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Surprise, Shock and Daring: The Future of Mobile, All-Arms Warfare

James B. Hickey

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LAND WARFARE PAPER NO. 45, APRIL 2004

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by James B. Hickey

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Foreword

This paper examines the intended nature of the United States Army's Future Force and offers specific ideas for doctrinal development. Operational surprise, tactical shock effect, and daring and creative leadership—qualities that are important for any combat force on campaign—are particularly important for the Future Force.

Given expected technological developments and the procurement plan, the Future Force will field capabilities of unprecedented mobility, target acquisition, lethality and means of communication. These capabilities will allow for fast-paced, decentralized yet coordinated campaigns that can strike decisively at an enemy's vitals.

The successful battlefield exploitation of these technological advances will be an entirely human effort. Surprise, the tactical prowess to induce shock, and the leadership to put this all in motion are functions of human creativity, courage, will and effort.

As the Army's Current Force evolves into the strategically agile and adaptive joint and expeditionary Future Force, planners and decisionmakers will do well to consider the recommendations contained herein.

GORDON R. SULLIVAN
General, United States Army Retired
President

April 2004

Surprise, Shock and Daring: The Future of Mobile, All-Arms Warfare

Introduction

Today as U.S. armed forces fight our enemies in Southwest Asia, South Asia and many other parts of the globe, it is clear that the nature of war and combat remains essentially the same. Though our weapons have become increasingly more effective and our tactics and organizations for fighting have thus evolved, what remains constant is the fact that war and combat remain a brutal test of human wills. Enemies of the United States are displaying the ability to resist and adapt. U.S. soldiers and airmen in turn are adapting to win. Gaining and maintaining contact with the enemy; killing and wounding him with fires; and maneuvering to finish him are as challenging as ever. Information, mobility, firepower, protection and leadership remain essential to the combat power required to prevail. Complicating this are the challenges of doing all of this over great strategic distances and in remote, austere locations. American fighting forces have faced these daunting challenges before and certainly will continue to do so.

As we fight we also look forward. We imagine how future wars will be waged. Assessing the United States' strategic situation and the threats both today and into the future, our leaders acknowledge the requirement to modernize and transform our military and naval forces. Demonstrated capabilities of our most modern technologies today on the battlefield and proving grounds provide us glimpses of extraordinary future potential. This potential allows us to visualize future war and combat being waged in ways significantly different from those of today or the recent past.

The United States Army's vision, however, acknowledges that, in the end, conflict will remain a human endeavor. The Army also affirms the ultimate requirement to control an enemy's terrain, resources and population to achieve decisive victory. Ground forces thus will remain indispensable.

At its most fundamental level, war is a brutal contest of wills. Winning decisively means dominating our enemies. Potential opponents must be convinced that we are able to break them physically and psychologically and that we are willing to bear the costs of doing so. For some opponents, mere punishment from afar is not enough. With these adversaries, the only way to guarantee victory is to put our boots on his ground, impose ourselves on his territory, and destroy him in his sanctuaries. . . . This is the foundation of decisive operations.¹

The challenge for the Army is to fight these battles anywhere the United States has interests and against any enemy. This requires us to be prepared to alert and deploy on short notice; travel great distances; and, on arrival, fight to win successfully operating under any set of local conditions. We will have to be able to do this as part of joint,

interagency or multinational forces. Operations can range from peacekeeping to mid- to high-intensity warfare.

This requirement is driven by many changes on the strategic landscape. Rapidly expanding United States political and economic interests around the globe not only increase opportunities for better relations and wealth creation but also increase exposure and risk, i.e., exposures that will have to be defended when threatened. Regional instabilities, aggressive regimes, terrorists, organized crime and the proliferation of advanced weapons ensure a varied, unpredictable and dangerous set of threats. Gone are the days when the Army could focus on a small number of specific theaters, adversaries and missions pursuant to a long-established and little-changing national military strategy. Today and into the future the Army must be prepared for any challenge, any time and anywhere.

The U.S. National Security Strategy of September 2002 acknowledges this new reality. It is a strategy of engagement and cooperation with allies, friends and those who seek partnership with the United States. It is also a strategy for preemption against the nation's enemies. U.S. strategies have expanded beyond deterrence.

The U.S. Army's leaders offer the idea and challenge of a Future Force² to meet tomorrow's threats. This force is intended to be a ubiquitous force of unmatched and unprecedented combat power—power that can be employed against any enemy, at any location on the globe, and achieve decisive victory. Exploiting science and industry's most advanced technologies, we will arm our soldiers with superior weapons and equipment. This superiority, coupled with combined-arms organization, quality training and joint force integration, is intended to give our Army the tactical power of "firsts": "see first, understand first, act first, and finish decisively."³

Accepting the possibility that much of the technological advances intended for the Future Force will be realized, I shall offer three ideas or requirements toward which we should aim; ideas that should be used to impart a decided operational bias in our efforts to field this force.

To transform the U.S. Army into a 21st century force of unprecedented and overwhelming combat power, Army leaders propose the fielding of a Future Force—a technologically sophisticated force designed to wage violent, fast-paced operational "deep battle" in any given theater.⁴ It is to do this as part of a joint, interagency or multinational force (JIM). It will alert and deploy across strategic distances against any enemy in any type of terrain. It will be a force that will be optimized for offensive operations. It will commit our strengths against identified enemy weaknesses—weaknesses that can be exploited through rapid fire and maneuver to strike at what the enemy holds most dear. The goal is to preempt long, costly wars of attrition.

The Army must both aim toward and leverage three specific qualities to realize the full operational potential of the Future Force. First, operational surprise should be viewed as not only an essential planning factor for the conduct of any future campaign but also fully realizable. Second, shock effect by highly mobile, combined-arms tactical combat units will be essential to maintaining high operational tempo. Third, daring and creative leaders at both operational and tactical levels will continue to be the *sine qua non* for

harnessing and exploiting the information, firepower, protection and mobility of the Future Force.

Technological advances notwithstanding, what will make the Future Force truly lethal will be its ability to force enemies of the United States to react to its campaign design and combat methods. The intended capability to enter a theater at just about any point with highly mobile and lethal forces will give us great opportunities to surprise our enemies. That, coupled with the ability to subsequently and repeatedly defeat enemy forces in fast-paced, violent tactical engagements, will sustain the enemy's initial surprise with shock effect. Surprise, shock effect and rapid destruction will both disorient and weaken the enemy while also increasing our freedom of action and allowing for rapid maneuver. This will be the way we will defeat enemy forces: by causing dislocation and disintegration rather than by engaging in sequential, set-piece battles of annihilation. Key to this will be leaders who will both design these schemes and lead in their flexible execution. Only they will be able to visualize enemy strengths, weaknesses and centers of gravity. They will also envision the operational concepts to attack decisive objectives while exploiting operational surprise and tactical prowess.

These ideas are timeless but have been present in history's most successful armies. They also reflect more the character of an army than, say, specific technological advances. That character is very often reflected in the attitude of an army's officer corps, the bias of its doctrine, the focus of its training and the organization of its fighting units.

The Strategic Operating Environment

Threats to U.S. security and that of our allies today are many and diverse. U.S. interests span across the world in all of its regions. This condition is expected to continue well into this century and, if anything, become increasingly more complex. The U.S. operational environment has changed dramatically since 1991.

On current evidence, the next few decades will confront the United States with an unstable and highly uncertain geostrategic environment. Potential military threats may emerge from revanchists or aspiring great powers, new regional alignments and/or transitional terrorist or criminal organizations. The global explosion in communications, together with continuing proliferation of military technologies, will allow even less wealthy states to field ground combat capabilities once reserved only for armies fielded and supported by fully industrialized economies.⁵

These threats can be conventional, nonconventional, state-supported or nonstate-supported, or combinations thereof. Each will differ in terms of ends, ways, means and conditions. Each will have to be approached with a unique appreciation. Most likely our armed forces can expect to be deployed to regions where the United States might not have forces already stationed. A problem in any of these locations, of course, will require air, land and sea forces to be moved and sustained over great and difficult distances.

Our adversaries and potential enemies also will have learned from history and events. They will have means and ways to fight effectively. Some will display extraordinary skill, will and courage. Many will not share U.S. values and basic assumptions

about just behavior. Engagements will be as ferocious as any of the most desperate in the 20th century.

From the “other side of the hill,” U.S. forces may be viewed strategically as slow to respond, hesitant to become involved in prolonged wars and fearful of casualties, both American and noncombatant. Operationally, our requirements for developed air and sea ports, established lines of communication and robust logistic support may make us appear yet more vulnerable. Further, a desire to seek only set-piece battle in open terrain after periods of rigid planning may paint us as tactically plodding and predictable.⁶

An adversary perceiving these vulnerabilities is likely to conclude that the longer he can delay an effective U.S. response, and the more prospectively expensive he can make it appear, the greater his chances of avoiding it altogether. Where possible, he will seek to deter U.S. intervention by means ranging from diplomacy to threat of direct action against the United States and its allies, including, increasingly, cyber threats to vital military and economic support systems. He will seek through a combination of persuasion, bribes and intimidation to deprive the United States of regional allies, and thus of access to local territory, airspace and port facilities. Failing to deny such access outright, he may seek to delay U.S. deployments by means ranging from ballistic and cruise missile attack on the forces themselves to attack of departure, transit, arrival and staging areas by special operating forces, information operations, and weapons of mass effect. The longer it takes the United States and its allies to project an operationally significant force, the more effective such anti-access efforts are likely to be.⁷

Respecting U.S. space and airpower abilities to acquire, control and execute precision fires with great standoff, an enemy will work to avoid detection, engagement and destruction. The use of complex terrain or the collocation with civilians in ever-expanding urban areas can be expected. Adversaries will avoid massed formations, remain dispersed, maximize concealment and reinforce covered positions.⁸

We should not assume that these threat forces will not develop sophisticated capabilities. Highly developed weapons and equipment are being sold around the world each day. Note that in 2001 Russia surpassed the United States in foreign military sales for the first time in recent memory. In Russia alone exist more than 22,000 main battle tanks and 21,000 artillery pieces; any of these can be sold. Not including the United States, China, Russia, Great Britain and Iran, 18 countries are armed with tank inventories of more than 1,000 tanks each. Access to space-based systems and services is also increasing. This most recent development may enable threat forces to access military applications formerly reserved for U.S. forces.

In sum, we can expect future adversaries to not only fight with will but with skill armed with deadly anti-aircraft systems, anti-armor weapons, mines, armor and first-class small arms. Some may effectively contest U.S. control of the air space, local or otherwise. These and other potential advantages can mean we will fight particularly difficult adversaries in any future conflict.

Threat ground forces will be enabled by a “home court advantage” which provides them an intimate knowledge of terrain and the ability to blur the lines between fighter and civilian. They will operate dispersed, using decentralized C2 [command and control], and present U.S. forces less distinguishable patterns, while exploiting high and low tech ISR [intelligence, surveillance and reconnaissance], leveraging commercial, and other technical means and the sympathetic population. Actions will focus on degrading or destroying [vulnerabilities]. . . . They will employ precision fires, opportunistic maneuver, and an extensive engineer and obstacle effort employing advanced multi-capable mines with anti-tamper protection to counter superior U.S. mobility. Finally, adversaries will employ air defenses, particularly MANPADS [man-portable air defense systems] and air defense ambushes, in an offensive manner, along likely air avenues of approach.⁹

The above can happen after one power within a region swiftly invades and forces the capitulation of a neighbor. Or it could be the result of a successful seizure of power from within an existing state by an internal, malevolent force: a *coup d’etat*. In each situation the aggressor would hope to gain control and consolidate power as rapidly as possible. Thereafter the aggressor would defend gains against any sort of counteraction. Efforts would focus on anti-access and force security measures. Potential points of entry for U.S. counteroffensive forces would be blocked, and enemy combat forces would position themselves to prevent their destruction by American long-range precision fires. The aggressor would then use all of his elements of strategic and operational power to delay. In the event of a U.S. counteroffensive, our adversaries would attempt to fight a long, frustrating war of attrition. The enemy would do his best to avoid large-scale, decisive engagements and instead attack real or perceived U.S. vulnerabilities throughout the depth of the area of operation (i.e., Fabian tactics¹⁰). He would hope to do this by preserving as much of his force as possible. This strategy would be intended to exhaust U.S. forces. It would aim to erode our will and that of our friends and allies.

Common access to outer space will challenge, perhaps even limit, U.S. ability to achieve strategic surprise. Knowing that a total denial of our access to outer space is likely and that confrontation with the U.S. may be unavoidable, potential adversaries are designing other options to avoid U.S. strengths and exploit U.S. vulnerabilities. To this end, the enemy could seek to accomplish its initial objectives quickly by an aggressive, territorial move with conventional forces against a neighbor, leaving sufficient time to prepare for and deny external intervention. Once U.S. forces are committed, however, respect for our significant capabilities causes the enemy to forgo massed formations in favor of smaller dispersed forces with lethal capabilities targeted against strategically significant symbols to generate confusion and encourage tentativeness in our use of force. To reduce its exposure and complicated U.S. targeting, the adversary will disperse and operate from areas of physical and moral sanctuary often located in complex, urban terrain, shielded by civilians and culturally significant structures. . . . The enemy will resort to decentralized, small-unit operations when it perceives that we have the advantage and will exploit linked operational and tactical intelligence, surveillance, reconnaissance (ISR) capabilities to determine

whether attack opportunities exist and conditions are right for offensive action. . . . The enemy's goal will be to fracture U.S. and coalition resolve. . . . In prolonging a conflict, the enemy will often be satisfied to achieve a stalemate.¹¹

The United States would hope to be able to deter the above by a timely forward positioning of forces or through the establishment of a security assistance effort. These prescient actions in concert with the exercise of other elements of national power could be enough to deter aggression. In some situations these actions may not be possible or effective. Rapid, armed reaction may be our only option.

An Expeditionary Force Requirement

An armed response to an act of aggression far from the United States or from where U.S. forces are forward deployed requires a national capacity to execute "operational maneuver from strategic distances." We would alert and deploy air, land, sea and space forces to regions far removed. These forces would have to be fully trained and ready for immediate deployment. As partners in a joint, interagency or multinational team these forces must be prepared to fight on arrival. Entry into theater can be opposed or unopposed. The area could be without established facilities such as seaports, airports or improved roads.

As sea and land forces alert, deploy and converge into an area of operation a combatant commander would refine intelligence, surveillance and reconnaissance (ISR) efforts to gather information about the enemy, terrain and weather. ISR forces would exploit both national-level capabilities and joint aerospace systems to gain electronic, photo and visual contact with the enemy. From such efforts a combatant commander could finalize concepts of operation, develop target data for an operational fires plan, and execute an initial fires attack against identified targets. Long-range strategic and operational precision lethal and nonlethal fires could be initiated from air, sea and land systems. In short, the commander, exploiting networked, high-technology joint capabilities, could begin to set favorable conditions in theater from strategic distances. This would be done as ground forces closed into the joint operations area (JOA) to identified positions of advantage for initial entry. The pattern is much like that of a meeting engagement.

As in meeting engagements, speed matters. "The longer it takes the United States and its allies to project an operationally significant force, the more effective . . . [an adversary's] . . . anti-access efforts are likely to be."¹² To preempt an attacking enemy before he achieves all of his operational objectives or consolidates his gains, our ability to engage him rapidly with both long-range precision fires and ground maneuver forces would be of great advantage. An aggressive defeat of an enemy's anti-access and delaying tactics would allow U.S. forces to begin work to seize the operational initiative.

A successful initial entry into a theater, however, would not be sufficient. To be ultimately decisive, U.S. forces would have to sustain an ever-increasing operational tempo. Specifically, we would have to reinforce initial-entry forces with a steady stream of follow-on elements, at the same time executing and sustaining combat operations by forces already engaged.

It . . . is important to understand that the critical measure of successful force projection is not the speed with which the first combat elements engage, but rather the rate at which the U.S. and its allies are able to achieve overall operational superiority, depriving an enemy of freedom of action and making his ultimate defeat both inevitable and irreversible. U.S. forces therefore must be able to rapidly translate the initiative gained by forcible entry into decisive operations against key enemy capabilities or vulnerabilities in depth.¹³

Throughout the nation's history, American forces have conducted operations using long lines of communication either within North America or across vast oceans and distant continents. It is a challenge with which we are very familiar. The United States also has an unmatched tradition of joint interoperability. No other nation ever conducted amphibious or air-ground operations on a scope or scale approaching what our forces conducted in the 20th century. Skill at power projection across the globe is a uniquely American feat of arms. Today, however, we have presented ourselves the challenge of doing these inherently complex operations more rapidly with an eye toward decisive campaigns.

The Future Force

For the U.S. Army, the Future Force is intended to fulfill this expeditionary role. This force, as part of a joint expeditionary force, is intended to be rapidly deployable, versatile and powerful. The aim is to be able to commit a brigade-sized force to combat in 96 hours and a division-sized unit in 120 hours. After 30 days, five divisions are to be in the fight. Immediately on entry into theater, all are to be able to fight and win against any adversary. In the theater each brigade-sized force is to be able to fight and move without replenishment for a period of three to seven days. Organically combined-arms, these forces are to be able to fight mounted, mounted while supported by dismounted forces, or dismounted while supported by mounted forces. High mobility is intended to allow this force to move at speeds superior to those of the enemy. At tactical levels this is to be ensured by vehicles designed to have high horsepower, all-terrain traction and robust suspension. Advanced target acquisition and weapons that can engage at extended ranges with killing shots are also intended to give Future Force soldiers freedom of action within the enemy's battle space. Sophisticated countermine and bridging operations are intended to overcome obstacles. At an operational level the brigade-size units are to move by ground using organic vehicles or by air using theater lift. The intent is to have the potential to be able to outmaneuver the opponent at both tactical and operational levels.

The force's lethality will be based upon superb target acquisition technologies and highly accurate, deadly weapons. These weapons will be line-of-sight (LOS), beyond-line-of-sight (BLOS) and non-line-of-sight (NLOS), i.e., direct fire, indirect fire under control of local maneuver commanders, and supporting indirect fire, respectively. These integrated systems are designed to allow U.S. soldiers to detect enemy troops and equipment long before the enemy detects our presence. With that information Future Force elements can then deploy, maneuver and engage the acquired enemy at ranges beyond those of the adversary's weapons. These weapons are both mounted and dismounted as well as either manned or unmanned. Complete integration with airborne forces is implicit. Future Force units are to exploit information and target

data collected from unmanned aerial vehicles (UAVs), manned aircraft and satellites. They are also to be capable of rapidly exploiting and directing close air support. The intent is to be able to attack the enemy with the full weight of available joint fires at any point on the battlefield.

In terms of organization, the Future Force is presently designed to be echeloned with units of action (UA) and units of employment (UE). This roughly corresponds to brigades and divisions/corps, respectively. The UA is a combined-arms, close-combat team that can be reinforced as needed for its assigned tactical tasks. Designed to win engagements, it is capable of independent combat actions. The UE is intended to operate at either a “higher” tactical or an operational level. There can be several UEs between a UA and a combatant commander. In short, one UE could fulfill the role of a “division” headquarters, another a “corps” headquarters, and so on. UEs commanding UAs focus on winning major battles. They attack enemy key capabilities. Intended to be a combined-arms, air-ground task force, a UE can operate as the Army forces (ARFOR) component, a joint force land component command (JFLCC) or a joint task force (JTF). The UEs commanding subordinate UEs execute campaigns to achieve operational objectives in theater. They, also, can operate as an ARFOR component, JFLCC or JTF. These higher-echelon UEs are also combined-arms, air-ground commands. Operationally they dislocate an enemy throughout the depth of the theater by disorganizing and disintegrating his systems. They thus are capable of decisive land campaigns aimed at supporting joint operational or strategic objectives.

Of fundamental importance to the potential success of the Future Force is its ability to acquire, manage, distribute and exploit information. The force is to have “information superiority” designed to allow leaders and soldiers to see the enemy long before the enemy sees and reacts to them. Clear, timely and accurate information will allow leaders to make sound tactical assessments and soldiers to strike the enemy at range. Further, leaders and soldiers are to be able to see themselves on the terrain in relation to the enemy in real time. One might imagine a combat training center “screen shot.” Most remarkable is the idea that this visibility of the area of operation is to be shared or “distributed” to each manned aircraft, vehicle and dismount element on easily comprehensible displays. Clearly that data will be managed so each echelon within the command is presented useful information for its respective task or role. This, coupled with reliable voice communications and message services, will allow for a common understanding of the general situation: a “common operational picture” (COP). Essential to this capability is a wide-band, digital network that links sensors to leaders and soldiers and again to weapon systems.

The Unit of Employment is a knowledge-based force organized and designed to operate within the network-centric and collaborative information environment (CIE) of the future. Information superiority (IS) is essential to the fundamental concept of simultaneous, distributed operations. . . . Drawing information, updated in near real time, from a wide variety of automated and manual sources—on-board sensor, unmanned air and ground vehicles, traditional and new ISR [intelligence, surveillance and reconnaissance] means, space platforms, and an assortment of correlated databases—this knowledge backbone will be

focused on improving and accelerating the decision-action cycle. The network will provide the means for forces at all levels to achieve situational understanding (SU) and establish, maintain, and distribute a common (joint) operating picture tailored to the force and situation.

Advanced C4ISR [command, control, communications, computers, intelligence, surveillance and reconnaissance] network will sharply enhance the lethality, survivability, agility, and versatility of the force, enabling more effective and timely application of the elements of combat power.¹⁴

In regard to battle command, command and control, and planning, the above described capability is intended to allow for more rapid reports, estimates, decisions and orders. The enhanced visual and voice means of communication will allow for more “give and take” among commanders as they assess situations, offer recommendations and finalize battle orders. Less time will be spent on discussing basic situational facts such as friendly combat power or positioning. Commanders should be able to make better decisions more rapidly. They will also have better means by which to issue more effective orders (clear, concise, flexible, timely, etc.). Perhaps most important, a commander will be able to remain forward where he wishes. He will not be tethered to staff or main command post. Embedded, robust and reliable digital capabilities onboard his combat vehicle will allow him to conduct leader reconnaissance, confer with fellow commanders and visit soldiers without losing a “main command post”-quality situational understanding (SU): “battle command on the move.” Further, coordination for critical functions such as reconnaissance and fires are completed in a more timely manner. The commander will also have the ability to “reach back” to gather specific data or information, i.e., he will be able to get answers to questions about details relevant to the situation at hand or pending operations. He will have access to staffs, data banks or experts networked on the information web. Some of these could be national-level assets. Depending upon the skill and temperament of the commanding officer, this has the potential to allow for a “deliberate planning” level of quality for combat orders in a very short time period. Rapid fragmentary orders will become the norm. This means well directed, lethal and rapid action—higher tempo.

Investment in the right technologies could tend to greatly expand the likelihood that organizations will function in “deliberate” settings, those in which the understanding of relevant factors is high and thus capabilities can be optimized. The traditional military definition for the word “deliberate,” as in deliberate attack or deliberate defense, reflects the condition and terms of the engagement more than the time and extent of preparations.¹⁵

General George S. Patton, Jr. would have agreed with this assessment. He insisted that orders be timely, short and clear (i.e., a page and a half with a sketch). He also reminded commanders that orders were about 5 percent of the responsibility of command. He determined that the difference between haste and speed in preparation for combat was proper reconnaissance, fire support and ensuring “every available man was brought up.” Note that he did not define it in terms of time needed to plan. To him the “best was the enemy of the good . . . a good plan violently executed *now* is better than a perfect plan next week.”¹⁶ This commanding general knew the power of high tempo as

well as the importance of well-managed information. His headquarters, “Lucky Forward,” was considered the best at managing, reporting and presenting information of any of its type in the European Theater of Operations in 1944 and 1945.

What all the above means in concept is the potential for being able to see the enemy first, understand the overall situation first, act first and finish an engagement decisively. This has been described as the “quality of firsts.”¹⁷ At both the tactical and operational levels it also provides the opportunity to execute distributed, simultaneous combat operations across the depth of the battlefield or joint operational area. This means UAs and UEs can operate in a noncontiguous manner. Forces will be able to fight decentralized but in a coordinated manner. As they do so they will have a clear understand of one another’s situations as well as an overarching COP. This C4ISR capability, coupled with long-range precision fires, vertical envelopment, mobile strike and self-contained, combined-arms UAs, allows for a 21st century version of “deep battle.”

For an enemy this would mean attacks from his front, flanks and rear. He would suffer fire attacks from weapons beyond his line of sight without being able to return in kind. His vulnerabilities would be assaulted and his strengths bypassed. His key political centers would be under direct threat or seized by *coup de main*. He would lose control of key terrain. His vital resources would be captured or destroyed. His critical support system would face direct attacks. The loss of supplies, communications and fire support would take away his capacity to fight a coordinated and sustained campaign. Some of his maneuver units would be annihilated in combined fire strikes and close assaults. Most would be isolated and contained. He would lose freedom of action. His soldiers would lose the ability to fight or even to defend themselves. At some point the enemy would lose the will to carry on.

Objective [now Future] Force corps and divisions conduct sustained land counter-offensive operations within the joint campaign to establish land force dominance, wrest the initiative from the enemy, force him on the defensive, and defeat him in detail. . . . The combination of joint precision strike against enemy forces, which will tend to drive him to disperse, avoid large-scale maneuver and seek sanctuary, combined with all-arms capabilities of the [Future] Force corps and divisions to find, root out, and destroy those forces, will afford the enemy no rest, relief, or sanctuary, and no means of responding effectively to this relentless, multi-dimensional assault.¹⁸

A Concept Assessed

The Future Force is an unequivocal argument for the offense. Its aim is rapid victory. It challenges the Army to “dictate the nature, scope, and tempo of . . . operation[s].”¹⁹ It demands that leaders and soldiers use imagination, will and skill to find ways to force the enemy to react to them. We will be expected to exploit enemy vulnerabilities, maintain freedom of action, and react to rapidly changing situations and unexpected developments. Given the aforementioned threat estimate, we are not to be blocked by enemy “anti-access” efforts or delayed by his security operations. Nor is he to be allowed to find sanctuary. If he finds sanctuary, he leaves wounded or as a prisoner of

war, or he is buried in it. At no time do we fight along his timeline. We do not allow the chance of a stalemate.

Implicit in this concept is the idea of operational and tactical initiative. It demands that we do not fight the enemy's fight. We are to set and dictate the terms of action throughout the battle or operation. We are to "compel the enemy to conform to friendly operational purpose and tempo."²⁰

Anticipating events, we must act before or react faster than the enemy. These operations are not for leaders and soldiers who need certainty and constant direction from central authority.

From an individual perspective, initiative is the ability to be a self-starter, to act when there are no clear instructions or when the situation changes. An individual leader with initiative is willing to decide and initiate independent actions when the concept of operations no longer applies or when an unanticipated opportunity leading to the accomplishment of the commander's intent presents itself. Despite advances in C2 [command and control] from digital technology, individual initiative remains important for successful operations. In battle, leaders exercise this attribute when they act independently within the framework of the commander's intent. They trust their subordinates to do the same.²¹

The way the Future Force concept asks us to attack the enemy demands daring and imagination. It asks us to envision operations and tactics that aim at dislocating and disintegrating the foe. It does not advocate tightly-controlled and rigidly sequenced battles designed to annihilate the enemy's main body sub-unit by sub-unit, to "clear zone" with set-piece, linear tactics. The Future Forces UEs are to simultaneously attack the enemy throughout his depth with distributed fires and maneuver units. Vertical envelopment by superbly armed, digitally connected and highly mobile UA forces is the means with which to enter the enemy's rear and threaten what he hopes to protect or what he must have to support his ability to fight (e.g., state capital, operational reserves, supplies, key terrain, C2 nodes, etc.). Highly concentrated and readily shifted precision fires can deliver destruction on confirmed enemy forces to support deep maneuver. Maneuver and fires to the front and rear of the enemy main body force him to fight against multiple types of attacks from multiple directions. UAs fight in a coordinated but noncontiguous manner. In this way the enemy loses his ability to pursue his objectives and soon loses his freedom of action. His units lose mutual support, his defense its integrity; he becomes dislocated. In due course, as his support systems are attacked, he loses the ability to communicate, direct fires and sustain. His forces disintegrate. This style of operational method requires commanders to conduct incisive "operational net assessments" to determine enemy strengths, weaknesses, centers of gravity and decisive points. This is an art. It is also a way to identify objectives against which to commit forces. Further, it demands imagination to find indirect approaches to these objectives as well as a sense of timing to sequence complementary, lethal actions.

In execution, the capability to see changing situations or opportunities is an imperative. More important is the mental and physical flexibility to adjust schemes to compensate for or exploit these changes. This must be tempered by an unshakable focus on one's objective. Networked, digital C4ISR among the distributed forces will both

allow all units to see and hear these changes and quickly make needed adjustments in response. Note, however, for this to happen a great trust must exist among leaders and subordinates. Subordinates must accept the responsibility for seizing the tactical initiative. Leaders must (1) demand this from subordinates; (2) exploit successes; and (3) underwrite setbacks. Military professionalism at each level of command will be vital.

Long-range precision fires and C4ISR offer the possibility to reach over enemy armies to directly strike at what they hope to defend or preserve. Precision strategic strikes closely coordinated and timed with converging UEs would present a defending enemy a most difficult dilemma. The capability to execute powerful and sustained attacks against key political, economic and military targets deep into the enemy's rear has the potential to preempt any organized resistance. Defending enemy field forces would be helpless. They could not defend what they have been tasked to protect. Further, their own ability to fight with effect within their immediate areas would be degraded. Imagine a coordinated, single strike that simultaneously attacks the command posts of an entire chain of command from national command to tactical headquarters in the opening phases of a campaign. This is partially akin to "decapitation" strategies envisioned during the Cold War whose aim was to "short-circuit command and control systems . . . [and] . . . leave rival armed forces leaderless and confused."²² If this were coupled with the pressure of operational UEs maneuvering to attack systems and key capabilities, the enemy would find himself exposed to the combined affects of a theater strategic and operational joint assault. It is not merely a modern argument for independent strategic bombing. It is more a 21st century version of J.F.C. Fuller's "Plan 1919."²³

The above describes simultaneous engagement and distributed operations. "Forces distributed throughout the battlefield act in concert to multiply the effects achieved, while their dispersion simultaneously reduces vulnerabilities to enemy counters. Collectively, these capabilities will reinforce the effects of fires/interdiction, present a set of multidimensional options to paralyze and overwhelm the enemy, and lead to rapid collapse of enemy forces."²⁴

Without question developing the means to fight decisive campaigns from strategic distances will be an enormous effort. Many technological advances for weapons, munitions, combat vehicle components, strategic lift and communications have been made to date. Many other emerging technologies offer great promise. Science and industry continue to work. Note that many of the technologies needed to make the Future Force a viable fighting force exist, and some are already in use. As outlined in U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-92, *Objective Force Unit of Employment Concept*, Final Coordinating Draft, 8 November 2002, "six families of capabilities are particularly important." Those are advanced C4ISR; combat service support (CSS) transformation; strategic and operational lift; precision munitions and advanced fire control; and the Future Combat System (FCS).

As we view the Future Force and the transformation of joint warfare in general, we must look beyond the technological. Whether we develop certain technologies or not will not change U.S. National Security Strategy, the strategic operating environment or the expeditionary force requirement. MacGregor Knox and Williamson Murray admonish us in *The Dynamics of Military Revolution 1300–2050* to see changes in military forces

beyond technological change. In their final chapter, “The Future Behind Us,” they suggest that “changes in society and politics—not in technology alone—are the most revolutionary forces of all.” Further, these revolutions will not change “war’s underlying nature. . . . Friction, uncertainty, and confusion in warfare are not superficial annoyances to be gradually eliminated by technological ‘progress.’ War is *inherently* nonlinear.”²⁵ We, therefore, should not see the Future Force concept as either valid or invalid based solely on a prediction of whether or not a specific technology is eventually brought to fruition.

We must continue to work to develop fighting doctrines—doctrines that must address the reality of the new operational environment and the absolute need to project power rapidly. Scores of U.S. Army and joint documents have been published outlining concepts and requirements. Several exercises have been executed to experiment with these ideas. Much work remains to refine concepts and to develop a joint services-wide vision and theory of war and combat. Most important, these efforts must produce joint doctrines that address operational and tactical combat methods.

The Future Force concept, again, is an argument for the offense. It acknowledges both the United States’ strategic challenges and requirements and the unchanging nature of war. As for the adversary it is optimized to engage, it will not concede the operational or tactical initiative. More than an argument for the offense, this idea advocates a specific type of offensive warfare.

This operational concept—focusing on rapid movements over strategic distances, the indirect approach, simultaneous attacks by distributed forces throughout the depth of the theater, and strikes against enemy centers of gravity—champions an American “deep battle *blitzkrieg*.”²⁶ We seek to continue such unique American skills at arms as strategic power projection and joint warfare while combining them with lessons learned from modern history’s most brilliant campaigns. We wish to shape and exploit technologies to effectively combine strategic and operational levels of war into one fluid, hard-hitting fist.

Over the past century, this style of operation has been executed successfully by many armies, including those of the United States. These campaigns were characterized by flexible execution; exploitation of enemy weaknesses; violent, distributed and simultaneous strikes in the enemy’s rear; combined-arms cooperation; air-ground integration; and rapid movements. Much of this is reflected in the materials prepared thus far about the Future Force. What we want the Future Force to do is not unlike what was done by Allied forces in Palestine in 1918, German forces in France in 1940 and in Libya in 1941, Japanese forces in Malaya in 1941–42, American forces in France and in the Southwest Pacific in 1944, the Israeli Defense Forces in the Sinai in 1967, and American forces in Panama in 1989. These campaigns were rapid, hard-hitting and decisive.

What our materials about the Future Force do not address are key classical concepts that can do much to develop ideas about initial-entry operations, high-tempo maneuver, and the dislocation and disintegration of the enemy. These concepts are operational surprise, tactical shock effect and daring, creative leadership. Each was a salient characteristic in each of the above-mentioned operations.

Operational Surprise

The night was much like the many before it. The bombing campaign continued. The darkness was full of the usual sounds of air combat: the drone of aircraft engines, the pounding of anti-aircraft batteries and the crash of falling debris. At least it wasn't raining.

The glider swooped low, scything through the air with a sinister whooshing sound, full of lethal intent. Its wings began clipping trees at some 90 [miles per hour]. Ahead lay two shining irregular, yet parallel, strips of moonlight reflected on water . . . all around flooded meadows, drainage ditches and small ponds, reflected a lucent eerie half lunar light. A bridge loomed up ahead.

Grenadier Romer . . . pacing the bridge, glanced around in alarm. That was loud, and extremely close! . . . Yet another fragment from a doomed aircraft. . . . He continued his pacing, scanning the half-light for the opposite sentry coming from the other side of the bridge.

A second crashing tearing sound could be made out in the darkness . . . alarming . . . one minute later, still another shattering tearing commotion broke the silence further down the canal.

A single shot rang out. Romer on the bridge heard the sound of scuffling feet, and fearfully observed the first onrush of airborne troopers frantically scrambling up the embankment on to the bridge.²⁷

Romer saw twenty-two . . . airborne troops, appearing so far as he was concerned literally out of nowhere, in their camouflaged battle smocks, their faces grotesquely blackened, giving the most eerie sensation of a blending of savagery and civilization. . . .

They were coming at Romer at a steady trot, as determined a group as Romer thought he would ever encounter. Romer could see in a flash, by the way the men carried their weapons, by the look in their eyes and by the way their eyes darted around, all white behind the black masks, that they were highly trained killers who were determined to have their way that night. Who was he to argue with them . . . ?

Romer turned and ran . . . shouting "Paratroopers!"²⁸

It was 0018 hours on 6 June 1944. Paratroopers of D Company, 2d Battalion, Oxfordshire and Buckinghamshire Light Infantry, 6th Airborne Division, having landed by glider on the European Continent just two minutes earlier, were assaulting one of the two bridges that comprised their objective. Operationally key, seizure of both bridges spanning the Orne River and its nearby canal would do much to secure the eastern flank of the invading Allied forces. By 0026—only ten minutes after landing—D Company had completed their mission successfully. German resistance was erratic; some Germans were captured in their sleep. Airborne casualties were few. "Total surprise had been achieved."²⁹ By 0300 the company, under the command of Major John Howard, had been relieved by Lieutenant Colonel Pine Coffin and the men of 7th Battalion, 5th Airborne Brigade, who had parachuted in at 0052. All were relieved later the same day by forces moving inland from Sword Beach.

A classic operational *coup de main*, the above mission is as well known as it was dramatic. It serves as a shining example of how an operational objective can be achieved through daring tactics and surprise. So significant was the degree of surprise that D Company was able to accomplish its mission with only four of the six platoons originally allocated for this task. Two platoons had mistakenly, but safely, landed miles away.

Such historical precedence serves us well as we assess the potential of the Future Force. Imagine what the ARFOR commander could have accomplished on 6 June 1944 if he could have air-landed a combat-ready and highly mobile combined-arms task force into the Normandy Peninsula that morning. Weeks of bloody fighting for Caen and its airfield could possibly have been avoided.³⁰

Surprise is the ability to “strike the enemy at a time or place or in a manner for which he is unprepared. . . . Factors contributing to surprise include speed, information superiority, and asymmetry.”³¹ If surprise is achieved, great advantage can be gained.

At its most basic, surprise has everything to do with human perceptions and attitudes. At its core are fear, disorientation and confusion. These emotional and mental stresses can undermine a soldier’s courage and reason. Surprise can prevent a soldier from executing his duties effectively or at all. A soldier unexpectedly and violently ripped away from his routine can quickly fail. The degree to which this can happen depends very much on a combination of factors. The soldier’s intelligence, level of training, experience, discipline, fatigue, health and motivation all have a positive or negative effect.

Units at large can also be surprised. That is especially so if the unit suffers a large amount of casualties in a short period of time. This is sometimes referred to as shock. A unit suddenly finding itself in a position for which it is not materially, organizationally or tactically prepared quickly loses its ability to perform. The capability of a unit to resist or recover from surprise is a question of leadership, cohesion, training, discipline and material means.

The Future Force’s proposed capabilities would grant a commander superb potential to achieve surprise throughout the course of a campaign. Its speed, fire power and C4ISR would give a commander all the tools he would need to strike an enemy in a place, time or manner to which the latter could not respond.

Combat being a test of opposing human wills, a commander should never overlook the opportunity to surprise his enemy. An enemy surprised is an enemy whose will is vulnerable. The degree to which a commander may surprise his opponent is very much a question of how well he knows his enemy. To surprise an enemy the commander must be able to determine what the enemy is prepared for and what he is not. The question of how to adversely affect the enemy’s will or resolve to fight in the end is a subjective call. Experience, common sense and a bit of intuition are what a commander must rely upon to devise tactics aimed at attacking an enemy’s moral will to carry on. Empathy, cunning and ruthlessness can result in the most interesting of tactical concepts. Certainly swiftness and violence in execution would be key components in such tactics.

This assessment, however, must address not only an enemy’s psychological predisposition to resist or break but also his physical preparedness to fight. In this regard, the Future Force’s knowledge-based operational concept can play an important role.

Advanced C4ISR and a “collaborative information environment” (CIE) would provide a commander “information superiority” (IS) over his opponent. A Future Force field commander is intended to have the potential to know more about the battlefield situation than the enemy and to know it more rapidly. Knowing terrain, weather and light conditions at a level superior to that of the enemy would be a distinct advantage. The ability to see most of the dispositions of both friendly and enemy forces across the area of operations would give a commander an even greater advantage. With this superior view and his own talents at assessing its tactical or operational significance, he would thus be able to identify great opportunities to catch his opponent off guard.

Richard Simpkin, in his book *Race to the Swift: Thoughts on Twenty-first Century Warfare*, wrote in 1985 about this dual aspect of surprise. He referred to the work of J. F. C. Fuller:

Fuller, in what is to my mind his most valuable single contribution to military thinking, distinguishes between “moral surprise” and “material surprise.” Moral surprise means that the enemy does not know you are coming: In Fuller’s view, only moral surprise can achieve an immediate decision. Material surprise means that the enemy knows you are coming but cannot do anything to stop you. . . . I . . . suggest the concept of material surprise, though the less dramatic of the two, is fundamental to maneuver theory. For it makes surprise restorable, analogous, if you like, to chastity as opposed to virginity. You may not achieve moral surprise, but by outdoing the enemy in tempo, by getting and keeping your tempo high enough to put yourself inside his decision loop (the Boyd Cycle) [“OODA loop”: observe, orient, decide, act] . . . you can both ensure material surprise and restore it if lost. What is more, the concept of material surprise suggests that both the value of surprise and the conditions for its achievement should be quantifiable, at least in part.³²

For example, a commander assessing his opponent may conclude that he can surprise his enemy with a dismounted close assault into the enemy’s rear without a fires preparation just minutes after midnight. He may have come to that conclusion because his assessment of the enemy is that the enemy seems not to be alert at night nor does the enemy believe his rear is assailable. In this case the enemy does not know we are coming! This enemy can be “morally surprised.” Stealth is what matters most. Note the actions of Major Howard and his men at the Orne River and Canal Bridges.

On the other hand, the friendly commander may also conclude that he will attack the enemy frontally at noon with the full force of a mounted assault orienting on a narrow portion of the enemy line. He is choosing a rapid assault executed behind a short but powerful artillery preparation because his assessment has told him that though the artillery attack will alert the enemy to the impending attack, the speed with which he will assault will preclude the enemy from adequately repositioning forces to block him. He has “calculated” that the alerted enemy will not be able to do anything rapidly enough to defeat him before he achieves his goal. This is “material surprise.” Speed and firepower seem to matter here.

Regardless of the type of surprise toward which a commander aims, he must skillfully assess his enemy and the conditions of the battlefield. He must also assess his own capabilities. After that he can determine his tactics.

These ideas about surprise are profoundly important in understanding the potential of the Future Force concept. Perhaps the most powerful capability this force may possess is its capacity to execute “vertical envelopment” and “mobile strikes.” Beyond our current airborne or air assault operational capacity today, Future Force UAs or UEs could position highly mobile, self-contained, combined-arms teams into areas across the JOA at will. Possessing the ability to enter a theater at any place of one’s choosing affords the attacker great initiative. Given that some of these places might be within the enemy’s rear and in areas where the enemy would least expect us, we would have superb potential to achieve operational surprise from the initial phases of the campaign. Gone might be the days when the only way into the enemy’s rear areas with any kind of a mobile, combined-arms team was after a lengthy preparation and costly penetration battle through the enemy’s main line of resistance.

These vertical envelopments could very well begin with airborne or air assault infantry operations. This particularly would be the case if a forced entry into theater were needed. Exploiting the power of long-range precision and suppressive fires, infantry could defeat specific enemy forces and then secure key terrain for follow-on Future Force elements. They could then be reinforced with highly mobile, FCS-equipped units in short order. This concept is akin to current airfield seizure operations. Essential to this later sequence would be short-take-off-and-landing (STOL), super-short-take-off-and-landing (SSTOL) or heavy-lift vertical-take-off-and-landing (VTOL) aircraft.

With C4ISR an assault commander could execute reconnaissance; choose his landing zones based upon the most current combat information; issue fragmentary orders; and direct lethal and suppressive fires as his tactics required. With its rapid and violent appearance on the battlefield this force would have all the potential to achieve tactical surprise against a defending enemy. The significance of this operation beyond its capacity to achieve local surprise is, however, its ability to deliver a mobile, combined-arms force into the JOA at a time and place of the commander’s choosing.

An enemy’s rear area could have endless locations against which to conduct such assaults. These forces could be placed just about anywhere within the enemy’s rear area, terrain and enemy situation permitting. Within a short time after an infantry airborne or air assault, a highly lethal and mobile “mechanized” force could be landed and linked up with its infantry and could press on to objectives further afield. Local tactical surprise could be turned into something much larger. Objectives deep in the enemy rear such as operational reserves or essential stores of supply could be directly threatened. The last thing a defending enemy commander would want was a fully-equipped and mobile UA in his rear loaded with three to seven days of combat provisions. Most dangerous would be the ability of this force to call on long-range, precision fire support or direct airborne “mobile strikes” by advanced attack aviation. As B. H. Liddell Hart, one of Great Britain’s most influential strategists and advocates of mobile warfare, wrote in 1929: “[M]ovement generates surprise, and surprise gives impetus to movement.”³³

In this situation a mobile, combined-arms force could remain undetected for some time, causing great concern and reaction on the part of the enemy. Violent attacks by this force, striking at vulnerable points within the enemy's rear, could deprive the enemy of critical resources. A general panic could ensue if these strikes were repeatedly conducted at times and locations and in manners for which the defenders were unprepared. An enemy operational commander would be forced to commit reserves or divert other forces away from their principle tasks to engage this marauding UA. Imagine if several UAs were committed in the enemy's rear at one time: Operational surprise could be achieved, and disintegration and dislocation of the enemy's defensive scheme could soon follow. This is maneuver throughout the depth of the joint operations area!

These vertical envelopments could be conducted from strategic distances or from an intermediate staging area. Of course these vertical envelopments could be either "forced entry" or otherwise. On the chance that the JOA had a shoreline along a major body of water, these vertical envelopment options could complement amphibious assaults. Essential to those amphibious actions would be modern shallow-draft, high speed ship (SDHSS) and theater support vessels (TSV). To be sure, the projected capabilities of the high-tech means intended to be at our disposal with the Future Force give us much to consider. They afford excellent potential for achieving surprise—both locally on entry and operationally, given a bit of daring and flexible transport management.

Deception would do much to reinforce efforts to achieve both "moral" and "material" surprise. It is the matador's cloak. Its goal is to distort or misrepresent true friendly intentions and capabilities. Its target can be the enemy commander or his troops. Distorting an enemy commander's view of the situation before and during an attack could not only lead him to make poor and untimely assessments and decisions but also unbalance him at the moment he realizes that his tactical or operational assessment was in error. Information operations (IO) targeting the enemy commander's information or his ability to process it would assist in the deception. These methods as well as camouflage, ruses or demonstrations could further deceive an enemy. Erroneous perceptions of "ground truth" could make enemy commanders and their soldiers mentally and materially unprepared for the ensuing battle.

One of the most dramatic examples of the power of deception at the operational level occurred in Palestine in the autumn of 1918. British General Sir Edmund Allenby and his Egyptian Expeditionary Force faced off against German General Liman von Sanders in the area between Jaffa on the Mediterranean Sea and the north end of the Dead Sea. Allenby wished to continue his offensive north. Von Sanders and his three Turkish armies aimed to prevent Allenby's force from continuing its advance and threatening Damascus. For Allenby, who wished to avoid heavy casualties and operational stalemate, concentration and speed were essential. To that end he concentrated the bulk of his force in the vicinity of Jaffa against the westernmost positions of the 8th Turkish Army. He did this to affect a rapid penetration of the Turkish line so that he could commit his mobile cavalry divisions into the enemy's rear.

On the vital 15-mile coastal sector Allenby concentrated 35,000 infantry, 9,000 cavalry and 383 guns against 8,000 Turkish infantry supported by 130 guns. Along the remaining 45 miles of front the British had only 22,000 infantry and

270 guns in the line against the Turks' 24,000 infantry and 270 guns. Secrecy was the keynote of the plan, and brigade and battalion commanders received a personal briefing from Allenby himself when he visited their divisional headquarters only two or three days before the operation was due to start.³⁴

Not only was secrecy essential to Allenby's success, but so also was an elaborate deception plan to keep the Turks and Von Sanders ignorant of this buildup of Allied forces in the West.

Every aspect of the coming offensive, including the artillery plan, engineering, logistics and signals, received the most minute scrutiny, especially the deception plan. Sanders . . . suspected that Allenby would strike in the Jordan valley [in the East] and had deployed 15,000 men and 185 guns to meet the threat. Allenby therefore decided to reinforce his opinion, not simply because this would continue to leave the coastal sector comparatively weak, but also because when the trap closed that many more Turkish troops would be enmeshed within it. The ANZAC [Australian and New Zealand Army Corps] Mounted Division was detached from the Desert Mounted Corps and, with other troops, allocated to a force under Major-General Sir E. W. C. Chaytor in the Jordan valley. Chaytor's force was to simulate the presence of the entire Desert Mounted Corps, which it did by constructing dummy horse lines, battery positions and camps, creating much apparent bustle, raising dust clouds with mule-drawn sledges and lighting many camp fires. . . . At the opposite end of the line, where the real attack would go in, troops arrived by night and moved into concealed bivouacs or camps constructed two months earlier. They remained under cover during daylight hours, were permitted no fires and cooked with smokeless solidified alcohol. The RAF [Royal Air Force] concentrated successfully on keeping Turkish and German airmen on their own side of the lines. Finally, two rumors were leaked to the civil population in the certain knowledge that Turkish sympathizers would carry them straight to Sanders. The first was that Allenby was moving his GHQ [general headquarters] into the most comfortable hotel in Jerusalem for the winter, and the second was that there would be a race meeting near Jaffa on 19 September, attended by the Egyptian Expeditionary Force's senior officers. Despite elaborate security, the details of Allenby's true intentions were communicated to the Turks on 17 September by a captured *havildar* [noncommissioned officer in the British Indian army]. Sanders, believing them far-fetched and that the man was a plant, did nothing.³⁵

Von Sanders' suspicions regarding an offensive in the Jordan were temporarily reinforced when, during the night of 18–19 September, British Lieutenant-General Sir Philip Chetwode's XX Corps launched a heavy attack on the east-central sector of the front.³⁶

At 0430 on the morning of 19 September 1918, Allenby began his main attack. The Desert Mounted Corps was committed to an exploitation attack by 1700. In 38 days Allenby destroyed three Turkish armies, advanced 350 miles and captured 76,000 prisoners, 360 guns and 89 locomotives. He lost 782 killed, 4,179 wounded and 382 missing. Damascus fell on 27 September and Turkey signed an armistice on 30 October.

In Nazareth on the morning of 20 September Von Sanders, in his pajamas, was seen running from his headquarters: battle command on the move!³⁷

Deception, surprise and a violent and rapid penetration opened the door into the Turkish rear. Fast-moving, marauding cavalry formations supported by the Royal Air Force caused a general dislocation and disintegration of the Turkish army group. Withdrawing Turkish forces, turned out of their positions by the fast-moving horsemen, were subjected to repeated and devastating attacks from the air. Violence, speed and surprise throughout the depth of the enemy's positions and rear areas brought a general collapse of organized resistance.

Dramatic and rapid changes in the enemy's perception of reality, especially in the heat of battle, could cause a high degree of surprise and degradation of combat power. Deception, a supporting operation requiring effort and resources, is a powerful enabler for surprise. The effectiveness of deception efforts, however, depends on how well they are nested with the concept of operation and the quality of their execution. They must be made integral to information operations aimed at gaining and maintaining information superiority.

Though many of the techniques outlined above would not be used by a Future Force, we should use our imaginations to use our means as cleverly as General Allenby used his. Tactical and operational surprise can be greatly enhanced by a well executed deception and security plan.

In sum, surprise is a result of doing the unexpected and, at times, the unreasonable. Breaking rules or norms can catch an enemy unaware. There is, of course, an element of risk associated with these efforts. Even if it is known that an enemy has taken the "story line" of a deception plan or is predisposed to be surprised by certain actions, uncertainties still exist. What an enemy does is what matters. That is why knowing what an enemy is doing is so vital. Gaining and maintaining information superiority in this regard is important.

Knowing that one has achieved surprise is an important point. Note that the effects of surprise rapidly evaporate and with them opportunities. A local tactical success if rapidly reinforced and exploited can seize these opportunities. Key is identifying, reinforcing and exploiting a success faster than an enemy can recover and react. Speed, information superiority and asymmetry matter here. It is how tactical success can be turned into an operational opportunity. It is how local surprise can turn into operational surprise. Note that Allenby's Desert Mounted Corps movement rates between 19 and 21 September were actually twice those of armored formations during the German invasion of the Soviet Union in 1941 or the Allied breakout from Normandy in 1944!³⁸ The spirit, drive and fighting skills of these Australian, New Zealand, Indian and British cavalymen are what we will want in the Future Force.

Tactical Shock Effect

Operational initiative is dependent upon tactical success. The ability to win engagement after successive engagement along a single line of operation allows a force to advance to its objective. Multiple forces advancing on their respective lines reinforce one another even if they are not in a position to provide direct mutual support. Parallel

columns of friendly attacking troops force a defending enemy to defend against blows from several directions at once.

Though one friendly column may be halted by enemy resistance at a specific point along its advance, other friendly forces continuing to advance along their respective lines of operations could turn that defending enemy or render the opponent's local success irrelevant. Eventually the enemy would be surrounded and defeated or would withdraw on its own accord or pursuant to orders from its higher headquarters.

Clearly an enemy being penetrated by multiple, independent columns would have a difficult time of it. That is especially so if his enemy were advancing at speed on more than a few of these penetrations. One imagines the 3d U.S. Army's advances across Brittany and east across central France from Orleans to Sens to Arracourt in the late summer of 1944 after the breakout from the Normandy Peninsula. The Israeli Defense Forces' campaigns across the Sinai in October–November 1956 and again in June 1967 also serve as textbook examples of operational maneuver where an enemy defense is "lifted off its hinges" by fast-moving, independent columns, each operating on its own "thrust line." The numerous, parallel and, at times, intersecting serpentine arrows look quite impressive when posted on a map or illustrated in a well-written account of the fighting. That is especially so when one observes how rapidly these forces advanced and the lopsided casualty rates in favor of the attackers. These were great operational successes. In the case of the Israelis, both campaigns resulted in the direct accomplishment of theater strategic goals as well.

What one can miss with only a superficial study of campaigns like these was the amount of hard, bloody and risky fighting involved. Certainly each operation was inspired and led by superb field commanders who knew their respective enemies and the terrain on which they fought. In execution, however, what made these campaigns successful were the fighting skills of the combat troops at the "sharp end." Their ability to win tactical engagement after tactical engagement allowed their columns and field armies to advance. The success of Combat Command A, 4th Armored Division at Nancy-Arracourt in September 1944 was an example of the hard fighting needed to allow General Patton to advance to and beyond the Moselle River, far behind enemy lines:

As on the previous day [13 September 1944] Task Force "Abe" led CCA, taking to the side roads and trails until the road center at Moyenvic was reached and then rolling south on the main highway. Now the armor was deep in enemy territory and the back areas offered good targets. Near Arracourt the American tanks caught up with columns of the 15th Panzer Grenadier Division, moving south out of the First Army zone to reinforce German lines south of Nancy. By the end of the day they had taken 409 prisoners and destroyed or captured 26 armored vehicles, 136 other vehicles, and 10 88-mm. guns. An American air observer, flying over the combat command, was able to report "a path of destruction" clear to the canal. Again the losses sustained by CCA had been relatively slight: ten men killed, twenty-three wounded, and two medium tanks destroyed.³⁹

In some cases many small units had to redouble efforts to continue the offense after suffering tactical setbacks or heavy casualties. The fighting around Abu Ageila was particularly fierce between 30 October and 1 November 1956. Elements of three IDF

brigades surrounded the Egyptian position but were unable to defeat the determined defenders before the Egyptians withdrew on their own initiative.

After completing its long march, the halftrack battalion of the 37th Brigade was ready to assault by 2:00 a.m. of November 1. By 3:00 a.m., much to the annoyance of Colonel Shmuel Golinda, his tank battalion still had not arrived. Golinda decided to carry out the attack with his infantry only; the halftrack battalion and a motorized infantry battalion. At 3:30 the column moved forward with its lights on. The Egyptians greeted the Israeli advance with heavy antitank and artillery fire, causing severe losses. Pushing rapidly ahead, however, the remaining halftracks entered the minefield which surrounded the Egyptian position, and most of them were quickly damaged and put out of action, either by mines, or by Egyptian fire. Colonel Golinda was killed; most of his officers were wounded; and it was obviously impossible to continue the attack. Under covering fire from the artillery of the 10th and 37th Brigades, the survivors of the ill-fated attack withdrew, bringing with them their 80 wounded. Just after dawn, the 37th Brigade made one more assault. . . . Again they were thrown back. . . . The battle of Abu Ageila was over.⁴⁰

Regardless, the 37th Brigade would continue its advance the next day—a day that would bring more setbacks but would see the steady advance of all of Israel's independent columns. In this campaign as in others, success was at the severe cost of some of the tactical units. Those losses could be particularly hard if, when faced with determined enemy resistance, a unit's courage and impetuosity outstripped resource and tactical skill.

Operational maneuver means tactical engagements. Engagement means fighting. The ability to win engagements is essential to successful campaigns. This is the case if we envision a campaign executed by distributed units on a noncontiguous battlefield. This is especially the case if the operational design is to put these units into the depth of the enemy's rear areas, in which the ability to move to reinforce a troubled friendly unit would be seriously challenged. One of the best ways to hedge against the inherent risks associated with these types of operations is to make tactical units hard, powerful and fast. With an all-arms capability these units must be able to fight and win on their own and repeatedly. Tactically skilled and responsible leadership is an absolute requirement.

The ability of these distributed units to fight and win a series of successive engagements in support of an operational scheme can do much to keep an enemy in a state of imbalance—particularly so if the enemy were, again, facing multiple, simultaneous threats in his rear areas. The ability of UAs to win engagements decisively and rapidly will be very important to a UE and its commander in maintaining momentum and high operational tempo in the prosecution of a campaign.

Ultimately, all Future Force decisive operations are based on success in close combat—the ability of the Future Force to seize and control key terrain and to close with and destroy enemy forces. Close combat has one central purpose: the defeat or destruction of enemy forces to decide the outcome of battles and engagements. Close combat engagements are the fundamental building blocks of operational success and strategic victory.⁴¹

Combat engagements are not only where the fate of campaigns is decided; they are, indeed, the essence of war. It is here that the core “human test of wills” plays out. In this crucible is where the efforts of armies to man, equip and train units are put to the test. Fear and hatred are the dominant emotions. Courage, discipline, confidence and reason are put under great stress.

Fear of uncertainty, death and horrible wounding can occupy the thoughts of some soldiers. They may be most susceptible to failure. Other soldiers are fearless and will fight regardless. Most soldiers fear they will let their buddies down. It is these courageous soldiers who do their best to do their duty. They will fight and resist for their comrades and themselves, and while they have a fighting chance. This question of confidence is a result of individual and unit experience, training and discipline. It is also a question of a soldier’s trust in his weapons and assessment of tactical odds. All of this can change from day to day or engagement to engagement. One day a unit can fight like lions; another day, not at all. Time and exposure to uncertainty, boredom, danger and the elements erode a unit’s fighting power. Unit cohesion and competent leaders are indeed vital.

The above presents many variables; they are part of what makes combat so uncertain. With such uncertainties it is impossible to say that one could develop a tactic specifically designed to break an enemy’s will, e.g., perhaps to “outmaneuver” an enemy rather than to annihilate him. At the fighting level—“the sharp end”—what an enemy will do on physical contact with friendly forces will be seen after contact, not before.

Fear matters, though. As we have seen above, fear triggered by surprise is even more corrosive. At the tactical level, physical violence is what dominates—violence that puts holes in people and things. The more violence in the shortest period of time, the better. Violence is fire.

For an attacker, initiating an action with fire superiority and sustaining it is an absolute:

There can never be too many projectiles in a battle. Whether they are thrown by cannon, rockets, or recoilless device is immaterial. The purpose of all these instruments is identical—namely, to deluge the enemy with fire.⁴²

There is only one tactical principle which is not subject to change. It is: “To so use the means at hand to inflict the maximum amount of wounds, death, and destruction on an enemy in the minimum time.”⁴³

Battles are won by frightening the enemy. Fear is induced by inflicting death and wounds on him. Death and wounds are produced by fire.⁴⁴

Lethal fire kills and wounds enemy soldiers. It certainly takes them out of the fight and weakens the enemy’s ability to resist. This fire also destroys or damages his weapons and equipment. This, of course, yet again reduces his ability to fight and carry on. Physical annihilation through death, wounding, destruction and damage matters.

These types of fires also induce fear and lack of confidence in the hearts and minds of the enemy soldiers who survive the attacks. This fear can become terror if weapons of such superiority and power are used that an enemy soldier sees himself as defenseless. This is made clear in the recollections of a regimental commander of the 84th Infantry Division in late 1944 after being delayed for days by a determined enemy defense:

The Crocodiles [soldiers armed with Churchill Crocodile flame-throwers] pulled into our [command post] at 1500. The British tank leader asked about German positions, then said his men would be ready to go on into the town in half an hour, after they got briefed. We advanced behind the tanks at about 1545. A few squirts from the flame tanks, and the Germans poured out of their holes. The bastards are afraid of those flame throwers and won't be caught inside a pillbox.⁴⁵

The use of terrorizing weapons or weapons in a terrorizing way is a timeless tactical method. The U.S. 1st Infantry Division (Mechanized), faced with the hard task of breaching Iraqi defensive positions for the VII Corps on the first day of the ground war in 1991, chose to penetrate the boundary of the 48th and 26th Iraqi Divisions in an aggressive and unorthodox way:

Using plows, rakes, and steel rollers, soldiers began cutting eight lanes across the mines. . . . Iraqi resistance was feeble. . . . Many enemy soldiers were facing west or southwest, offering the Americans their flank. Those who survived the artillery barrage were hardly in fighting trim. . . . An M9 armored bulldozer rolled along the trenches, collapsing the walls as Bradley fighting vehicles sprayed the enemy positions with machine gun and 25mm cannon fire. No psyops [psychological operations] surrender appeals were broadcast for fear that such a move would slow the attack and give the Iraqis time to fire chemical artillery rounds. In several instances the Americans found use for the temperamental line charges by firing them down the trench lines. The shallow trenches—typically no more than three feet wide and three deep—simplified burial tactics, as did the baffling Iraqi practice of piling the spoil from the fortifications on the south side, where it could be pushed back into the ditches. . . . Twenty-nine minutes after entering the minefield, 1st Brigade broke through the Saddam Line; 2nd Brigade on the right punched across about the same time. . . . The Big Red One had sustained two casualties during the breach, one soldier killed by a mine. More than five hundred Iraqis were captured by day's end. A subsequent after action report, signed by Rhame [Major General Thomas G. Rhame, Commanding General, 1st Infantry Division (Mechanized)] and dated 14 March 1991, estimated that . . . “some 150 enemy soldiers who chose to resist were plowed under.”⁴⁶

Short of killing, wounding or breaking an enemy soldier's will to resist, the effects of an attacker's fire can prevent an enemy from performing his combat duties. The enemy can be “suppressed.” The sights, sounds, smells and physical shocks of being in the “beaten zone” can be overwhelming. An enemy soldier may not be able to use his weapon with any effectiveness, or to move, observe or communicate. It may shock him into inaction.

Heavy shelling creates shock waves which numb the senses and cause bleeding from the ears. The danger makes victims' adrenalin run strong; a reaction which in nature is designed to provide the extra energy needed for sharp bursts of life-saving activity. Under shelling, however, there can be no movement, and the victims are forced to lie still under as much cover as they can find, thereby denying the body demands for violent action to burn out the adrenalin. There is an internal physiological conflict within each man, and he quickly becomes exhausted or

breaks under the strain. Added to this are the horrors of shelling—the dense clouds of dust and fumes; the isolation, once again, from one’s comrades; and the appalling prospect of total physical oblivion. . . . Practical experience of all this had been gained in every major combat from 1915 onwards.⁴⁷

Overwhelming violence—violence produced by firepower—will remain the principle means by which to break an enemy’s will and capability to resist on the battlefield in the tactical engagement: “the moral ascendancy of fire.”

The above does not suggest that fires alone will win engagements—far from it. If we intend to win engagements on our terms, i.e., on our initiative, maneuver is essential. Both within and outside the enemy’s battle space, maneuver allows us to deploy, occupy positions to initiate physical contact, seize repeated positions of advantage from which to better place our weapons and take control of key terrain. In the end, to be decisive, one has to close with or assault an enemy to finish him.

At a tactical level there exists a timeless reality. The reality is the interdependent and complementary relationship between missile and shock weapons or, in a modern sense, between long-range, indirect-fire weapons and line-of-sight, short-range weapons. The former generally have a slower rate of sustained fire and require more complex organizational coordination to attack the enemy. When well coordinated and targeted, they can deliver great blows. The latter, however, have a much higher sustained rate of fire and require no complex organizational coordination—a soldier sees and stabs his enemy or he aims and shoots!

“Missile” weapons can strike at range and cause both destruction and suppression. Their suppressive effects last as long as their strikes continue and, perhaps, shortly thereafter. Imagine attacks from catapults, artillery or bombers. “Shock” weapons strike from close range and destroy and suppress as well. Their effects, however, are more tactically decisive. When used by individual soldiers or small groups of soldiers in close proximity to the enemy, their lethal and suppressive effects can be more readily exploited—that is, to gain positions to deliver yet more deadly blows or to rapidly assault and finish an enemy who is “suppressed.”

These weapons used effectively together are the crux of combined-arms tactics or warfare. This concept presents the enemy a dilemma. Any action an enemy takes to protect himself from one type of attack makes him vulnerable to the other. The combined deadly effects of both indirect and direct fires force an enemy to seek cover. As he seeks cover he becomes vulnerable to direct assault where he can be finished off at close quarter.

Seeckt [Colonel Hans von Seeckt, Commander, 10th Infantry Brigade, 5th Infantry Division, Third German Corps, 13 January 1915, near Soisson, France] decided in favor of the premature attack. Beginning at dawn, the German artillery began the systematic bombardment of the French positions while Seeckt feverishly completed the organization of the other half of the attack. . . . From the point of view of the infantry, the attack against the Vregny Plateau proceeded according to the Drill Regulation of 1906. Pioneers, equipped with wire cutters and hand grenades, led the attack. Creeping forward through gullies and other

suitable avenues of approach, they cut lanes through the French wire, which was at this time still rather thin. Hand grenades prevented the French defenders, which included sharpshooting *Chasseurs Alpins*, from interfering with this work. Once the wire was cut, the infantry advanced in loose skirmish lines, rifles at the ready and bayonets fixed.

The three French lines of resistance fell easily. The German artillery succeeded in “shaking” many of the French defenders. In many cases, the French simply dropped their rifles and ran away at the sight of the advancing rows of German riflemen.⁴⁸

How well coordinated these combined-arms actions are determines the intensity of violence inflicted on the enemy. It also determines how long the engagement lasts. This coordination between fires and assault is vital to winning tactical engagements quickly. In general the speed with which an attacking force can gain visual contact with an enemy and begin to engage with an effective high volume of fire will determine its ability to advance. If this force can continue and intensify its rate of lethal fires it can maneuver to advance, close or bypass all the more rapidly. One can advance at a rate commensurate with one’s ability to kill and suppress the enemy. Given that the ability to sustain high rates of sustained fire is difficult, one must act rapidly and maneuver while the effects of fire are their most intense. The closer maneuver units can follow their supporting fires the better.

At Bai Beche on November 5 [2001], for example, the dug-in al Qaeda defenders refused to withdraw in spite of over 2 days of heavy American air strikes. To dislodge them, [General Abdul Rashid] Dostrum’s AMF [Afghan Military Force] cavalry was ordered to charge the position. The first attempt was driven back. The American SOF [special operations forces] attached to Dostrum’s forces observed this reverse and began calling renewed airstrikes against the al Qaeda positions in anticipation that Dostrum would eventually order a second assault. In the process, however, a SOF warning order to the cavalry to prepare for another push was mistaken by the cavalry as a command to launch the assault, with the result that the cavalry began its attack much sooner than intended. The surprised Americans watched the Afghan cavalry break cover and begin their advance just as a series of laser-guided bombs had been released from American aircraft in response to the SOF calls for air support. The SOF commander reported that he was convinced they had just caused a friendly fire incident: the bomb release and the AMF cavalry advance were way too close together for official doctrinal limits, and the air strike would never have been ordered if the SOF had known that the cavalry was then jumping off for the second assault. As it happened, the bombs landed seconds before the cavalry arrived on the position. In fact, the cavalry galloped through the enormous cloud of smoke and dust that still was hanging in the air after the explosions, emerging behind the enemy defenses before their garrison knew what was happening. The defenders, seeing Dostrum’s cavalry to their rear, abandoned their positions in an attempt to avoid encirclement.⁴⁹

This close coordination of fire support for assault troops can clearly overwhelm an otherwise strong enemy. A fundamental tactic in fighting rapid and decisive engagements, it is one of the best ways to place pressure on the enemy and force him to react to your time line. If it is done well, friendly casualties can be minimized, as friendly troops

spend less time exposed to enemy fires. It also opens opportunities for agile exploitation of a favorable situation. Breaking the integrity of an enemy formation or position presents exposed flanks or allows friendly troops to penetrate or bypass toward objectives beyond. The capability to weather the enemy's fire will remain a vital requirement to be able to advance and fight within the enemy's close combat battle space.

Of significant importance is the question of tactical initiative. The attacker never wants to concede it. Being able to dictate the terms of action throughout an engagement is how an enemy is compelled to fight the attacker's fight. Forcing an enemy to simultaneously face multiple, violent threats from multiple directions in a short period of time is the best way to overwhelm his ability to fight and resist. This, coupled with an unrelenting pressure by the attacker to close, greatly pressures the enemy. It compels the enemy to rapidly decide either to hold his position and face destruction or to surrender the field. This is how engagements are finished quickly, enemy units defeated and ground taken.

These tactics, however, are difficult to execute. They require well-trained, well-equipped and aggressive units. They require decisive, courageous and clever leadership. They require maneuver units to be genuine all-arms teams that can move and fire inside the enemy's battle space. A high level of teamwork is essential. Combat drill and effective means of communication are fundamental. The potential for Future Force UAs to execute these types of tactics is great. A UA's intended capabilities to see a situation develop early, engage with long-range precision fires, move rapidly and maintain flexibility throughout with its C4ISR offer this potential. For example, the UA could probably coordinate with better timing the strike of precision munitions or area suppressive fires with the closure or assault of friendly troops onto an enemy position.

[R]eliance on fires alone effectively conceded the initiative to the enemy. In the worst event that may enable him to evade defeat. . . . [S]tandoff fires alone therefore gambles on the enemy's powers of endurance, and if that gamble fails, belated close engagement is likely to prove much costlier than had it been incorporated from the outset.

Competent combined-arms commanders know that, and routinely balance the risks of over reliance on fires against the risks of close combat. No two situations are identical, and the balance between fires and close engagement constantly must be adjusted to the mission, the enemy and the battlefield. But there always will be a balance, and a force deprived by design of the ability to apply it would be tactically and operationally crippled.⁵⁰

UAs should be specifically trained and equipped to be "shock" maneuver units, not mobile "archers" with security detachments. Our evolving official literature about UAs, UEs and FSC should be clear and unequivocal on this issue. Our White Paper "Concepts for the Objective Force" was clear:

Winning decisively means dominating our enemies. Potential opponents must be convinced that we are able to break them physically and psychologically and that we are willing to bear the cost of doing so. For some opponents, mere punishment from afar is not enough.⁵¹

Because of the steady increase of lethality, range and rate of fire of modern weapons over the past 150 years, the battlefield has become more dispersed and so, therefore, have the tactics. It is difficult and dangerous to concentrate and close in the face of an armed enemy. Regardless, it has been done with decisive effect by countless combat units.

Despite more than three millennia of improvement in man's ability to see and strike his enemies from a distance, victory in war sooner or later comes down to the ability to threaten and if necessary execute direct ground combat operations to capture or destroy an enemy's soldiers and weapons, seize the territory he controls, and break his continued will to fight. Combat in the "red zone" remains the most arduous, dangerous and costly military activity, and the first objective of any Army operational concept must be to assure its success in the least possible time and at least cost in lives.⁵²

A force that has the skill and will to readily deploy, attack with fires and close with and destroy into and through the enemy's battlespace not only will control the initiative but will gain a moral or psychological advantage. Paddy Griffith in his *Forward into Battle: Fighting Tactics from Waterloo to the Near Future* reinforces the above-stated position of the Objective Force White Paper:

Close combat . . . is not generally desired by either party. . . . When and if they do find themselves face-to-face with an enemy, soldiers may still attempt to limit the intensity of the combat. . . . In view of the great reluctance of soldiers to mix it hand to hand, it has long been recognized that the side which goes out and actively seeks a confrontation will enjoy a great psychological advantage. Provided that the enemy can be convinced of both your intention and your ability to reach him, he will in all probability run away and leave you in victory.⁵³

Taking the offensive position with lethality and speed regardless of an enemy's best efforts to resist can cause shock. The enemy can be rendered physically and mentally paralyzed and thus incapable of any meaningful action. This can be caused by surprise, violent and sustained fires, mass casualties, isolation and/or the sudden appearance of armed, aggressive enemy soldiers on and around his position. This paralysis is, however, temporary. This is "shock effect." We should aim to create it.

More important, we should be prepared to exploit it. This means UAs that can identify enemy forces at range, violently suppress them with fires, rapidly close with them and finish them with a ruthless assault. This done, the enemy defeated and perhaps paralyzed, the UAs or their reinforcements follow through to the next action. This is a way for a tactical success to yield operational opportunities. Knowledge, speed and violence are its characteristics.

Shock effect is the combined physical and psychological destructive reaction of the enemy to the violent impact of mounted and mobile armor-protected firepower and supporting troops. . . . Shock effect, in a properly executed assault, has a devastating effect on enemy morale and a favorable effect on friendly morale. To exploit . . . shock effect, aggressive employment of the combat power of the combined arms team is essential.⁵⁴

The organization of the UAs as noted above is intended to be combined-arms. That is, indeed, what it will have to be. The question is how far down its command structure it will have organic combined-arms teams such as today's armored cavalry troop or mechanized infantry company. Given the exigencies of close combat, this combined-arms structure could very well extend down to platoon level. Armored cavalry platoons operated for decades as combined-arms teams, many of those years in combat in Vietnam. When soldiers close within range of the enemy and supporting fires by NLOS weapons or close air support (CAS) can no longer be used, they must have at their immediate disposal a set of weapons of great striking power. Future Combat Systems designed along the diverse capabilities of 20th century assault guns, mechanized infantry combat vehicles, tanks and assault engineer support equipment must be part of these assault units. These are vital for "fire accompaniment," transport and obstacle breaching. They are needed for carrying key supplies such as water and ammunition for dismounted soldiers and can also evacuate wounded. Vital, of course, are scout, sapper and infantry squads. These soldiers, armed with the most lethal of hand-held weaponry, are indispensable when fighting in complex terrain. This force must be prepared to fight mounted or dismounted, with its mounted sections providing direct and responsive support. It must be able to direct supporting fires from BLOS, NLOS or CAS as determined by the assault commander and should have the capability of directing and dispensing its own obscurants. FCS must be designed to protect the internal volume of the vehicle against the worst an enemy can throw at them, i.e., so protected that they can move, shoot, communicate and protect the troopers onboard or in the lee of the vehicle.

These characteristics will provide UA sub-units the ability to both move and strike within the enemy's close combat battle space. It will also give them a set of diverse capabilities to deal with the confused, deadly and surprising environment of close assault. Note how German storm-trooper units were manned and equipped in 1918 or U.S. Army assault platoons on 6 June 1944. These units were self-contained and armed with a varied and tailored set of weapons, tools and skills.

The ability to move through enemy fire and obstacles and, in response, deliver deadly fires will make these units aggressive. These capabilities, along with challenging training designed to make these units combined-arms teams, are what will provide us with "shock groups"—teams that can use superior situational understanding, mobility and fire support to rapidly close with and finish an enemy. This ability to identify, move and destroy is what can cause the shock effect needed to create opportunities for exploitation.

At 0415 [30 January 1968] Colonel [Glenn] Otis was ordered to commit Troop C to block a Viet Cong regiment that had attacked Tan Son Nhut Air Base. The troop was on its way in fifteen minutes and while it was en route was ordered to destroy enemy forces attacking the air base itself. . . . As the troop approached the air base at 0600, it came under heavy small arms, automatic weapons, and rocket grenade fire. The cavalrymen attacked to split the enemy force where Highway 1 passed the southwestern gate of Tan Son Nhut. This move isolated approximately 100 Viet Cong inside the air base and kept the main body outside the gate. The full brunt of the enemy attack now fell on Troop C. In the first few minutes several tracked vehicles were hit and troop casualties were heavy. Captain [Leo]

Virant was seriously wounded in the head. The remaining elements of Troop C kept firing and succeeded in slowing the assault. . . . Flying over the area, Colonel Otis observed Troop C deployed in an extended column formation along Highway 1, with four tanks and five personnel carriers burning. . . . Colonel Otis ordered Troop B, commanded by Captain Malcolm Otis [no relation to Colonel Otis], to leave the Trang Bang bridge and move at top speed down Highway 1 to Tan Son Nhut, forty-seven kilometers distant. Captain Otis's troop, traveling fast, reached the battle area in forty-five minutes. When the troop arrived, it executed a column right toward the west at the Vinatexco Textile Factory, which put it parallel to the northern flank of the Viet Cong attack. With all vehicles of Troop B off the main road and strung out in column, Colonel Otis directed a left flank movement that brought them on line on the flank of what was later estimated to be at least 600 enemy soldiers. Troop B attacked with such intensity that many of the enemy immediately fled to escape the fire. Some attempted to reach a tree line three kilometers to the west across open rice paddies, but Captain Otis sent his 3d Platoon and Troop D [air troop] gunships to cut them off. Caught in the cross fire between Troops B and C and heavy air and artillery fire, the Viet Cong were pinned in place.

The battle climaxed at about 1000, when Troop B's flank attack began to take its toll of the enemy. Although fighting went on until 2200, from 1300 to 2200 the primary business was mopping up—hunting down the confused and beaten enemy. . . . Colonel Otis's cavalymen were to have no rest after Tan Son Nhut, for the 3d Squadron, 4th Cavalry, was soon involved in its second major battle in as many days.⁵⁵

Future Force system integration (SI), situation awareness (SA) and C4ISR will allow for rapid movement of UAs and their subordinate units. It will also allow them the great advantage to deploy on probable lines of deployment (PLD) that are well sighted given the enemy situation. Throughout this deployment the commander will be able to direct reconnaissance of the terrain and enemy to support his decisionmaking. He will also be able to direct NLOS and BLOS fires as he desires.

The decision to advance from the PLD forward and into the enemy's battlespace is indeed important. This is a command decision. The commander must decide whether he has enough information about the enemy and the terrain and whether his fire support is adequate. He should also have an idea of how he aims to gain positions of advantage for a rapid close fight: his tactics. Orders, based upon the most current combat information, must be clear and understood.

Hesitancy at this point is dangerous; remaining stationary while "setting the conditions" is fraught with peril. At some point the enemy will learn of the UA's presence and will be able to act on that information: execute obstacle targets, direct indirect fires or withdraw. What one must focus on is unrelenting pressure on the enemy to prevent him freedom of action: conduct reconnaissance; execute precession or suppressive fire; and close. Do this at a rate that takes away the enemy's ability to effectively react. In general, do what the enemy would fear most.

In small operations, as in large, speed is an essential element of success. If the difference between the two possible flanks for envelopment is so small that it requires thought, the time wasted in thought is not well used. . . .

In battle, casualties vary directly with the time you are exposed to effective fire. Your own fire reduces the effectiveness and volume of the enemy's fire, while the rapidity of attack shortens the time of exposure.⁵⁶

Tomorrow, ground tactics will remain essentially the same as in the past. Commanders and units, to be effective, will have to force the enemy (1) to face multiple threats at one time (i.e., all-arms) and (2) to face attacks from multiple directions. This includes vertical envelopment. The challenge is coordinating and timing actions on the ground while fighting against an enemy who is shooting back. Simplicity, battle drill, quick decisionmaking and good training really matter. To be certain, the battlefield will become lonelier. Dispersion among soldiers and units will increase. This will be driven by improved weapons and equipment. Targets will be acquired at greater ranges; engagements will thus be at greater ranges. Communications will improve, as will vehicle mobility and operating speeds. Local tactical leadership will matter all the more.

Assaulting forces have two basic tactical options if they aim to defeat a specific enemy force at hand. They can attack enveloping the enemy from either the left or right and time that strike with a frontal attack. If the terrain allows and the enemy seems to have an assailable flank, this is an option. Vertical envelopment is a clear option here. This is what General Patton called the "two-way attack," i.e., "grab 'em by the nose and kick them in the pants."

Whenever possible, beginning with the squad, use a base of fire and a maneuver element. The maneuvering element should be the larger of the two forces, and should start its attack well back from the point of contact of the base of fire. The maneuvering force must proceed sufficiently far beyond the hostile flank to attack from the rear. As soon as the enveloping attack, or better, the rear attack, has progressed sufficiently to cause the enemy to react, the base of fire transforms itself into a direct attack along the original axis of advance. . . .

Fire from the rear is more deadly and three times more effective than fire from the front, but to get fire behind the enemy, you must hold him by frontal fire and move rapidly around his flank. Frontal attacks against prepared positions should be avoided if possible.⁵⁷

The second tactic—necessary if there is no assailable flank—is penetration at an identified enemy weakness, i.e., a "break-in" into the enemy formation or position, a direct assault to his rear, and attacks left and right off the center into his "flanks." The approach to the "break-in" is done by small, combined-arms units that "infiltrate" forward under overwhelming covering fire directed against enemy forward positions. This is the "Rommel" tactic that General William E. DePuy, USA, Ret., wrote of in *Infantry Magazine* (March–April 1990):

I suppose most of you read General Erwin Rommel's book *Infantry Attacks*. . . . He was in that unusual battalion that had three, four, five machine gun companies and a lot of rifle companies, and he personally positioned all the machine guns

and gave them targets. After shutting down all enemy fire, he then penetrated on about a one-squad front—brought his reserves through personally and operated in the enemy’s rear. That is probably the most difficult task—tactical technique or task—that one can devise. But it’s just about the only way you can get through a linear defense frontally with acceptable casualties (acceptable means very low). . . .

That means that instead of two up and one back, you’ve got one up and five back, or one up and three back. In other words the bulk of the force is shooting. The greatest part of the force is involved in firepower and the smallest part is involved in maneuver in that particular technique.⁵⁸

The above assault tactics would be needed if a specific enemy force had to be defeated or fixed, or the ground it occupied cleared. This could be a task critical to the course of a battle or the campaign itself. Clearly the more rapidly it could be accomplished at the least cost would allow for friendly forces to press on to other actions beyond. Rapid tactical victories open opportunities for exploitation.

Of course an enemy force could be bypassed as well. This may be the preferred option if defeat of the enemy force at hand may not be the UA’s mission. In this situation a UA would gain visual contact with the enemy force and engage it with fires as needed while the UA reconnoitered an axis around the enemy. Once a bypass was identified, the UA could continue its advance to its ultimate objective. A UA operating as part of a UE would be particularly well equipped for such a rapid tactic. SI, SA and precision fires from BLOS weapons could be exploited to do much to damage a bypassed enemy unit. Important is that the UA commander maintains all-around observation of the enemy with manned observation posts and unmanned sensors. Fires will not contain or fix the enemy. The enemy will have the ability to reposition in this type of situation. Knowing this would be very important. The establishment of a rear guard by the advancing UA would be advisable. Gain and maintain contact!

Fighting defending enemy forces in cities is a special case. Expanding urbanization is a reality of our contemporary operating environment. We can expect our future adversaries to seek to fight from these sanctuaries. Cities and towns provide superb conditions for an enemy intent on an operational delay. Tactically the U.S. Army (and Marine Corps) knows how to fight in cities. We did it hundreds of times in the 20th century. The hard-won lessons are clear and well recorded.

City fighting is a meticulous, combined-arms fight. The fighting is decentralized, but it must be controlled. Close cooperation and coordination among flank units are essential. Terrain (surface, subsurface and above-surface) must be cleared and kept clear as friendly units advance. Limited fields of fire and observation make it difficult to see and engage the enemy except at the shortest ranges. Weapons with high rates of fire and with the ability to be brought into action rapidly are well suited. Grenades, demolitions and obscurants are used in large amounts. Mortars are invaluable. It takes time.

Within the context of a campaign intended to be rapid and decisive, urban areas will have to be cleared by forces specifically tasked to do so. This will allow other units to continue rapid maneuver across the JOA to their operational objectives. This is exactly

what we did in the Brittany Peninsula and around Aachen in 1944. In Brittany between 31 July and 13 August 1944, the 6th Armored Division maneuvered 200 miles across the peninsula, fighting the entire way in numerous, dispersed columns. It captured 4,000 enemy and destroyed scores of enemy guns and vehicles. It invested the port city of Brest and contained 30,000 Germans. In the meantime the 83d Infantry Division moved up to St. Malo and between 4 and 17 August reduced the German defenses in two weeks of slow, hard fighting. The 83d Infantry Division's attack was an all-arms fight that used corps artillery eight-inch guns in direct fire against strongpoints, medium bombers, and napalm bombs dropped by fighter-bombers. This command showed great ingenuity and flexibility in supporting its infantry, tank destroyer and mortar task forces. It, of course, took time to clear the city on its terms.

In contrast with . . . the] swift exploiting thrusts [of the 6th Armored Division] . . . the 83d Division had besieged the fortress of St. Malo, and only after a "slugging match had slowly hammered down pillboxes, barricades, and fortified areas" was the main stronghold reduced by 17 August. . . . The 83d Division had completed an impressive action. As against comparatively light losses, the division had taken more than ten thousand prisoners.⁵⁹

This pattern would play itself out again in Brest, west of St. Malo, between 21 August and 13 September 1944. The U.S. VIII Corps and its 2d, 8th and 29th Infantry Divisions had the mission to clear the city. This allowed the 6th Armored to join the 4th Armored and the rest of the 3d Army to exploit rapidly east across France. The fighting in Brest was hard. American tactics were characterized by improvisation, decentralization and the prudent use of time. Unrelenting pressure was kept on the enemy throughout.

The earliest and most important lesson learned was the need for combined arms action. Infantry units bore the brunt of the fighting, but required vital assistance from the other combat arms. Engineers detected and cleared mines and booby-traps, removed obstacles, cleared streets of rubble, and repaired cratered avenues to make them usable as supply lines. Demolition teams emplaced and detonated explosive charges in support of infantry attacks. Aircraft strafed and bombed German units and performed reconnaissance. Combat at close quarters usually precluded artillery support, so infantry commanders made maximum use of their organic mortars. In a great departure from urban warfighting doctrine, commanders learned to use armored vehicles in street fighting. In the absence of artillery support, infantry units came to rely on the direct firepower of main guns on tanks and TDs [tank destroyers] to blast enemy positions at point-blank range. Armored vehicles could blow passageways through walls and buildings and bull their way over obstacles and through small structures. VIII Corps' tank battalions had been reassigned to Third Army for the pursuit across France, so TD units stepped in to provide armor support. Another departure from prewar doctrine. . . . Urban combat's enclosed, compartmentalized environment presented commanders with serious command and control problems. Observation over the whole battle area was impossible, and radios failed to function among city buildings. Platoons and squads found themselves isolated as they fought to seize and clear buildings on all sides. . . . In contrast to mobile warfare, the tempo of

urban combat was slow and tortuous. Close combat put great demands on leaders at the lowest level, and commanders began to refer to city combat as “a corporal’s war.” . . . Infantry commanders discovered that hurried operations resulted in heavy casualties and confusion caused by the intermingling of bypassed Germans with friendly troops. Detailed planning and methodical execution made for slower operations, but resulted in steady progress with fewer casualties. . . . Soldiers learned quickly that the worst place to be during street fighting was on fire-swept boulevards. . . . [I]nfantrymen moved from building to building by blasting holes in walls of adjacent structures. . . . The explosion took the Germans by surprise and usually incapacitated anyone on the other side of the wall. Although laborious and time-consuming, the wall-busting tactics proved effective and reduced casualties.⁶⁰

The 1st Infantry Division would experience the same in Aachen in October 1944, as would the 1st Cavalry and 37th Infantry Divisions in Manila in February 1945. The battle of Hue in 1968 was fought much the same way by the United States Marines. Clearly these actions were contests between well-armed foes involved in total war.

If one looks at Israeli experiences in Judea and Samaria today one can see the basic pattern of urban combat. Though the level of violence is not nearly the same as in battles fought in the mid-20th century, great danger exists for the attacking soldiers involved. Compartmentalization and intermingling of friendly and enemy forces requires decentralized actions. Firepower is used at close quarters. This is especially required because of the presence of civilian noncombatants. Soldiers and commanders must be more discriminating. Buildings are breached by armored bulldozers to open avenues to Israeli infantry. Tanks, heavily armored personnel carriers and armed helicopters provided direct support: combined-arms operations. Time is taken to execute these methodical missions. Casualties are kept to a minimum. There is no “blitz” in this “krieg.”

Operations for Future Force UAs will follow these patterns. Modern surveillance and reconnaissance technologies will do much to allow commanders to see the urban battlefield more clearly. Some of this will be done by devices such as unmanned aerial vehicles (UAVs) or track-laying minirhomboids equipped with cameras. These, in fact, are now being used in Afghanistan and Iraq.

Modern communication equipment and C4ISR will do much to improve command and control. Regardless, the fighting will be close and personal at the “sharp end.” The “corporals” will need an arsenal of capability to move, see the enemy and kill the enemy on this battlefield. Commanders will have to be patient and lead from the front. The officer casualties in the Israeli Defense Forces during combat operations in the battle for Jenin in April 2002 were significant. The United States Army Center for Army Lessons Learned (CALL) identified many points about the IDF’s most recent experiences:

- UAV operations are essential.
- Maintaining initiative and anticipating enemy actions with a good and continually updated intelligence preparation of the battlefield (IPB) are essential.

- Signals intelligence is essential. It helps keep the IPB updated. The enemy used cellular telephones and walkie-talkies.
- Joint operations and communications are essential IPB, planning and execution of urban operations.
- Fire discipline is important in areas with many civilians. This is challenged by enemy violations of the rules of land warfare.
- Snipers are essential.
- Noncommissioned officers and lieutenants are extremely important leaders. They must make quick decisions on the spot.
- All soldiers must be skilled in the use of smoke and how a kill zone works.
- Tanks and bulldozers are great assets. Tanks must be supported by infantry at all times in the city; they provide thermal imagery and fires. They provide protection and shock value against ambushes.⁶¹

An IDF officer's view (also from CALL):

- In Jenin, our soldiers could not advance until they brought in the bulldozers, the helicopters—Cobras and Apaches—firing their cannons and missiles. . . . [Our infantry] just could not suppress the Palestinian fire. The helicopters can keep the roofs clean. The D-7s cleared pathways for the troops and tanks, destroyed buildings where gunmen remained.
- Armor is a necessity. When faced against a prepared and well armed enemy . . . you don't really have a choice but to use armor. . . .
- The night is yours—at night, you have the advantage.
- Tanks and friendly snipers equipped with night scopes and 12.7mm rifles are the best counter to enemy snipers.
- Collapse or flood sewers. Take the high ground. Use helicopters to land soldiers on roofs.⁶²

The pattern of urban combat remains constant. We will fight in cities and towns in future conflicts. Our adversaries may be well-equipped regulars or less well-equipped guerrillas. Regardless, the fighting will be hard. We will have to respect its nature. We should and must use available technologies to help us see the enemy, move, communicate and kill the enemy. Our technologies will help us deliver highly lethal yet more discriminating fires. This will be important to saving civilian lives as well as minimizing damage to the cities themselves. Our junior combat leaders will have to be trained to expect the unexpected and to make quick decisions. This will be an all-arms fight. It will take time. The successful conduct of these battles will be vital to securing operational objectives and achieving theater strategic goals. They will have to be conducted and resourced so as to facilitate other, more rapidly conducted actions within the same JOA. They can be either supporting actions or, indeed, main efforts, depending upon the operational scheme.

In sum, the successful conduct of engagements will remain the essential building blocks of a high-tempo, decisive campaign. To win rapidly, campaign design must not only position maneuver forces or execute fires in such a way as to put the enemy at a great operational disadvantage, it must also convince the enemy we are willing to close with him to “break him physically and psychologically.” To this end we must be able to attack enemy forces with great and surprising violence. This is done in tactical engagements. This means combat. It is the action where we kill, wound and defeat the enemy. It is how we break his will.

Speed of action and overwhelming violence break an enemy physically and psychologically. Maneuver with the combined effects of all-arms is the means to do this. We must force our foes to face strikes from many directions and types. He must face the unrelenting, blasting heat of a well-coordinated and well-timed “missile and shock” assaults. His flanks and rear should never be secure. He should know we can identify and penetrate his weaknesses at will and at speed. If he seeks sanctuary in towns, cities, mountains or forests, he must know we will take the time we need to uncover and finish him.

This is not an argument for offensive tactical actions at all times throughout the course of a campaign—a philosophy similar to that of the French Army of 1914: “*offense a la outrance*,” or, loosely translated, fight to the death.⁶³ In fact, initial engagements of a campaign may indeed have to be security operations where we would screen or cover as we deploy additional forces into the theater. These would be efforts to gain and maintain contact with enemy forces where we might trade space for time to build an operationally capable offensive capacity. In operations such as these we would seek the strong advantages inherent in well-positioned tactical defenses. Given the intended capabilities offered by Future Force C4ISR, rapid movement rates and long-range weaponry, we would engage the enemy with hard-hitting ambushes to inflict casualties and delay his operations.

In the end, however, we would have to seek opportunities for offensive action to decide the campaign in our favor and on our timeline. Once a decision was taken to attack, the enemy would have to be hit hard. His soldiers would have to be given reason to fear our assaults: actions that would rapidly strip them of forces, space and time. These engagements when executed violently and with speed would open opportunities for operational exploitation. It is these opportunities that could accelerate the advance of UAs throughout the enemy’s rear areas where he would be most vulnerable. These would be the areas where we could attack the resources and systems that enable his ability to fight. This is what would allow us to dislocate and disintegrate the integrity of the enemy’s defensive scheme. This is how we could attack what he seeks to defend. Pitched, unrelenting fights in areas where he hopes to find sanctuary that result in his capture or annihilation would do much to break his will to carry on. We would have to display the will and skill to do this.

The unexpected and simultaneous appearance of a number of UAs in areas where the enemy would not expect American forces would cause surprise. If this general surprise were immediately acted upon with the rapid maneuvers of UAs, each operating in a distributed fashion throughout the depth of the enemy’s area of operation, the initial advantage of surprise could be extended. A string of stunning tactical victories, each inducing a degree of local shock, could further the enemy’s “moral and material”

imbalance. With a spreading physical and psychological paralysis, the enemy operational commander would lose the ability to react with effect. A cascading and uncontrollable set of reverses could begin to erode the will of enemy soldiers to resist.

In the mean time our SU would allow us to see and exploit these successes. We could increase the level of operational tempo. The enemy would face an ever-increasing level of violence at an ever-increasing pace of activity. The German campaign in France in June 1940 would be an example of this, as would the Israeli June offensive in 1967.

Much as German engineers and infantry were willing to face bloody and relentless assaults across the Meuse River on 13–14 May 1940 to secure crossing for General Paul von Kleist's panzer forces so that the latter could break out into the Allied rear, some tactical engagements will prove decisive for the conduct of rapid operations. The more rapidly these engagements can be joined and finished, the more rapidly operational opportunities can be made and exploited. The speed at which these fights are concluded and acted upon must be greater than the ability of the enemy to recover and react to counter. This leverage will be a function of unit fighting skills and decisiveness of field commanders.

A UA should be manned, trained, equipped and organized for rapid, close-combat operations. It must have the capability to see an enemy at range, attack at range with fires, deploy at will and rapidly close. It must have hardness, speed and firepower to assault an enemy up to and through his direct-fire battlespace. The UA must be able to closely coordinate BLOS, NLOS and CAS fires to ensure timely and effective fires to support its maneuver sub-units. Its sub-units must be made up of diverse capabilities to fight in both complex and open terrain. It must have an arsenal of powerful weapons and tools to overcome any situation or surprise. Its leaders must be aggressive, independent and responsible, with the skill and will to prevail. They must be able to quickly devise schemes that force the enemy to face multiple threats from at least two directions at one time. They must always be prepared to outmaneuver an opponent and exploit successes. Units like these will be able to induce "shock effect."

The War We Must Be Prepared to Win

To this point the focus has been on defeating an enemy who is rather conventional, i.e., one who is prepared to fight in an overt and organized way using sophisticated weapons, tactics and operations. His aim would be to seize and defend regional political power. This power could be measured in territory, population and resources. He would be prepared for open combat and to aggressively exploit any advantage he has to win by defeating our field forces.

At this juncture, however, we must briefly focus on the challenge of "irregular" or guerrilla warfare. Since 1609, North Americans have fought these types of conflicts more frequently than wars between standing armies. We as Americans will almost certainly face more; we must remain prepared to fight and win. We must be willing to fight and win against subversion or insurgencies in areas of the world in which the United States has interests. We should also be prepared to support insurgencies as a means to pursue an "indirect" theater strategy against a hostile government or nonstate power.

The Future Force has the potential to add greatly to any campaign aimed at either defeating an irregular foe or supporting an allied insurgent movement, i.e., not as a main effort but as a supporting force that could aid a special operations forces command engaged in security assistance or direct-action roles.

The power to project lethal conventional forces from great distances and operationally deploy them at will by means of vertical envelopment would be a superb capability to have in any future irregular conflict. The ability to communicate, collaborate and execute distributed, mobile operations as described in Future Force operational concepts could give special operations leaders overwhelming combat power when needed, e.g., in a situation where a local special operations unit would need the overwhelming combat power of a UA to exploit a fleeting opportunity or to avert a tactical reverse against a superior enemy force.

The employment of conventional force, in this case Future Force UAs or UEs, in an irregular conflict is not the decisive means by which to execute a campaign. These conflicts are not decided by the application of overwhelming combat power aimed at a decisive and rapid outcome. What is decisive in these irregular wars is the loyalty and support an insurgent group enjoys from the local civilian population at large. Though all wars are political in ends, ways and means, it is in wars of subversion or insurgencies that politics most directly affect the ways and means of a campaign. Time, endurance and sensitivity to local issues are essential. Military force, when used, must be discriminating, proportionate and effective.

Particularly important in a campaign where we might be supporting or fighting against an insurgency is an understanding of the political positions of the opposing forces. This is the work of special operations, civil affairs and intelligence troops. In the case where we are supporting a government against a subversive or insurgent force, it is also the work of local police and military forces and our liaison groups with the same. Simultaneously, our in-country command must gain an appreciation for the opposition's military capabilities and of the local terrain and weather conditions. This, again, is a reconnaissance, surveillance and intelligence effort. Both of the above depend more on time, analysis and liaison than, say, the presence and mass of conventional combat troops. In fact, the overbearing presence of American combat troops would probably be counterproductive given the sensitivities of local politics and, for that matter, of politics here in the United States.

[Guerrilla war] must have a friendly population, not actively friendly, but sympathetic to the point of not betraying rebel movements to the enemy. Rebellions can be made by two percent active in a striking force, and 98 percent passively sympathetic.⁶⁴

When our intent is to aid an ally or friendly government against subversion or an active insurgency, we would wish to assist them by helping them (1) to “retain the allegiance of the population” and (2) to “eliminate those involved in the subversion.”

In attempting to counter subversion it is necessary to take account of three separate elements. The first two constitute the target proper, that is to say the Party or Front and its cells and committees on the one hand, and the armed

groups who are supporting them and being supported by them on the other. They may be said to constitute the head and body of a fish. The third element is the population and its represents the water in which the fish swims. . . . If a government is to be successful therefore, it must base its campaign on a determination to destroy the subversive movement utterly, and must make this fact plain to its people. . . . [M]ilitary officers [thus] are required to initiate proposals for wearing down and defeating insurgents which representatives of other government departments have to scrutinize in order to ensure that they do not cut across long-term government aims.⁶⁵

This effort, again, clearly has more to do with reconnaissance, intelligence, presence and civil-military relations than with overt, independent military operations. What military forces might do, special operating forces and otherwise, is to maintain an economical presence. This would include overt and covert liaison, patrols, ambushes, searches, curfews, etc.⁶⁶ These might be referred to as “framework” operations, i.e., operations intended to gather information about the enemy and terrain, to prevent the enemy freedom of action and to support the government in its efforts to gain and maintain the support of the population. Military force when applied would have to be well focused, timed, proportionate and effective.

How then would a UA or its sub-units be employed in such an environment? One, the troopers of a UA could very effectively be used for routine, overt patrols. These patrols could be either “presence” or combat patrols. They would always have an implicit reconnaissance role. Two, a UA, operating from bases within theater or outside, could execute raids against identified guerrilla bases or formations. It could do this as either a main or supporting effort to a special operating force direct-action mission. This combat function could prove effective as the special operating force develops the situation in theater to the degree that enemy insurgents are exposed or forced to react in an overt manner. The speed with which UAs could move, as well as their firepower, would provide great advantage. Further, the C4ISR could do much to assist in establishing effective SU and coordination between forces in contact with enemy guerrillas and a UA that is brought into the theater to assist in a developing situation. Clearly, the UA could also be used to avert a crisis. Given a situation where one of our security assistance forces was attacked by enemy insurgents, a UA or one of its sub-units could be used to provide support.

B. H. Liddell Hart advised us in his *Strategy* that the guerrilla needs both camouflage and freedom of action to survive and fight. He relies on space, cover, superior information and time to wear an opponent down. Aid of the local population is vital. His tactics are “hit and run.” The guerrilla seeks “to avoid battle and tactically by evading any engagement where [he] . . . is likely to suffer losses.”⁶⁷ He, however, must be “dynamic and must maintain momentum.”

Static intervals are more detrimental to [the insurgent’s] . . . success than in the case of regular warfare, as they allow the opponent [the government] to tighten his grip on the country and give rest to his troops while tending to dampen the impulse of the population to join or help the guerilla. Static defense has no place, except in the momentary way involved in laying an ambush.⁶⁸

Our tasks, therefore, are to uncover the insurgent, limit his freedom of action and kill him. These are to be done as we assist a friendly government to regain or maintain the support of the population at large. As the enemy takes action to press his fight, he risks being uncovered and cornered. As the local government earns the loyalty of the population, the insurgent further loses cover and support.

At this juncture “small-force maneuver warfare” can be used against “revolutionary warfare.” As a special forces command develops the situation in cooperation with government forces the enemy insurgent is more clearly defined. The enemy thus becomes a target—a clearly defined objective for a quick-moving and hard-hitting Future Force UA.

One then has a situation in which revolutionary warfare and military activity to counter it can develop in parallel. Both start at a covert, non-violent level. Phase one is countered by a “hearts and minds” campaign, and by the undercover deployment of special forces, possibly culminating in a surprise strike aimed, say, at capturing the leader or the main arms cache. If, despite this, the revolutionary movement is able to go over to phase two, widespread and continuing activity, the army must be free to counter this by adopting the same tactics.⁶⁹

This style of warfare requires time, patience and a willingness to decentralize operations. Only when the enemy is exposed or decides to accept open battle is he vulnerable to concentrated force of maneuver units. Short of this, small-unit action and civil-military cooperation are the order of the day. British operations in Malaya from the late 1940s through the 1950s reflect this reality.

In the future we may also find ourselves in a situation where we would wish to support an insurgency against an opposing government and its armed forces. In fact, we have experience doing this: from the Second World War when members of the Office of Strategic Services (OSS) in conjunction with U.S. Army ground and air forces fought with local insurgent groups against the Japanese army in both Burma and Indochina, to actions against the Taliban in Afghanistan. In this case our SOF would, again, be our principal force in theater.

Special operations soldiers and leaders cooperating with local insurgents, though primarily fighting a guerrilla-style war using tactics of “hit and run” and denying pitched battle, could develop situations where highly maneuverable “conventional” forces could be deployed into theater to exploit a favorable opportunity. Again coordination between the SOF soldiers in contact with enemy forces and a Future Force UA positioned out of contact would be vital. This could be facilitated by the proposed C4ISR capabilities to exchange combat information, intelligence and coordinating instructions. This type of coordinated action was executed by Detachment 101, under OSS command, and General Joseph W. Stillwell’s forces in Burma in 1944. Detachment 101 was made up of more than 500 Americans and 8,500 Kachin guerillas. The guerilla companies of the detachment “performed invaluable service . . . by harassing enemy units, dislocation communications and by guiding [friendly columns] . . . through torturous terrain.”⁷⁰ This guerrilla force provided reconnaissance and security for both the U. S. Army’s 5307th Composite Unit (“Merrill’s Marauders”) and Great Britain’s Chindits under the command of Brigadier Orde Wingate. Their actions were fundamental in assisting Colonel Frank D. Merrill’s men to remain viable for 100 days behind enemy lines.⁷¹

In future operations Future Force UAs could use their mobility and firepower to raid an enemy army well within the enemy's area of operation. UAs could be directed into action by SOF operating with insurgents who may have developed the situation to the point that they could identify an enemy force that would be vulnerable to attack. This type of action would certainly complement the activities and tactics of an insurgent force by not exposing the insurgents to direct combat with the forces of an opposing government. Essential to this effort, though, would be the requirement to balance the tactical use of large U.S. combat forces in an insurgency with both the political objectives of the United States and those of the insurgent leaders.

Though Future Force units could not be used as a main effort in a guerrilla war, they certainly could be used to support special forces operating in theater. These actions could be used to either counter or support an insurgency. The mobility, firepower and ability to fight as a distributed, independent force would allow a Future Force UA to perform tasks that could do much to assist in fighting and winning a guerrilla war.

Certainly in peace support operations a UA would be as versatile as today's line force. In these actions as in insurgencies, time must be used to secure operational objectives. There will be few, if any, opportunities to rapidly secure campaign objectives through the use of overwhelming military force. In these cases conventional operational modes of fighting can play only a supporting role. Regardless, we will have to be prepared to fight the war we find ourselves in and against any enemy that threatens U.S. interests. The Future Force will have many capabilities that can be effectively used to help win a war against an unconventional opponent. We will have to use our imaginations to discover how to best apply those.

Daring, Creative Leaders

Leaders will remain the most important aspect of combat power.⁷² They will have the greatest single impact on whether the Future Force is fielded and, if so, whether it achieves its intended operational potential. Their duties will remain the same—they will have to decide and lead. They will remain responsible to identify objectives, visualize end states, assess capabilities and describe ways to move from the current to the required position. By motivating, teaching and doing, they will inspire and prepare soldiers to win.

The proposed capabilities of the Future Force and the nature of our contemporary operating environment offer huge challenges to both today's and tomorrow's leaders. The requirement to alert, deploy and fight within 96 hours against any enemy around the world will require units, in fact, to be ready. The ability for UAs to vertically envelop into a theater and shortly thereafter move off to objectives within will demand of soldiers and leaders an independence of spirit and aggressiveness that many today may think are not compatible with disciplines normally associated with military life. The requirement to coordinate such a complex tactical "system of systems" to achieve overwhelming combined-arms and air-ground effects at any given point on the battlefield, and to do so on short order, may seem too much to ask of our junior leaders.

The implications for doctrine, force structure and training are large. In the end, however, we will have to take stock of what emerging technologies are telling us about the future of battle. Just imagine what serving officers in the 1890s, just after the end of

the Indian Wars, may have thought about the future of war. How many would have envisioned the industrialized mayhem of 1918? Did they foresee what the internal combustion engine, quick-firing artillery or the machine gun would do to the battlefield? Could they have imagined gas warfare? All of this would meet some of them or their subordinates in a short 20 years. What can *we* foresee?

Questions about technological innovations, changes in strategic challenges or the very nature of our future enemies notwithstanding, we will have to be prepared for and willing to do what is necessary to win in combat both today and tomorrow. As leaders and soldiers, these are our responsibilities to the nation and our fighting troops. We can take heart that the nature of combat will not change. It will remain, at its core, a brutal test of human wills. The edge in winning will continue to be the quality and fighting spirit of our soldiers. The bravery, tenacity, endurance and skills they possess will determine victory over our armed opponents more than any other quality our Army may have. The degree to which our soldiers possess the will and skill to best our foes is, and will certainly remain, a question of their leadership.

Our leaders today, trying to gain a view of future war, offer the idea of the Future Force. It is intended to be ubiquitous and hard-hitting. Much of what has been written about it today addresses the many qualities that will make it particularly well suited for offensive operations. If indeed, this concept is targeted toward decisive campaigns, it will demand qualities in leadership reflecting a certain bias—leaders who possess skills and attributes that have been shared by many of those who have proved to be particularly adept at more aggressive forms of fighting and campaigning.

Neither a comprehensive theory of effective military leadership nor a proposal to dramatically shift from what is already outlined in existing doctrine will be presented here. What will be suggested, however, is that some leadership attributes are and have proven to be particularly important in conducting offensive operations. Further, some of these characteristics will prove to be of greater importance given the proposed capabilities of the Future Force. This force will test leadership in many significant ways. Distributed operations, increased movement rates, highly lethal weapons of great range and the enormous amount of information that can be made available at any time will test the strength and confidence of leaders above and beyond what we have seen heretofore. If nothing else, the scope and rate of movement in Future Force operations will demand more from our leaders in terms of understanding, decisions and action. I shall attempt to offer some idea of the salient leadership attributes needed by Future Force leaders in this final segment of this paper.

First, acceptance of one's responsibilities will remain the point of departure for any military leader. This reality will have to remain central in the minds of Future Force leaders. It will have to be reflected in our ethos and in the course of our daily duties. Simply put, we are and will remain responsible for winning. Victory in battle will continue to be our central task; therefore, we are also responsible for all preparations needed to win. This means results: getting things done. No leader can take great comfort in the knowledge that he has followed his orders. This reality should not be a burden. Its "joyful" acceptance, rather, will serve as both a powerful license and a secure harbor. This idea, though painfully simple, will be the bedrock of all of a Future Force leader's

assessments, decisions and actions. The requirement to be alerted, deployed and in theater within 96 hours will bring a new understanding to the idea of readiness. “Ready” will mean ready to move and fight—to fight alone if needed. Future Force leaders will have responsibilities in garrison that must be met regardless of perceptions of security or the unlikely possibility of war. This reality will be something akin to what our leaders have faced in ranger battalions since the 1970s or in the “border squadrons” of U.S. Army Europe before 1989.

Second, knowing what needs to be done, i.e., knowing one’s mission, will continue to provide a military leader aim. It will continue to bring reason to one’s service and the sacrifices needed to prevail. For a Future Force leader the capacity to know one’s mission at any given time will be essential. These operations will be fast-paced and their opening stages in theater will be vague. A leader will not be able to assume that his or her immediate superiors will always provide clear objectives, tasks and means with such clarity and measure that the leader will be faced with only the responsibility to devise a scheme, order action and lead in the execution of the same. Without question, at times, one’s duty will remain to execute prescriptive orders that leave little doubt or room for interpretation—and to do so with grim determination. For the most part a leader will be left to his own devices to “restate his mission,” given the complexity of senior command and the confusion of battle. How a commander or leader will define his mission will be most directly guided by his superiors’ intents and what the circumstances will allow. This will continue to be a huge challenge of command; it will not change in the future with the fielding of the Future Force. The mission will continue to define objective and give a unifying purpose to a unit. Knowing what must be done and why will fortify a commander and the command in general. This will be the case particularly in the hardest of times. It will also help to identify and assess opportunities. Given this, it will be vital that commanders communicate clearly with one another. A common view of what must be done and how each action affects the others and the accomplishment of the general aim will remain essential to unity of effort. The power of the proposed “common operational picture” and “collaborative command” enabled by C4ISR and “battle command on the move” will prove important to this very human condition of war and battle.

Third, the will to get things done shall continue to be of great importance. It is perhaps more a reflection of character than of intellect. It is certainly strengthened by the knowledge of what must be done and why. But it is and will remain more often the result of a leader’s self-confidence and moral certitude. It shall remain the thing that allows a leader to stare down uncertainty, bad news and risk. Will and courage, when present, shall also continue to be infectious. They motivate soldiers to overcome any obstacle and reach their greatest potential. Under such conditions, the power of a fighting organization can be outdone only by overwhelming odds. The most important decisions will be choices from among bad options. Knowledge of one’s mission and the will to get it done shall allow those decisions to be taken in a timely and decisive manner. A leader’s strength of will shall continue to be reflected in the fighting spirit of the soldiers. Given that combat shall remain a test of opposing human wills, this energy may prove decisive. The example provided to us by Lieutenant General Thomas “Stonewall” Jackson is invaluable. His 1862 Valley Campaign is a lesson not only on maneuver but also on the power of one man’s will and what it can do to motivate soldiers, his “foot cavalry,” to do

the unimaginable. It also illustrates how his superior will could convince a numerically superior enemy to surrender the field and seek security in the rear. As a young cadet General Jackson once wrote: “You may be whatever you resolve to be.”⁷³ At Manassas (twice), in the Shenandoah, at Fredericksburg and at Chancellorsville he resolved to be victorious—and he was.

Fourth, aggressiveness will be essential. This will remain a question of temperament—a quality that will be best measured by a leader’s actions. It will come, as it always has, in “many shapes and sizes” and will remain not so readily assessed based upon a superficial knowledge of a soldier’s personality. Aggressiveness will continue to fire imagination and heighten the energy needed to find or make opportunities. It will be essential to the will to do battle and to close with and destroy the enemy. It was once said that the Spartans never asked about the number of their enemies but only about their location. If true, it speaks volumes about why that city-state may have prevailed for as long as it did. As knowledge of one’s mission provides focus, or the will to accomplish it gives power to get it done regardless, aggressiveness will provide velocity. This quality shall remain particularly important for a leader on the offense. To decide an outcome, tactical or operational, one must remain prepared to seize and maintain the initiative. Setting those terms will be done by leaders who not only can visualize what must be done to affect those conditions but are willing to act to make them a reality. Acting more rapidly than the enemy will remain vital. All of this will remain a product of an aggressive spirit.

Fifth, the professional knowledge of battle, soldiers, tactics and weapons will be essential. It will continue to be the result of endless study of both the art and the science of war. Study, reflection, training, experience and the knowledge of battle and soldiers in battle should continue to make a leader aware of its enduring nature and cost. An understanding of tactics and the never-ending impact of weapon technologies on the evolution of tactics will continue to be fundamental to a commander’s assessment of capabilities and limits of the forces under his charge. Competencies in the understanding and conduct of fighting will provide a leader’s confidence and strength of will. It will continue to warn him that there are no fixed rules and that certainty is never to be expected. However, it will also alert him to the fact that opportunity, though most often fleeting, abounds. The question of whether opportunity will be identified and acted upon will remain very much a function of a leader’s bias, knowledge of the circumstances at hand, disposition of forces and tolerance for risk. The study of battle will remain, therefore, essential. Its study will continue to show leaders that they are not alone. They will see that the challenges that they will meet have been experienced before. It will give them knowledge, confidence and a stronger capacity for inductive reasoning.

The knowledge of battle will also serve as a catalyst to unleash the imagination of a leader to devise plans to win and to deftly direct change in execution. He will be able to note that the best field commanders were particularly skilled at the study of terrain and enemy. They were also skilled at engineering opportunity by devising simple and deadly tactics tailored to given situations. Ways to surprise an enemy came to them quickly because their knowledge of the enemy and convention allowed them to identify ways and means by which to be especially ruthless. Napoleon’s admonition to “never do what the

enemy wishes you to do” would ring true in their ears. Efforts to surprise an enemy by creating conditions for deception thus became justified. Understood also were tactics devised to exploit the temporal effects of surprise. The importance of speed, decentralized command and reserves became obvious.

Our Plan called for a simultaneous strike. . . . [The] air force was to launch a pre-emptive attack. . . . At the same moment [General Israel] Tal’s tanks would assault Rafa and El Arish along the coast while I hit Abu Agheila and Kusseima on the central axis. Between us, [General Avraham] Yoffe’s division would traverse the supposedly impassible sands of Wadi Haridan isolating the two battlefields and racing toward the Egyptian forces in the interior. . . . Yoffe’s movement would be a special surprise, since it was universally believed that vehicles could not move on the sand in that area. . . . My division’s primary task, then, was to open the central axis. . . . Although the Egyptian headquarters was at Kusseima, Abu Agheila was the more formidable position. Were I to take Kusseima first, I would still have to deal with Abu Agheila. But if Abu Agheila fell, we would be in control of the roads behind Kusseima, and the Egyptians would find the position untenable. So there was no question about where to strike. . . . To destroy Abu Agheila it would be necessary to identify and exploit the position’s inherent vulnerability. . . . So the plan of battle would have to emphasize concentration of force, surprise, and maneuver. And the action would take place at night. . . . In 1956 the Israeli forces had attacked from the south. Now I decided to attack from the north, west, and east. Going from the north would surprise the Egyptians and would let me get quickly to the roads behind both Abu Agheila and Kusseima. . . . What I had in mind was a closely co-ordinated attack by separate elements . . . in a continuous unfolding of surprises.⁷⁴

Ariel Sharon, Commander, Southern Command, Israeli Defense Forces, took Abu Ageila by storm in one day on 5–6 June 1967. He would take the Egyptian strong point with a vertical envelopment by paratroopers, a deep envelopment by a tank brigade, and frontal assault by a mechanized brigade with the direct support of a separate tank battalion. “Tahboula,” or shock, was intended to imbalance the defenders, as was the direct assault of enemy vulnerabilities. This combined-arms assault was specifically designed to prevent the enemy from fighting his own combined-arms battle. Sharon’s soldiers suffered 32 dead and 140 wounded, and 19 Israeli tanks were destroyed. The Egyptians lost control of nearly 8,000 men, with an unknown number killed; 40 of 88 tanks and self-propelled guns were destroyed and two battalions of artillery overrun. Most important, Sharon was able to pass forward the IDF’s main effort: Yoffe’s division. The Egyptian command, on notification of the loss of Abu Ageila, was “surprised, shocked, and demoralized.”⁷⁵ The Egyptian commander, Field Marshal Abdel Hakim Amer, ordered a general withdrawal to the west bank of the Suez Canal on 5 June 1967.⁷⁶

Implicit in the above is the acceptance of risk as a normal condition of the battlefield. That is especially the case the more aggressive the tactics chosen. How an enemy will react to an action is in the end an unknown. Experience, self-confidence and the will to win strengthen a commander in the face of these uncertainties. Note that Sharon spent weeks with his command training them for this action before 4 June 1967:

But through it all I strove to make my division a cornerstone of self-confidence. . . . I never allowed myself to say, "Look, if I do not have such and such a force the job will be impossible." I just adapted the plan. We trained all the time, under very tight discipline. And from day to day I became more sure of our ability, more convinced that we were capable of achieving a truly great victory.⁷⁷

Beyond training his unit for this specific and operationally important task, at a personal level Sharon had spent a professional career preparing himself for this action:

It was a complex plan. But the elements that went into it were ones I had been developing and teaching for many years, starting back in 1953 with the paratroopers—the idea of close combat, nightfighting, surprise paratrooper assault, attack from the rear, attack on a narrow front, meticulous planning, the concept of the "tahboulah," the relationship between headquarters and field command. This would be the first time I commanded a division. But all the ideas had matured already; there was nothing new in them.⁷⁸

Finally, flexibility of execution will be essential to fast-paced, offensive action. It shall remain so if one accepts that opportunities in battle will always be present and there for those looking to find them. Leaders will have to have the mental agility to see changing conditions in battle and be prepared to act on them. The degree to which a leader will possess this will remain a reflection of his attitude. Beyond this leaders will have to do what is needed to prepare their units to be as agile as they themselves are mentally flexible. This capacity will be reflected in the quality and type of training the commands receive, in their material readiness and by the nature of their plans for battle. In regard to these "concepts of operation," the degree of emphasis on reconnaissance, depth in formation, size and location of reserves, and the positioning of leaders will be telling. To exercise flexible command, the commander will be required to be forward to see the field, the enemy and his own forces. He will continue to be required to be in communication with his fellow commanders, superior, subordinate and flank (however distant they may be), regardless. The intended capabilities of C4ISR and the ideas of "battle command on the move" will facilitate these requirements.

The French battery now opened rapid fire on our wood and at any moment we could expect their fire to be aimed at our tank, which was in full view. . . . At that moment the subaltern in command of the tanks escorting the infantry reported himself seriously wounded, with the words: "Herr General, my left arm has been shot off." We clambered up through the sandy pit, shells crashing and splintering all round. Close in front of us trundled [Colonel Karl] Rothenburg's tank with flames pouring out of the rear. . . . In the mean time Lieutenant Most had driven my command signals vehicle into the wood. . . . I now gave orders for the tanks to drive through the wood in a general easterly direction. . . . Slowly Rothenburg's command tank forced its way. . . . An attack by the 25th Panzer Regiment was successful. . . . A tight control east of the Meuse, and flexibility to meet the changing situation, were only made possible by the fact that the divisional commander with his signals troop kept on the move and was able to give his orders direct to regimental commanders in the forward line. . . . Continuous wireless contact was maintained in the rear, and a detailed exchange of views

took place early each morning and each afternoon between the divisional commander and his Ia [chief of operations]. This method of command proved extremely effective.⁷⁹

These were the words of Field Marshal Rommel on 14 May 1940, the fateful day when the 7th Panzer Division secured a tenuous crossing of the River Meuse. The French defense was courageous and stubborn. The German losses were high. Regardless, the commander pressed the fight. The breakout across Northern France happened the following day. Rommel's actions that day and the day prior were characterized by forward presence, a constant search for enemy weakness and the rapid shifting and commitment of reserves to exploit opportunities. This commander's will and drive were infectious. His soldiers faced many dangers but bravely faced each down.

Our profession's most effective offensive commanders had both the skill and the will to win. They understood battle and soldiers in battle. The uncertainty of battle, its danger and the presence of opportunity were accepted as facts. Their challenge was to prepare for them and exploit them when found or made. This knowledge was reflected in the way they trained their soldiers for action; how they formulated their plans; and from where they led. Surprise, speed, violence and flexibility characterized their campaigns. Few ever missed opportunities to turn local successes into operational advantage. Decisiveness was their nature.

They were personally daring and highly creative persons. Skilled in the science of war, they were also, in practice, artisans. They always looked for chances to exploit the element of surprise and for ways to make tactical engagements decisive and to achieve operational advantage. Speeds of movement, rapid concentration and violence on contact were their tactics and operational method when on the offensive. Always looking for and finding ways to overcome numerically superior enemies and maneuvered to imbalance an enemy both in the short and long run of a campaign, they accepted the realities of close combat and did everything possible to prevail rapidly when accepted.

General Jackson was observed by subordinates as a commander who understood surprise and decisive combat.

His was not the mystery of speech; it was the mystery of action. General Jackson came and went; his enemies knew not whence he came, nor his friends whither he was gone. He moved, but gave no reason for his movement. He never looked to his subordinates for advice and it was seldom volunteered. His plans were his own and he took the responsibility.⁸⁰

In a letter to Captain John Imboden in 1862, shortly after the Valley Campaign, General Jackson wrote:

Always mystify. Mislead and surprise the enemy if possible. And when you strike and overcome him, never let up in pursuit so long as your men have strength to follow, for an army routed, if hotly pursued, becomes panic stricken, and can be destroyed by half their number.

Another rule—never fight against heavy odds, if by any possible maneuvering you can hurl your own forces on only a part, and that the weakest part, of your enemy and crush it. Such tactics will win every time, and a small army thus destroy one in detail, and repeated victory will make it invincible.⁸¹

Erwin Rommel's tactics as a platoon leader and battalion commander in the First World War were a foreshadowing of how he would fight as a division commander in 1940 and as a corps commander in 1941. Whether he fought on foot or from tanks, in mountains or in open desert, he saw fighting, both tactically and operationally, as best executed with surprise, firepower, maneuver and speed. He led from the front with daring, drove his men ruthlessly and never stopped thinking of ways to preempt and undermine his enemies.

On the 9th April [1941] we had a great deal to do to complete the administrative arrangements for our supplies and for bringing up more troops. A report came in that the enemy had concentrated strong contingents of troops round Tobruk. . . . Unfortunately the Luftwaffe was fully occupied . . . and could only put a very few machines in the air. When the commander of the Brescia [Italian infantry division] arrived at about midday I informed him of my intentions, which were for the Brescia and, later, the Trento [Italian infantry division] to attack Tobruk from the west, raising a great cloud of dust in the process and tying down the enemy strength, while the 5th Light Division [German light panzer division] made a sweep through the desert round the south of Tobruk in order to attack it from the south-east. . . . Meanwhile, I imagined that the 5th Light Division was on the march for Tmimi. It was now of the utmost importance to appear in strength before Tobruk and get our attack started as early as possible, for we wanted our blow to fall before the enemy had recovered his morale after our advance through Cyrenaica. . . . I therefore flew off in the direction of Mechili to meet the 5th Light Division. . . . [A]t 16.30 . . . [I] found the whole of the 5th Light Division still there. They had imagined they could allow themselves a couple of days for maintenance work on their vehicles. This was far from being my idea and I ordered the division to move on through Tmimi that night and to be in the Gazala area, which was to be their starting point for the attack on Tobruk, by daybreak.⁸²

Ariel Sharon's methods in 1956, 1967 and 1973 were as aggressive and as hard-hitting as General Jackson's or Field Marshal Rommel's had been in earlier wars. In 1956, as a 29-year-old brigade commander, Sharon led his mechanized-airborne force across the most rugged parts of the Sinai Peninsula with an aggression that brought the heated attention of his Army's Chief of Staff, Moshe Dayan. Sharon's desire to press the fight at the Mitla Pass after its seizure by airborne assault and rapid reinforcement by mechanized forces resulted in a pitched but successful fight against prepared Egyptian positions—an action taken on Sharon's own initiative. Half of the IDF casualties in the 1956 Sinai Campaign were Sharon's men. This action not only secured the southern flank of the IDF 7th Armored Brigade's drive to the Suez after its bypass of Abu Agheila, it also opened an axis down the southwestern coast of the Sinai to Sharm el Sheikh, one of

the IDF's operational objectives. By the end of the eight days Brigade 202 had traveled approximately 300 miles and fought five engagements while accomplishing all of its operational tasks. Moving, jumping and fighting day and night, it both created and exploited opportunities en route.

Sharon's Brigade was given the most desperate gamble among the many risks which composed the Sinai campaign. It was the first force to be committed. On whether it fared well or badly could pivot High Command decision about whether to wage full-scale war against Egyptian Sinai or limit operations to a raid by this brigade.

Its mission taxed human energy to its limits and over an incredibly prolonged period required repeatedly bold, clear decisions by the commander amid utmost pressure. In these things lies the value of the experience as a military document. It is a shining example of prodigious performance by many men because one man wills it.⁸³

The Future Force's potential offensive power will be put into action only when led by daring, creative leaders who know their responsibilities and mission and have the will, professional competencies, aggressiveness and flexibility to prevail in battle and campaign. Their spirit, imagination and courage will allow for campaigns that will seek and leverage operational surprise. That, coupled with knowledge of where and when to seek decisive tactical engagement and how to close those encounters rapidly, will accelerate operations yet again. These leaders, with highly motivated and skilled soldiers armed with the best weapons U.S. industries can produce, offer huge potential for rapid, decisive campaigns designed to preempt long, costly wars.

Conclusions

The Future Force concept offers an idea about future warfare and combat. Looking at what technology may offer and the current strategic trends, it proposes an idea for dominant joint, interagency and multinational warfare. Its capabilities are intended to provide the United State an expeditionary force that can deploy large, well-armed forces on short notice to any region of the world. It will be a highly mobile, all-arms force capable of conducting rapid campaigns. Its ability to exploit information through sophisticated communications technologies will provide its leaders and soldiers with timely, accurate combat information and intelligence assessments; it will be a knowledge-based organization. This information will allow for target acquisition at range and for timely tactical assessments. This, in concert with long-range precision munitions, will allow for "strategic maneuver" where enemy forces can be engaged long before ground troops are committed into theater. Coupled with the ability to vertically envelop large maneuver forces anywhere within a theater shortly after the commencement of a strategic fires strike, it will give us great potential to seize the operational initiative early.

The intended capability to enter theater either opposed or unopposed with forces that can quickly move off to objectives beyond those initially seized is what will be truly remarkable. It offers the potential to strike the enemy where he is most vulnerable. This capability, built around a mobile, all-arms team that is able to both prevail in rapid, violent engagements and move operational distances with limited resupply requirements,

will provide our commanders with a force of unprecedented capability. It will be a force that will have combined the theories of the 20th century's most powerful military ideas into one, i.e., armored, airborne, air power and amphibious doctrines combined into one unified idea—a “Quad A” concept, if you will!

This idea is, indeed, akin to “deep battle” or “blitzkrieg.” As was the case with those concepts, we will seek victory through rapid, decisive campaigns. We will deny the enemy his designs of “anti-access” and delay; we will not give him a stalemate. He will react to our firepower and timeline. If he seeks sanctuary in cities or towns, we will take the time we need to kill him as we simultaneously take control of the rest of the area. We will combine all that we have learned about war and combat with our newest weapons, and we will win with a flexible, fast-paced method.

We shall aim toward decisive objectives. The “indirect approach” will be our way at both an operational and a tactical level. We will aim to preempt, dislocate and disintegrate our adversaries. Though we will aggressively maintain our focus on our objectives, we will flexibly react to events and opportunities in execution. When we accept battle, we will have the ability to annihilate our foes with a combined fires-strike and close assault. Combined-arms and air-ground cooperation will be fundamental. Operational tempo will be maintained through additional force deployments, rapid moves, decisive engagements and well-timed sustainment.

Operational surprise, if achieved early through vertical envelopment or amphibious landing, will allow us to seize the operational initiative. This, coupled with the ability to close with and rapidly destroy enemy forces in each tactical engagement where we accept battle, will give us superb potential to maintain that initiative and accelerate the tempo of operation. This will further imbalance the foe; seizing his key ground and destroying his forces, while rapidly exploiting advantages gained, will deprive the enemy of his ability to react with effect. As we continue, he will lose the will to carry on. The “shock effect” of sudden, unexpected losses in tactical engagements can extend the physical and psychological paralysis achieved by the initial operational surprise of a vertical envelopment in the enemy rear.

The *sine qua non* for the above is leaders who see the potential of these campaigns. These leaders and fighters must have both imagination and knowledge to devise campaigns and tactics that are beyond the enemy's ability to react. They must be master trainers, skilled men-at-arms and tacticians. They must know the means of battle around which to build a campaign. They must understand the power of the element of surprise and know how to achieve it. The study of terrain and enemy is implicit and must come easily to them. They must be ruthless in pursuit of victory and in engagement with the enemy. They must have the will to dare.

Endnotes

- ¹ U.S. Army, “Concepts for the Objective Force,” White Paper (Washington D.C.: U.S. Government Printing Office, 2002), p. v.
- ² Prior to the arrival of the 35th Army Chief of Staff, General Peter J. Schoomaker, on 1 August 2003, Army leaders referred to the force of the future—the successor to today’s Army—as the “Objective Force”; since that date the term used is “Future Force.”
- ³ *Ibid.*, p. 6.
- ⁴ “Deep Battle” was a concept developed by Soviet theorists in the 1920s and 1930s. Marshals V. K. Triandafillov and M. Tukhachevskii, both Tzarist-trained officers and veterans of the fast-paced battles of the Russian Civil War, envisioned the idea of a deep operations theory. They did so as they looked toward the eventual mechanization of armies and the Soviet government’s desire for an offensive security strategy. The idea was to attack the enemy throughout his rear with fast-moving, combined-arms forces to precipitate a general collapse of the enemy front. This was to be effected by the rapid penetration of the enemy forward lines. A “shock” army” was to penetrate the enemy’s front and “mechanized cavalry” to exploit the penetration into the enemy’s rear areas. Throughout the course of the penetration the “shock army” was to fix the enemy main body in its forward positions while the “mechanized cavalry” attacked enemy vitals. Airborne forces were to be employed to assist the rapid advance of the “mechanized cavalry” by seizing key objectives. “Simultaneity” was a key supporting concept. It aimed at getting as many troops as possible, as rapidly as possible, into contact with enemy units throughout the depth of the battlefield. In contact with powerful and mobile forces to his front and rear, the enemy would be forced to fight in many directions at once. Further, the concept of “interchangeability” was also proposed. This suggested the alternate use of fires and maneuver troops to accomplish similar tasks. Fires were viewed to have the potential to fix, contain or neutralize enemy forces, if only for brief periods. This was to allow maneuver forces to pursue objectives of greater importance. The enemy was to be penetrated, dislocated and annihilated in battles of encirclement. What was never made clear in the Soviet Field Service Regulations was how this concept was to be controlled in practice. Decentralization of command authority was not compatible with political prerogatives of the time. This and the army purges of 1937 would prove reasons among many for the disastrous battles of 1939–1943. This “deep battle” concept ultimately proved devastatingly successful in the Soviet campaigns of 1944–45. Exigencies of total war helped Soviet leaders sort through the challenges of developing a practical concept for battlefield command and control. In the late 1960s this “deep battle” concept was modernized with the advent of the mechanized infantry combat vehicle (BMP), operational maneuver group tactics, and mechanized airborne formations. Note that even in this theory’s earliest inception Tuchachevskii believed this concept would require huge formations. He did not believe that a handful of small, elite formations would have the power to execute operations of this scale for any period of time in a war against industrialized enemy nations. This, along with its operational-level focus, made the Soviet vision markedly different from that of the western European theorists.
- ⁵ Huba Wass de Czege and Richard Hart Sinnreich, *Conceptual Foundations of a Transformed U.S. Army*, The Land Warfare Papers, No. 40 (Arlington, Va.: Association of the United States Army, March 2002), p. 4.
- ⁶ *Ibid.*, p. 5.
- ⁷ *Ibid.*
- ⁸ *Ibid.*
- ⁹ U. S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-92, “Objective Force Unit of Employment Concept,” Final Draft (Fort Monroe, Va.: 8 November 2002), p. 9.
- ¹⁰ To “win like Fabius” or to win by “Fabian tactics” is to wear out an opponent by delay and evasion rather than confrontation, in the style of the ancient Roman general Fabius. (*The New Dictionary of Cultural Literacy*, Third Edition., 2002, online at <http://www.bartleby.com/59/4/fabiantactic.html>.)
- ¹¹ U.S. Army, “Concepts for the Objective Force,” p. 2.

- ¹² Wass de Czege and Sinnreich, *Conceptual Foundations*, p. 5.
- ¹³ U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-0, “Objective Force Operational and Organizational Concept,” Final Draft (Fort Monroe, Va.: 18 December 2001), p. 10.
- ¹⁴ TRADOC Pamphlet 525-3-92, p. 30.
- ¹⁵ Huba Wass de Czege, BG, US Army, Ret., “New Paradigm Tactics and Tactical Organizations: How to Think About Design and Fighting the Future Combat System Based Tactical Organizations” (25 October 2001), p. 19.
- ¹⁶ George S. Patton, Jr., General, U.S. Army, *War as I Knew It* (Binghamton, N.Y.: Maple-Vail, 1947), pp. 269, 273, 275, 310.
- ¹⁷ U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-90, *Objective Force Operational Concept for Maneuver Units of Action* (Fort Monroe, Va.: 7 November 2001), p. 6.
- ¹⁸ TRADOC Pamphlet 525-3-92, p. 23.
- ¹⁹ U.S. Army Field Manual (FM) 3-0, *Operations* (Washington, D.C.: Department of the Army, June 2001), p. 4-13.
- ²⁰ *Ibid.*, p. 4-15.
- ²¹ *Ibid.*
- ²² John M. Collins, *Military Strategy: Principles, Practices, and Historical Perspectives* (Dulles, Va.: Brassey’s, 2002), p. 64.
- ²³ J. F. C. Fuller, an officer in Britain’s Royal Tank Corps during the First World War, advocated Plan 1919 to The Allied Supreme Commander, Marshal Ferdinand Foch, to bring an end to the war on the western front with a mechanized, air-ground penetration operation in 1919. It was never executed due to Germany’s collapse in November 1918. The idea was to avoid frontal assaults against the enemy main body—“body warfare”—and, rather, to strike deep into the enemy’s rear through selected penetrations. The aim was to attack the enemy’s command and supply systems with coordinated tank and aircraft attacks. He proposed a “shot through the brain” and one through the stomach. This mobile, air-ground assault was to bring about a German collapse by “strategic paralysis”: “brain warfare.” See Patrick Wright, *Tank: The Progress of a Monstrous War Machine* (London: Faber and Faber Limited, 2000).
- ²⁴ TRADOC Pamphlet 525-3-92, p. 23.
- ²⁵ Macgregor Knox and Williamson Murray, *The Dynamics of Military Revolution 1300–2050* (Cambridge, England: Cambridge University Press, 2001), pp. 177–178.
- ²⁶ Having outlined the roots of “deep battle” above, I shall outline here the same for “*blitzkrieg*,” or lightning war. This phrase was coined by the British press as it looked for ways to describe German operational method in 1939–1940. The German doctrine and practice of mechanized, combined-arms warfare in the first half of the 20th century was championed and led by Field Marshal Heinz Guderian. Following their traditions of command decentralization and encirclement operations as well as the tactical lessons of the First World War, the Germans developed a combined-arms concept for modern mobile warfare built around key emerging technologies: the tank and airplane. Like the Soviets, the Germans sought to win wars with rapid, decisive campaigns exploiting penetrations, fast-moving armored formations and paratroopers. The Germans also envisioned the need to attack the enemy throughout his depth to cause a general collapse of enemy forces. Guderian described his view as “cutting the spokes of a wheel.” What marked the German concept as unique and initially more viable, however, was much better developed doctrines and capabilities. The Germans made better use of radios; allowed for decentralized, mission tactics; fielded well-trained, combined-arms maneuver units; and developed techniques for tactical air-ground integration. Unlike the Soviets, the scale of their vision was on an order of magnitude less than Tuchachevskii’s. For the Germans this development was more evolutionary than revolutionary. It complemented German philosophical biases about war, combat and leadership more readily. Further, it was a natural progression from the infiltration tactics Germany had perfected in the First World War. This, as well as the general lack of preparedness of its enemies early in the Second World War, accounted for Germany’s startling initial successes between 1939

and 1942. Note that the German focus seemed to be more tactical than operational in outlook. Perhaps the United States should adopt the best ideas of both the “deep battle” and the “blitzkrieg” concepts, much as we so superbly did in the years 1944–45, but, of course, adapted to more modern means.

- ²⁷ Robert J. Kershaw, *D-Day: Piercing the Atlantic Wall* (Annapolis, Md.: Naval Institute Press, 1994), p. 64.
- ²⁸ Stephen E. Ambrose, *Pegasus Bridge: June 6, 1944* (New York: Simon and Schuster, 1985), p. 76.
- ²⁹ Kershaw, *D-Day*, p. 66.
- ³⁰ The city of Caen and its airfield, approximately 16 kilometers inland from the invasion beaches, were key objectives for D-Day. Their rapid seizure by the Allies was critical for the success of the campaign’s positioning of forces and timeline. The units tasked to seize them on D-Day were armored brigades that could not get off their landing crafts and off the landing beaches due to a multitude of traffic control problems. In the meantime the Germans were able to quickly secure Caen with mobile panzer units during this day-long delay. The Allies did not seize Caen until D+33, after some of the bloodiest and most grueling fighting of the war. In the process Caen was almost totally destroyed. See Carlo D’Este, *Decision in Normandy* (New York: Dutton, 1983).
- ³¹ U.S. Army, FM 3-0, p. 4-14.
- ³² Richard Simpkin, *Race to the Swift: Thoughts on Twenty-First Century Warfare* (London: Brassey’s Defence Publishers, 1985), p. 82.
- ³³ B. H. Liddell Hart, *Strategy*, quoted in Robert Debs Heinl, Jr., Colonel, USMC, Ret., *Dictionary of Military and Naval Quotations* (Annapolis, Md.: Naval Institute Press, 1966), p. 317.
- ³⁴ Bryan Perrett, *A History of Blitzkrieg* (New York: Stein and Day, 1983), p. 51.
- ³⁵ Bryan Perret, *The Changing Face of Battle: From the Teutoburger Wald to Desert Storm* (London: Cassell & Co., 2000), pp. 211–212.
- ³⁶ *Ibid.*
- ³⁷ *Ibid.*, p. 220.
- ³⁸ *Ibid.*
- ³⁹ Hugh M. Cole, *The Lorraine Campaign* (Washington D.C.: U.S. Government Printing Office, 1950), p. 87.
- ⁴⁰ Trevor N. Dupuy, *Elusive Victory: The Arab-Israeli Wars 1947–1974* (New York: Harper & Row, 1978), pp. 167–168.
- ⁴¹ TRADOC Pamphlet 525-30-0, Draft, p. 33.
- ⁴² Patton, *War As I Knew It*, p. 275.
- ⁴³ *Ibid.*, p. 314.
- ⁴⁴ *Ibid.*
- ⁴⁵ John W. Mountcastle, *Flame On!: U.S. Incendiary Weapons, 1919–1945* (Shippensburg, Pa.: White Mane Books, 1999), p. 66.
- ⁴⁶ Rick Atkinson, *Crusade: The Untold Story of the Persian Gulf War* (New York: Houghton Mifflin, 1993), pp. 396–397.
- ⁴⁷ Paddy Griffith, *Forward into Battle: Fighting Tactics from Waterloo to the Near Future* (Navato, Calif.: Presidio Press, 1991), p. 172.
- ⁴⁸ Bruce I. Gudmundsson, *Stormtroop Tactics: Innovation in the German Army, 1914–1918* (New York: Maple-Vail, 1989), pp. 30–31.
- ⁴⁹ Stephen Biddle, “Afghanistan and the Future of Warfare: Implications for Army and Defense Policy” (Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, November 2002), pp. 28–39.
- ⁵⁰ Wass de Czege and Sinnreich, *Conceptual Foundations*, p. 24.
- ⁵¹ U.S. Army, “Concepts for the Objective Force,” p. v.

- ⁵² *Ibid.*, p. 23.
- ⁵³ Griffith, *Forward into Battle*, pp. 79–180.
- ⁵⁴ U.S. Marine Corps, Fleet Marine Force Manual 9-1, *Tank Employment*, 1965, p. 3.
- ⁵⁵ Donn A. Starry, General, USA, Ret., *Armored Combat in Vietnam* (Indianapolis, Ind.: Bobbs-Merrill, 1980), pp. 119–123.
- ⁵⁶ Patton, *War As I Knew It*, pp. 267–268.
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