, and selected features from areas around as well as within the urban area.

¹³ The definition of center of gravity is from Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*. Washington, D.C.: The Joint Chiefs of Staff, March 23, 1994 as amended through April 6, 1999, 70. Those for critical and decisive points are the author's.

The three types of critical points are not mutually exclusive. As noted, both centers of gravity and decisive points are themselves critical points. Critical points will vary by echelon, between organizations at a given echelon, and by physical location in the area of operations. What is a center of gravity at one echelon may qualify only as a decisive point at another, or it may not even achieve status as a critical point. Likewise, a unit at a given echelon may share all, some, or none of the critical points with another unit at the same level; Here too, an element of one type (e.g., center of gravity) might be a critical point of another type in a different organization, should it achieve status as a critical point at all. Further, what comprises the “working set” of critical points, centers of gravity, and decisive points for an organization can change over time. The implications of this dynamism for the military planner and operator are highly significant. Constant validation or adaptation of critical point lists will be both essential and a significant burden on military analysts, especially given the high tempo that can characterize urban operations. Critical point identification should include not only adversary centers of gravity, decisive points, and critical points, but also those of the friendly force and various noncombatant groups

The value of critical point analysis is evident in the historical case of Hue during the North Vietnamese Army’s (NVA) attack on that ancient capital. The NVA force carefully planned its attack on the city, one rich in politically significant features. Models of the city were constructed prior to the Tet 1968 attack and used to identify those parts of the urban area to be sought as objectives of the pending offensive. These critical points included high visibility political targets, key terrain, and selected personnel, the last often identified for the purposes of assassination. The dramatic initial success of the enemy was in no small part due to the insightful selection of these points. Similarly, the eventual collapse of resistance within Hue was directly related to operations by the U.S. Army’s 1st Cavalry Division against the NVA line of communications and the main enemy command post. The latter was located in a wooded area to the west outside of the city itself, both obvious critical points (whether identified as such beforehand or not).

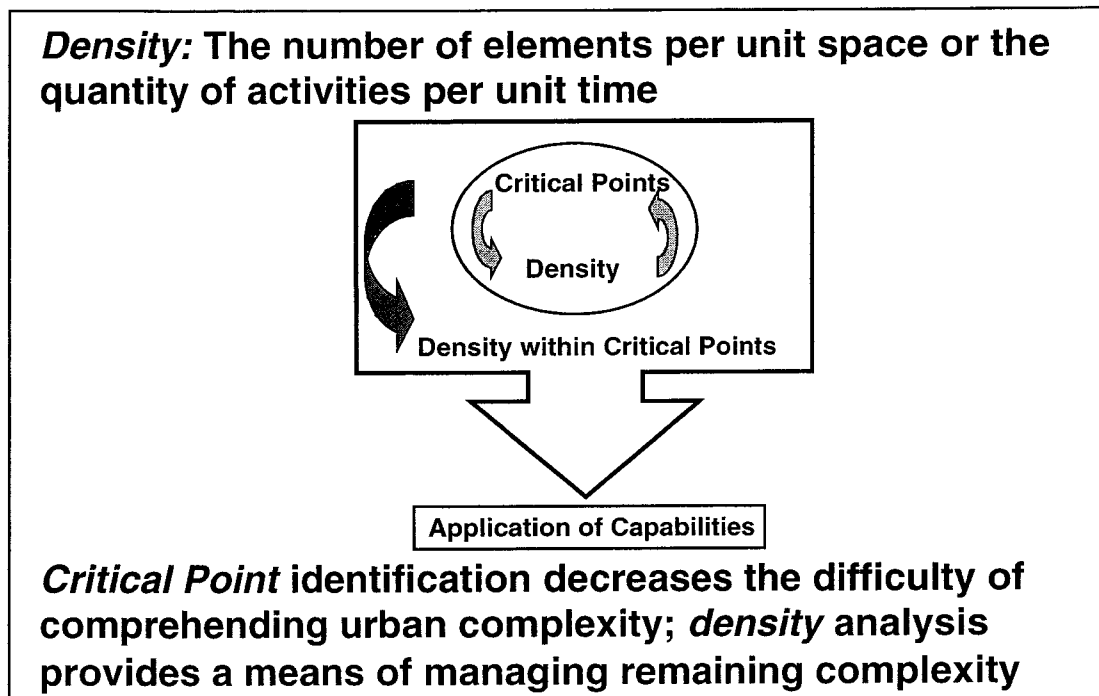


Figure 2.10—The Role of Critical Points and Density in Focusing Available Capabilities

Density and critical point analyses are complementary. Density will influence what qualifies for designation as a critical point: if there are many of a vital infrastructure asset, that multiplicity will likely preclude such resources being designated as critical points, especially if the multiple assets are redundant. Whereas critical point analysis allows comprehension of the otherwise overwhelmingly large and complex by reducing the scope of consideration, density analysis further reduces the complexity by making seemingly heterogeneous challenges understandable through the employment of a descriptive tool with application to virtually any component of urban operations.

Understanding density's effects on an operation demands well-considered planning before initiation. Determining the appropriate number and type of units, gauging how centralized or decentralized command and control should be, and estimating how the enemy's capabilities will vary over time are simplified when considered from the perspective of density. An action that includes sweeping through a town's marketplace will require an entirely different mix of forces if that maneuver takes place at night versus during the peak of market time. In the first case the action would require few military police; in the latter they might dominate the task organization. The type of units selected to clear the area would likely be different if the operation is in a suburb with widely-dispersed buildings than if it is in a city core. Were the buildings widely spaced but characterized by high-rise apartment complexes, the force selection during planning would be

different yet again. Similarly, adaptation to changes in the density of firing positions, noncombatants, and other factors must be planned for before and made during mission execution. Understanding the effects of density on the enemy or noncombatant target groups is also essential.

A commander has several alternatives when choosing how to best handle issues related to density:

- **Match density with density:** Neutralize the effects of selected densities by increasing the size of the force or other resources dedicated to the mission. An attacking unit could augment its strength so as to have sufficient men to cover every possible enemy firing position and approach route.
- **Effectively reduce densities:** Take actions that have the effect of reducing the density of selected factors. The number of enemy firing positions that could threaten a friendly force might be reduced:
 - By maximizing underground and building-to-building movement
 - By employing booby traps, chemicals, foam, or other lethal and non-lethal munitions to deny the adversary use of buildings
 - Via thorough planning that avoids particularly dense concentrations of windows, doorways, and other hides.
 - Through the use of obscurants to deny enemy observation and reduce the adversary's situational awareness.
- **Maintain selected densities:** Victory during urban contingencies has often followed an eventually successful attempt to cut off a force in a built-up area. In other words, an isolating action was taken to preclude the enemy from reinforcing or resupplying his urban force and thereby increasing the density of desirable assets on hand.
- **Addressing densities asymmetrically:** There may be ways to mitigate the negative effects of particular densities without addressing them in kind. Superior discipline, training, combined arms and joint cooperation, and leadership will continue to be influential, if not decisive. Gaining the cooperation of PVOs and NGOs can relieve units of noncombatant support tasks that detract from combat operations. Further, NGO and PVO activities that cause the temporary departure of noncombatants from given urban areas can reduce the density of civilians in areas where chances of injury or death are high. Their departure also decreases the likelihood they will interfere with friendly force operations. More active pre-operation coordination with these organizations, such as inviting them to participate in training exercises and simulations, would better prepare both military and civilian agencies for operational contingencies.
- **Capitalize on urban densities:** Innovation may take the seemingly negative environmental factor of high density and turn it to advantage. The same challenges that disrupt friendly force undertakings can overwhelm an enemy. The density of

activity in a city is a natural cloak for surreptitious actions. Changes in routine are less likely to be noticed as urban routine is itself often in constant flux. A friendly force commander can use this latent urban activity to aid his deceptions or shield troop movements.

Urban Intelligence Preparation of the Battlefield (IPB) (Jamison Jo Medby)

The IPB analytical framework works for all types of operations, but in order to remain an effective tool of intelligence it must adapt to the variety of challenges found in all types of terrain. The challenges inherent in an urban area can be sorted into four categories as outlined in the United States Marine Corps urban Generic Intelligence Requirements Handbook (GIRH): buildings, population, infrastructure and underlying terrain. A sampling of their effects includes:

- Buildings increase the density of firing positions and the surface area of a fight
- Infrastructure, that dealing with both physical structures and human systems, can be used as instruments of physical and information warfare. Maintaining an urban area's infrastructure may be necessary during an operation in order to maintain life-sustaining support for the indigenous population.
- Underlying terrain; waterways, hills, and drainage characteristics; all present the same opportunities and challenges as in other terrain types
- People in a city can influence operations by merely getting in the way while going about their daily routines. Noncombatants can actively assist one or both sides. Human beings are the only thinking component of the battlefield; they will tend to act so as to serve their own interests. They can often also be manipulated.

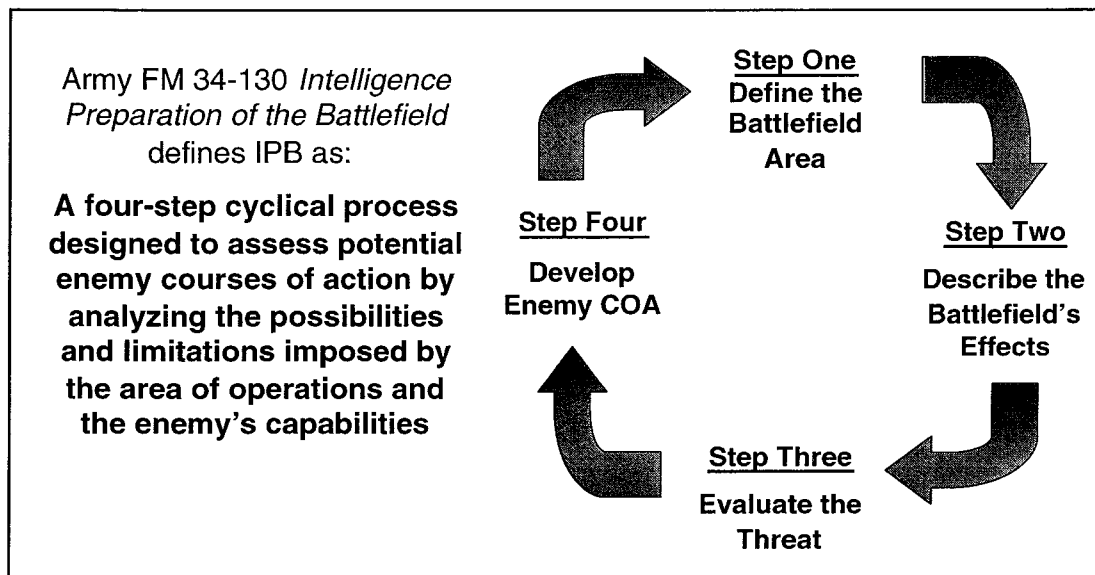


Figure 2.11—The Traditional IPB Process

It is the population that is the focus of this briefing because it has too often been forced into the background. Greater consideration of how population groups and subgroups can influence operations is an essential component of tailoring the urban IPB process.

IPB is a framework for organizing information to help provide timely, accurate and relevant intelligence to the military decision making process (MDMP). It is composed of four steps. The first three are designed to compile information about specific features of the operational area. The fourth step consolidates this information in order to help predict enemy COA.

Consideration of population concerns in steps two and three are especially notable in developing urban IPB:

- **Step 2** (Describe the Battlefield's Effects): traditionally puts population analysis in the "other" factors to be considered when describing the battlefield's effects.
- **Step 3** (Threat Evaluation): usually assumes that a threat must exist. This assumption, to an extent a vestige of IPB's Cold War roots, unnecessarily constrains application of the process during the many urban operations (or components of urban combat operations) in which no threat exists.

The civilian population may very well be the most challenging and mission-significant environmental factor in urban areas. Population analysis should come to the analytic foreground when dealing with urban areas. It should include such components as demographic analysis, cultural intelligence, and media and international actor analysis. Innovative application of the traditional OCOKA analysis (Observation and fields of fire, Cover and concealment, Obstacles, Key terrain, and Avenues of approach) normally used in conjunction with terrain evaluation holds promise.

Population OCOKA			
	Terrain OCOKA	Evaluation of Physical Effects	Evaluation of Information Effects
Observation & Fields of Fire	Hilltop	HUMINT, Restricted use of Weapons	HUMINT, Target Audience
Concealment & Cover	Foliage	Non-combatants prohibit engagement	PSYOP and Deception conceal intentions
Obstacles	Cliff	Non-combatants "get in the way"	Cultural differences impede understanding
Key Terrain	Bridge	Crowd Location	Critical Leader
Avenues of Approach	Open Field	Crowds limit AAs	Audiences provide AA to hearts & minds

Figure 2.12—Applying OCOKA to Populations

“Population OCOKA” can be used to analyze ways that the population can influence both the physical and information components of an operation. For instance, crowds can wittingly or unwillingly provide concealment for an enemy. Unarmed non-combatants were used as cover by militia gunmen during fighting in October 1993 Mogadishu. Similarly applying the procedure to the information realm, consider friendly force use of deception: a particular section of the target audience might be considered as a field of fire for a PSYOP campaign, a campaign seeking to conceal a force’s operational intentions.

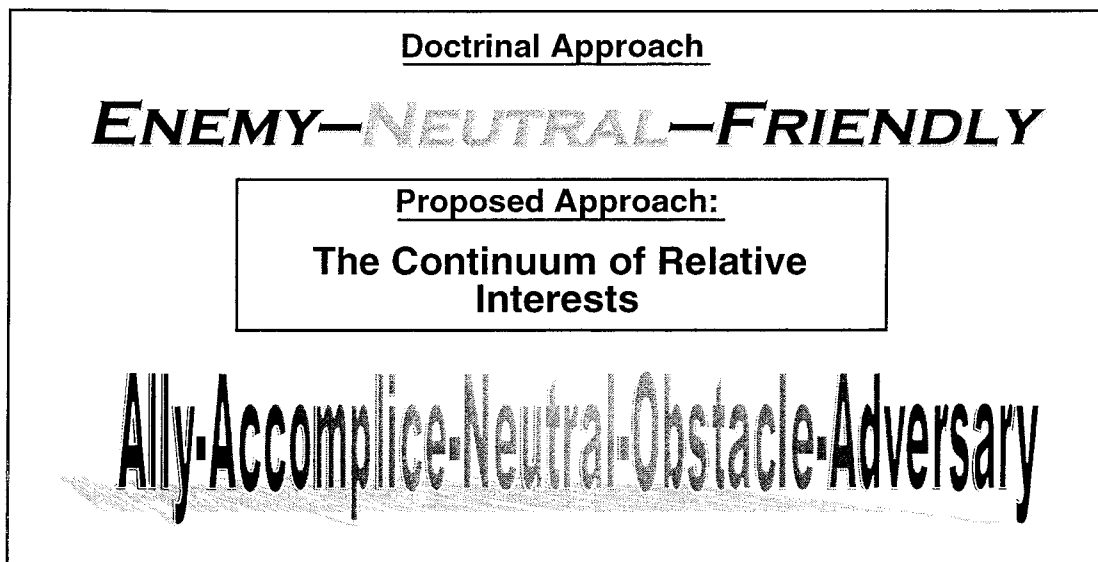


Figure 2.13—The Continuum of Relative Interests

Like IPB's Step 2, Step 3 (threat evaluation) requires a more rigorous assessment of population effects for a force committed to urban contingencies than has traditionally been the case for operations on other terrain. Current threat evaluation techniques suggest putting groups into one of three distinct categories: friendly, neutral, or threat. Such an oversimplification of reality presents several analytical pitfalls, to include developing an "us versus them" mentality inappropriate to the situation at hand or seeing groups as threats that are better categorized otherwise. Components of the population may remain unaligned (neutral), but they may also support one or more sides, shift alliances, or serve the interests of the friendly force and the adversary simultaneously. In order for threat analysis to meet the challenges presented by these population groups, it is necessary to array the groups along a continuum that incorporates the dynamic nature of an urban population's effects on an operation.

This is but a sampling of how the current IPB process can be modified to better support forces undertaking operations in urban areas. Further discussion is available in Jamison Jo Medby's *Street Smart IPB for Urban Operations*. Santa Monica, Calif.: RAND, 2002.

Adaptation During Urban Operations (Scott Gerwehr)

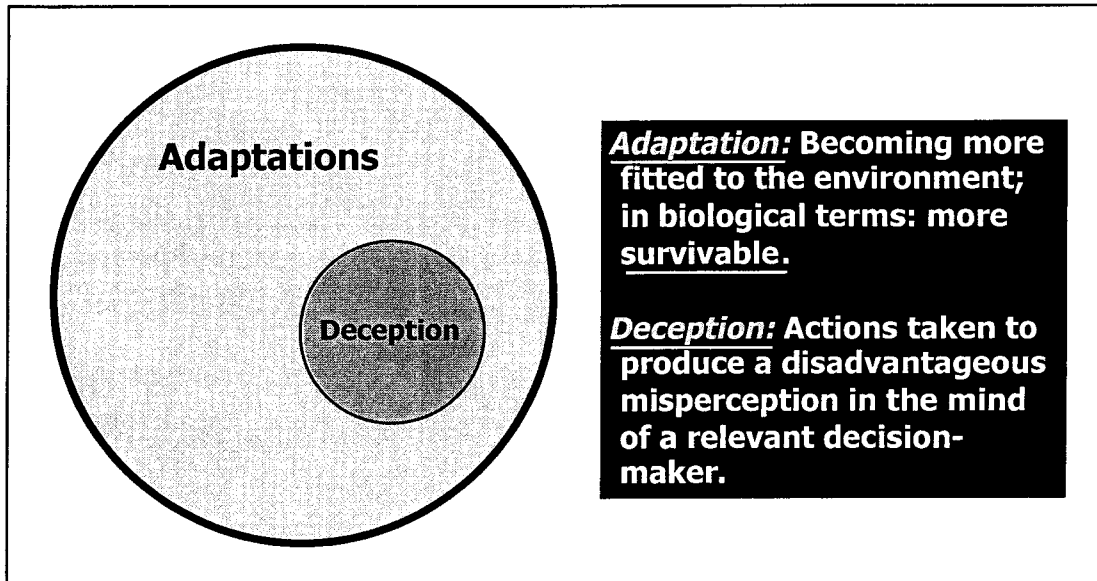


Figure 2.14—Adaptation During Urban Operations

The word “adaptation” means positive change. There are many possible adaptations (speed, maneuverability, communications, lethality, armor, etc.) and many possible effects of such adaptation: from decisive to inconsequential. The nature of urban terrain, its density and complexity, underwrites a hypothesis that the pace and variety of adaptations are increased in urban operations.

Deception is among the most important types of adaptation. Previous RAND work has explored the relationship between urban terrain and deception, concluding that urban terrain facilitates the conduct of deception and amplifies deception effects. Not only is deception seen in virtually every type and on every scale of urban conflict, deception skills and techniques fit the definition of an adaptation: they are acquired, learned, improved, disseminated, and reproduced.

Friendly forces should capitalize on elements of the urban environment that support adaptation in the service of mission accomplishment. The proximity of large numbers of forces and considerable density of means to communicate favors an organization that can consolidate information, process it, and disseminate the result as intelligence or lessons learned. Similarly, capitalizing on indigenous residents’ local knowledge will abet a unit’s more quickly adapting its tasks to the particular demands of local terrain and population.

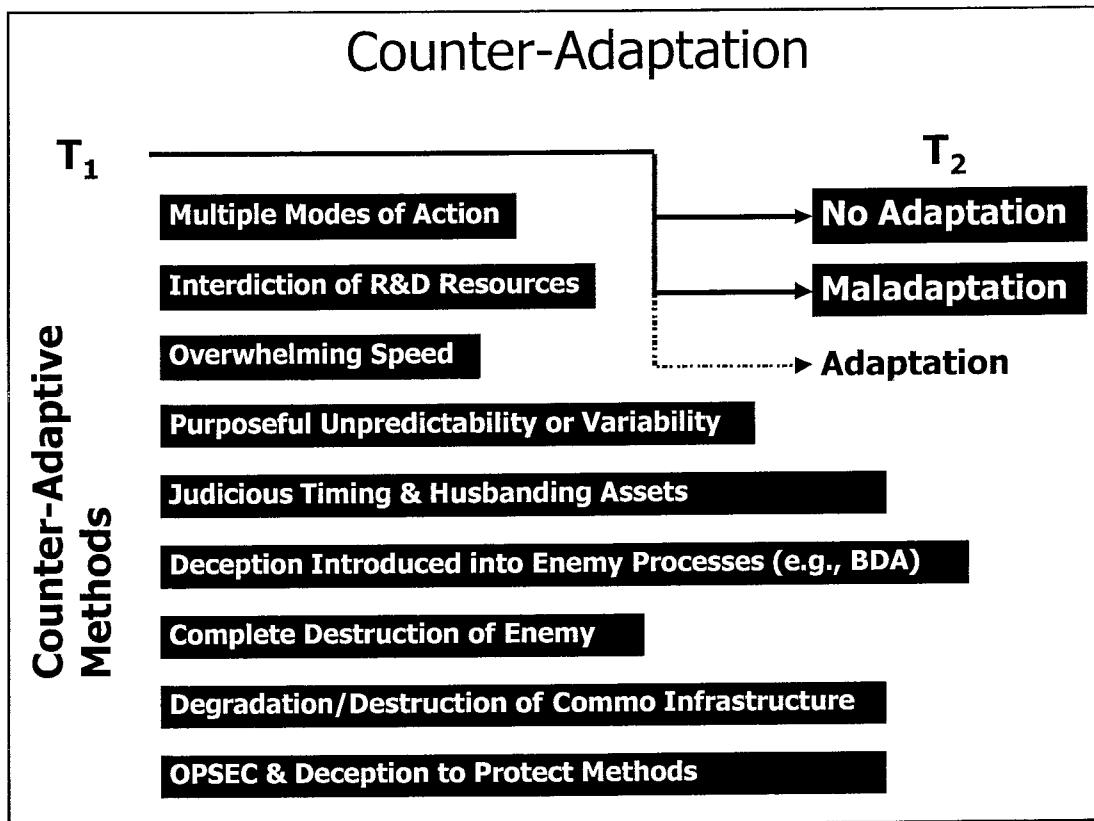


Figure 2.15—Countering Adversary or Noncombatant Adaptation

How can a force use deception and other capabilities to counter or influence the character of an adversary's adaptation? Both in the short and longer terms, positive actions can be taken to cause a foe to (1) fail to adapt, (2) adapt too slowly, (3) adapt inappropriately, or (4) adapt predictably. Whether via deception, speed of friendly force execution, or another means, staff and commanders should capitalize on an urban area's particular suitability for adaptation. Adaptation is an activity, one that can either be turned to a force's advantage or left to use by others. It can be:

- Uncontrolled
- Monitored and predicted
- Guided
- Prevented
- Promoted

The urban environment is known to neutralize many of a technologically superior force's advantages. Managing adaptation may allow that force to restore that favorable imbalance.

Taking a sample from the counter-adaptive methods shown on the left in Figure 2.15, the force with a technological edge could:

- Attack an adversary at many points simultaneously. If the objective is to restore stable government, the friendly force could address shortcomings underlying popular disgruntlement (e.g., lack of food, inequitable distribution of land, and poor medical care) while simultaneously conducting a vigorous psychological operation campaign in conjunction with aggressive direct action against the enemy force. Addressing these many critical points simultaneously presents the leadership of the less capable force with multiple problems, severely tasking or overwhelming its ability to react and adapt effectively.
- Take advantage of its surge capability to operate at a tempo beyond that the foe can match.
- Continuously alter tactics, techniques, and procedures. Technologically superior U.S. forces suffered a tactical setback on October 3-4, 1993 in Mogadishu in part because they employed similar procedures repeatedly. Military forces, even unsophisticated ones, will learn lessons and look for opportunities to employ them. Diversity in tactics and procedures means that the foe's adapting to the last mission is less applicable to the next.
- Neutralizing an adversary's command and control structure. Whether via the removal of a commander, elimination of the opponent's communications capabilities, or overwhelming the enemy leadership with information, denying the foe the resources needed to establish situational awareness and conduct analysis slows both its decision-making capability and the related ability to adapt.

An Operational Level Perspective: Coordinating Urban Internal Security Intelligence, Police, Ground Force, and Special Operations

**Brigadier General Mohammed Majid Al Aitan,
Commanding General, Jordanian Special Operations Command**

How should operational level commanders coordinate special operations, intelligence, police, and ground forces during urban internal security operations? An effective solution involves synchronizing a number of key elements: planning, command and control, the quantity and types of forces available, and the operational concepts to be employed. When planning for urban operations, it is critical to remember that it is a predominantly civilian environment, but one in which the military must be able to deal with a full spectrum of threats that range from civil disobedience to organized terrorism to full combat operations. Citizens fall into several categories: loyalists, people who are against the government, locals indifferent to political ideology, and guests or visitors.

Urban areas present a myriad of challenges for military planners preparing for internal security operations. They must ensure major life support elements such as power and water supply are secure and that capabilities exist to counter any threats to their continued operation. They must be aware of hazardous materials types, quantities, and locations within the urban area of operations. Civil control procedures such as establishment of curfews must be designed to minimize disruptions to normal life to the greatest extent possible. Protecting and maintaining civil authority is also very important; the uninterrupted operation of government services must continue. The media, handled properly, can be a valuable asset; improperly handled, media relations can be a nightmare. A counter-sniper plan is crucial. Plans must include contingencies for shows of force: the time of day, location, and the type of force to be used should all be preplanned to the maximum extent possible. In addition to planning preparations, all elements likely to be involved in the conduct of internal stability operations should train together well before they are committed to such undertakings.

Jordan maintains a twenty-four hour, seven days a week command center that monitors and coordinates all aspects of a particular operation. Intelligence information comes from civilian, military, and police sources into a national intelligence center at which it is analyzed.

The commanding general (CG) of the Special Operations Command assumes command of all military and police forces for the duration of the operation. It is his responsibility to coordinate all operational elements. There are well-established policies regarding responsibilities when the military enters an operation. When appropriate, a formal hand-over between police and the Jordanian military organizations takes place. It is after this event that the CG, Special Operations Command assumes command of the operation. This is part of establishing a clear chain of

command in which all parties know their appropriate roles. This fundamental step is essential to operational success.

Urban stability operations procedures have much in common with other armed forces undertakings. Units need to conduct good reconnaissance and otherwise ensure a continuous flow of accurate information. The number and heterogeneity of civil and military elements supporting an operation makes their coordination far more complex than is the case during many other types of missions. Civilian and military organizations will have to work together to establish search, infrastructure repair, and utility maintenance teams. Evacuation plans can influence supporting organizations over widely dispersed parts of the city; all those tasked in such plans need to be aware of them before execution. All aspects have to be coordinated. The members of every participating agency must clearly understand the established rules of engagement. Nor do the commander's responsibilities stop with the command and control of those forces assigned to mission-related tasks. He must establish contact with and win the trust of relevant community leaders. The ultimate lesson: always handle people with care, for the military, police, other agencies, and the people must all live together after an operation's completion.

Stress and Urban Military Operations: Preparing for It, Dealing with It During Active Operations

CAPT Myron Almond

Overview

Combat stress consists of “adverse behaviors after exposure to combat that threaten individual and unit safety and effectiveness.”¹⁴ Combat Stress Reaction (CSR) is a “normal condition that occurs in normal combatants under abnormal circumstances.” CSR occurs when an individual’s psychological defenses are overwhelmed. Anyone who is exposed to a sufficient number of days in combat or experiences combat of sufficient intensity is likely to have a combat stress reaction and thus temporarily be unable to function effectively. CSR is a normal reaction primarily characterized by changes in behavior.

Stability or support taskings may in some ways replicate the stresses experienced during combat. Rules of engagement or other constraints may preclude soldiers’ becoming involved in events when moral or other standards would normally dictate participation. These pent up emotions may never gain an outlet, unlike the case with combat in which active participation can act to relieve stress (though any such “therapeutic” value rapidly diminishes with increased exposure).

Combat stress has had many labels throughout history. The World War I label “shell shock” had its origins in the belief that the concussion of exploding shells physically damaged the nervous system, causing symptoms we now label as CSR. Other twentieth-century designations included “irritable heart,” “nostalgia,” “soldiers’ heart,” and World War II’s “battle exhaustion.” Treatments for CSR have included evacuating people to hospitals remote from the sounds of front line fighting, employing electric shock therapy, and treating people as far forward as is feasible. Current views regarding combat stress consider it (1) a type of trauma, (2) with predictable effects, (3) that can be managed (not treated; it is not a medical condition). Trauma, “a sudden, unexpected, powerful and dangerous event outside the realm of ordinary human experience,” can occur in many forms during combat.

An urban environment may exacerbate the likelihood of combat stress due to:

- Physical and emotional isolation – Combat units tend to operate relatively independently in built-up areas. Often positions occupied by one or two men are located such that other unit members can not be seen. Individuals are then at risk of losing the physical and emotional support inherent in operations permitting greater visual contact.

¹⁴ Quotations are from CAPT Almond’s conference presentation unless otherwise noted.

- Three-dimensional danger—Threats may appear from any direction, to include above and below a soldier. Uncertainty regarding the adversary’s location, lack of situation updates, and fears of injury due to spalling when munitions strike structures can weigh on a soldier’s mind.
- Delayed or unavailable medical care—An urban environment often makes timely medical evacuation an impossibility. Service members may witness friends die because timely means of evacuation, such as air medical evacuation, is not feasible due to the vulnerability of aircraft during the close quarters combat characteristic of much urban combat.
- Increased feelings of vulnerability—A soldier may perceive himself to be more vulnerable to injury or stress as urban operations continue. This tends to occur when an individual’s psychological defense mechanism begins to break down.

Symptoms, Risk Factors, Prevention, Treatment and Prognosis for Acute CSR

Symptoms

Observing an individual’s behavior is the best way to identify CSR. This is somewhat complicated as the symptoms of CSR are in many ways identical to normal reactions to combat. Symptoms of CSR may be behavioral, emotional, physical, cognitive, or any combination of these. They include (Those shown in bold italics are among the normal responses to combat.):

Table 2.1
Human Responses to Combat

Behavioral	Emotional
• Change in appetite • Change in sleep pattern • Neglects hygiene • Loss of interest in pleasurable activities • Hyper vigilance • Degraded combat performance	• Shock, numb feelings, disbelief • Anger • Grief, sadness • Helplessness • Irritability
Physical	Cognitive
• <i>Sweating</i> • Rapid heart rate • Rapid breathing • Elevated blood pressure • Nausea, diarrhea • Dizziness	• Confusion • Poor concentration • Difficulty making decisions • Memory problems (including amnesia) • Nightmares, “flashbacks,” intrusive thoughts • Suicidal or homicidal ideation • De-realization, depersonalization

The difference between normal combat anxiety and CSR is that with CSR the symptoms:

- Interfere with functioning
- Exceed those of peers
- Persist long after exposure to the trauma.

Risk Factors

There are many risk factors that increase the likelihood of CSR in a unit or its individual members. These factors can be generally categorized as environmental, operational, and individual:

Table 2.2
Factors Influencing CSR Development

Environmental/ Situational	• Weather, terrain, noise • Combat intensity and duration • Viewing wounded • Suffering a wound • Surprise attack • Nuclear, biological, or chemical attack/threat • Inadequate food • Poor sleep; fatigue; inadequate rest • Poor field living conditions/sanitation • Infectious disease (presence and threat) • Well equipped and trained enemy with high morale and motivation
Operational/ Organizational	• Poor leadership • Poor unit cohesion/morale (small unit) • Uncertainty about mission or role • Lack of home support for mission • Lack of/inaccurate information • Poor training (for combat and field living) • Outdated equipment (lack of confidence in the equipment capability) • Unpredictable deployment schedule (due to dynamic, unstable international situation) • Frequent turnover of unit personnel
Individual	• Age (very young or older) • Single/divorced • Lack of commitment to the mission • Worry about family/financial stress • Poor physical fitness • Medical/mental illness • Personality characteristics • Recently assigned to the unit • Lack of training and experience

The Risk of an Individual Developing CSR Increases As:

- The number of risk factors increases
- The severity of risk factors increases
- The exposure to risk factors increases.

Though individuals will vary in their susceptibility to combat stress reaction, any individual is at risk.

Prevention

CSR is not fully preventable. However, the best way to mitigate CSR is with realistic, frequent training. Individuals who have experienced instances of shock, surprise, deprivation, and other conditions inherent in active operations are better prepared to deal with similar experiences during subsequent operations. Teaching them about the symptoms, means of prevention, and how buddies can help to manage CSR should be a part of this training. Ensuring soldiers are physically fit and that they receive the best possible food, shelter, and sanitation are also important. Adequate sleep (a minimum of four hours) and allocation of leisure periods further assist in preventing CSR. Another tool for mitigation is cycling units in and out of combat. This protects individuals from prolonged, sustained exposure to many of the stress factors noted above. Individuals' episodic exposure to combat in Vietnam may be one reason CSR rates were relatively low in that conflict. Other methods of prevention include: better training of small unit leaders; maintaining an active ("busy") training schedule; viewing relevant films; ensuring families are cared for; disseminating accurate information (keeping soldiers informed); and promoting unit integrity, morale, cohesion, and discipline.

Leaders gain much by demonstrating that they care for their soldiers' welfare and by taking active steps to build robust teams. Provision of modern equipment and having leaders live with and frequently visiting their subordinates are additional means of preventing instances of CSR. New personnel should be rapidly and effectively integrated with other team members. Finally, unit members with psychiatric diagnoses are at higher risk; they should not be deployed.

In the future, it may be possible to further reduce the likelihood of combat stress reactions through biological screening and the selective use of beta-blockers.

Treatment

As noted, combat stress reaction is a normal reaction to prolonged or extreme exposure to stress. Given sufficient exposure to risk factors, a unit will suffer CSR regardless of how diligent leaders have been in their efforts to prevent it. While some psychological diagnoses can be associated with CSR, it must be remembered that CSR is not a medical or psychological diagnosis. Acute cases ideally should be treated at or close to the unit. "On scene management" can literally save the lives of stress casualties as well as those of their fellow unit members. In addition, such management increases the chances that subsequent "therapy" will be more effective.

The “BICEPS” technique has proven an effective on scene management procedure. Brevity, Immediacy, Centrality, Expectancy, Proximity, and Simplicity combine to provide near immediate and beneficial aid:

Brevity:

- Critical incident stress debriefing should take two to three hours
- Rest and replenishment should be managed so as to return the soldier to duty within two to three days
- Military commanders should expect individuals to rapidly return to duty

Immediacy

- Treat as soon as condition is recognized and the situation permits
- Begin with aid by buddies, chaplain, or corpsman

Centrality

- Treat CSR victims in one area, not as part of a medical unit, to avoid victims being labeled as ill
- Treatment may occur in their unit or near (but separate from) battalion aid stations or field hospitals
- Encourage service members to continue to consider themselves as war fighters, not patients
- Soldier or marine chain of command should remain directly involved in recovery and return to duty
- Unit members should visit or send messages that inform service member that he is needed and wanted back

Expectancy

- Instill message that the service member is having a normal, acceptable and temporary reaction to stress and that he or she will soon return to duty
- Small unit leader encouragement is the single most critical factor

Proximity

- Treat near the member's unit
- Maintain close association with unit. CSR exposes an individual to two elements in tension with each other: (1) The member is driven by a strong desire to seek safety and avoid an intolerable environment, and (2) the soldier does not want to let his comrades down; he wants to return to his unit. The former begins to dominate when a soldier or marine begins to lose contact with his unit during CSR treatment. He will begin to believe he has failed his fellow unit members and that they have already rejected him.

Simplicity

- Avoid drugs or psychotherapy
- Provide food, sleep, shower, and a clean uniform
- Enforce a routine, e.g., exercise, work detail, or occupational therapy
- Maintain a military environment to ensure discipline

Prognosis for Those Treated for Combat Stress Reaction

- Of those treated near their units, 65–85 percent return to duty in one to three days
- An additional 15–20 percent of those treated return to duty in one to two weeks
- Only 5–10 percent are evacuated, most of whom have problems in addition to CSR. Those evacuated are unlikely to return to duty. Many will probably be permanently disabled.

Individuals suffering and recovering from a combat stress reaction are no more likely to experience a reoccurrence than other unit members. They are, in fact, less likely to again have a combat stress reaction than inexperienced unit replacements.

Conclusion

Combat stress can affect any service member, even during operations in which the threat of combat is fairly remote. It is a normal reaction to intense and/or prolonged exposure to combat. While all combat environments contain stressors, urban environments have distinct stressors that may impact service members in a unique way. The urban environment also provides a greater number of opportunities in which factors known to induce or enhance combat stress can influence an individual. Properly conducted stress inoculation training, non-medical management, and good leadership are among the keys to preventing and properly addressing combat stress reactions.¹⁵ It is also critical that individual unit members are able to identify and treat the symptoms of CSR.

Sources for Further Study

- DoD Stress Awareness Web Site:
<http://www.defenselink.mil/specials/stressawareness/index.html>
- Office of the Special Assistant for Gulf War Illness, Medical Readiness, and Military Deployments Web Site:
http://deploymentlink.osd.mil/lessons_learned/stress_issue.shtml

¹⁵ There is some evidence that overzealous stress inoculation training can have the reverse of the desired effect, the result being that it increases the negative effects of anticipating pending combat rather than better preparing individuals better to manage exposure to fighting.

- FM 6-22.5 *Combat Stress*, 23 June 2000
<http://155.217.58.58/cgi-bin/atdl.dll/fm/6-22.5/fm6-22.5.htm>
- FM 8-51, *Combat Stress Control In A Theater Of Operations Tactics, Techniques, And Procedures*
<http://www.vnh.org/FM851/TOC.html>
- Field Manual 22-51, *Leaders' Manual for Combat Stress: Combat Stress Behaviors*, Chapter 2: "Stress and Combat Performance"
<http://www.vnh.org/FM22-51/02FM2251.html>
- "Russian Troops Face 'Chechnya Syndrome'"
<http://www.ichkeria.org/a/2000/8/peo0608-en20513.html>
- Russian Army Lessons Learned from the Battle of Grozny, 1994–1996
<http://www.grenadier2.dreamwater.com/chechnya.html>
- Lieutenant Colonel Timothy L. Thomas, "Urban Combat Lessons Learned"
<http://www-cgsc.army.mil/milrev/English/JulAug00/thomas.htm>
- Timothy L. Thomas, Foreign Military Studies Office and MAJ Charles P. O'Hara, "Combat Stress in Chechnya: 'The Equal Opportunity Disorder'"
<http://call.army.mil/fmso/fmsopubs/issues/stress.htm>
- David Grossman and Bruce K. Siddle, "Psychological Effects of Combat"
http://www.killology.com/article_psychological.htm
- Ralph Peters. "Our Soldiers, Their Cities." *Parameters* (Spring 1966)
<http://carlisle-www.army.mil/usawc/Parameters/96spring/peters.htm>
- Henry Waters, "Medical Implications of Combat in Cities," April 1974.
- Roy Grinker, "War Neurosis in North Africa."
- Roy Grinker, "Men Under Stress."

Lessons Learned: Operation “HUE CITY,” 1968

Mr. Nicholas Warr and Mr. Scott A. Nelson

Overview

The two speakers served together in C Company, 1st Battalion, 5th Marine Regiment (hereafter cited as C/1/5) during its commitment to urban combat in 1968 Hue. Nick Warr was a rifle platoon leader, Scott Nelson his company commander.

The Challenges of Urban Combat

Lack of Training

U.S. marines in Vietnam had been patrolling in the jungles from 1965 to January 31, 1968. All that changed the night of January 31st when the North Vietnamese Army (NVA) seized Hue city. Nick Warr’s platoon had a collective training experience of five hours in MOUT instruction. The marines were inadequately prepared for the brutal city fighting they were to conduct, their previous training having focused primarily on jungle operations.¹⁶ While Scott Nelson was a company commander, he had only been through the standard junior officer’s platoon level training before arriving in Vietnam. He felt himself unprepared for his responsibilities and emphasized the need for better training and readiness to conduct actions across the spectrum of MOUT operations.

¹⁶ Scott Nelson email to Russell W. Glenn, Subject: “Summary of conference presentation,” dated June 28, 2001.

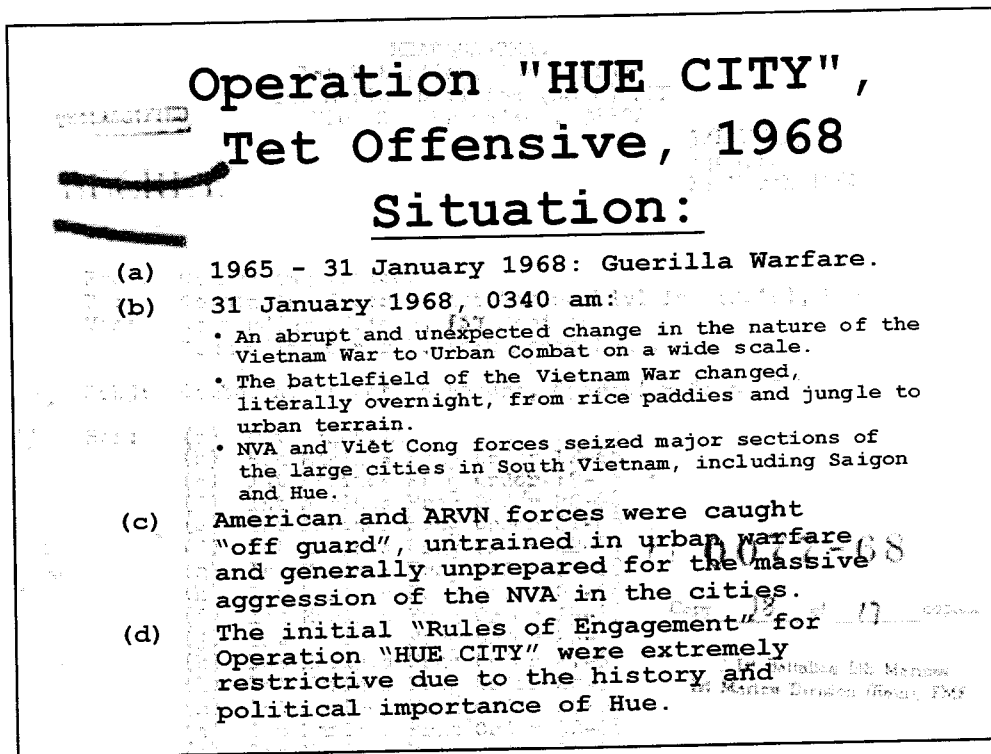


Figure 2.16—Operation "HUE CITY," Tet Offensive, 1968

Command and Control

C Company, 1/5 Marines lost two of its three platoon commanders during the fight for Hue.¹⁷ A Company's commander, executive officer, and much of the remaining company headquarters became casualties, resulting in the unit being ordered to the battalion rear area for reorganization. The loss of those leaders rendered the organization combat ineffective and delayed the advance of the remainder of the battalion. Staff sergeants assumed responsibility for platoons in such instances; privates first class (PFCs) became squad leaders. It is essential to train junior personnel to execute the tasks associated with unit leadership and to keep all men informed regarding the tactical situation, intelligence, and other pertinent factors.

Intelligence

Elements of the Army of Vietnam's (ARVN) 3rd Airborne Battalion had been fighting on the same urban terrain on which C/1/5 attacked on February 3, 1968. No direct exchange of intelligence

between Vietnamese and U.S. leaders regarding enemy dispositions took place, nor did the 1/5 Marines battalion headquarters pass any such information from the U.S. allies to company level. Similarly, the U.S. Army's 101st Airborne Division was west of Hue as a blocking force, but to the presenters' knowledge there was very little information passed between the marines and soldiers. No marine reconnaissance units were committed to determine the situation in the zone of attack prior to C/1/5 Marines' commitment on February 13th.



Figure 2.17—M48 Tank in Hue, 1968¹⁸

Tactics and the Use of Firepower

The marines could call in a torrent of external fire support during their operations in the jungle. In the city, by contrast, radios were severely limited in range and the use of large caliber fire support was limited by U.S. rules of engagement in the battle's early days. Air support was often unavailable due to poor weather thereafter. Marines were initially ordered not to use high explosive weaponry to capture enemy positions in an effort to save the historically significant city of Hue from total destruction. This prohibition cost many marines their lives and was soon abandoned by those fighting in the city.

To overcome artillery, aviation, and mortar fire support limitations, the men of C/1/5 utilized infantry and armor in combination. A four-man infantry fire team would move cautiously down

¹⁸ C/1/5 Marines had five officers at the beginning of its operations in Hue, a first lieutenant company commander, three platoon leaders, and an artillery forward observer. Nicholas Warr email to Russell W. Glenn, Subject: "RAND summary," dated August 8, 2001.

a street toward an objective building. When they signaled that they were in a position to begin the assault, a M48 tank or an Ontos (a small, lightly armored vehicle with six 106-mm recoilless rifles atop it; see photograph below), would race forward along the route just traveled by the infantry.¹⁹ The vehicle would fire into the building, the infantry rushing forward immediately afterward while the enemy was still recovering from the blast. As the infantry cleared the building the vehicle would quickly move to a more secure position from which to prepare for the next assaults. The tank provided the firepower needed by the infantry while the infantry provided the security needed by the marines in the tank or Ontos.

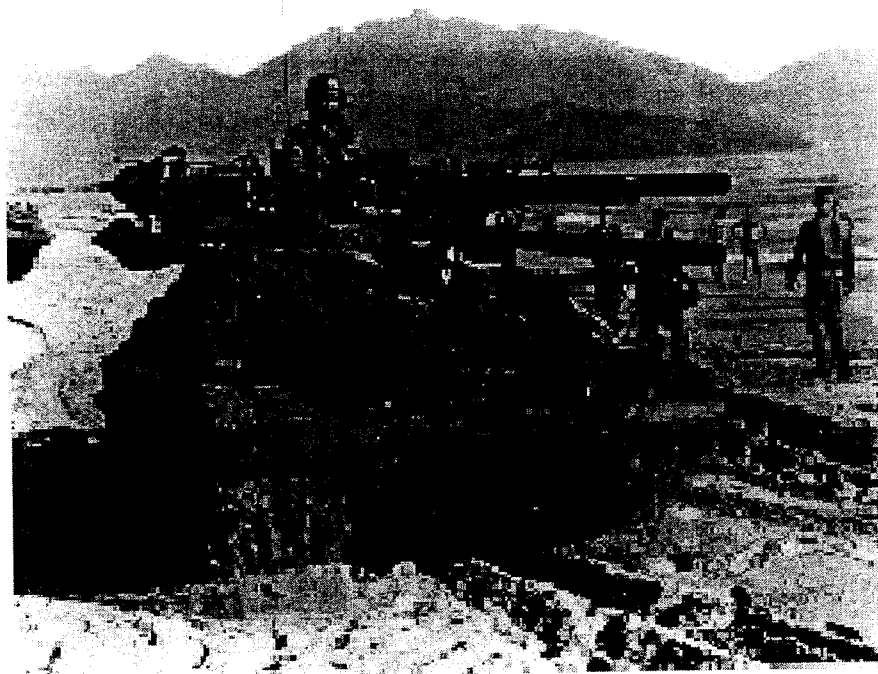


Figure 2.18—Ontos

Another effective use of combined arms involved the teaming of a tank and an Ontos. One vehicle would move while covered by the fire of the other. The differences in size and mobility, coupled with the excellent firepower (90-mm main gun on the tank, the six 106-mm recoilless

¹⁸ Photograph of M48 tank in Hue from <http://www.usmc.mil/historical.nsf/74d6bec733d8206f852566a40052f81f/335ee1cc80215e368525663d00503fae?OpenDocument>

¹⁹ Ontos photograph from <http://www.usmc.mil/historical.nsf/74d6bec733d8206f852566a40052f81f/335ee1cc80215e368525663d00503fae?OpenDocument>.

rifles on the Ontos) made this an excellent pairing. However, as the vehicles tended to attract enemy rocket fire, dismounted infantry in their vicinity were at considerable risk.²⁰

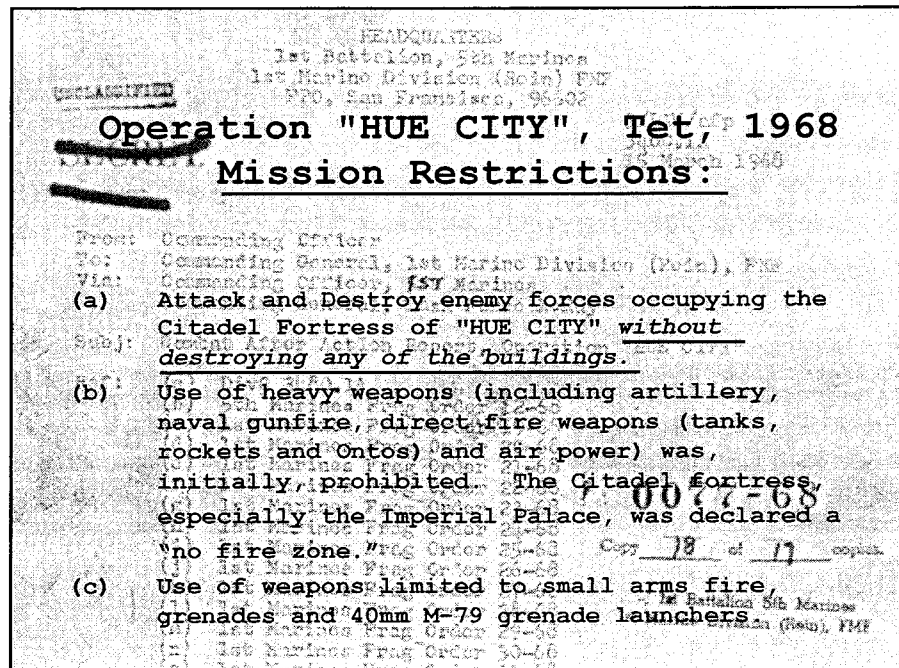


Figure 2.19—Restrictions on C/1/5 Marines' Use of Firepower

As noted, the limitations placed on the use of firepower were thought to have significantly constrained operations and were a significant element in the high casualties suffered by C/1/5 Marines. The C Company marines, for example, were not allowed to fire on the Imperial Palace in the Citadel until 26 February when demolitions were used to open the wall of the then-abandoned palace. A force should have the capability and authorization to apply overwhelming firepower with great precision in order to destroy a specific target or target area but not the entire city. This would have the added advantage of avoiding the "two-edged sword" effects of firepower. Rubbling a city may kill the enemy, but it also limits friendly force mobility while providing excellent firing positions for the enemy. Better munitions would help to mitigate a second "two-edged sword" effect: MOUT fighting is typically very close-quarters combat and often you are firepower limited because of "danger close" considerations. Greater precision and the ability to control weapons effects would permit reduced danger close distances.

Use of Chemical Munitions and Smoke

²⁰ From "Lessons Learned, Operation "HUE CITY," 5.

CS gas had a dramatic effect on the enemy. The 1/5 Marines had advanced only four blocks at a cost of fifty percent casualties during the February 13–25 period of heavy fighting. (As the zone of attack was also four blocks wide, the marines thus took sixteen blocks in this two week period.) Toward the end of that period, Nick Warr noticed some fresh marines sitting on large black boxes. He asked what the boxes contained and was informed it was a new weapon that launched CS canisters (designated the “E-8 Gas Launcher”). After an initial failed attempt, 1/5 Marines successfully blanketed a several block area with CS gas on February 25th. They advanced the following morning and, without a single casualty, secured an additional twelve city blocks that had been abandoned by the NVA. Many hundreds of marines were saved through the use of this weapon, but the use of chemicals during military operations was, and continues to be, contentious.

During an effort to medically evacuate a downed comrade, a marine mule driver became a casualty himself.²¹ His vehicle continued to move across a street after he was struck by enemy fire, coming to rest in the open with the incapacitated driver still aboard, unable to evacuate himself. Several of Nick’s platoon members volunteered to go out and get the driver. The platoon threw smoke grenades into the street and adjacent intersections. The marines darted out and retrieved the driver without loss.²² Nick emphasized that he would have made greater use of smoke had it not been in such short supply during the fighting for Hue. It is especially important that smoke be available when ROE constrain the use of supporting artillery or aviation fires.

Miscellaneous Additional Observations

- Marines need to be trained to demonstrate initiative, to size up a situation and make decisions on their own. The urban environment is not one in which a man can simply follow orders.
- Everyone on the urban battlefield needs to be part of the intelligence collection process, not only those designated as intelligence personnel or others at headquarters processing the incoming material.
- Today’s training programs and facilities are much better than those that existed in 1968. MOUT training complexes are good, but they need to be expanded in size and complexity.
- Allowing the use of approved chemical weapons, perhaps “smart” chemical capabilities, would be a valuable benefit for U.S. forces during future urban operations.
- Knowledge of the overall plan must be disseminated down to the rifleman level. Casualties are so heavy and come so quickly during urban fighting that junior personnel will quickly find themselves leading platoons and companies in a MOUT fight.

²¹ A “mule” was a golf cart-sized vehicle with a flatbed rear used for transporting casualties and supplies.

²² The mule driver was already dead.

- Generally, not much happened after dark during C/1/5 Marines' fight for Hue. Marines were not trained to fight at night in 1968, nor had the company conducted any night attacks. However, during one evening Scott Nelson ordered a reinforced squad to conduct a night action. The approximately fifteen men moved across a street and occupied a three-story building unopposed. As daylight broke, the marines conducted a "turkey shoot" as the NVA moved in the open, the enemy thinking they would be able to reoccupy the buildings they had vacated the night before.

Brcko: Crucible for Peace in the Balkans

Ambassador Robert W. Farrand

Supervisor of Brcko and Deputy High Representative for Bosnia and Herzegovina

Overview

The 1995 Dayton Accords were drafted to stabilize and resuscitate Bosnia-Herzegovina after years of civil war and ethnic cleansing. The Accords left three standing armies in the region, those of the Republica Srpska (Bosnian Serbs), Bosnian Croats (Orthodox Catholics), and Bosniacs (Bosnian Muslims).

Brcko is a vital linchpin for any lasting settlement in Bosnia-Herzegovina; as Brcko goes, so goes the country. Tension is high due to the combustible mixture of ethnic commingling (both historic and that “Solomonically” mandated by Dayton), recent memory of awful bloodshed, Brcko’s high international profile, and the city’s strategic location. The map below demonstrates the geographical aspect of this strategic element. Two large segments of Bosnian Serb territory (shown in the lighter shade) are pinched down to a narrow three-mile neck in the northeastern portion of the country. Brcko sits astride that bottleneck: those that govern the city determine whether the Bosnian Serb entity remains linked or is separated at that point.²³

²³ Map from http://www.lib.utexas.edu/maps/europe/bosnia_herzegovina_pol97.jpg, accessed August 9, 2001.



Figure 2.20—Bosnia-Herzegovina After the Dayton Accords

In addition to linking the two major sections of Republika Srpska, Brcko also:

- Stands on the Sava River and is one of the last deep water ports in the region
- Has one of the two existing north-south rail lines between Bosnia-Herzegovina and Croatia passing through it
- Was itself the scene of extensive ethnic cleansing by Bosnian Serbs, meaning that a solution here can illustrate that a solution is possible for the country.

After Dayton, the fate of Brcko was left to a U.S.-brokered process of arbitration. A year of arbitration was unable to generate a solution acceptable to all three sides. Given how critical Brcko was seen to be for any lasting peace, it was decided that an international supervisor would be named to take direct control of the city and oversee its renewal. Enter Ambassador Farrand.

Ambassador Farrand had four tasks as Supervisor of Brcko, the accomplishment of which was to be attained in a “peaceful, orderly, and phased manner:”

- **Restore individuals’ freedom of movement across “entity” lines within Bosnia-Herzegovina:** This was a non-trivial matter as much had been done internally to segregate the three groups of concern. License plates assigned to Bosnian Croats,

Bosnian Serbs, and Bosniacs identified a vehicle owner's ethnicity, provoking murderous attacks when a car or truck from one group had the temerity to enter another "entity" area. The solution arrived at by the international community was to issue new plates using only those characters seen in both Latinic and Cyrillic alphabets. It took a year and a half to accomplish this.

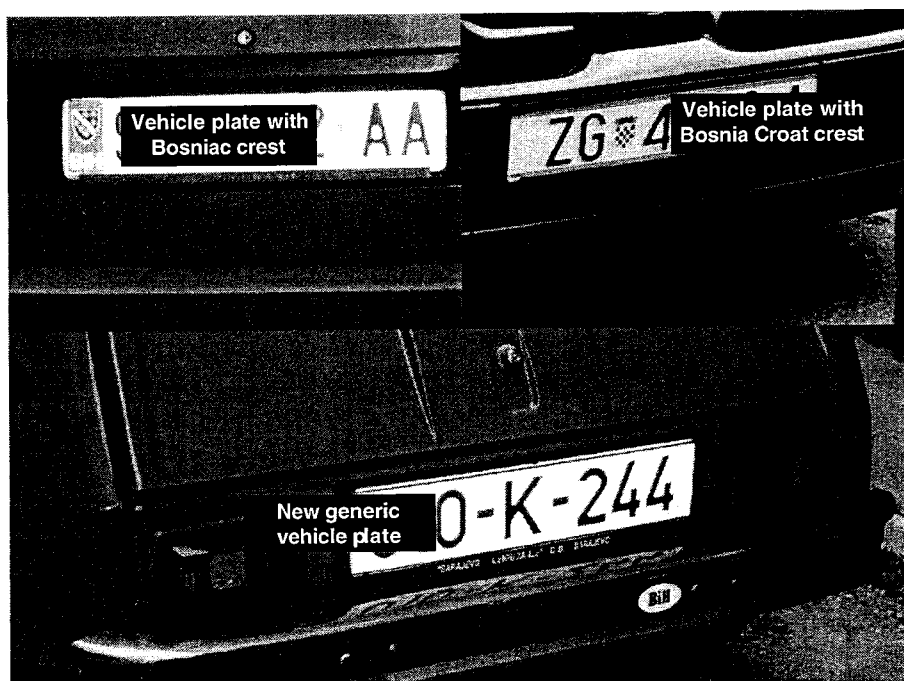


Figure 2.21—License Plates Denoting Vehicle Owner's Ethnic Background (Top) Were Replaced by Generic Tags (Bottom)

- **Return of refugees to their homes of origin:** The Bosnian Serbs destroyed something on the order of 9,000 Bosniac and Croat homes in Brcko and virtually eliminated the Bosniac and Croat population of the town. [Brcko was 55 percent Bosniac with the remaining population roughly equally Croat and Serb before the cleansing. After the cleansing the city was 98 percent Bosnian Serb.] Restoring displaced members of the population to their pre-war homes was seen as a critical test of Dayton's legitimacy and that of the Brcko Supervisor. The Bosnian Serbs repaired a hundred or so homes in selected locations and inserted Serb families as "biological blockers" to the repatriation effort. Croat and Bosniac returnees at first felt safe occupying only those areas in the Stability Force (SFOR) zone-of-separation. Eventually, after months of carefully calibrated return, the Supervisor authorized Bosniac families to flow around the "biological blockade" of Serb families in tight groups. Thereafter, ironically, SFOR had to protect the Serb families from harm.

- **Institute and oversee free and fair elections (for judges, city administration officials, and city legislators):** The goal was to create multiethnic municipal bodies, most prominently the police force, with representation being proportionate to each of the three groups' electoral results. The single most important objective of political and military actions was the return of the rule of law. Fair elections were a crucial component in the process of achieving this end. Until this was done, any initiatives would lack legitimacy, resultant structures would be susceptible to collapse, and the threat of renewed armed hostility would continue to hang over the city. As a civil police force and judiciary waxed in strength and trustworthiness, SFOR was able to step back and lower its profile. However, both the SFOR and international political representatives had to remember that the new civil structure would require support and oversight for an extended period.
- **Restore/revitalize the economy:** This task was not achieved. Ambassador Farrand estimated that 45–50 percent of the Bosnia-Herzegovina economy was “black” (illegal) at the time of his departure, another 30–35 percent “gray,” and less than 10 percent “white.” One example of a good idea turned sour is the “Arizona Markets”, a Bosnian Croat-controlled bazaar set up in 1996 by the Implementation Force (IFOR). At first the Arizona Market served its goals of stimulating the local (to include Brcko) economy and cross entity contact. Since these early successes, however, the market has grown like a cancer. It is now largely unregulated. In addition to legitimate goods, the market harbors brothels and provides a conduit for all manner of illicit products (to include smuggled cigarettes, alcohol, chocolate, and, increasingly, narcotics).

Observations

Better international civil-military linkages are essential during peace operations. Each community must understand how the other thinks and works. There should also be a sense of being on the same team, a recognition that civil and military approaches and ways of operating will differ for good reasons. There is an unquestioned need for a cross-cultural school to provide better training in this regard. The National Defense University, the service war colleges, or a similar institution should develop a course of instruction with the objective of greatly increasing mutual understanding between civilian and military personnel who will later work together. Attendance at such a school needs to be perceived as career enhancing for military and civilian attendees alike if it is to succeed.

An illustration of the benefits to be reaped from better civilian-military links can be seen in an example involving refugees returning to Brcko. A group of thirty or so Bosniac families were coming back to a neighborhood that the Serbs hotly contested. Human intelligence (HUMINT) reports provided warning that some of the Serbs were arming themselves with small arms and rocket-propelled grenade launchers. The Supervisor therefore informally requested that SFOR adjust its patrolling patterns so as to interdict any potential renewal of violence. Routine and

cooperative linkages of this sort prove invaluable in the field. They should be practiced and perfected before deployment.

HUMINT is critical in peacekeeping operations. HUMINT can be gathered in manners as varied as sharing a drink at the local watering hole, paying informers, via unsolicited messages passed in the dead of night, or from interviews with members of international non-governmental and private volunteer organizations (NGOs/ PVOs). Successful HUMINT operations require mixing with noncombatants. This involves a force protection risk for the military, but HUMINT is unlikely to be achieved in an atmosphere where friendly personnel are in full combat attire and standing behind protective wire barriers.

Cultural intelligence is also absolutely essential. HUMINT is critical to successful peace operations, but so is an accurate understanding of local thinking. What are the interests and intentions of various factions? How is history understood (or misunderstood) by various sides? How will each side perceive events as they unfold? Cultural intelligence is key for crafting effective civil affairs, public affairs, and psychological operations. Moreover, a lack of cultural awareness may significantly reduce the effectiveness of any accord or agreement between warring factions.

Don't view peace operations as a temporary assignment. Prepare to stay until the state/entity is once again viable and capable of governing. This means not simply contemplating a long haul, but rather planning for it. Public discussion of pulling out (e.g., during Congressional debates or testimony) sabotages peace efforts of operators on the ground. As a side note, the threat of "eroding skills and readiness" is overstated. While there are admittedly some skills (e.g., firing the MLRS) that cannot be practiced while committed to most peace operations, there are new and important skills being acquired. The acquisition of such skills will surely prove valuable if we believe the hypothesis that urban deployments are likely to increase in frequency.

In short, adaptive and coordinated actions by civilian and military personnel, each with a well-informed current intelligence picture, are vital to the longevity and effectiveness of any agreement. Peace accords are often drafted far away from the point of discord and by individuals with a less than perfect appreciation of conditions on the ground. Events may overtake an accord before it is signed. Virtually any task embedded in the accord will be far more easily stated than completed. Parenthetically, ambiguity in an accord may actually be a good thing. It allows flexibility. The international implementers on location can then fill in gaps as dictated by the demands of the moment.

Restoring the rule of law in all its aspects should be at the top of the list of objectives. A trustworthy, reliable, and multi-ethnic police force emboldens a frightened and traumatized public to believe in newly formed governmental structures. More than the police, rule of law also involves revising and harmonizing basic laws and establishing effective courts and prisons.

Final Points

- Marshall Tito ordered that every Yugoslav house be armed. Unfortunately they were. However, PROJECT HARVEST has been moderately effective in significantly reducing the numbers of arms in the hands of residents.
- Television and media influence is everything! Ignoring or mismanaging the media is a surefire way to undermine a peace. Extremist elements on all sides will use inflammatory broadcasts to appeal to their supporters and set the populace against you.
- Bosnian Serbs positioned the elderly, women, and children at the front of any crowd during demonstrations. They served as human shields and ensured that any resort to force would lead to very bad press for peacekeepers.
- Peaceful and productive ethnic commingling (as measured by intermarriage, for example) was extensive in Brcko before the war, undercutting the myth that there have been five hundred to a thousand years of unceasing hatred between the primary demographic groups.
- Organized crime is a problem if left unregulated. Organized criminals, especially pimps, are not willing to die for their trade. The multitude of demands on military forces means that organized crime cannot be eliminated during peace operations, but it can be regulated. This is an approach that ought to be given far more consideration. For example, resisting imposition of taxes on merchants in the Arizona Market because it appeared to legitimize immorality was a breathtakingly stupid decision on the part of the international community.
- Factors favoring the peacekeepers during peace operations:
 - Opponents have no positive program, only contrary, defensive positions
 - The vast majority of noncombatants want peace and stability
 - The peacekeepers have considerable resources on which to draw (both national and international).
- Factors favoring those opposing peace efforts:
 - Intimate knowledge of the terrain
 - Superior understanding of the culture, the language, and the population
 - Opposition tactics are virtually without ROE. They will “play the crease,” inflaming and poking at perceived coalition force weaknesses (e.g., the media)
 - Longevity. The opposition knows it will be there long after peacekeepers are gone.

REMEMBER

**IT IS BETTER TO LET THEM DO IT IMPERFECTLY
THAN TO DO IT PERFECTLY YOURSELF
FOR IT IS THEIR COUNTRY, THEIR WAY,
AND YOUR TIME IS SHORT.**

*"PILLARS OF FIRE"
T.E. LAWRENCE*

Figure 2.22—The Voice of Experience

The Corporals War

Major Douglas Chalmers, British Army²⁴

Overview

This presentation has three primary components:

- An introductory discussion regarding the professional culture of the British Army
- A synopsis of the military and political situation in Northern Ireland (NI)
- How the British Army prepares to meet the requirements of its mission there

British Army Culture

The British Army has participated in over sixteen operations during the last forty years. In the past five years alone, for example, the British Army has sent soldiers to Northern Ireland, Kosovo, and Sierra Leone. Only four of these deployments have involved large-scale commitments of forces conducting warfighting operations. The combined result of these factors is that (1) most of the service's officers and professional noncommissioned officers (NCO) have had at least one operational tour, and (2) the operational experience base for serving soldiers is predominantly one founded on small unit patrolling during peacekeeping and peace-enforcement operations.

The British Army firmly believes in the value of decentralized and timely decision making as embodied in the service's concept of "mission command." Trust establishes the foundation upon which mission command functions. This trust encompasses the commanding officer's role as well as all echelons within his command. British battalion commander powers of command, for example, are somewhat more sacrosanct than those of his American counterpart. One of the British commander's responsibilities is to serve as guarantor of his regiment's lineage and reputation. Because of this, those above him normally will not meddle with his organization nor impose changes to his unit's habitual task organization.

British rank structure is also significantly different than that in the U.S. Army. A British one-star brigadier commands a brigade, rather than a colonel as is the case in the American army. British brigades are perceived as independent commands from the perspectives of both deployment and maneuver to a greater extent than in the U.S. Army (in which a brigade tends to deploy as part of a division). Majors command companies in the British Army and command tours are a minimum

²⁴ This briefing does not represent official United Kingdom or British Ministry of Defense policy. It is instead based on lessons learned and the personal views of Major Chalmers based on his experiences during numerous operational assignments.

of 24 months. The British Army battalion S-3 (operations officer) is a captain and his role is generally one of staff coordination. U.S. Army and Marine Corps units generally have majors as S-3s and captains commanding companies. American S-3s tend to take a more active role in planning and overseeing battalion activities, including those of company commanders, than is the case during British operations. These distinctions in command rank and staff authority create important differences in the British Army's ability to decentralize operations.

The British Army in Northern Ireland

There are basically two opposing sets of aims among the residents of Northern Ireland. One is that championed by the Nationalists and Republicans. These two groups seek a unified Ireland with currently British Northern Ireland joining the Republic of Ireland to the south as part of that sovereign nation. Second are the Unionists and Loyalists whose desired end state is to have Northern Ireland remain part of the United Kingdom. Both sides use legal and other methods in their efforts to effect change. Both recognize that the center of gravity relevant to this conflict is the will of the people, those in Northern Ireland and others in the United Kingdom. The role of the British Army is to preserve the right of self-determination for the residents of Northern Ireland. The army's principal role as it serves this goal is to prevent illegal armed action and control civil disturbances.

The Army is not the primary agency in Northern Ireland. It is subordinate to the local police as well as British political leaders. Tactically, the Army provides assistance to the police in their efforts to maintain normalcy or restore stability in times of trouble. It reassures the people by guaranteeing public order and discipline while at the same time helping to enforce the rule of law. The trick for the soldiers is to avoid being caught as the "pig in the middle," a force stuck between the opposing factions. The primary tactic used to achieve these very challenging ends is the deploying of dismounted and mounted teams of four soldiers commanded by a lance corporal or higher. Commanders employ these teams in groups of two or more (called "multiples") commanded by a corporal or individual of higher rank, thus the term "The Corporals War." These corporals are the center of gravity for tactical military operations in the province of Northern Ireland. The decisions that they make in the field can and do have immediate effects on the operational and strategic environments. Because a corporal's judgment may reverberate up to the strategic level very quickly, he must have an intimate understanding of his commanders' intents. Understanding that intent only one or two levels up is not good enough. Two levels up for the corporal stops at company or battalion. He must understand the objectives of leaders all the way up his chain of command. He must possess an in-depth knowledge of what is going on around him (e.g., during the "marching season") and what the desired strategic outcome is. Soldiers' reactions to a situation must be appropriate; preliminary training to develop such responses is essential.

Operations in urban Northern Ireland tend to develop more quickly than those in rural areas. The speed of transition from event to reaction is also faster paced. The media and local population are quick to react and will often become an integral part of events.

In addition to these political considerations, the urban area presents many challenges relevant to operations at the lowest tactical levels as well. Walls and buildings in built-up areas pose what is known as a channeling effect that tends to enhance the effectiveness bullets and the impact of explosive-induced concussion. The density of structures also poses significant and varied problems when considering how to effectively employ high velocity weapons. The three dimensional quality of an urban battlefield creates marksmanship challenges. Shooting down from rooftops or windows requires different skills and training than those gained on the typical open, relatively level weapons range. "Map knowledge" of an area of operations can not compare with local knowledge of the terrain. A leader is already at a severe disadvantage if he has to rely on a map when attempting to outmaneuver a combatant. It is critical that these leaders and their men develop local knowledge: the lay of the land, the rhythm of the streets. A reach-back capability (e.g., a camera or overhead imagery that transmits images to higher headquarters) is also important so that superiors fully understand conditions present at any given time, analysts can properly determine evaluate a situation, and other patrols can learn as much as possible from their mates.

Preparation for Northern Ireland Operations

All units prepare extensively for deployments to Northern Ireland; it is therefore perhaps more appropriate to address training as a subset of preparation rather than separately.

Soldiers in every branch of the British Army, to include armor and artillery units, participate in Northern Ireland operations. There are three types of rotation: regular line units that do a six-month tour, regular line units that do two year tours, and units that are permanently assigned to NI. Rotations are unit based; there are no individual replacements. Preparations follow a step process. The first step encompasses internal unit training. This training is generally conducted with the assistance of an advisory team consisting of representatives from a unit recently returned from or currently on assignment to Northern Ireland. Target recognition, marksmanship, and individual skills are the focus in this first step. The second step is centralized training. This is designed so as to incorporate instruction by representatives from a large number of external agencies. The objective is to take advantage of individuals with expertise in selected relevant fields such as weapons search, improvised explosive device detection (though neutralization is left to specially trained personnel), or other disciplines that are not normally part of a war fighting skill set. Centralized training is also designed to establish uniform training standards across all British Army units. The third step is training at a centralized facility with mock villages, a dedicated opposing force (OPFOR), and a permanent training support structure. Finally, an arriving unit's preparation includes its actually assuming responsibility for its sector in Northern Ireland. The arriving unit conducts joint patrols with the currently responsible

organization during this hand-over period. Naturally, training continues during a unit's the conduct of operations in the theater in order to insure that there is no skill loss.

There are particular areas of emphasis when preparing for pending Northern Ireland urban operations. Situation updates on the most recently available area of operations intelligence, to include what has been occurring on the streets, are crucial to avoid unnecessarily extending a unit's learned curve. Cities change over time; a past Northern Ireland rotation does not ensure currently relevant knowledge. New buildings, new roads, bypasses, and both structural and human networks change. The enemy also adapts to methods employed during friendly force operations. It is important to not become too focused on the immediate future. Leaders should ensure that their soldiers consider operations "down range" beyond the close fight. Lastly, since the police are the primary agency and everything must be within the bounds of British law, rules of evidence apply to military operations, especially forensic evidence. There are naturally training and organizational support implications relevant to this requirement.

The situation in Northern Ireland is in many ways unique. For example, ROE are the product of years of experience and have their foundation in British law. Company commanders do not have the authority to modify them. Nonetheless, there are many lessons and applications of value during urban operations conducted by other nations. Not surprisingly, the basic skill sets and preparatory procedures have greater pertinence for a military readying for peace operations. We find, for example, that:

- A less assertive approach on the streets, e.g., one encouraging the wearing of berets in lieu of full combat gear with helmet, is generally preferable. The option of going to a higher force protection profile is left to lower level commanders during such contingencies.
- The use of simulators employing street scenarios assists in readying soldiers to make the right decision under pressure.
- The time necessary for training a unit as it returns to its ready-for-war posture differs with the type of organization. Armored and mechanized infantry units tend to take longer than do light infantry.

Given the contemporary emphasis on technology, it is appropriate to conclude with a final note regarding its value during urban undertakings. Technology can decrease the number of personnel required during a war, but it can only augment operations in which stability or support missions dominate. The technological solution is often not appropriate when dealing with civilians. A woman whose car has been bombed does not want to deal with a robot or talk to a commander over a radio; she wants to deal face-to-face with a human being. No matter how sophisticated the technology, there are missions that will demand that soldiers are on the ground in tomorrow's urban areas.

Appendix A. Speaker Biographical Sketches

Brigadier General Mohammed Majid Al Aitan, Jordanian Special Operations Commander

General Al Aitan entered the Jordanian armed forces in 1968. He became a lieutenant in his nation's Royal Special Forces upon graduation from the royal Military Academy in 1970. His subsequent duties have included airborne platoon leader, special forces detachment leader, special forces company commander, and commander of the Royal Special Forces. The general's operational tours include participation in Jordanian internal security operations from 1970-1971 and as an UNPROFOR commander in Croatia from 1992-1993.

General Al Aitan is airborne and ranger qualified. His school tours include service as a special forces instructor, instructor at Jordan's Staff and Command College, specialty wing commandant, and Commandant, Special Forces School. An extensive international education includes the U.S. Special Forces, Psychological Operations, and Strategic Planning and Transportation courses; Pakistan's Staff and Command College and National Defense College; and the Special Warfare Course in Taiwan.

Recipient of eleven medals in the course of his career, General Al Aitan is a black belt 3rd Don in Tai-kwan-do. He is married and has six children, four sons and two daughters.

Myron Almond, Captain, U.S. Navy

Originally from Malvern, Arkansas, Captain Almond attended the University of Arkansas from 1966-1970, majoring in Electrical Engineering. After attending Naval Officer's Candidate School in 1971, he completed 18 months of nuclear power training and served as Reactor Officer and Sonar Officer onboard the fast attack nuclear submarine *USS Permit* (SSN 594) from 1972-74 while the vessel conducted special operations in the western Pacific. Leaving the Navy in 1974, Captain Almond returned to the University of Arkansas and earned his Master's Degree in Mechanical Engineering, conducting research concerning heat flow characteristics in nuclear fuel rods.

Captain Almond subsequently completed one year of Pre-med studies before returning to the Navy for medical training at the Uniformed Services University of the Health Sciences in Bethesda, MD. He obtained his M.D. degree in 1981. After completing an internship at Naval Hospital Charleston, he entered U. S. Navy Flight Surgeon training at Pensacola, Florida in 1983, receiving basic flight training sufficient to solo. He then served as Senior Medical Officer for the *USS John F. Kennedy* (CV67) from 1983-1985. Captain Almond obtained additional medical training to become a specialist in aerospace medicine in 1988. His next two tours were as Pre

Commissioning Senior Medical Officer onboard the aircraft carriers *Abraham Lincoln* (CVN72) and *George Washington* (CVN73) during which he received additional medical specialty certification in occupational medicine. From 1994 until 1997 he was assigned to the Naval Safety Center, Norfolk, VA where he was the head of the Aeromedical Division and was responsible for human error analysis and prevention of Navy and Marine Corps mishaps worldwide. In October 2000 he completed a psychiatry residency at the Naval Medical Center, Portsmouth VA and is currently an aviation psychiatrist at the Naval Operational Medical Institute, Pensacola, Florida.

Captain Almond's current research interest is mortality trends in Navy and Marine Corps personnel looking specifically at the role of substance abuse and human error in fatal mishaps. His military awards include the Humanitarian Service Award, Navy Commendation Medal, and three Meritorious Service Medals.

Gideon Avidor, Brigadier General, Israeli Defense Force, retired

Gideon Avidor joined the Israeli Army in 1957 as a tank driver, retiring thirty years later as Deputy Commander of the Armored Corps. The majority of his career was served with the Armored Corps. In addition to many staff and instructor assignments, he commanded a tank battalion, tank brigade, and the School of Armor. General Avidor saw combat in the Six Days War (1967), Yom Kippur War (1973) and Operation Peace in Galilee (1982). From 1983 to 1986 he was the Israeli Defense Attaché for Singapore, the Philippines, Australia, and New Zealand. General Avidor's military education includes the U.S. Army Command and General Staff College (1978) and the Israeli National Defense College (1982). He holds BA degree in general history from Tel-Aviv University and a MA in geography from Haifa University. He is currently working on a Ph.D. dissertation entitled "The Urbanization Process's Influence on Defense Doctrine."

Douglas M. Chalmers, Major, British Army

Major Douglas M. Chalmers was born in Belfast, Northern Ireland on February 26, 1966. He enlisted in the Royal Irish Rangers in 1984. He reached the rank of lance corporal while serving in Ballymena, Northern Ireland and subsequently attended Sandhurst. Upon graduation in 1986 he was commissioned into the First Battalion of the Royal Irish Rangers.

Major Chalmers is a graduate of the British Platoon Commanders Battle Course, Intelligence Officers Course, Sustained Fire Platoon Commanders Course, Combined Arms Tactics Course, and the Junior Division Staff College. He is also a graduate of the U.S Ranger School at Ft. Benning, Georgia.

Major Chalmers's regimental duty includes service as a mechanized platoon commander (Germany), battalion intelligence officer (Cyprus) and most recently as a rifle company commander (Northern Ireland). He also completed a staff tour as SO3 G3 (Organizations and

Deployments) of HQ 39 Inf Bde (Belfast, Northern Ireland) and has served as an instructor at the NCO's Tactical Wing (Wales). His operational experience includes 3 tours of Northern Ireland (1988 to 1989 and 1996 to 1999) and tours with the United Nations Transitional Authority Cambodia (UNTAC), United Nations Protection Force (UNPROFOR), and the NATO Implementation Force (IFOR).

Major Chalmers is married to the former Helen Evans.

Robert William Farrand, Ambassador (Retired)

A career member of the Senior Foreign Service of the United States with the rank of Minister-Counselor, Mr. Farrand was appointed Ambassador to Papua, New Guinea, Solomon Islands and Vanuatu in April 1990. He served in that capacity until September 1993. The following month, Ambassador Farrand accepted a position as Deputy Commandant for International Affairs and senior civilian at the Industrial College of the Armed Forces at Fort McNair in Washington, D.C. In July 1995, he was named to the State Department's office of the Inspector General as Senior Inspector and Team Leader.

In March 1997, Ambassador Farrand assumed dual responsibilities as Deputy High Representative in Bosnia and Herzegovina and Supervisor of the Bosnian city of Brcko (population 80,000). He oversaw the creation of a neutral, multiethnic district in Brcko in March, 2000 and departed Bosnia and Herzegovina in May 2000. He is now in retirement.

Between 1987 and 1990, Ambassador Farrand was Principal Deputy Assistant Secretary of State in the Bureau of Human Rights and Humanitarian Affairs. From 1985-1987, he was Deputy Director of the Office of Foreign Service Career counseling and Assignments (Personnel).

He served as Deputy Chief of Mission at the U.S. Embassy in Prague, Czechoslovakia from 1983-1985. Prior to that he was Deputy Director of the Office of Eastern European and Yugoslav Affairs in the Department of State (1981-1982). He was Officer-in-Charge of Bilateral Affairs in State's Office of Soviet Union Affairs from 1978-90. Farrand headed the U.S. Commercial Office in Moscow, USSR, from 1976-1978. Before that he was chief of the Economic/Commercial Section at the U.S. Embassy in Prague, Czechoslovakia (1973-1976); Commodities Officer in the Bureau of Economics and Business Affairs at the Department of State (1970-1973); and Chief of the Consular Section at the American Embassy in Moscow, USSR (1968-70).

The ambassador joined the Department of State in 1964 and spent his first consular and diplomatic tour at the U.S. Embassy in Kuala Lumpur, Malaysia (1965-67). He received a Bachelor's degree from Mount Saint Mary's College, Emmitsburg, Maryland and a Master's Degree in Economics from Georgetown University. He is a graduate of the National War College.

An officer in the U.S. Navy from 1957-1964, Farrand served three years at sea and three years as an economics instructor at the Naval Academy in Annapolis.

Ambassador Farrand was born in Watertown, New York. He is married with five children.

Scott Gerwehr, RAND

Scott Gerwehr is a policy analyst at RAND. He is currently conducting research on a range of national security issues. His recent work includes analysis on computer network attack and defense, assessing California's vulnerability to terrorism, aerospace operations against elusive targets, and urban operations. His areas of particular focus are deception, psychological operations, and covert action. Mr. Gerwehr has a BA in molecular and cell biology from UC Berkeley. He is currently completing doctoral work in political psychology at UCLA.

Russell W. Glenn, RAND

Dr. Russell W. Glenn is a 1975 graduate of the United States Military Academy, West Point, NY. His early assignments include tours with the 1st Infantry Division (Fort Riley, Kansas), 2nd Engineer Group (Korea), and as an instructor with the Department of Mathematics, West Point. Completion of Command and General Staff College (C&GSC) and the School of Advanced Military Studies (SAMS) preceded a three-year tour with the 3rd Armored Division (Spearhead). He served as Chief, G3 Plans and Exercises during Operations Desert Shield and Desert Storm with the division. Subsequent tours included two years as exchange officer with the British Army's Royal School of Military Engineering, Senior Army Fellow at RAND, seminar leader at the U.S. Army's School of Advanced Military Studies, and author of Field Manual 100-5, *Operations*. He has been a Senior Defense and Political Analyst with RAND in Santa Monica, California since retirement from the armed services in 1997.

Dr. Glenn's Masters degrees are from the University of Southern California (MS, Systems Management), Stanford University (MS, Civil Engineering and MS, Operations Research), and the School of Advanced Military Studies (Master of Military Art and Science). He earned his Ph.D. in American history from the University of Kansas with secondary fields of military history and political science. His military education included Airborne, Ranger, and Pathfinder Schools. He is a licensed professional engineer in the state of Virginia. Dr. Glenn is the author of *Reading Athena's Dance Card: Men Against Fire in Vietnam*. Annapolis, MD: Naval Institute Press, 2000 and other books, articles, and RAND reports.

Mike Hammon, Center for Emerging Threats and Opportunities

Mr. Hammon currently serves as a Research Fellow at the Potomac Institute for Policy Studies. He specifically examines issues relative to defense procurement policy, acquisition reform, and education an training, and urban warfare.

Mr. Hammon is currently program manager for the Project Lincolnia series of war games. Project Lincolnia I recently concluded and Lincolnia II is in preparation for execution in the Summer of

2001. The games examined the role of technologies in urban warfare and the development of strategic and operational planning for U.S. military forces participating in complex urban operations. Prior to his current assignment, Mr. Hammon was project manager for the Institute's support of the OSD Dual-Use Science and Technology program. He designed their outreach program, assisted the OSD program manager in budgeting, project solicitation, and dual-use program management education. He also contributed to the Institute's MARITECH shipbuilding technology study, which analyzed various commercial shipbuilding technologies with potential for U.S. Navy shipbuilding programs.

Prior to joining the Potomac Institute, Mr. Hammon worked in the Office of Congresswoman Jane Harman (D-CA) as her Defense Legislative Assistant. There he provided support to the Congresswoman regarding military policy, R&D, procurement, and operational issues in her capacity as a member of the House National Security Committee. Mr. Hammon was instrumental in providing language in the Fiscal Year 1995 Defense Authorization Bill to begin a DoD dual-use technology development program.

Mr. Hammon's last active duty Air Force assignment was as a faculty member at the Defense System Management College (DSMC), Ft. Belvoir Virginia. There he instructed program management skills from all military services, foreign allies, and civilian defense contractors regarding acquisition management skills and policy.

During his assignment to DSMC, Mr. Hammon was selected as a LEGIS Fellow by OPM and served on the staff of Senator Jeff Bingaman (D-NM), member of the Senate Armed Services Committee. Though responsible for advising the senator on all military matters, Mr. Hammon's primary duty was as a member of the staff group writing the Federal Acquisition Streamlining Act of 1995 (FASA).

Mr. Hammon is a retired Air Force officer whose career included flying assignments in the F-4 Phantom and T-43 navigator training aircraft as well as an Air Staff assignment in the Pentagon. During the last assignment, Mr. Hammon was a program element monitor, executive officer, and management support officer in the electronic warfare acquisition directorate.

Mr. Hammon holds a Bachelor of Science degree in Aerospace Engineering from the University of Oklahoma and a Masters in Business Administration (with honors) from Embry-Riddle Aeronautical University. Military schools include the Air Command and Staff College and Air War College.

Jamison Jo Medby, RAND

Ms. Jamison Jo Medby is a 1991 graduate of the University of California, Los Angeles (Bachelor of Arts degree in international economics). Following her graduation, she briefly attended Kunming University in the People's Republic of China where she received an honorary award, which was presented to her upon demonstration of fluency in Mandarin Chinese. From 1991 through 1995, Ms. Medby was Assistant Vice President at First Federal Bank of California. She

received her Masters degree (political science) in 1998 from the California State University, Northridge, at which point she began her professional research career at RAND. In 1999, she received an honorary certificate of graduation following her completion of the Military Intelligence Officer Transition Course (MIOTC) at Fort Huachuca, Arizona. Her primary research topics at RAND include intelligence preparation of the battlefield for urban operations and cyber-intelligence preparation of the battlefield for information operations, in particular computer based operations; public-private partnerships for the U.S. Army; and U.S. Army outsourcing.

Scott A. Nelson, Company Commander, 1st Battalion, 5th Marines, Hue, Vietnam, 1968

In January 1995, Mr. Nelson joined Warner Bros. Studios as the Director of Studio Protection. In January 1999, he was promoted to vice-president. In this capacity, he directs a wide range of protective services for people, property and information. This includes physical security, set and location security, special event security; fire protection, prevention and suppression; complex investigations, threat management, and crime prevention; comprehensive emergency management and disaster preparedness; and medical services. The protection group currently consists of five departments, a financial manager, and a systems administrator.

He has been a featured speaker for the Association of Threat Management Professionals (ATAP), the American Society for Industrial Security (ASIS), the Research Security Administrators (RSA), and other security groups. Mr. Nelson has also been instrumental in the establishment of several investigative support groups and crime prevention programs.

In October 1994, Mr. Nelson retired from the Federal Bureau of Investigation as a member of the Senior Executive Service in the position of Deputy Assistant Director-Inspector. His assignments were many and varied. He was responsible for directing a major theft squad, coordinating statewide Civil Rights matters, and supervising Terrorism investigations in New Jersey; managing Criminal Investigative programs throughout Northern California; supervising world-wide police training and behavioral science/psychological profiling matters at the FBI Academy; managing the FBI's national Public Affairs Office, acting as a spokesperson and managing media, special productions, tours, correspondence, and publications; and he was selected as the FBI's Ombudsman, handling sensitive personnel matters for the Director of the FBI. Mr. Nelson received many commendations throughout his twenty-seven year career, including the FBI Star.

From 1966-1969, Mr. Nelson served in the United States Marine Corps, retiring at the rank of Captain. For action as a Marine rifle company commander in Vietnam, he was awarded the Legion of Merit with Combat V, the Bronze Star with Combat V, the Purple Heart, the Vietnamese Silver Star, the Vietnamese Cross of Gallantry, and the Presidential Unit Citation. He received additional awards for other actions in Southeast Asia. Mr. Nelson authored the Commander's Perspective for a recently published book, *"Phase Line Green—The Battle for Hue City"* written by his co-speaker at this event, Nick Warr.

Mr. Nelson graduated from Jacksonville University in 1965 with a BS degree in business management. He then studied at Rutgers University and Long Island University, receiving an M.P.S. degree in criminal justice. He has also completed partial studies for a Masters of Public Administration degree.

He is married to Ann, and has three children, Aleks, Chris and Kara. Mr. Nelson sits on the Board of Directors of the Boys & Girls Club, Burbank, California, and the Chief Special Agents Association, a group of senior security executives in Southern California. He is also active in numerous other professional associations.

Nicholas Warr, Platoon Leader, 1st Battalion, 5th Marines, Hue, Vietnam, 1968

Nicholas Warr grew up on a small farm in Oregon and attended Brigham Young University and the University of Oregon before enlisting, at the age of twenty, in the United States Marine Corps in June 1966. Nominated for the Enlisted Commissioning Program by his Boot Camp Drill Instructors, Warr attended OCS in Quantico, Virginia and was commissioned in March 1967. His first assignment as a second lieutenant sent him to Vietnam from November 1967 to December 1968. Warr served as a platoon commander, company executive officer and company commander in several combat operations during 1968, including Operation Hue City and Operation Mameluke Thrust.

Warr received the Presidential Unit Citation for participation in Operation Hue City and was honorably discharged as a first lieutenant in March 1970. Today he enjoys a successful career in computer-technology sales. Warr is the author of *Phase Line Green: The Battle for Hue, 1968*, and has participated in numerous professional military seminars and symposiums on urban warfare. He lives in Alpine, California, with his wife, Pamela, and continues to write.

Appendix B. Lessons Learned, Operation “Hue City”

Charlie 1/5/1, 31 January 1968 to 5 March 1968

Scott Nelson, First Lieutenant	Commanding Officer, C/1/5
Nicholas Warr, Second Lieutenant	Platoon Commander, C/1/5
Travis Curd, Second Lieutenant,	2/11 Artillery FO, attached to C/1/5
John Mullan, Staff Sergeant,	Platoon Sergeant, C/1/5
John Loudermilk	US Navy Corpsman, C/1/5
Captain Dale Dye, USMC (Retired)	H/2/5 and D/1/5

Even under the best of circumstances, street fighting is a bloody business. This was, in the end, the ultimate lesson learned by the United States Marine Corps personnel who participated in this historical battle, considered by many to be the bloodiest of the Vietnam War.

The Marine forces involved in Operation “HUE CITY” lost 142 Marines killed in action during the month-long battle, including the initial fierce clashes involving, primarily, fighting throughout the southern sections of the city, and the climactic full-scale battles inside the Citadel fortress itself. Hundreds more Marines were wounded and had to be medically evacuated on both sides of the river. Enemy casualty estimates range well into the thousands.

Although Operation “HUE CITY” will be long remembered as an overwhelming American/ARVN victory over the best conventional forces the enemy could throw at us, and although the Fifth Marines overcame very unfavorable odds and ultimately triumphed in the finest traditions of Marines in combat, in truth this battle was a very close thing. At the squad, platoon and company levels casualty rates were very severe, as high as 75% or more in some units. This was especially true during the first day or two of each unit’s initial experience in full-scale urban combat.

The ultimate success of this operation could have been significantly improved, in our opinion, by several factors, including:

- Improved (less restrictive) rules of engagement, including situational flexibility down to the platoon level.

- Acquisition of improved intelligence data, in particular concerning the disposition and size of enemy forces. Reconnaissance and small unit probes to fix enemy positions are critical. ARVN forces fought the NVA for over a week (1 – 12 February 1968), on the same battlefield as the 1/5 Marines would fight, but absolutely no direct knowledge transfer took place between ARVN commanders and Marine commanders, at any level, prior to 1/5's attacks on 13 February 1968.
- Improved communication of intelligence information to all levels of command.
- Improved supporting fire plan. Access to artillery, naval gunfire, direct fire from armored vehicles (tank/Ontos "killer teams"), and air support. All supporting arms should be judiciously deployed.
- Significantly increased training for urban conflict (street fighting). Practice and preparation.
- Deployment of available chemical weapons (CS tear gas) for offensive operations during the early stages of the operation.
- Improved dissemination of operational plan details, down to the fire team level.

On the other side of the scale, 1/5 resoundingly defeated the NVA forces inside the Citadel fortress [despite being seriously outnumbered, the (initially) very high Marine casualty rates, and the resulting confusion created by the rapid turnover of officers and NCOs]. Factors in 1/5's success during Operation "HUE CITY" included:

- Small unit combat experience,
- Individual Marine determination,
- The buddy system,
- The quick learning capacity of Marines under combat conditions,
- The combined leadership (officers and NCOs) of 1/5 at all levels,
- Our ultimate ability to coordinate fire support and execute street fighting tactics under heavy enemy fire.

Certainly, using the 20/20 perspective of hindsight, this battle could have been decided in an even more timely and decisive fashion, reducing friendly casualty rates in the process, by paying attention to the fundamentals of planning Marine combat operations. Proper prior planning prevents p--- poor performance.

The following details regarding the lessons learned from Operation "HUE CITY" are offered from former officers and NCOs of Charlie Company, First Battalion, Fifth Marine Regiment, First Marine Division, all of whom served in combat during Operation "HUE CITY," and all of whom were directly involved in the battle with NVA forces inside the Citadel fortress from 13 February 1968 through 5 March 1968.

Situation.

Terrain:

There is an infinite variety of possible landscapes that will confront a Marine force given the mission of attacking an enemy force in urban terrain.

When the Tet Offensive broke out on 31 January 1968 and conventional NVA forces overran major sections of the largest cities in South Vietnam, Marine forces were literally knee-deep in rice paddies and jungle mud. Since first establishing beachheads in Da Nang and Chu Lai in 1965, Marines had been assigned the mission of conducting a counter-insurgency type of war. The Vietnam War was decidedly a rural conflict, and Marines were for the most part fighting a guerrilla army. The Tet Offensive changed all of that. Suddenly and unexpectedly, for the first time since the height of the Korean War, Marines found themselves with a mission that involved urban combat.

Preparing to remove an enemy battalion that has captured a 40-story skyscraper or a college campus is a much different mission than getting an enemy squad out of a house, school, or church in a small town. Urban combat is going to occur in large cities and middle sized towns, and each urban battlefield will take on a unique character and challenges of its own. The common factor in all of these variations, however, is that in all cases, of urban combat, *structures* dominate the terrain.

Studying and assessing terrain is a fundamental issue for Marine commanders when planning missions. This is even more critical in planning house-to-house combat operations. Among many other considerations, building materials vary widely in their ability to provide small-arms cover.

Through the use of reconnaissance and intelligence, we recommend conducting a serious assessment of each building or structure that is within your unit's area of operations, because the tactics involved in taking each objective (building, structure, etc.) may be different in each case. A small, wood frame house may offer the illusion of cover from small arms fire but little else; in some places walls are paper-thin. Even houses that use some form of plaster or concrete construction can prove to be unexpectedly porous at the worst possible time.

Know the basic layout of a structure before entry to as great an extent as is possible. Approach each structure with an entry plan and a search plan, and make sure each member of a fire team and squad is well versed in these plans. Establish voice codes and commands and communicate regularly with each other. Consider entryways (existing doors and windows) to be extremely dangerous, likely locations for booby traps, and spots to be avoided if at all possible. Blow entry holes using satchel charges or rockets wherever possible. Once the entry plan is finalized and understood, it must be executed with fierce determination. Be prepared for anything, and be

ready to improvise. Be systematic. Check everything (e.g., basements, sewer access, attics, rooftops, trash cans) thoroughly before declaring that an objective is secure.

Another critical aspect of urban terrain is the spaces between buildings. Streets, alleys, and other pathways are normal routes for humans. It is therefore likely that they are under observation and covered by enemy fire. Whenever possible, take the most difficult route from house to house.

Establish, in advance, a plan on what to do in the event non-combatants are found in urban combat zones, and for marking buildings that have been cleared.

Make absolutely sure that your Marines are aware that *they are at risk from both within and without* while inside a building being secured. Always assume that every room, of every floor, in each and every house, contains enemy soldiers. Always move very quickly when moving in front of windows or doorways. Always know where enemy positions may be in buildings that are adjacent to yours. As in all Marine operations, watch your buddy's back, and run as fast as possible when traversing open ground.

Multiple story structures present an even greater challenge than single story buildings. In a medium-size village, town, or small city that is dominated by one-, two-, and three-story buildings, Marines should be especially concerned about the taller buildings. They are naturally used by the enemy as "high ground." If possible, make entry to taller, multi-level buildings via the roof and work systematically and thoroughly downward.

Mission

The mission assigned to Marine forces during Operation "HUE CITY" was to attack and destroy enemy forces that had captured major sections of the ancient imperial capital of Hue during the surprise NVA offensive that was quickly dubbed the Tet Offensive. Due to the historic aspect of many of the buildings in Hue, the usage of heavy weapons was significantly restricted during the initial days of fighting on both sides of the river. As friendly casualties mounted, and as initial estimates of the size of the enemy force in the Hue City area was significantly increased, fire restrictions on supporting arms were ultimately lifted. In our respectful opinion, our ability to successfully complete the mission was, initially, severely impacted by the rules of engagement.

Although it is understood that mission and rules of engagement are not the exclusive responsibility of Marine leadership at the platoon, company, battalion or even the regimental level, it is strongly recommended that every effort be made, at every level in the chain of command, to ensure that balance has been achieved between the demands of the mission and the affect of the rules of engagement on the ability of the command to perform the mission successfully.

Execution:

Reconnaissance and Intelligence:

Urban combat is nearly always conducted at very close quarters. It is not uncommon to have opposing forces fighting from positions a few dozen meters apart; most of the fighting is done from a distance between 25 and 100 meters. Due to this close-in nature, it is critical to know where the enemy is and how they are deployed. This lesson was learned the hard way during the initial stages of the battle inside the Citadel. During the first two major clashes between Marine and NVA forces on the morning of 13 February 1968, the enemy surprised us and wreaked significant damage very quickly. This occurred mainly because we weren't exactly sure where the NVA were deployed. Although the ARVN had been in several major battles inside the Citadel, we don't recall receiving any intelligence attributed to them regarding the enemy's exact location. Further, to our knowledge, no Marine reconnaissance unit was sent in to check out the situation before we attacked on the morning of the 13th.

We recommend that all intelligence assets, reconnaissance units, and surveillance devices that can be made available are deployed in a significant effort to fix the exact location of enemy soldiers and units. The combatant who knows where his enemy is hiding experiences a decided advantage in surprise and the devastating deployment of firepower.

Urban Combat Tactics:

The tragedy of urban conflict is that the "battlefield" for each firefight is a neighborhood; each objective taken is someone's home, a school, church, or some other structure that has significant value and meaning to its inhabitants. Considering the possibilities, it is not difficult to imagine tank battles across mall parking lots; mortar fire hitting a church, a hospital, or a community center; heavy small-arms firefights between homes; or an artillery barrage on a schoolyard. While these images may be grist for the mills of Hollywood, when we think about them in relevance to our homes and our neighborhood schools and churches, the tragedy is somehow increased, made more politic. However, it is our collective belief that the life of one Marine is more precious than ten, one hundred homes, schools, churches, shrines, shopping malls, or any other building known to man. Therefore, all efforts should be made, using any and all weaponry available, to stun the enemy and support Marine advances through the use of supporting arms *and without regard to damage to buildings*.

At the same time, the use of heavy weaponry in urban combat is assuredly a "two-edged sword," as are many assets in modern warfare. Rubble can be nearly as affective as a building for protecting enemy firing positions. Further, artillery and other "flat trajectory" weapons may be somewhat restricted by the height of buildings and their distance from each other. In many cases, mortars, although smaller in caliber, are superior to artillery because of their higher

trajectory and are thus able to hit enemy targets that are screened effectively from direct fire weapons by buildings or other structures.

Dale Dye's Urban Combat Tactics Update:

(Note: Dale Dye fought with Hotel 2/5 on the south side of the Perfume River in early February, 1968, and then "dropped" to Delta 1/5 for the fight inside the Citadel. Dale may well be the only U. S. Marine who fought on both sides of the river during Operation "HUE CITY." An E-5 sergeant at the time, Dale was "officially" a combat correspondent, but says, "All I can remember doing during Hue City is changing magazines and pulling triggers.")

When asked to read and comment on this white paper, Dale offered the following: "Having mulled this over for some time now, I've come up with what I think will be valuable hints for the infantry small-unit leader to bear in mind while training his Marines for urban combat operations and for employment when/if the situation arises for real. All of these observations/hints are based on things I actually experienced or learned while fighting in Hue. By the way, I coined a military acronym for this stuff after deciding that MOUT (Military Operations on Urbanized Terrain) and FIBUA (Fighting In Built-Up Areas) just didn't fit the bill. In my view, we should classify all this stuff under the acronym FISH (Fighting In Someone's House)." Here, then, are Dale Dye's "21 Tips for Successful FISHing:"

1. **Tactical movement passed windows/doors:** Most movement in urban fighting tends to be quick and short. That's good, but it leads to ignoring the obvious at times. We had a lot of Marines killed or wounded—particularly on the south side of Hue—because they exposed themselves when moving past windows or doors. In general, avoid moving past doors (open or closed), period. You will have to move past windows, but be sure to duck below the window level. Also, don't forget that many structures have ground level windows that provide light and ventilation to cellars or basements. Step over these ground level windows and do not expose your legs and/or lower body to enemy fire from within.
2. **Shoot Through:** Our infantry weapons loaded with standard ball ammo have a hell of a penetration factor. As Murphy urges, when in doubt, empty the magazine! Be especially careful of stacks of furniture, desks, cabinets, armoires, closets, clothing presses, etc. when searching or clearing rooms. You can shoot right through these items and a couple of well-placed rounds may save your life. On the south side, I was right behind a Marine who instinctively put a burst of five from his M-16 into a large wall cabinet and was rewarded with a dead NVA who fell through the door and out onto the floor. This technique rapidly became SOP.
3. **Increased Shrapnel Effect:** Don't get salty—or let your troops get salty—regarding helmets and flak jackets in urban fighting. Many of our MSW (multiple shrapnel wound) casualties on both the south and the north sides of the river resulted from the increased burst effect of RPGs, mortars and ChiCom grenades that occurred due to flying masonry. Always be aware that high explosive type weapons will create an increased shrapnel fan in urban areas. A

flying piece of brick, concrete or macadam can kill you just as easily as shrapnel from the actual weapon.

4. **Use of fragmentation hand grenades:** Up until we were committed to Hue, I noticed that a lot of Marines were reluctant to carry and/or use frags. Get over—and get your Marines over—this reluctance in a hurry! A basic load should be four to six frags per man before you enter the area. Teach Marines how to deliver frags with either their left or right hands. Also teach Marines to “cook off” a frag before tossing or lobbing it into a room or building. They’ve got four to six seconds on a standard frag fuse and that’s enough time for a nimble enemy to retrieve and toss it back in your lap. This happened several times on the south side of Hue and at least once (with fatal consequences) on the north side. I like to count three, but two is sufficient, after the safety lever is released before delivering the grenade. When heaving a grenade into a room or building, generally heave it as hard as you can. The frag will bounce around off the walls or furniture and that makes it hard for the enemy to chase it down and retrieve it.
5. **Steal Civilian Vehicles:** Every Marine unit operating in an urban environment finds itself in need of quick transportation for re-supply, rapid troop movement, or evacuation of casualties. Naturally, there is no transportation available when it is critically needed. We learned in fighting on the south side of Hue to hot-wire and steal civilian vehicles. Emphasis is on “civilian” as military vehicles left behind by an enemy may well be mined or booby-trapped. Steer clear of the enemy’s half-tracks, abandoned armor or military trucks in general. What you want is the family sedan or pick-up truck. In any Marine unit there is generally a character that has had some “previous experience” in this area. Find him, and use him. This saved lives time and again on the south side of Hue. We even hot-wired several of the three-wheeled cyclo type vehicles and they worked just great for re-supply and CasEvac. I humbly admit to being one of the star players in this effort, which made me the go-to guy for Captain Ron Christmas commanding Hotel 2/5.
6. **Supply points and rally points:** Re-supply of weapons, water and ammo is always a problem in urban fighting as trucks or other transport attempting to reach the fighting units rapidly become prime targets. The solution is to establish street corner supply points. Have your support people simply run the gear up and dump it on a designated street-corner or intersection. At that point, fire teams, squads and platoons can send working parties to the designated point, get what they need and bring it forward with no danger to the supporting supply pipeline. Also, establish rally points for lost troops or units. As you move a unit forward, pause at easily recognizable intersections, buildings or corners and let everyone know this is a rally point. If they get lost or lose contact with the higher unit, they simply find the rally point and wait. The platoon guide or a designated runner can make regular checks of these points and police up the missing people. This worked particularly well for re-assembling lost squads in the north side fighting.
7. **Recoilless weapons:** The M-72 LAAW, the AT-4 and any other available recoilless weapon is extremely valuable in urban fighting for obvious reasons. However, it’s important to consider the back blast when using these weapons from enclosed areas such as rooms, blind

alleys, etc. I fired a LAAW from a second story window on the north side, and was extremely proud of myself until I discovered the back-blast damn near killed the other two guys in the room with me. The back-blast from a recoilless weapon will carom off walls and act like a miniature tornado!

8. **Counter-sniper techniques:** Working in buddy-teams in Hue, we rapidly learned to play fox and hounds with NVA snipers. The generic problem was that someone got dinged before we managed to spot the shooter that dinged him. When under fire from an unknown sniper position, one man will have to serve as target while the other man spots and shoots. We finessed this technique by selecting a short run to cover for the target or bait man in an attempt to draw the sniper's fire. If he moved quick and low from cover to cover, we would generally get the sniper to fire a badly aimed shot or burst. This revealed his hide and the cover man could deliver fire on the sniper's position or call for fire from the remainder of the squad by putting a tracer or two into the hide. Train in this technique!
9. **Focus high/look low:** In Hue we tended to focus on high firing positions for the enemy. He's an infantryman and he knows the value of the high ground, so we tended to look for him high. Unfortunately, this led to a tendency to ignore spider-holes and low-level fighting positions that frequently caught us by surprise. An enemy in urban defense will frequently lure you into committing to an assault by firing from high while his shooters are dug into low positions around a building. We got nailed in the assault on the treasury and hospital areas on the south side by not checking the low-ground before we went over into the assault.
10. **Unlikely hides:** On the north side during the Citadel assault, I lost a man and nearly got nailed myself because we did not think anyone could be dug in under a pile of household junk. It was a pile of discarded material with a broken bicycle on top, looking just like a trash pile in any other city. Unfortunately, an NVA had dug under the trash-pile from the rear and made himself a firing embrasure at absolute ground level. Never presume an enemy can't be somewhere. He will be there.
11. **Sewer and drainage canals:** Most of the NVA who moved into Hue on the nights of 30-31 January 1968 got into the city undetected by moving through Hue's sewage system and drainage canals. In the offense, spot the manholes and check them out. In the defense, explore the canal/sewer system and use it to move troops from point to point. Marines should be trained to do this as a matter of course. Just as we designated and trained tunnel-rats for work underground in the jungle, we should Train Marines to explore, move, and fight beneath city streets.
12. **High observation posts:** Rooftops are extremely valuable as OPs. A good man up high can direct fire and movement for troops below and save you a lot of time and trouble in spotting potential or real danger areas. Get an observer high and work out a system of signals so he can direct your fire or movement. An observer with a magazine of tracers can be extremely valuable in this endeavor. In selecting the rooftop OP, don't let yourself get silhouetted. If possible, tear yourself a mouse-hole somewhere in the shingles and observe from there.

13. **Weak hand shooting:** Cover in urban fighting is most often what's available rather than what you would select. This makes it important that all Marines become adept at weak hand shooting. Learn to fire accurately—or at least effectively—from either shoulder so you are not forced to expose yourself when firing from behind inconvenient cover.
14. **Use cover:** Obviously, you should hug walls rather than moving down the center of an alley or street. On the north side of Hue, we found ourselves advancing up streets adjacent to the Citadel walls by rushing from doorway to doorway, which minimized our exposure to fire from the walls. Unfortunately, this left us with our backs to doors very often, and NVA inside the buildings would shoot-through the doors at us. When ducking into doorways for cover, be aware of what's at your back. If it's a door, get low and be prepared for incoming fire from inside the building.
15. **Sneak a peek:** At regular intervals in urban fighting you will find yourself at a corner or intersection, wanting desperately to know what's on the other side. Learn to observe quickly by getting low and taking a quick peek around the corner or the wall. Two or three quick peeks minimizes exposure and lets you get a picture or plan for your next move. Don't hang your face out there for a prolonged observation. [Editors note: If this technique is employed, do not "sneak a peek" at the same point each time. The enemy will be ready for the second, third, or subsequent "peeks."]
16. **Fire on embrasures or loopholes:** Due to the rapid, violent, confusing nature of urban fighting, there is a tendency to "spray and pray" when putting fire on an identified target. Fight this element of human nature! When you have spotted a firing embrasure or loophole from which an enemy is firing at you, slow down and put deliberate, aimed fire on the target. In Hue we frequently took fortified positions under fire causing the enemy shooter to duck and cease firing. When we moved, he was back up and shooting. The solution is to kill him with aimed rounds right into the slot.
17. **Enter and exit low:** An enemy is under just as much pressure and adrenaline rush as you are. Remember that and when you enter or exit a building, get low! An enemy's initial tendency under pressure is to aim and shoot center-mass for a standing man. If you're under that point of aim, you may survive the fire.
18. **Don't mask your covering fire:** Unfortunately in Hue there were a number of instances in which Marines attempting to move under covering fire from other Marines ran right into friendly fire. Put this down to confusion and the "fog of war," but you can avoid it if you think before you move under covering fire. Be sure you know where your covering line of fire. From his position to the target, select an intermediate or terminal position that is outside this line of fire before you move.
19. **Fix bayonets:** In Hue we experienced a number of very close encounters with NVA soldiers inside buildings or when turning into alleys or hallways. These eyeball-to-eyeball meeting engagements happen all the time and Marines need to be prepared for instant action. The best insurance is to have your bayonet fixed and to be prepared to deliver a quick, decisive thrust at the face or chest. If you don't kill him, you'll scare the hell out of him and cause him

to retreat rapidly. This happened at least twice that I know of on the south side resulting in a wild hand-to-hand melee that could have been avoided and decided in the Marines' favor with a quick bayonet thrust.

20. **Fire factor:** Most buildings in an urban environment contain lots of material that will burn. We learned quickly on the south side of Hue, absent tear gas grenades at the squad level, that we could take White Phosphorus (WP) grenades, toss them into a house and depend on whatever was inside to catch fire. The resulting blaze often forced hiding NVA shooters into a panicky exit and we were able to kill them in the open.
21. **Slow the tempo:** Finally, one of our most valuable lessons fighting on the south and the north sides of Hue was to slow down and be deliberate. Before we got a feel for urban ops we had a tendency to just go hey-diddle-diddle right up the middle and rely on the momentum of our attack to shock the enemy. He was not easily shocked, as we learned to our detriment. The solution was to slow down, assess the situation, make a deliberate plan, and carry it out with vigor!

Urban Tactics for Supporting Arms:

Supporting arms are most effective prior to "danger close" to minimize the potential of friendly casualties, and to maximize preparatory fires to support the infantry's attack. During Operation "HUE CITY," the most effective indirect fire during "danger close" was from the 8-inch gun. We recommend that the supporting axis of fire be perpendicular as well as parallel. Finally, in the event, as in the case of Operation "HUE CITY," that due to political considerations that proper preparatory fires would not be allowed, that a variety of artillery fires such as smoke, delayed fuses, high angle, etc. be incorporated with the infantry's attack. Combined arms coordination training for urban combat is critical.

Other advantages of preparatory fires include the destruction of the camouflage of enemy positions, the psychological shock factor against enemy troops, and the fact that heavy weapons can create new avenues of attack and egress for armored vehicles.

One of the most effective aspects of supporting arms during the battle for Hue were the "killer teams" that evolved; an M-48 tank and an Ontos would pair up and maneuver together as a team. This would allow either the tank or the Ontos to maneuver into a good firing position, while the other covered. Further, the devastating firepower put out by the 90mm tank cannon and the (6) 106's of the Ontos turned out to be extremely beneficial because of their capabilities to deliver pinpoint firepower. Armored vehicles can provide many benefits to the infantry engaged in urban combat, as they provide some cover from enemy small arms fire. However, armored vehicles can also become "rocket magnets" producing casualties for infantry troops in close proximity.

Other than in instances of harassment and interdiction fires, buildings that are hit by heavy weapons should be attacked immediately, using whatever shock benefit that may be derived, and

all efforts made to clear and neutralize all enemy positions in that particular building before the attack is stopped (whenever possible).

Remember that when calling in fire missions, you can request "splash" so that friendly troops have time to take cover immediately prior to impact.

In daytime operations, the usage of covering smoke is often helpful when Marines must attack across open areas.

However, as was learned during Operation "HUE CITY," even with proper support of heavy weapons, which was ultimately provided to the Marines, we faced "hard corps" North Vietnamese Army troops who fought from prepared positions, moved to secondary positions, fought again, and finally, very reluctantly, died. In the capture of each room, each floor, each rooftop, each building, each street, it was ultimately the Marine rifleman who won the battle.

It is critical for infantry units to know both the capabilities as well as the *limitations* of supporting arms. For example, naval gunfire is a more flat trajectory weapon, and not necessarily effective due to the vertical terrain (buildings). Further, in our experience, it was not smart to be on the gun-target line because the first round was typically not as accurate as artillery or mortars in terms of range specified.

Another aspect of supporting arms limitations has to do with helicopter support. Urban terrain is not forgiving to helicopters that may be forced to make an emergency landing. Thus, helicopter pilots may be reluctant to fly over urban terrain. Further, maneuvering helicopters in urban terrain is a very difficult and dangerous proposition.

One very tragic aspect of the use of supporting arms in urban combat is that the likelihood of civilian casualties is very high. In at least two situations that we are aware of, the NVA used civilians as "screens" for their infantry troops, and fire missions were, of necessity, called in on those positions.

On the Use of Chemical Weapons:

During 1/5's battle inside the Citadel fortress (which kicked off on 13 February 1968) the battalion progressed a total of four blocks along our avenue of attack, which was four blocks wide. Thus, 1/5 secured a total of sixteen city blocks within our assigned area of operations after nearly two weeks of heavy street fighting (13-25 February 1968). Accomplishing this, we suffered nearly 50% casualties at the hands of a well-prepared, determined force of NVA soldiers, a force that was finally estimated to be nearly 11,000 strong in the Hue City area of operations.

On 25 February 1968, Marines from Charlie Company shot off three E-8 gas launchers, each carrying about 40 CS gas grenades, toward the enemy's last known position. The next morning, 1/5 took control of the remaining twelve city blocks in about three hours, without a single

casualty, because the NVA was not equipped to deal with the tear gas attack and was forced to withdraw.

No one can ever be certain that the use of chemical weapons would have made a difference in the initial stages of the battle (although we were all issued new gas masks the day before we went into Hue City!), but many of the veterans of that battle have often wondered what might have happened if the E-8's had been deployed in the early stages of the battle. We recommend the judicious use of chemical weapons, such as tear gas, etc. for urban combat operations.

Administration:

Planning and Preparations:

The inherent complexities of urban combat are such that special attention needs to be paid to planning and preparations. Training, training, training; practice makes perfect. A coordinated Marine attack on an enemy-held position in a town or city can be equated to an intricate opera or Broadway production, although the stakes are a bit higher. Entry techniques, room search and clearing techniques, voice commands indicating movement or progress, fire discipline, the use of grenades, rockets, and supporting fires, communications, all of these must be rehearsed and improved, until they become second nature to our urban warriors.

Further, all plans must be communicated and rehearsed at each level of command, from the fire team to the company and above. In particular, platoon commanders, platoon sergeants, squad leaders and fire team leaders must be aware of each man's assignment. This should include who goes into a structure first, who covers. Hand and arm signals, as well as vocal commands should be established and practiced.

Medical: (Input from Doc John Loudermilk, U.S. Navy Corpsman)

The following recommendations are made regarding training and preparations for field corpsmen who support Marine units in urban combat:

- Augment corpsmen's field pack with a medical surgical kit and antibiotic creams.
- Increase knowledge of:
 - Treatment of rashes and dermatitis.
 - Treatment for opening airways/cricoid thyroidotomy.
 - Treatment of battle trauma (psychological).
 - CPR certification/refresher.
- Periodic training sessions at BAS or RAS, and discuss ongoing problem resolution in the field, answering questions of corpsmen.

- Increase knowledge of childbirth procedures. (NOTE: Although this comment was made in a somewhat lighthearted way, there is a serious aspect to this issue. Doc Loudermilk helped a Vietnamese woman give birth during the battle inside the Citadel of Hue.)
- Follow up information regarding casualties back to their unit.
- Time off after major battles.
- Better record keeping.
- Small, motorized vehicles will be required for both supply and medical evacuation. This will reduce the number of able-bodied Marines required to move wounded to the rear area.

Command and Control:

In full-scale urban conflict, especially in situations during which enemy dispositions are not well known, initial contact with the enemy can, and most likely will be unexpected, at very close range, and massively devastating. Command and control, the basic Marine's connection to his leadership, can disappear in the blink of an eye. During Operation "HUE CITY," C/1/5 lost two of its three 2nd lieutenant platoon commanders; SSgts became platoon commanders; PFCs were squad leaders. In urban combat it would not be at all surprising to find corporals as platoon commanders given the potentially high casualty rates. The critical factor for unit survival in these situations is that unit's ability to immediately determine the enemy's positions and to return a high volume of sustained fire on those positions, allowing maneuverability against them.

During the first day of 1/5's involvement in Operation "HUE CITY," Alpha Company lost its CO, its XO and much of the company CP group. Of necessity, Alpha was pulled back to the battalion rear for reorganization. The loss of a few leaders effectively eliminated an entire company. This also delayed the battalion's attack, blunting our initiative.

The individual Marine who is under heavy enemy fire from very close range, who may now be cut off from his team and/or squad leader, needs to have been thoroughly informed of communications codes, lines of departure, lines of stoppage, friendly unit dispositions and the ability to call in supporting fires and conduct contingency plans. In short, in urban conflict situations, command and control needs to be understood at every level down to the basic Marine.

Based upon our experiences during Operation "HUE CITY," we recommend you train for high levels of performance, expect the unexpected, expect chaos, and plan for all possibilities.

Respectfully submitted, and Semper Fidelis!

Operation "HUE CITY" Veterans

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