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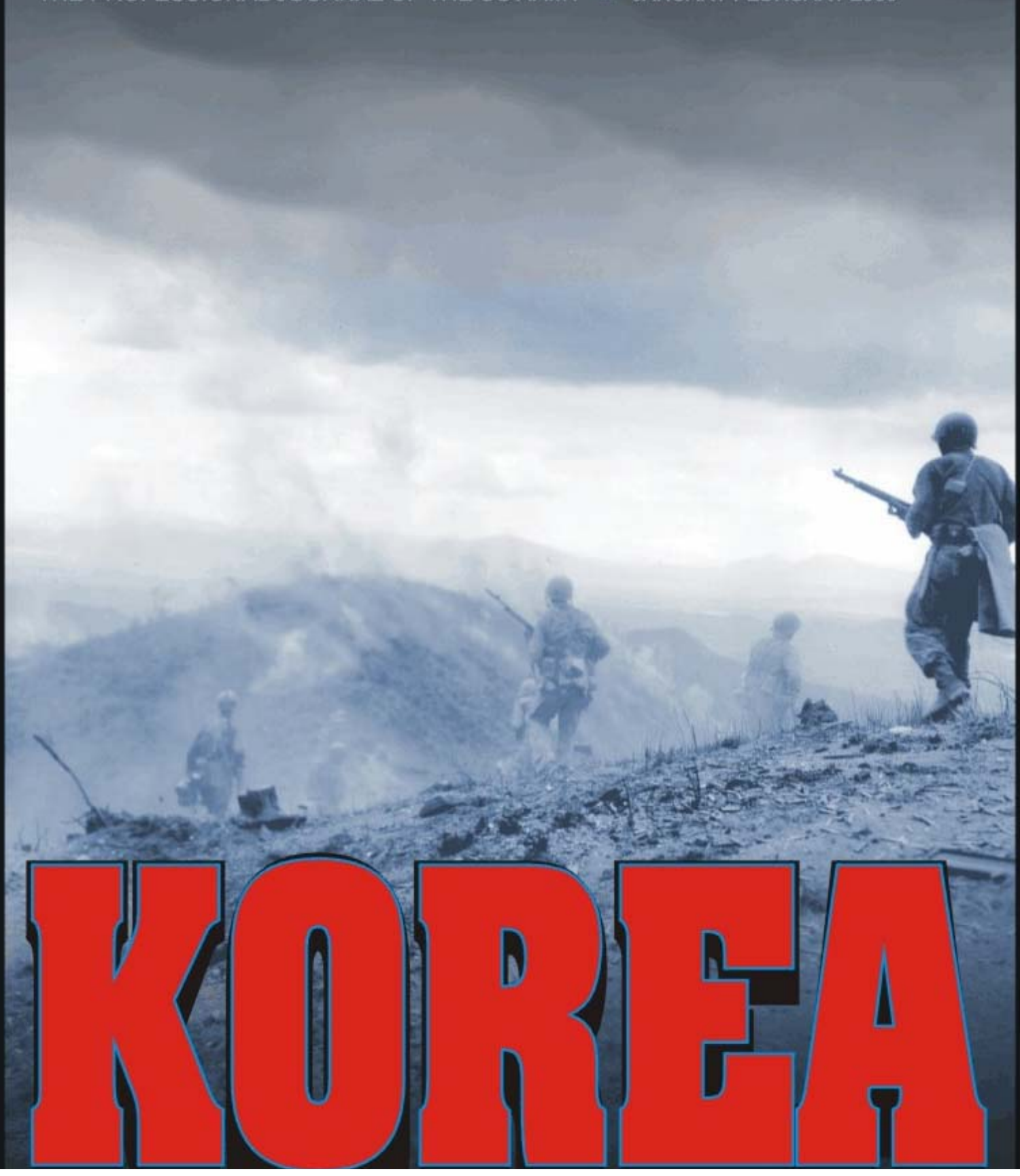

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CONTENTS

From the Editor

Much changed over the first five years after World War II. Japan, a former arch enemy, had become a major posting for the US military. Our European focus had shifted east from Germany to the Soviet Union. Worldwide, the 8.2 million men under arms in 1945 had drawn down to a skeletal force. And here at home, the baby boom and GI bill were fueling tremendous social change.

Amid all these changes, in 1950, Secretary of State Dean Acheson outlined the US security interests around the world. He did not mention Korea. Two weeks later, the North Koreans swarmed across the 38th parallel.

If much changed in those five years after World War II, much has remained eerily similar in Korea for almost 50 years since that war's armistice. North and South still face off across the most world's most heavily fortified border. The US military maintains a presence there to avoid another strategic miscommunication. International tensions are still high and peace talks still lead nowhere.

This issue of *Military Review* examines the aftermath of the Korean War—its effect on nuclear policy, regional strategy, tactical doctrine, military leadership, readiness training and Army command and control. In his study about how the Army should prepare in 2000, Joseph G.D. Babb revisits Task Force *Smith* in 1950. Kelly C. Jordan explains how lessons from that war affect the Army today. Acknowledging that restricted terrain characterizes the "Land of the Morning Calm," John F. Antal nevertheless proposes concentrated armor operations in the defiles. At echelons above the hilltop warriors, policy makers pondered the use of nuclear weapons in Korea, as Stanley Weintraub chronicles. Greg A. Pickell warns us that instead of preparing for the last war, we should be ready for a re-eruption of the one a half a century ago. No one knows whether war in that theater will come, and taking a different tack, Robert L. Bateman III traces lessons about cohesion from Korea in 1950 to Vietnam in 1965 to who knows where next.

In anticipation of the theory and doctrine discussions in the March-April issue, an article here posits a new form of warfare, on the same level as maneuver and annihilation but fundamentally different: cybershock. James J. Schneider argues that the ability to disrupt enemy command and control can produce defeat as readily as isolating or destroying forces.

In the leadership and command section, Jeffrey S. Wilson expands the Army values discussion to show how leaders should apply the principles to all facets of their soldiers—spirit, sinew, and significant others. Because personality styles differ among the general population, they are bound to differ among our soldiers, and Michael L. Russell explains how we manage the force in peacetime and war. Finally, Jose M. Marrero cautions leaders that rewarding soldiers may unwittingly recognize the wrong individuals and encourage undesired behaviors.

The Army enters the millennium well into its third century of service to the nation. Some things have changed little in the past 225 years. Others have changed significantly in a mere 50. And some aspects of our profession differ radically from the good old days 10 years ago. *Military Review* remains your forum to discuss ideas about tradition and revolution. So let us know what you are thinking—about these articles and about our Army.

LJH

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Task Force Smith Revisited

Lieutenant Colonel Joseph G.D. Babb, US Army, Retired

Half a century ago the US ignored a potential threat that still opposes us today. The Korean War is not over, and the United States is still taking casualties. This was America's first major UN operation, and since the end of the Cold War the number has increased many fold. An obvious question begs to be answered: Have we learned anything in the past fifty years?

"NO MORE Task Force *Smith*s." Former Army Chief of Staff General Gordon R. Sullivan outlined this battle cry for the Army of the 1990s. The tiny, ill-prepared and badly equipped force had put up a valiant but futile attempt to halt North Korean hordes in a war that broke out following the biggest drawdown in US history.[1]

Ironically, the number of divisions in the active Army—10—was the same when Sullivan retired as it was at the beginning of the Korean War in 1950. The division that prepared and deployed Task Force (TF) *Smith*, the 24th Infantry Division, was reflagged in the early 1990s but is now being reactivated, along with the 7th Infantry Division, as the Army adds two "cadre" divisions to the 10 active ones.[2] As the Army enters the year 2000 with units deployed in Bosnia and Kosovo, a decade after the end of the Cold War, and 50 years after the "limited war" in Korea, a heated debate continues over its proper organization, equipment, manning and role.

The traditional problems normally associated with military readiness—personnel, training and equipment shortfalls—that led to the disaster in Korea in 1950 seem to have been largely avoided today. While demands for further reductions in the budget and manpower have receded, the requirement for changes in the Army's roles and missions and the reality that manpower costs must be trimmed to pay for modernization are not likely to go away anytime soon. As General Eric K. Shinseki takes over the leadership of the Army, valuable lessons from TF *Smith* merit re-examination.[3] The Army's duties and missions in Japan during the occupation have parallels to today's missions in Bosnia and Kosovo.

TF *Smith* is generally seen as a failure in tactical preparedness. However, for long-term US national security, the occupation of Japan arguably was a great success since Japan remains our key Asian ally today. Army leaders face parallel situations and choices today in building and maintaining the land component of the world's only superpower with national interests around the world.

The Army must be prepared to "fight and win the nation's wars," but it also must be able to conduct other missions in support of this nation's national security objectives.[4] The real debate over the future role of the Army should not concern whether to prepare for warfighting or for military operations other than war (MOOTW) or stability and support operations (SASO) activities. The deliberations and decisions must address how to man, train, equip, organize and plan all the missions assigned by the National Command Authorities (NCA). In reevaluating TF *Smith*, this article briefly reviews not only the personnel, training and equipment elements of readiness, but also the strategic environment, the leadership and morale factors and the effects of the nontraditional missions conducted by the Army during the Occupation of Japan.

This evaluation must be done at all three levels—strategic (Washington, D.C.), operational (Tokyo and Seoul) and tactical (the occupation zone and battlefield). The US Army in the post-Cold War, post-*Desert Storm* era, as it was in the aftermath of World War II, is being required to conduct military duties in other than a war environment. The Army

US Army

Emperor Hirohito pays an unprecedented visit to Supreme Allied Commander Douglas MacArthur at the US Embassy in Tokyo, 27 September 1945.

The virtually complete and peaceful compliance with the terms of the surrender by the Japanese soon moved security worries to the background. MacArthur and his staff were quickly forced to make decisions that had significant long-term ramifications for Japan's future modernization and political development. The fate and future role of the emperor and the war crimes tribunals were the most visible and volatile topics, but issues related to caring for the basic needs of the people were also important in keeping Japan stable and peaceful.

has already been tasked to conduct or support unilateral, coalition and UN-led humanitarian, peace-enforcement, peacekeeping and peace-building operations in northern Iraq, Somalia, Rwanda, Haiti, Bosnia and now Kosovo and East Timor.[5] The status and results of these operations are mixed and controversial. However, the military's role and performance in Japan and Korea after World War II were no less controversial at the time. The fact that there has not been an outbreak of a major conflict in either Korea or Taiwan suggests that the price of peace is US presence and patience.

This article looks at the occupation of Japan in the years preceding the Korean War, specifically addressing the strategic direction, military organization and leadership that formed, tasked and deployed TF *Smith* to Korea for action against the North Korean People's Army (NKPA). TF *Smith*, named for Lieutenant Colonel Charles B. (Brad) Smith, was the lead element of the 24th Infantry Division, Eighth United States Army, the first American combat unit introduced by General Douglas MacArthur into the "police action" in July 1950.

Roy K. Flint states, "the tactical defeats endured by the officers and men of the 24th Division were rooted in the failure of the Army—and not just the divisions in Japan—to prepare itself during peacetime for battle."[6] This article outlines the missions and duties of Army occupying units in Japan, discusses their readiness for war, traces actions of TF *Smith* in the opening days of the Korean War and reviews the resulting lessons. Most important, this article draws parallels between the Army of 1945-1950 and the Army of 1995-2000 and proposes some considerations and conclusions using some of the lessons from the Occupation of Japan and the combat operations of TF *Smith*.

The Occupation of Japan

On 28 August 1945, the first American soldiers deployed to the Japanese home islands to prepare for the arrival of occupation forces. MacArthur, designated Supreme Commander for the Allied Powers (SCAP), arrived on the 30th to implement the Basic Initial Post Surrender Directive.[7] This document called for the same type of humanitarian, nation-building and security operations that the Army is conducting today. The directive called on the SCAP (also the wider term for the entire headquarters) to demilitarize and democratize Japan. While a bit lengthy, the goals outlined in the text are most informative, especially when compared with UN mandates the Army has been asked to implement in current and recent operations:

"The ultimate objective of the United Nations with respect to Japan is to foster conditions which will give the greatest possible assurance that Japan will not again become a menace to the peace and security of the world and will permit her eventual admission as a responsible and peaceful member of the family of nations. Certain measures considered

to be essential for the achievement of this objective have been set forth in the Potsdam Declaration. These measures include, among others, the carrying out of the Cairo Declaration and the limiting of Japanese sovereignty to the four main islands and such minor islands as the Allied Powers determine; the abolition of militarism and ultranationalism in all their forms; the disarmament and demilitarization of Japan, with continuing control over Japan's capacity to make war; the strengthening of democratic tendencies and processes in governmental, economic, and social institutions and encouragement and support of liberal political tendencies in Japan. The United States desires that the Japanese Government conform as closely as may be to the principles of democratic self-government but it is not the responsibility of the occupation forces to impose on Japan any form of government not supported by the freely expressed will of the people."[8]

The guidelines and broad policies for the occupation of Europe and Japan had been agreed to by the major allies at the Cairo Conference of 1943. Military planners in Washington had been key members of a team studying postwar issues from the earliest days of the war. Key State Department personnel, military planners and regional experts began working on postwar planning in early 1942 in a more or less ad hoc manner. However, in early 1945, a State-War-Navy Coordination Committee (SWNCC) was formed and prepared interagency analysis and policy inputs for postwar Germany and Japan.[9] Why should interagency planning and cooperation be a contentious issue and lead to a separate Presidential Decision Directive, PDD-56, in 1998 when the historical precedents are obvious?

Despite the planning effort, at the time of the surrender considerable and continuing political debate swirled in Washington about the fate of Japan and America's role in the postwar world. Amid turmoil and conflicting guidance, MacArthur, no stranger to the politics of the Pacific, assumed wide latitude in interpreting his mandate. He immediately began to make his presence felt by implementing humanitarian relief efforts, caring for the thousands of Allied prisoners of war, demobilizing the Japanese military, conducting war crimes tribunals and organizing and putting into place a civil-military government. The task was immense, politically sensitive and dynamic.[10]

With the official unconditional surrender in early September, SCAP became responsible for a totally defeated nation that had suffered over 5 million casualties, with its major cities in ruins and its agricultural sector unable to feed the country. Japan contained a population of 74 million, many of whom needed housing and medical care. More than 5 million Japanese army and navy personnel, most outside the home islands, needed to be brought home. Additionally, more than one million Korean and Chinese soldiers and forced laborers had to be repatriated.[11]

The traditional problems normally associated with military readiness — personnel, training and equipment shortfalls — that led to the disaster in Korea in 1950 seem to have been largely avoided today. While demands for further reductions in the budget and manpower have receded, the requirement for changes in the Army's roles and missions and the reality that manpower costs must be trimmed to pay for modernization are not likely to go away anytime soon.

In addition, as the occupation began, MacArthur was the commander of over a half-million deployed American and Allied forces throughout the Far East. The reorganization, demobilization and orderly return of the servicemen to home nations significantly complicated the task at hand in Japan. US Army personnel, fresh from bloody, no-quarter-given combat against the Japanese were critical to providing humanitarian support, ensuring a pacified Japan and preparing to rebuild a nation. This was not a task the American units had been prepared and trained to undertake, nor were many of these combat veterans eager to stay in Japan now that the war was over.

But while there those men oversaw not only a program for ensuring Japan's military would not threaten peace, but also a sweeping program to remake Japan in America's image—a new, democratic, political order.[12] While the politicians in Washington and other Allied capitals argued over Japan's reparations, the fate of the Emperor and what Japan should look like in the future, SCAP immediately analyzed the task at hand and went to work.

SCAP endured conflicting messages from Washington and the frustrating and counterproductive role of the Russians, some of whom were part of MacArthur's Allied staff in Tokyo. The first phase of the occupation focused on security and demilitarization issues and the second on the political, economic and social changes mandated in broad goals by the Allies as interpreted by MacArthur and his staff.[13]

Actually, both phases occurred nearly simultaneously, with humanitarian and demilitarization tasks having initial primacy. However, the virtually complete and peaceful compliance with the terms of the surrender by the Japanese soon moved security worries to the background. MacArthur and his staff were quickly forced to make decisions that had significant long-term ramifications for the future modernization and political development of Japan. The fate and future role of the emperor and the war crimes tribunals were the most visible and volatile topics, but issues related to caring for the basic needs of the people were also important in keeping Japan stable and peaceful. Other decisions about implementing political and economic development policies, using the existing Japanese bureaucracy and future governmental structures were no less vexing. The predominate planners, decision makers and implementers were military officers, using guidance from Washington that was neither clear nor consistent.

It is also debated that the Army's most important shortcoming was the attitude of the leadership, civilian and military, and even of the soldiers, that war was not possible, especially a ground war, in the Atomic Age. With communist-inspired or supported insurgencies in Greece, Vietnam and Malaya, the recent defeat of the US-supported Nationalists in 1949 in China, and the further Soviet consolidation of Eastern Europe in the late l940s, the warning signs appear, in hindsight, to have been quite obvious.

Military staff officers played critical roles in interpreting policy and ensuring the implementation of directives for the postwar government. The demobilization of the Japanese army and navy, the destruction of war industries and equipment, the distribution of humanitarian supplies and repatriation of soldiers and workers were accomplished, for the most part, by the Japanese under US military direction. In addition, US Army personnel were directly involved in rewriting the constitution, instituting police and education reforms and planning for sweeping political, social and economic changes, including land reform, purging military and industrial leaders and forming labor unions.

Army combat units were deployed throughout the islands, actively patrolling to thwart illicit military training, arms caches, contraband and black-market activity. In addition, infantry units served as military police and constabulary to keep the peace and provide an American presence throughout the country.[14] However, the Japanese fanaticism for working with the Americans and implementing the peace more than equaled their fanaticism for war. The discipline among the Japanese people and the American soldiers has been widely characterized as miraculous. The "miracle" was military leadership, planning and organization, coupled with a studied understanding of the Japanese people and culture.

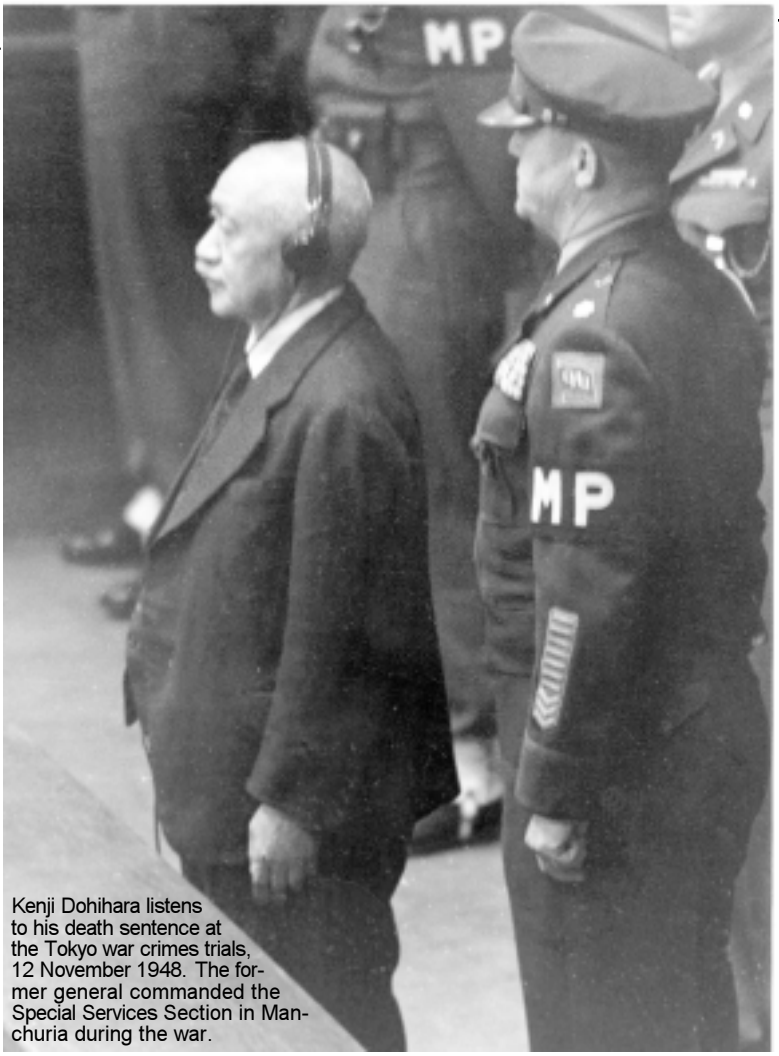
The initial occupation force of over 400,000 soldiers in the Sixth and Eighth US armies was clearly unnecessary given the attitude and actions of the Japanese people. In addition, the war-weary American people demanded the rapid return of their service personnel. The pace of the US demobilization quickly reduced the numbers of troops available for duty in the Far East. By early 1946, the Sixth Army was gone and the Eighth Army (EUSA) numbered under 200,000.[15] A standing Army of over 8 million at the end of World War II was reduced to 592,000 and 10 divisions by 1949. Four of these divisions, the 1st Cavalry, and the 7th, 24th and 25th Infantry divisions were part of the Occupation of Japan.[16] One of these occupation divisions, the 24th, would deploy the first American combat troops introduced into Korea.

The 24th Infantry Division

"They had to be told that this was a police action, and that they'd soon be home in Japan. It was a happy thought—life in Japan was very good. Almost every man had his own shoeshine boy and his own *musame*; in a country where an American lieutenant made as much as a cabinet minister, even a PFC could make out. And the training wasn't much."[17]

In 1949, the 24th Infantry Division was conducting its third year of occupation duties on the island of Kyushu, the southernmost of Japan's four main islands. The division had completed its move to this island directly across the Tsushima (Korea) Strait from the southern ports of the Republic of Korea in May 1946. Kyushu held the major naval base at Sasebo and the city of Nagasaki. There was little extra room for ranges and virtually no maneuver areas. After short deployments by the 2d Marine Division and the 32d Infantry Division, the 24th would become responsible for the entire island and conduct the full range of occupation duties until the outbreak of the Korean War.

US Army



Kenji Dohihara listens to his death sentence at the Tokyo war crimes trials, 12 November 1948. The former general commanded the Special Services Section in Manchuria during the war.

Amid turmoil and conflicting guidance, MacArthur, no stranger to the politics of the Pacific, assumed wide latitude in interpreting his mandate. He immediately began to make his presence felt by implementing humanitarian relief efforts, caring for the thousands of Allied prisoners of war, demobilizing the Japanese military, conducting war crimes tribunals and organizing and putting into place a civil-military government. The task was immense, politically sensitive and dynamic.

The 24th had officially assumed occupation responsibilities on the island on 16 June 1946 and handled minor disturbances related to fraternization and problems between the Japanese and not-yet repatriated Korean workers. The division also addressed easing food shortages among the Japanese, running military and civil courts and providing division interpreters to support rebuilding and construction activities.

Training and operations continued. The division patrolled extensively, conducted marksmanship training, reconnoitered locations for artillery ranges and set up a division school. The division also assumed the responsibility for a repatriation center. Plans were well along for providing clubs, Red Cross facilities, and improved recreation for the troops.[18] Kyushu was to be the home for the 24th Infantry Division for the foreseeable future.

SCAP Occupation Instruction Number 5, dated 1 October 1949, tasked the EUSA, the senior headquarters for all the Army divisions in Japan, with ensuring Japanese compliance with orders and instructions. These included encouraging the development of the economy to help feed and house the Japanese people, supervise the continuing repatriation effort and execute missions and directives related to Japan's social, cultural and economic development. Significantly, the instructions stated:

"(6) Conduct occupation duties in such a manner that forces are prepared constantly:

(a) For combat.

(b) To quell any incipient disorders, riots or other disturbances or disputes.

(c) In the event of disaster in Japan to:

1. Preserve order.

2. Alleviate human suffering by providing emergency aid.

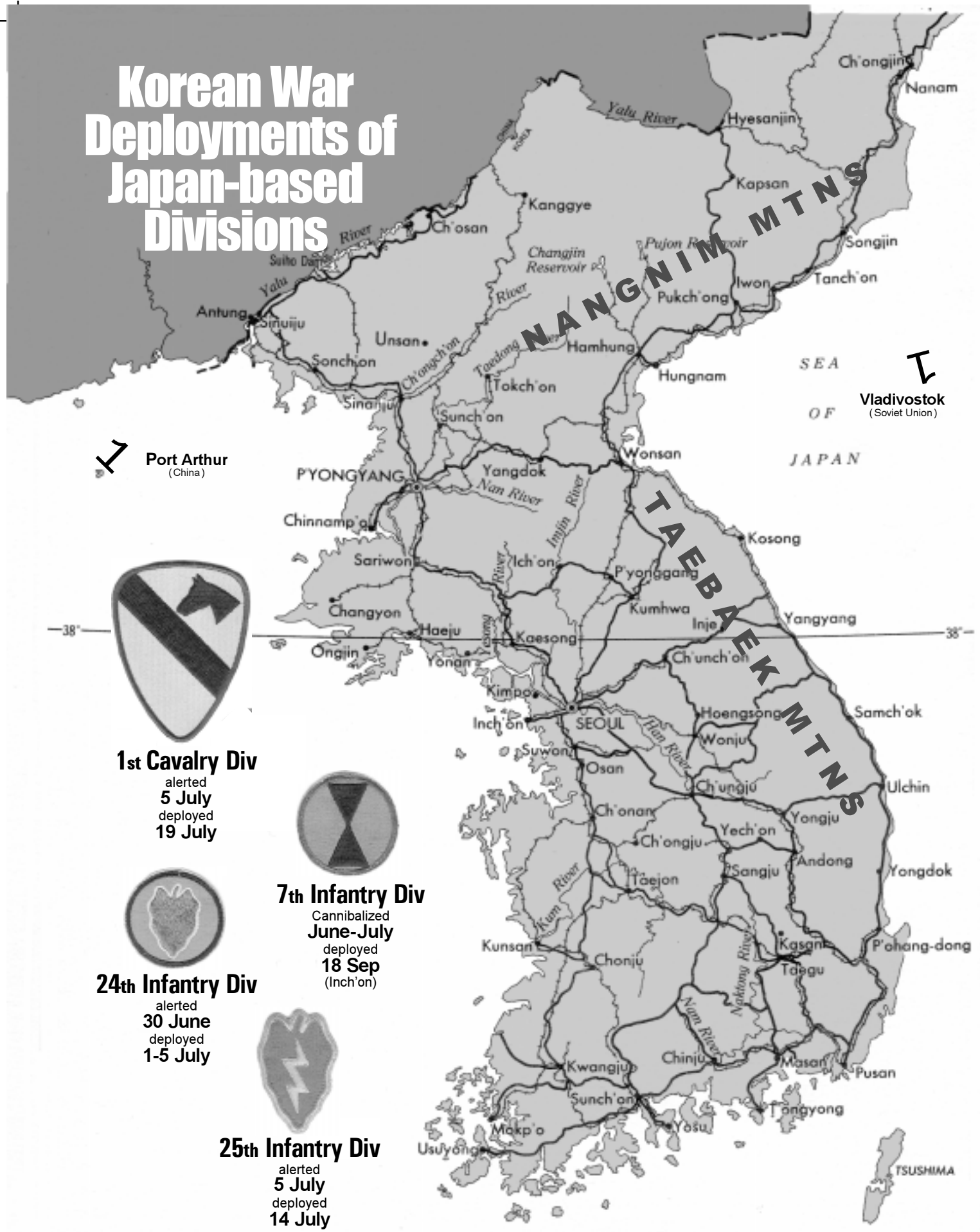
3. Extend assistance to the Japanese Government as directed.

4. Effect emergency rehabilitation of those Japanese installations."[19]

It is clear in communications from higher headquarters, fully eight months before the outbreak of hostilities on the Korean peninsula, that being prepared for combat was a stated mission subordinate units had to be prepared to conduct. Having said that, it is also clear that it was not designated a priority or singled out for special consideration. How was the 24th Infantry Division organized for the task and how prepared for combat was the unit? What was the status of the leadership and what was the morale of troops? One analyst asserts that "without exaggerating, it could be said that Eighth Army units were bordering on being unready for war."[20]

In early 1949, the 24th Infantry Division strength was about 10,700, well below the planned wartime strength of 18,900. None of the three infantry regiments, the 19th, the 21st and the 34th, had its full complement of three battalions. The 19th had only one battalion, a headquarters company and one company of a second battalion. The 21st had only one battalion and two headquarters companies. The 34th was in the best shape, organizationally, with three battalions less one company. The 52d Artillery was also understrength, and because of inadequate range facilities only fired once a year. Coupled with a high

Korean War Deployments of Japan-based Divisions



1st Cavalry Div
alerted
5 July
deployed
19 July

7th Infantry Div
Cannibalized
June-July
deployed
18 Sep
(Inch'on)

24th Infantry Div
alerted
30 June
deployed
1-5 July

25th Infantry Div
alerted
5 July
deployed
14 July

War in Korea, Presidio Press

Japanese soldiers bringing weapons to a US Army collection point in Yokohama.

Japanese fanaticism for working with the Americans and implementing the peace more than equaled their fanaticism for war. The discipline among the Japanese people and the American soldiers has been widely characterized as miraculous. The "miracle" was military leadership, planning and organization, coupled with a studied understanding of the Japanese.

turnover and continuing occupation duties that kept individuals away from training, the personnel status was troubling.

Perhaps more important than the personnel picture was the status of equipment. The units were equipped with World War II weapons. In addition, ammunition stocks were low, with only "thirteen high-explosive, antitank (HEAT) artillery rounds to be found in the division."[21] The crew-served weapon and vehicle situation was much the same. What the soldiers had was old and worn out, and maintenance was difficult with the shortage of parts. Critical for the upcoming battles in Korea, there were virtually no operational armored units in Japan and the available tanks were light, poorly maintained M-24s.

When Lieutenant General Walton E. Walker took over the Eighth Army in 1949, he emphasized training and immediately instituted a new training program. This program was just starting to have a positive effect when the war broke out. Units had conducted individual and crew training, but there were limited facilities for the firing of indirect-fire weapons, recoilless rifles and antitank weapons. This lack of tank-killing capability was a key shortcoming in the upcoming battle with the North Koreans. Additionally, battalions and larger units had no opportunity to train together and develop the necessary inter - operability and combined arms expertise. This would also be a telling shortcoming for TF *Smith*.

Even so, "the greatest weakness of the American Army was not its weapons and equipment, pitiful as they were. The US Army, since 1945, had been civilianized at the insistence of the public. They wore uniforms, but they were civilians at heart."[22] The lifestyle of the officers and men of the occupation force reinforced a relaxed "colonial army" atmosphere. However, this is a contentious point; it does not appear that the Army's day-to-day regime in Japan was any more relaxed than

for units in the Continental United States.

Later actions by American troops no better trained or prepared, and from a similar relaxed, civilianized environment produced major victories in a few short months. Many of the officers and noncommissioned officers (NCOs) were veterans of World War II, and the United States still had a technically superior Air Force and Navy. These factors would help mitigate the initial shortfalls of the US Army on the peninsula. In the Gulf War many of the senior officers and NCOs were Vietnam War veterans, and the US and allied air and naval assets were again technically superior. It might be prudent to remember that after Inchon, it was not the North Korean Army that defeated the UN forces but a massive counteroffensive by a Chinese army.

The senior US officers in the chain of command, including MacArthur and even some of the troops themselves, had believed that when the NKPA realized the Americans were on the ground in Korea and moving in additional forces, the invasion would stop. Overconfidence, hope, underestimating the enemy and "arrogance" all appeared to play a role in the climate, morale and motivation among the leaders and the led in TF* Smith *— and their superiors.

It is also debated that the most important shortcoming was the attitude of the leadership, civilian and military, and even of the soldiers, that war was not possible, especially a ground war, in the Atomic Age. With communist-inspired or supported insurgencies in Greece, Vietnam and Malaya, the recent defeat of the US-supported Nationalists in 1949 in China, and the further Soviet consolidation of Eastern Europe in the late l940s, the warning signs appear, in hindsight, to have been quite obvious. Not everyone overlooked the warnings; "the best of the leaders—Walker, Stephens, the Regimental Commander and Smith—knew that war was possible and fought against the obstacles."[23] The failure was at the strategic level to get the Army's future tactical requirements "about right."

Task Force *Smith*

A veteran of the 7 December 1941 attack on Pearl Harbor and now commander of the 1st Battalion, 21st Infantry Regiment—the Gimlets—of the 24th Infantry Division, Smith had been catapulted into another war, a war he had not expected and one for which his unit was not fully prepared. Literally and symbolically, Smith was leading the United States in war for the second time in ten years.[24]

In a letter in response to a US Army Command and General Staff College student's query in 1992, retired Brigadier General Smith, for whom the task force was named, endorses as "factual and accurate" the accounts of Fehrenbach, Appleman and Eric Ludvigsen, who wrote an article published in *ARMY* magazine in February 1992.[25] These three sources are used extensively in the following brief account of the activities of the unit in Japan and its actions in Korea in July of 1950.

On 25 June 1950, the NKPA initiated a large-scale offensive operation against the Republic of Korea. Aside from some advisers serving in the Korean Military Advisory Group (KMAG), there were few other American troops on the peninsula. The outgoing commander of KMAG, Brigadier General William L. Roberts, who was on his way back to the United States as the attack began, had been recently quoted in *Time* magazine: "The South Koreans have the best damn army outside of the United States."[26] The eight divisions of the Army of the Republic of Korea, without tanks and adequate artillery, and the US KMAG advisers were completely surprised by the attack and by 27 June resistance was breaking down everywhere. By the 28th, "only a rabble held the south shores of the Han."[28] On 30 June, based on a personal "on the ground" assessment by MacArthur followed by a request to use military power, President Harry S. Truman authorized the deployment of two Army divisions to Korea.[29]

Having been on alert since the 28th of June, "Task Force *Smith* was born in the late evening of 30 June.[30] Lieutenant Colonel Smith, the battalion commander of 1st of the 21st Infantry (1-21 Inf), the Gimlets, would lead the first US Army combat formation to Korea. Replacements were immediately moved to the understrength units and a mixed infantry-artillery task force of slightly more than 400 men was cobbled together out of other regimental and division assets. TF *Smith* prepared for movement to Korea to "stop the North Koreans as far from Pusan as possible."[30]

On 5 July, only five days after notification in Japan, TF *Smith* deployed in a delaying position south of Osan, Korea. With additional troops and volunteers, the task force now numbered 540 soldiers. Shortly after 0800 artillery and antitank teams of TF

Replacements were immediately moved to the understrength units and a mixed infantry-artillery task force of slightly more than 400 men was cobbled together out of other regimental and division assets. TF* Smith *prepared for movement to Korea to "stop the North Koreans as far from Pusan as possible." On 5 July, only five days after notification in Japan, TF* Smith *deployed in a delaying position south of Osan, Korea.

Smith fired on advancing Soviet-supplied T-34 Korean tanks. However, the NKPA armored column moved through and Smith prepared his unit for the coming infantry assault. Low ammunition supplies, dud rounds and inadequate weapons—not failures in bravery, unit cohesion or leadership—were primarily responsible for only six tanks being destroyed or damaged out of the more than 30 engaged.

A follow-on enemy infantry column was sighted about an hour later and the task force took the enemy under fire when they came into range. However, by mid-afternoon the position was about to be flanked, and communications had been lost with the artillery unit to the rear. After repeated attempts to contact the artillery and believing it had been destroyed by the enemy tanks, Smith finally ordered a withdrawal. It was during this withdrawal under fire, a very difficult maneuver, that the unit broke up and took heavy casualties. Upon moving back, Smith found the artillery unit intact and together with its commander, Lieutenant Colonel Perry, the guns were rendered useless and the withdrawal completed. Even though North Koreans did not pursue the retreating Americans, about 180 US soldiers were killed, wounded or missing from TF *Smith* compared with 127 reported NKPA killed and wounded.[31] Nevertheless, the unit had slowed the North Korean advance.

The senior US officers in the chain of command, including MacArthur and even some of the troops themselves, believed that when the NKPA realized the Americans were on the ground in Korea and moving in additional forces, the invasion would stop.[32] Overconfidence, hope, underestimating the enemy and "arrogance" all appeared to play a role in the climate, morale and motivation among the leaders and the led in TF *Smith*—and their superiors. However, given the task, the mission and the odds, TF *Smith* deserves high marks for its performance.

While the TF might have done better, the other two regiments of the 24th Division were arguably much worse. However, the division continued to delay the NKPA, took significant losses (including the capture of its commander), and fought until relieved by the 1st Cavalry Division on 22 July.[33] The Pusan perimeter held and a successful counterattack occurred in early fall. The 24th Division, refitted and reinforced, distinguished itself in combat later in the war. Smith continued to command 1-21 Inf until November 1950.[34]

General Walker (left) meets 24th Infantry Division Commander Major General William F. Dean at an advance airfield in Korea and informs him that his division will soon be joined by the rest of Eighth Army, 7 July 1950. Dean was later captured during the defense of Taejon.

War in Korea, Presidio Press

When Lieutenant General Walton E. Walker took over the Eighth Army in 1949, he emphasized training and immediately instituted a new training program. This program was just starting to have a positive effect when the war broke out. Units had conducted individual and crew training, but there were limited facilities for the firing of indirect-fire weapons, recoilless rifles and antitank weapons. This lack of tank-killing capability was a key shortcoming in the upcoming battle with the North Koreans.

Considerations

Today we have fallen heir to the problems and responsibilities the Japanese had faced and borne in the Korean-Manchurian area for nearly a half century, and there is a certain perverse justice in the pain we are suffering from a burden which, when it was borne by others, we held is such low esteem. What is saddest of all is that the relationship between past and present seems to be visible to so few people. For if we are not to learn from our own mistakes, where shall we learn at all.[35]

At every level of the defense establishment between 1945 and 1950 errors of omission and commission led the DPRK to think it could attack and defeat a military supported by US advisers and logistics. The DPRK thought it could win before the might of the United States would or could be brought to bear against it. One obvious element in this equation was the need for MacArthur, his staff, the Eighth Army and its subordinate units to carry on with the vital strategic task of demilitarizing and democratizing Japan the, "most alien enemy the United States had ever fought in an all-out struggle."[36]

Half a century ago the US ignored a potential threat that still opposes us today. The Korean War is not over, and the United States is still taking casualties. This was America's first major UN operation, and since the end of the Cold War the number has increased many fold. An obvious question begs to be answered: Have we learned anything in the past fifty years?

The lessons from the occupation of Japan and of the tactical-level combat experience of TF *Smith* are often seen only as "a study of unpreparedness." More than that, this is a study in balancing the nation's objectives with its capabilities and willingness to use them. It is a study in decisions and plans made in ignorance of the history, the culture, the alien ideologies and the regional geopolitical situation. It is a study in reliance on the wrong technology or the right technology poorly integrated into the total military instrument of power and the arrogance of the success of the last fight. It is a study in how too many key leaders see the world as they wish it were and not as it really is.

One author describes the familiar "New World Landscape" of the post-Cold War environment," saying that trends suggest that conflict will be on the rise. But he points toward a different world in which nations are likely to be embattled from within and without.[37]

The occupation of Japan and the fate of TF *Smith* suggest that in the post-Cold War era we are looking in both the right and wrong places. Technology is only a partial answer to the problems in securing the nation's objectives in the 21st century. Regional expertise and planning, a better-integrated joint force, the ability to understand and evaluate the capabilities of, and work with allies and friends, and former enemies—these are also only partial solutions. The real solutions cannot be bought—they must be studied, practiced and earned.

Senior military leaders in Washington must educate executive, cabinet and legislative members and staffs with little or no military experience on the risks and pitfalls of decisions involving the use of military force across an increasing complex and varied spectrum. Our political leaders must fund the best balance of personnel, equipment, training and force structure to build the force and develop leaders who confidently and intelligently face the challenges of the future.

At the operational level, the theater commanders in chief—the MacArthurs of today—must anticipate, plan, balance and conduct military activities in war and operations other than war with the most efficient and effective joint, multinational and inter-

agency force mix, at the right time and place. This does not necessarily mean with overwhelming combat power, for what may seem most simple, in the long term could become most costly. The tragedy of US Air Force and Naval aviation assets mistakenly attacking US and ROK forces in the early days of the Korean conflict exacerbated the problems faced by the 24th Division. It is more than tragic that today we are still shooting at each other, figuratively and literally, and still do not have a joint team that can interoperate in truly seamless, efficient, multiservice operations.

At the tactical, TF *Smith* level, we argue that a disciplined soldier trained for his warfighting mission can do any "other than war" task assigned, in part because we prioritize training dollars, hours and facilities to practice for the fight-and-win mission. If that means we are only prepared to provide our nation with ad hoc SASO responses and settle for a loss or draw in situations like Rwanda, Somalia or Haiti, we are failing the nation. As for the Balkans, are we there to win the peace or just protect ourselves until ordered out? What would MacArthur do in Bosnia or Kosovo?

Luckily we did not lose Japan to save Korea.

The occupation of Japan and the fate of TF* Smith *suggest that in the post-Cold War era we are looking in both the right and the wrong places. Technology is only a partial answer to the problems in securing the nation's objectives into the 21st century. . . . If we are only prepared to provide our nation with ad hoc SASO responses and settle for a loss or draw in situations like Rwanda, Somalia or Haiti, we are failing the nation.

However, it certainly would have been better to win both the war and the peace—with fewer casualties. Building and keeping the peace, deterring war and if deterrence fails, winning the war are the demands of the National Military Strategy. National security requires shaping the Army's future leaders, force structure, equipment and training to meet all those demands. In the success of the Occupation of Japan and in the sacrifices of TF *Smith* there is much to be studied and learned that is directly applicable—tactically, operationally and strategically—for today's Army and the joint force. ***MR***

NOTES

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3. Ibid., 2.
4. Department of Defense, Office of the Chairman of the Joint Chief of Staff, *National Military Strategy of the United States of America* (Washington DC: Government Printing Office, February 1995), i.
5. Peace Building consists of postconflict actions, primarily diplomatic, that strengthen and rebuild civil infrastructure and institutions in order to avoid a return to conflict. Peace Enforcement is the application of military force or the threat of its use, normally pursuant to international authorization, to compel compliance with generally accepted resolutions and sanctions. Peacekeeping involves military or paramilitary operations that are undertaken with the consent of all major belligerent parties. Department of the Army, Field Manual 100-23 *Peace Operations* (Washington DC: Department of the Army, 30 December 1994), 2-6.
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9. Robert Wolfe, ed., *American Proconsuls: United States Government in Germany 1944-1952* (Carbondale, IL: Southern Illinois University Press, 1994), 3-52.
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20. Heller and Stofft, 269-75.
21. Ibid., 274.
22. Fehrenbach, 91.
23. Heller and Stofft, 274-75.
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26. Fehrenbach, 17.
27. Ibid., 76.
28. Ibid., 90.
29. Eric C. Ludvigsen, "An Arrogant Display of Strength," *ARMY*, January 1992, 36-45.
30. Ibid.
31. Appleman, 59-76.
32. Ibid., 60, 70, 73.
33. Fehrenbach, 124-47.
34. Ludvigsen, 45.
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36. Ruth Benedict, *The Chrysanthemum and the Sword: Patterns of Japanese Culture* (Rutland, VT: Charles E. Tuttle Company, 1954), 1.
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Harnessing Thunderbolts

Major Kelly C. Jordan, US Army

THE FIRST HALF of the 20th century taught the US Army that traditional faith in firepower was appropriate for total wars and battles of annihilation. America had trusted its industrial base to provide overwhelming amounts of materiel and expected military leaders to transform those assets into tremendous combat power. Thus, the United States was able to survive the first part of the 20th century with an incredibly small standing Army and emerge victorious from its two most significant wars. Not surprisingly, after spending approximately 50 years learning how to maximize combat power on the battlefield, US military leaders were eager to incorporate their findings into doctrine and avoid the painful lessons that ground forces had learned in virtually every previous conflict.

Consequently, upon entering the Korean conflict, the country's first limited war of the nuclear era, US Army doctrine prescribed annihilating opponents through the maximum application of firepower. However, for the first time the United States also faced the threat of nuclear retaliation from another country. Many of the actions associated with total wars proved unsuitable for operations in limited wars, so America adjusted to the delicate Cold War climate and sought to avoid escalating conventional conflicts, nuclear exchanges or even a Third World war. This restraint prevented the Army from continuing to rely on the approach to warfighting that had worked so well in recent experience.

Still, US political and military leaders could ill-afford to surrender the enormous firepower advantage, especially when facing opponents who were fighting total wars and possessed substantial numerical advantages in troops. As a result, one of the most important capabilities US ground forces developed in the limited wars of the second half of the 20th century was the ability to *control* the massive amounts of available firepower.[1] As events during the recent NATO actions in Yugoslavia have demonstrated, this very difficult objective is an ongoing process. The Army began refining its ability to control combat power during the Korean War, and many of the lessons that the Army learned then resonate in our doctrine today.[2]

The US could ill-afford to surrender its enormous firepower advantage, especially when facing opponents who were fighting total wars and possessed substantial numerical advantages in troops. As a result, one of the most important capabilities US ground forces developed in the limited wars of the second half of the 20th century was the ability to* control *the massive amounts of available firepower.

According to US Army Field Manual (FM) 100-5, *Operations*, control is an inherent part of battle command. Control is effective if "it allows the commander freedom to operate, delegate authority, lead from any critical point on the battlefield and synchronize actions across his entire [area of operations]."[3] Here I will argue that the US Army learned valuable lessons regarding ways to control its combat power on the battlefield during the Korean War—how to "harness its own thunderbolts." In particular, the Army learned to better orchestrate its direct fires and synchronize its indirect fires to maximize their battlefield effects. In addition, the Korean War experience provided the impetus for resolving the ambiguity surrounding control over theater commanders in chief (CINCs) that had existed since World War I.

Perhaps the greatest control leaders can exert in battle is that which compels their soldiers to risk injury or death by firing their weapons in battle. Traditional linear tactics oriented on maximizing this aspect of battlefield control, but the more open tactics of the 20th century have forced commanders to innovate to elicit soldiers' participation in combat, especially when they cannot even see one another.

US Army

An infantryman returns fire with his M-14 rifle during early operations in Vietnam.

Tests began in 1953, in response to the poor marksmanship skills demonstrated by many Korean War-era soldiers. . . By improving soldiers' confidence in their ability to successfully engage a variety of target at ranges from 50 to 300 meters, Army leaders also increased the tendency of individual soldiers to engage the enemy during firefights.

To increase their level of battlefield control over direct fires during the last half of the century, Army leaders used three important techniques:

- They added more automatic weapons to the infantry rifle squad and platoon.
- They improved the Army's method of marksmanship instruction.
- They subdivided the infantry squad into two fire teams.

These efforts, largely results of the Army's Korean War experience, improved commanders' control of their forces and are still evident in today's Army doctrine.

The infantry platoon of World War II and the Korean War contained 42 soldiers; discounting the platoon headquarters element, each had an effective strength of 36 soldiers. Despite this apparent similarity, the infantry squad and platoon organizations of the Cold War era differed greatly from their World War II predecessors. Unlike the 12-soldier squad of World War II, the Korean War infantry squad had three fewer soldiers and an additional automatic rifle. It consisted of nine soldiers: a squad leader, an assistant squad leader, two Browning Automatic Rifle teams (each consisting of a rifleman and an assistant gunner), two riflemen with M-1 Garand rifles, and one sniper with an M-1 Garand sniper rifle.[4] Similarly, while the World War II infantry platoon contained three squads of 12 soldiers each and a platoon headquarters element of six soldiers, the Korean War infantry platoon consisted of three of these nine-soldier squads and contained an additional weapons squad of nine soldiers and a platoon headquarters identical to that in the World War II platoon. The weapons squad consisted of a squad leader, a four-soldier bazooka team, and a four-soldier machinegun team with the .30 caliber machinegun.[5]

These changes significantly increased the firepower available to small-unit leaders by adding one automatic weapon to each infantry squad, for a total of two, and five automatic weapons to each infantry platoon, for a total of eight. S.L.A. Marshall held that men operating crew-served weapons almost always fired their weapons in combat and that a unit's rifle fire tended to build up strongly around its automatic weapons, so one would expect an increase in the "ratio of fire" from such a unit. This is in fact what occurred. By Marshall's own reckoning, which can be substantiated using information other

than Marshall's own somewhat suspicious data and a secret formula that died with him in 1977, the American infantry platoon's ratio of fire increased from a high of 25 percent in World War II to approximately 55 percent by the end of the Korean War.[6]

Another way that Army leaders significantly increased their control over direct fire on the battlefield came largely as a result of the development of

To increase their level of battlefield control over direct fires during the last half of the century, Army leaders used three important techniques: They added more automatic weapons to the infantry rifle squad and platoon; improved the Army's method of marksmanship instruction; and subdivided the infantry squad into two fire teams.

TRAINFIRE, a revolutionary system of marksmanship training.[7] *TRAINFIRE* provided more realistic rifle marksmanship training by using pop-up targets in realistic target arrays to improve riflemen's performance in combat. This system was also intended to increase soldiers' confidence in their weapons, and induce them to fire more often in combat.[8]

Before adopting *TRAINFIRE*, the Army had used a system of basic marksmanship instruction based on known-distance ranges. Soldiers fired from a series of formal positions on a level firing line at "bull's-eye" targets raised and lowered from pits dug at specific and uniform distances. By contrast, *TRAINFIRE* ranges required soldiers to fire from pre-dug fighting positions and used "E"-type silhouettes mounted on pop-up devices, called "Punchy Petes," as targets.[9]

Tests on the initial *TRAINFIRE* version began in 1953, in response to the poor marksmanship skills demonstrated by many Korean War-era soldiers. After four years of testing, the Army formally adopted *TRAINFIRE* as its basic rifle marksmanship training method in the summer of 1957 and began implementing it throughout the force during Fiscal Year 1958.[10] Once adopted, it took the Army three years to construct the required number of ranges in America and overseas.[11]

By improving soldiers' confidence in their ability to successfully engage a variety of target at ranges from 50 to 300 meters, Army leaders also increased the tendency of individual soldiers to engage the enemy during firefights. The increased participation of riflemen provided leaders with greater amounts of firepower, and the soldiers' increased confidence and lethality improved commanders' ability to maximize and control their available combat power.

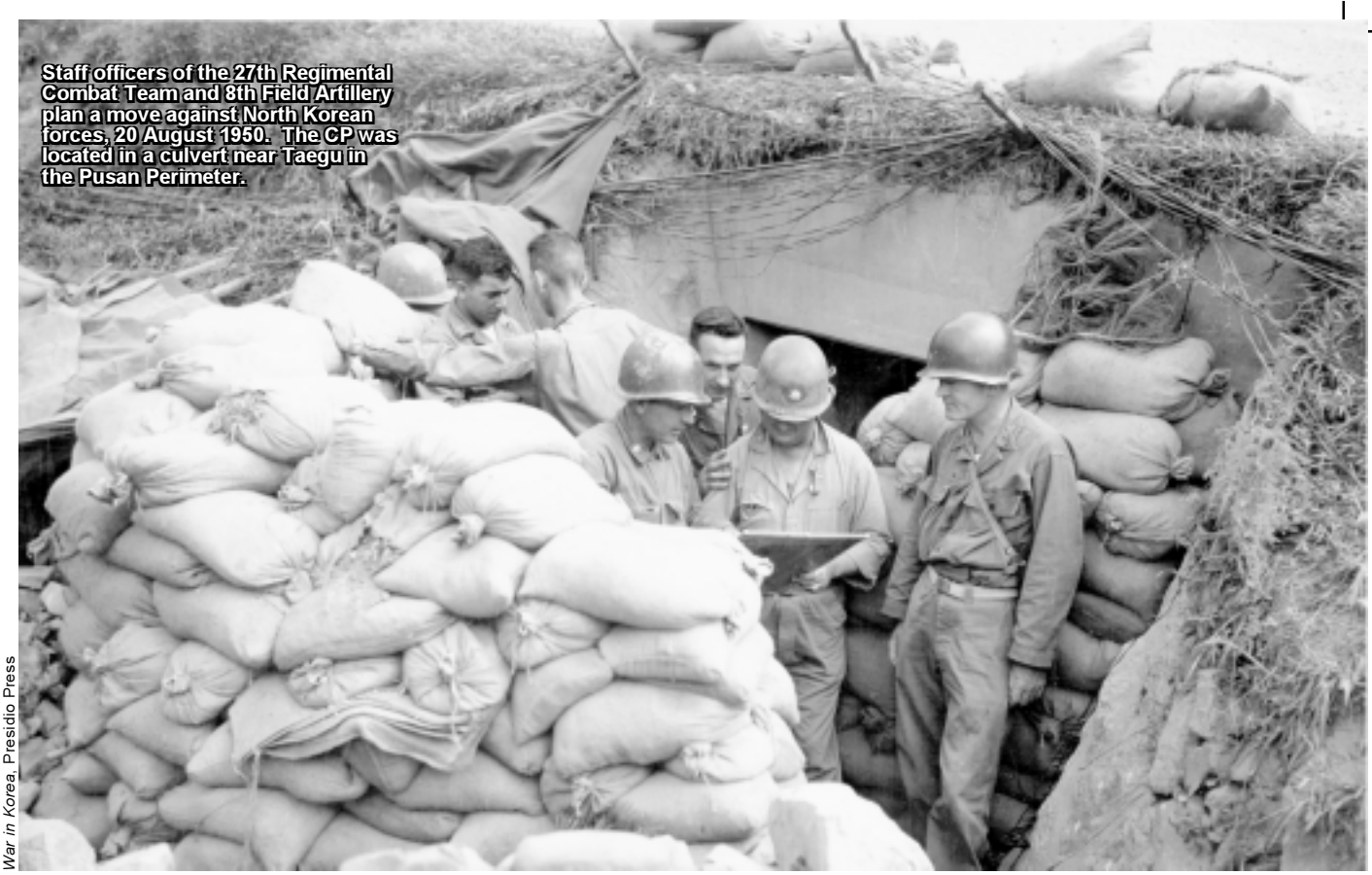
In addition, commanders realized that the greater number of automatic weapons in the Army's small units and the increased combat participation of a unit's soldiers required an organizational change to improve combat leaders' ability to control their more lethal units. Recognizing the inherent galvanizing power of automatic weapons, the Army reorganized the infantry squad in 1955, adding an additional leader and rifleman to its existing nine-soldier unit. The new 11-soldier squad was also structured quite differently from its Korean War predecessor, now organized into two five-soldier fire teams based around each of the unit's automatic weapons.[12]

This change provided a manageable span of control for all three leaders in a squad.[13] With team leaders responsible for controlling the actions of four soldiers each, a squad leader's span of control was reduced significantly. This change also allowed much better observation and supervision of individual soldiers in combat. The greater number of unit leaders could encourage even more participation in battle because almost certainly, at least one of the three leaders would be able to see and interact with every soldier in the squad.[14]

In the end, a combination of continued organizational refinements to the infantry squad and platoon, helped raise the ratio of fire to between 90 and 95 percent in Vietnam and maintain it at that level in contemporary times.[15] Those improvements include subsequent increases in the firepower allotted to these elements, improved marksmanship training, the adoption of fire teams based around automatic weapons and an increased number of leaders. These changes—and their impact—are still present in today's force.

Increasing control over direct fires has been difficult enough, but direct fires often provide only a small portion of commanders' available firepower. The majority of their combat power may come from indirect fires. Since these assets are usually not organic to a unit, synchronizing indirect fires requires coordination and is perhaps more difficult than orchestrating direct fires because of the distances and communication required to bring about the desired effect. Commanders can improve their control over indirect fires by ensuring that their subordinates make the best possible use of their available assets and by having the most rapid possible response of these assets in combat. Given the inordinately important role indirect fires played in the Korean War, especially during the conflict's last two years, it is not surprising that the Army learned valuable lessons about synchronizing artillery fires and close air support which are now integral to warfighting doctrine.

The doctrinal change most directly attributable to the Korean War is the standardization and inclusion



Staff officers of the 27th Regimental Combat Team and 8th Field Artillery plan a move against North Korean forces, 20 August 1950. The CP was located in a culvert near Taegu in the Pusan Perimeter.

War in Korea, Presidio Press

The doctrinal change most directly attributable to the Korean War is the standardization and inclusion of an artillery fire support annex into operations orders at the regimental (brigade) and battalion levels. Chief of Army Field Forces General John R. Hodge directed that all "written regimental and battalion orders must contain a fire-support annex to insure that all infantry supporting weapons are fully utilized through assignment of specific missions."

of an artillery fire support annex into operations orders at the regimental (brigade) and battalion levels. In his first training bulletin of 1953, Chief of Army Field Forces General John R. Hodge noted that infantry commanders and units in Korea did not properly plan for and employ indirect fires. As a corrective measure, Hodge directed that all "written regimental and battalion orders must contain a fire support annex to insure that all infantry supporting weapons are fully utilized through assignment of specific missions."[16] Hodge also promised that the Army's future infantry manuals (the 7-series) would address fire support planning issues in greater detail and that forthcoming training circulars would further emphasize these issues. He concluded by encouraging commanders to integrate requirements to plan for and employ all available weapons systems into company, battalion and regimental field problems.[17]

Adopted in 1953, Hodge's directive to include fire support annexes in operations orders down to the battalion level became even more vital to the Army's success during the so-called Pentomic era (1955-1962). Because of the variety of missions assigned to the Army during Dwight D. Eisenhower's presidency, it became more important than ever to maximize the firepower available to commanders. The addition of aerial rocket artillery in Vietnam further increased the complexity of controlling indirect fires for infantry commanders, as did the arrival of the Multiple Launched Rocket System (MLRS) in the 1980s. Essentially, Hodge's 1953 directive addressed a control issue infantry commanders had faced since World War I and provided a solution by making ground commanders down to battalion level explicitly responsible for planning, coordinating and employing artillery. Hodge realized that synchronization maximized the impact of indirect fires on the battlefield, and today's doctrine reflects his views 47 years ago.

Another area of significant doctrinal change resulting from the Korean War involved the response time to immediate close air support requests. As the Air Force became more responsive to Army requests for immediate close air support, ground commanders increased their overall combat power and control over the firepower assets themselves.

Despite public statements by several senior Army leaders to the contrary, numerous ground commanders of the period expressed repeated dissatisfaction with the Air Force response time for immediate close air support requests. Studies prepared by General Edward M. Almond, the US X Corps commander

during the first year of the Korean War calculated the average response time for an immediate close air support request as 58 minutes. Based on his World War II experience as a division commander in Italy and the battlefield situation in Korea, Almond believed the battlefield situation demanded a response time of 30 minutes or less. Although perhaps correct, Almond's standard was completely unrealistic for the Fifth Air Force in the Korean War, given its available close air support assets, the existing target request system and the period's communications equipment.

The Korean War had perhaps its greatest impact with respect to the control of theater CINCs. . . This system, still in place today, requires theater CINCs to report directly to the secretary of defense, with the JCS serving as the secretary of defense's military advisers and providing staff support.

Nevertheless, Almond's criticism reflected the concerns of many other ground commanders, and the Air Force, hypersensitive to criticism as a newly independent service, was loath to accept any agreement that would cause them to lose control of any air assets. The Air Force finally met Almond's standard of a 30-minute response time for immediate close air support requests during the Vietnam War, thus improving the ability of ground commanders to control their available combat power.[18] This outcome is even more remarkable considering the Air Force's Cold War focus on its Strategic Air Command; the Army was still able to persuade the Air Force to improve its Tactical Air Force capabilities.

Moving even further away from the battlefield, the Korean War had perhaps its greatest impact with respect to the control of theater CINCs. American practice during the First and Second World Wars had been to provide broad guidance to the secretary of war and the chief of staff and then allow the CINCs to determine their own courses of action within their respective theaters largely unencumbered by guidance, advice or interference from Washington, D.C. After the Joint Chiefs of Staff (JCS) struggled to control the actions of the US and UN theater CINC, General Douglas MacArthur during the first year of the Korean War, Congress, with Eisenhower's full support, amended the National Security Act of 1947 by passing the Reorganization Act of 1958. The Reorganization Act clearly established unquestioned command authority for unified commands with the secretary of defense and abolished the largely ineffective system of assigning "executive agents" to manage conflicts for the JCS.[19] This system, still in place today, requires theater CINCs to report directly to the secretary of defense, with the JCS serving as the secretary of defense's military advisers and providing staff support.

During the first 11 months of the Korean War, some of MacArthur's actions as theater CINC required President Harry S. Truman to relieve him of his commands in April 1951. This relief highlighted the ambiguity of the system established by the National Security Act of 1947 (and its 1949 amendment) and provided the major impetus for increasing direct civilian control over military operations. While perhaps based on good intentions, this system of control was somewhat perverted during the Vietnam War, with the president and the secretary of defense designating specific bombing targets, but it proved very effective during Operations *Just Cause* and *Desert Storm*. Thus, perhaps the most important issue of control, that over theater CINCs, was resolved as a result of actions during the Korean War.

While many important doctrinal improvements of the past 50 years have their roots in the Korean War, surprisingly, neither the development of air mobility nor the training revolution of the mid-1970s and 1980s, perhaps the two most significant Army innovations since World War II, were direct responses to the Army's experience in Korea. Since helicopters were first used in Korea to move troops around the battlefield and the rugged Korean terrain presented ground forces with significant mobility challenges, it seems logical to assume that the Army started developing its airmobile capability during the Korean War. However, the Army's air mobility doctrine did not actually begin its development until several years after the Korean War during the Pentomic era as a way to give combat units the ability to remain dispersed and then consolidate rapidly.[20]

Similarly, the Army's training revolution was not a direct response to Task Force *Smith*'s performance."[21] Rather, it was mostly due to the influence of General William E. DePuy during his tenure as the Army's first Training and Doctrine (TRADOC) commander in the mid-1970s and the determined efforts of many committed officers and NCOs.[22] The fact that neither the training revolution nor the development of air mobility has direct ties to the Korean War experience suggests that the improvements in controlling combat power on the battlefield were perhaps the most important doctrinal legacies of the Korean War for the Army.

The significant lessons with respect to controlling combat power that the US Army learned during the Korean War and implemented throughout the past half-century are as relevant now as they were 50

years ago. At the beginning of the Cold War, America had to learn how to "harness its thunderbolts," meaning that the military had to learn how to maximize combat power during limited war. The key to this process was developing the ability to control combat power, and this capability arose from a variety of innovations and changes that collectively have had a significant influence on contemporary Army doctrine. Inspired by its Korean War experience, the Army changed the organization of its smallest infantry units, improved its marksmanship training, added a fire support annex to all operations orders down to battalion level, convinced the Air Force to improve its response time for immediate close air support requests and clarified the chain of command for theater CINCs. Each of these changes was significant on its own, but taken together, they allowed the Army and the nation to increase control over available combat power dramatically.

Indeed, since the end of the Korean War, the Army has made perhaps its most significant advances in synchronizing and orchestrating combat power. These changes followed a significant reduction in force and limited war, came during a period of tremendous global uncertainty and have increased the ability of commanders to delegate authority, synchronize battlefield actions and operate relatively unfettered in combat. For the current Army, coming out of a recent period of downsizing and facing an uncertain and dangerous international situation, these same lessons are likely to remain valid well into the 21st century. ***MR***

NOTES

1. By "control," I mean the following: the ability to direct combat power, the ability to synchronize (arrange activities in time and space to mass at the decisive point) combat power and the ability to orchestrate (coordinate ongoing activities to achieve a desired effect) combat power. FM 100-5, *Operations* (Washington, DC: Headquarters, Department of the Army, 1993), 2-8, 2-15. The definition and description of the term "orchestration" are my own based upon a briefing I received from Colonel David Fastbend at the United States Military Academy in spring 1997 on the status of the new FM 100-5.

2. I have addressed only those changes that I believe to be both legitimate and significant. To qualify as a legitimate change, it must have definite roots in the Korean War experience and not be merely an evolutionary modification that occurred coincidentally after the Korean War. A significant change must have survived the Pentomic era, the Reorganization of Army Divisions (ROAD) era, the Vietnam War, the Volunteer Army (VOLAR) era and the Army of Excellence (AOE) era and must still be present and largely unchanged in today's emerging Force XXI.

3. FM 100-5, *Operations*, 2-15.

4. John K. Mahon and Romana Danysh, *Infantry, Part I: Regular Army*, Army Lineage Series (Washington, DC: U.S. Army Center of Military History, 1972), 73. For information on the addition of the second BAR to the squad, see also COL Robert B. Rigg, "Wither the Squad?" *ARMY*, February 1960, 39. The Army made this authorized but informal practice during the Korean War official through a change to the standard Table of Organization and Equipment for the Infantry Rifle Squad in 1953.

5. Mahon and Danysh, *Infantry*, 73.

6. Marshall's "ratio of fire" reflected the percentage of soldiers in contact who claimed to have actually fired their weapons in an engagement. S.L.A. Marshall, *Men Against Fire: The Problem of Battle Command in Future War* (Washington, DC: The Infantry Journal Press, 1947; reprint ed., Gloucester, MA: Peter Smith), 5, 9-10, 57 (hereafter cited as Marshall, *Men Against Fire*). See also S.L.A. Marshall, *Commentary on Infantry Operations and Weapons Usage in Korea, Winter 1950-1951*, (Chevy Chase, MD: The Johns Hopkins Operations Research Office, 1951; reprint ed., Fleet Marine Force Reference Publication (FMFRP) 12-6, *Commentary on Infantry Operations and Weapons Usage in Korea, Washington*, DC: Headquarters, United States Marine Corps, 1989), 4-5, 54-55 (hereafter cited as Marshall, *Commentary on Infantry in Korea*). The substance of my findings will appear in a forthcoming article in *The Journal of Military History* entitled, "Filling the Empty Battlefield: S.L.A. Marshall and the Ratio of Fire in Korea."

7. Marshall, *Men Against Fire*, 5, 9-10.

8. Howard H. McFann et al., *Trainfire I: A New Course in Basic Rifle Marksmanship*, Human Resources Research Office, Technical Report 22 (Washington, DC: George Washington University, Human Resources Research Office, October 1955), 4-12; Colonel Nelson I. Fooks, "Shoot Fast and Straight," *Army Information Digest*, June 1957, 35-38; "Trainfire: A New Approach to Rifle Marksmanship," *Infantry School Quarterly*, 46:1, January 1956, 47-54.

9. McFann et al., Trainfire I, 17-20, 26-32, 75-83, 100-103; Fooks, "Shoot Fast and Straight," 35-38; "Trainfire: A New Approach to Rifle Marksmanship," 47-54; "Trainfire I Adopted," *Infantry*, 47:3, July 1957, 89.

10. "Trainfire I Adopted," 89. McFann et al., *Trainfire I*, 9, 54-63; "Trainfire: A New Approach to Rifle Marksmanship," 47-48; Major F.D.G. Williams, *SLAM: The Influence of S.L.A. Marshall on the United States Army*, TRADOC Historical Monograph Series (Fort Monroe, VA: Office of the Command Historian, United States Army Training and doctrine Command, 1994), 74, fn 32.

11. McFann et al., *Trainfire I*, 17-20, 26-32, 75-83, 100-103; Fooks, "Shoot Fast and Straight," 35-38; "Trainfire: A New Approach to Rifle Marksmanship," 47-54; "Trainfire I Adopted," 89.

12. Marvin L. Worley, Jr., *New Developments in Army Weapons, Tactics, Organization, and Equipment* (Harrisburg, PA: The Stackpole Company, 1959), 90, 97.

13. Most sociologists agree that the optimal span of control for the average individual is between two and five elements.

14. For a more complete treatment of this phenomenon, see FM 100-5, *Operations*, 14-2.

15. Author Dave Grossman reports these figures based upon the works of someone named Scott and R. W. Glenn. Glenn's findings appear in "Men and Fire in Vietnam," *ARMY*, April 1989, 18-27. Dave Grossman, *On Killing: The Psychological Cost of Learning to Kill in War and Society* (Boston: Little, Brown, and Company, 1995), xv, 35.

16. GEN John R. Hodge, "Army Field Forces Training Bulletin Number 1," (Fort Monroe, Virginia: Chief of Army Field Forces Office, 20 march 1953), 2-3. From 1948 to 1955, the chief of Army Field Forces was somewhat akin to our present-day TRADOC commander in that he was responsible supervising training and developing doctrine for the field Army. Thus, a directive from this individual impacted the entire Army. James E. Hewes Jr., *From Root to McNamara: Army Organization and Administration, 1900-1963* (Washington, DC: US Army Center of Military History, 1975), 171, 217, 267.

17. Ibid., 3.

18. Retired USAF GEN William W. Momyer contends that the creation of an additional level of control for the corps-level ground commander in Vietnam largely solved the Army's air-ground operations control problems. This change gave the "corps commander some flexibility to change the importance of targets at any given time or to support the ground unit which needed direct air support the most" and finally brought the air-ground system in line with FM 31-35. See Momyer, *Airpower in Three Wars (WW II, Korea, Vietnam)* (Washington, DC: Department of the Air Force, 1978), 261.

19. C.J. Bernardo and Eugene H. Bacon, *American Military Policy: Its Development Since 1775* (Harrisburg, PA: The Stackpole Company, 1961), 514-520.

20. In response to the emerging nuclear threat in combat zones, the doctrine of the Pentomic Army envisioned a "cellular" (as opposed to a linear) battlefield and required its "battle groups" to spread out over wide areas to avoid presenting an adversary with any lucrative targets. After absorbing an opponent's nuclear attacks, the battle groups would quickly regroup and execute their assigned missions. There is little historical evidence to suggest that the Army was interested in developing an air-mobile capability after Korea (even under the leadership of an innovative soldier and Korean War luminary like Matthew B. Ridgway, who helped develop the Army's airborne capability during World War II) until the advent of the Pentomic era, when a desire to actively integrate new technology into the force structure and a mission which required the Army to have a dual capability of warfighting and a form of civic control and defense encouraged such developments. See Christopher C.S. Cheng, *Air Mobility: The Development of a Doctrine* (Westport, CT: Praeger, 1994) for a more complete description of the development of the Army's air mobility doctrine.

21. The Army owes much to author T.R. Fehrenbach for highlighting the its pitiful state of readiness at the outbreak of the Korean War and popularizing the actions of LTC Charles B. Smith's ill-fated command. In fact, Army historical texts published before Fehrenbach's work first appeared in 1963 do not even identify Task Force *Smith* by name and only vaguely refer to its actions. Nevertheless, the Korean War experience had a profound impact on many future leaders. Two such individuals were David Hackworth and John K. Singlaub, both of whom would gain notoriety in the 1970s for their rather spectacular exits from the Army. Despite their rather dramatic departures, they were acknowledged by their fellow officers to be superb trainers, and they each attribute their dedication to becoming great trainers in part to the impact of the Korean War. I am indebted to my colleague CPT Robert Bateman for highlighting the lack of attention paid to Task Force *Smith* by Army historical texts in the decade following the Korean War.

22. DePuy observed that the Vietnam War had destroyed the Army's NCO corps and believed that this loss had robbed the Army of its ability to rely on its NCOs to teach soldiers what they needed to know. These convictions led him to implement a system of training that relied on Soldiers Manuals, Skill Qualification Tests (SQTs), and Army Training and Evaluation Programs (ARTEPs)—a program which brought the Army to its incredible proficiency displayed so convincingly during the 1991 Gulf War. See James Kitfield, *Prodigal Soldiers: How the Generation of Officers Born of Vietnam Revolutionized American Style War* (New York: Simon and Schuster, 1995) for a more complete description of the Army's training revolution.

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North Korea and the Bomb

Stanley Weintraub

ON 30 NOVEMBER 1950 at a press conference in Washington, D.C., President Harry S. Truman inadvertently suggested that General Douglas MacArthur as "military commander in the field" had the authority to unleash atomic bombs. That same day, General George E. Stratemeyer in Tokyo sent a cable to General Hoyt S. Vandenberg requesting that the Strategic Air Command (SAC) should be "prepared to dispatch without delay medium bomb groups to the Far East. . . .This augmentation should include atomic capabilities."[1] MacArthur's staff was clearly rattled about the possibility of Dunkirks in Korea, or a humiliating armistice.

At 8:30 a.m. the next day in Washington, a high-level meeting that included just about every policy maker but the president convened in the Joint Chiefs of Staff (JCS) conference room in the Pentagon. Chairman General Omar Bradley worried whether MacArthur could hold at any point in North Korea, and whether Chinese air power would have to be interdicted so that troops at worst might withdraw safely. "To do so might draw in the Soviet air [force]. If this is true, we might have to defer striking."

Army Chief of Staff Lawton Collins supported Bradley. "If we hit back, it is a strong provocation of the Chinese and may possibly bring in Soviet air and even submarines. The only chance then left to save us — if that happened — is the use or the threat of use of the A-Bomb. We should therefore hold back from bombing in China even if that means that our ground forces must take some punishment from the air." He was beginning to think that Korea "was not worth a nickel."

"If we do hit back," Secretary of State Dean Acheson warned, "it may bring in Russian air support of the Chinese and we would go from the frying pan into the fire."

"We would have to evacuate [Korea] and probably would be engaged in war [with Russia]," General Bedell Smith, the new CIA chief, predicted. At that, Collins contended that the United States would have to "consider the threat or the [actual] use of the A-Bomb. It would [otherwise] be very difficult to get our troops out."[2]

Bernard Baruch, long a White House adviser on military and atomic matters, visited George Marshall to press on him the feeling in the country, "in view of what is regarded as a very desperate situation"—the massive Chinese intervention—"for use of the atomic bomb." He didn't think it would "do any good in the circumstances," and questioned what it could be "dropped on."

Later in the day, Bernard Baruch, long a White House adviser on military and atomic matters, visited Defense Secretary George Marshall, who had been at the JCS meeting, to press on him the feeling in the country, "in view of what is regarded as a very desperate situation"— the massive Chinese intervention —"for use of the atomic bomb." Marshall observed that he didn't think it would "do any good in the circumstances," and questioned what it could be "dropped on." The Chinese, he claimed, "were totally unmoved by this threat. . . . Their propaganda against American aggression was stepped up." Marshall scoffed at the Nehru-Panikkar claims of neutrality as an "Indian rope trick."

While atomic talk was swirling about Washington and British Prime Minister Clement Attlee was flying to the United States to confront Truman, General Curtis LeMay, SAC chief and former commander of the 20th Air Force, which had deployed the bomb over Hiroshima and Nagasaki, responded to the message from Stratemeyer. The SAC understanding, said LeMay, had been that nuclear weap-

ons, according to an earlier JCS advisory, would not be used except during "an overall atomic campaign against China." If the situation had actually changed, he wanted to be in on the deployment. He and his men, he boasted, were the only ones with the knowledge required to deliver atomic bombs.[3]

Preparing on 3 December for Attlee's hurried visit, State Department officials reminded the JCS of "the rather widespread British distrust of MacArthur and the fear of political decisions he may make based on military necessity. Bearing on this is the British belief in the [establishment of a] buffer area and their stand against [UN] attacks across the Yalu. Also involved is the fear of the effect on Asiatics of use of the atomic bomb or even open consideration of its use." British concerns, Acheson went on, were "very sincere." MacArthur had already compiled a history of flouting orders.

Throughout the agonized preparatory State-Defense conference in the Pentagon's JCS War Room, unaware that he would soon become MacArthur's top general in Korea, Matthew Bunker Ridgway sat impatiently. During the review of the situation, he saw "no one apparently willing to issue a flat order to the Far East Commander to correct a state of affairs that was rapidly going from bad to disastrous. Yet the responsibility and the authority clearly resided right there in the room." He spoke up, but Air Force Chief of Staff Vandenberg dismissed the idea of sending MacArthur further orders. "What good would that do? He wouldn't obey the orders."

Ridgway exploded, "You can relieve any commander who won't obey orders, can't you?" The meeting ended with no decision about MacArthur except for sending Collins back to Tokyo to consult with him. The participants did agree that Truman should make no commitment to Attlee or anyone else restricting American freedom of action on using the Bomb. It might, in extreme circumstances, have to be used. Yet Truman realized that if under inauspicious tactical conditions for its employment in Korea it failed to produce decisive results, it would lose all credibility as a Cold War deterrent. He had already been in office — and had the ultimate authority to approve the deployment — when the Nagasaki bomb, the first and only plutonium bomb exploded upon an enemy, was detonated. The hills and valleys upon which Nagasaki was situated had minimized the blast impact as well as the secondary effects of the explosion. That bomb, the only uranium device in the American stockpile, had detonated over an alluvial plain, though it packed more power than the earlier Hiroshima bomb, neither case compared to the rugged Korean terrain.

There was never any concern about depleting precious fissionable material or stockpiled weapons, since the 292 bombs the US possessed in June were being supplemented weekly. The Soviets had at best

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10 to 20 bombs by the end of 1950 — enough, nevertheless, to cause widespread panic in Washington.

Collins was then back in Tokyo, this time with Air Force intelligence chief General Charles Cabell, a vigorous proponent of atomic weapons. They found MacArthur now optimistic that he could stabilize what he conceded was a poor situation. He even advised postponing any decisions on nuclear deployment until he knew whether the atomic option would be needed to cover a total evacuation from Korea. Still, the combination of Cabell's being brought along to Japan, and Truman's stonewalling Attlee about the bomb, now emboldened MacArthur to ask for it. As a matter of prudence, since the atomic-configured aircraft sent to cover a possible withdrawal from Pusan had already returned to California, he requested on 9 December that the Pentagon grant him a field commander's discretion to employ nuclear weapons as necessary. He wanted them stockpiled in Okinawa, within his Japanese jurisdiction.[4]

Despite that, when queried by the Joint Chiefs later in the month about how he would respond to Soviet intervention or more massive Chinese intervention intended to drive reeling UN troops completely from Korea, he again refused to consider using the bomb. However, to prevent the ultimate fallback, and a Dunkirk, MacArthur would make an exception. The war might have to be widened, he suggested, to forestall termination of his mission.

Even Truman agreed about the risk of loss of face in Asia, especially in Japan. With the Japanese repercussions of defeat in mind as well as the ongoing retreat in Korea, MacArthur on 24 December



(*Left to right*) Generals Matthew B. Ridgway; Douglas MacArthur and J. Lawton Collins; Omar N. Bradley and Hoyt S. Vandenberg; (*facing page*) President Harry S. Truman and Secretary of Defense George C. Marshall; Secretary of State Dean Acheson; and General Curtis LeMay.

proposed to "blockade the coast of China, destroy through naval gunfire and air bombardment China's industrial capacity to wage war" and "release existing restrictions upon the Formosan garrison. . . possibly leading to counter-invasion against vulnerable areas of the Chinese mainland."

Whether or not that would escalate the war — the situation since the Chinese intervention remained grim — he sent the Pentagon a list of what he described as "retardation targets" for which he wanted 34 atomic bombs. Of these, four were (in Paul Nitze's description) to drop on Chinese troop masses and four were for "critical concentrations of enemy air power."[5] Since no such airfields existed in Korea, the bombs had to be meant for Manchuria.[6]

Much later, in talking to General Dwight D. Eisenhower (17 December 1952) about ending the war, MacArthur (no longer in a position of responsibility) explained where he thought nuclear bombs would have done the most good. "I would have dropped between 30 and 50 atomic bombs . . . strung across the neck of Manchuria" and "spread behind us — from the Sea of Japan to the Yellow Sea — a belt of radioactive cobalt. . . . For at least 60 years there could have been no land invasion of Korea from the north." The Russians, he claimed, would have been intimidated into restraint by the boldness of the act.

Cobalt 60, from the reprocessing of plutonium, would have possessed such powerful radioactivity as to endanger populations remote from the drop zone. Yet MacArthur was not suggesting an ex post facto science fiction fantasy. The Joint Chiefs of Staff had already discussed a radioactive *cordon sanitaire* sown north of the Manchurian border, and it had even been proposed — if unrealistically — in Congress by Representative (later Senator) Albert Gore Sr. of Tennessee, a member of the Joint Committee on Atomic Energy who had probably received the details from a physicist at the Oak Ridge atomic facility in his home state. Since Korea had become "a meat grinder of American manhood," Gore felt that it would be "morally justifiable under the circumstances" to make any communist soldier who crossed the radioactive "neutral zone" risk "certain death or slow deformity."[7] Ignored were the potential ill effects on the soldiers or airmen who would have to deliver the "hot" waste, or that means might be employed by the enemy to fly over the radioactivity, or even to bridge it. The proposal, nevertheless, remains linked to MacArthur, who had merely borrowed it in frustration.

On the evening after Christmas, Truman convened a meeting at Blair House, where he was living while the White House was undergoing renovation, that included Acheson, Marshall, Bradley and the State Department's assistant secretary of state for Far Eastern affairs, Dean Rusk. He wanted to discuss options in Korea — whether "we could hold our position there, what we should do if we could not." Rusk ticked off the alternatives the first of which he admitted was "beyond our capabilities" — to win a military victory and stabilize Korea by force. The second involved making it in China's interest "to accept some stabilization" because it would be too costly to the country otherwise. The third was "to get out in defeat voluntarily or under pressure." He preferred the second possibility.

Acheson wondered whether Russia would try to deny the United States any middle course, which brought Rusk to observe that if the Soviets had wanted "a general war," they would have already come in and blocked any withdrawal from North Korea, exacerbating the disaster. "We took the risk in June that entry into Korea would lead to general war." The same sort of risk could arise, he thought, "at any time in Europe."

In a worst-case scenario, Philip Jessup, ambassador at large for UN affairs, asked whether the United States had the "air capabilities of knocking



(*Photo credits, left to right*)
War in Korea, Presidio Press
US Army
US Army
Airbridge to Berlin, Presidio Press
Jim Keith
Airbridge to Berlin, Presidio Press

out both Port Arthur and Vladivostock," from which the Soviets would have to launch any attack to deny Korea to the United States.

"We did not, except by using the atom bomb," admitted Rusk.

MacArthur would keep probing for "field" permission, in an emergency, to deploy the bomb while recognizing its futility — even when, concurrently and without his knowledge, Washington never ceased bringing up the subject. On 6 January 1951, Ridgway, new to the Eighth Army after the death of General Walton Walker in a jeep accident just before Christmas, asked MacArthur about employing chemical weapons "as a last resort to cover the withdrawal and evacuation from a final beachhead." MacArthur's reply the next day suggested that similar conditions would apply for nuclear weapons. "I do not believe there is any chance of using chemicals on the enemy in case evacuation is ordered. As you know, US inhibitions on such use are complete and drastic and even if our own government should change this attitude, it is most improbable that the membership of the United Nations would be in accord." Later in January he informed Ridgway that he was against forward deployment of atomic weapons. The likelihood of forced evacuation had faded, and Ridgway's Eighth Army had firmed up its positions.

South Korean president Syngman Rhee also asked, through American ambassador John Muccio, to have MacArthur authorized to use any weapon, including the atomic bomb. Ridgway, consulted by Muccio, confessed that he had no idea where the nearest A-Bomb was. In any case, no chance existed for MacArthur to control a nuclear device.

Meanwhile, LeMay told Vandenberg confidently, if unrealistically, that with three days' preparation his command could deploy 135 A-Bombs over Korea and China. In a memo to Truman, National Security Resources Board head Stuart Symington, later secretary of the Air Force, warned that the growing Soviet atomic stockpile would force the United States to draw the line at established frontiers and to warn Russia that its aggression would mean atomic war. If the United States waited too long for that deterrence it would have to fold its hand. Truman wrote "Not True" and "Bunk" in the margins and added on the last page, "My dear Stu, this is [as] big a lot of Top Secret malarky as I've ever read. Your time is wasted on such bunk as this[.] H.S.T."[8]

Atomic weapons decisions [in early April 1951] could not be withheld from Congress's Joint Committee on Atomic Energy. Eighteen legislators, many of them leak-prone, were involved, some of them also likely to be strong critics of relieving MacArthur. Truman may have even intended some leakage of his atomic intentions, as the show of forcefulness would demonstrate that his shakeup in the Far East meant no weakness in prosecuting the war.

Possibly the most ironic reference to the bomb during MacArthur's tenure occurred in a top-secret report prepared for the National Security Council (NSC) on "Recommended Policies and Actions in Light of the Grave World Situation." Dated 11 January 1951, the study again surveyed the possibilities of general war with the Soviets over Korea, Formosa, Japan or "from any of the sparks which will fly as the communists move further into Southeast Asia. In Europe, the explosiveness of the situation needs no spelling out." It was a Cold War document in all particulars.

"Above all," the NSC study urged, "there should be political utilization, on behalf of NATO and the rest of the free world, of the [strong] current United States position resulting from possession of the atom bomb, and ability to deliver it. Atomic bombing by itself cannot win a war against Soviet Russia, but today it is the most powerful military weapon. In

this world of power politics, therefore, it should be further utilized in political negotiation. Even though our atomic bombing capability is our prime military advantage, should a war with Russia occur within the next 18 months, United States long-range strategic air power will be of limited strength because of obsolescence, lack of equipment and lack of advance warning."

Advocating devices that could be pinpointed, Oppenheimer contended that nuclear explosives "can only be used as adjuncts in a military campaign that has other components, and whose purpose is a military victory." Only when the atomic bomb became an "integral part of military operations," he thought, would it be "of much help in the fighting of a war." If entirely a weapon of increasingly mass destruction, mankind would ban it.

In sum, the NSC study suggested that rattling the bomb was worth the risk — and indeed its potential would help end the war in 1953 after the crucial fact of Stalin's death. With his paranoia no longer a factor, it became possible for Eisenhower to convey, via Jawaharlal Nehru of India, American consideration of employing new tactical nuclear weapons to break the deadlock over an armistice. It was a gamble a minority president could not take; nor were the weapons yet ready to deploy in 1950.

Reacting to the Korean War and to assumed Soviet complicity in it, Congress had already increased AEC appropriations. Beginning that January the nuclear testing program moved from the remote Pacific to desolate — but domestic—Nevada, where radioactive clouds from above-ground detonations would send messages to Moscow and radioactive carbon 14 over the United States. According to the minutes of one meeting at Los Alamos, officials planning the tests secretly discussed "the probability that people [downwind from the explosions] will receive perhaps a little more radiation than medical authorities say is absolutely safe."

Early in April, exasperated by MacArthur's continued insubordination, which included talk of taking the war into China, Truman began planning the supreme commander's dismissal. On 7 April he consulted top advisers at Blair House, but postponed any action until the joint chiefs met. But the president, sensing Marshall's continuing reluctance to face likely political repercussions from the Right, suggested that before they gathered on Monday for a final decision, he go through the cable traffic between MacArthur and Washington, at least since the beginning of the war.

In the exchange of cables, most of them routine, was a MacArthur request to the Pentagon on 10 March certainly encouraged by hawks in Washington, asking for "atomic capability" to take out Manchurian airfields if that became necessary to retain air superiority north of the 38th parallel. The revived on-again, off-again nuclear messages would continue as a paradoxical counterpoint to the agonized exchanges over relieving MacArthur — expanded war juxtaposed with realpolitik peace. Four days later, Vandenberg replied to Tokyo that the secretary of the Air Force Thomas K. Finletter and the under secretary of Defense Robert A. Lovett had gone along: "Finletter and Lovett alerted on atomic discussions. Believe everything is set." On 31 March Stratemeyer reported to MacArthur that atomic bomb loading pits at the Kadena air base on Okinawa were operational and that unassembled Mark IV bombs were on hand. The suggested threat to American domination in the air had existed since late November, when Rusk informed the British that the Russians had moved 200 twin-engined TU-4 bombers to Manchurian bases. They remained cause for anxiety although Moscow hesitated risking its own pilots on Premier Kim Il Sung's behalf.

Now there was further concern from Tokyo that a "major attack" originating from Shantung province and Manchuria was pending to push UN forces away from the 38th parallel. Bradley hoped the nuclear threat would initiate the armistice negotiations that MacArthur's political intrusions had apparently torpedoed, or at worst strike enemy concentrations about to escalate the war. He had brought a JCS recommendation to the president on 6 April, dated the day before, authorizing MacArthur—despite the crisis atmosphere about him — to initiate a preemptive strike if an attack appeared to be materializing. Between the lines was the possibility that such a nuclear warning, certain to emerge via press leakage, might have the intended persuasive effect on Mao.

Truman telephoned AEC chairman Gordon Dean, who came immediately to the White House. The bomb, Truman confided, might, if conditions became desperate, be employed beyond, rather than within, Korea, but he would reserve the decision for its use until he had consulted with the NSC's special committee on atomic energy. Dean telephoned Vandenberg for the president, authorizing transfer of nine nuclear cores "from AEC to military custody." The next day, 7 April, as MacArthur was about to be fired, the 99th Medium Bomb[er] Wing in California was ordered to pick up the bombs for delivery to Guam,

An early nuclear test in the Nevada desert sends a message to Moscow.

US Army

"Above all," the NSC study urged, "there should be political utilization, on behalf of NATO and the rest of the free world, of the [strong] current United States position resulting from possession of the atom bomb, and ability to deliver it. . . . In this world of power politics, therefore, it should be further utilized in political negotiation.". . . With Stalin's death in 1953, his paranoia was no longer a factor, and it became possible for Eisenhower to convey American consideration of employing new tactical nuclear weapons to break the deadlock in Korea.

but *not* to proceed to Okinawa as originally planned for "possible action against retardation targets" — Chinese or Soviet sites. Since the deployment was purely cautionary, the strike force commander would remain in Nebraska at SAC headquarters rather than fly with his B-29s to Japan.

Since MacArthur's proconsulship was about to terminate, JCS chairman Bradley also held up a directive to MacArthur, although authorized by Truman and Acheson, that permitted, if necessary, retaliatory strikes on an approved list of targets outside Korea. Late that Sunday, 8 April, the joint chiefs had met again to consider recalling MacArthur, and recognized that during a transfer of command, orders with atomic potential were best held in abeyance.[9] The personnel changes in Tokyo, which would inevitably and quickly remove a cadre of MacArthur intimates, might improve prospects for a peaceful end to the war far more than even suggesting the nuclear option.

Atomic weapons decisions could not be withheld from Congress's Joint Committee on Atomic Energy. Eighteen legislators, many of them leak-prone, were involved, some of them also likely to be strong critics of relieving MacArthur. Truman may have even intended some leakage of his atomic intentions, as the show of forcefulness would demonstrate that his shakeup in the Far East meant no weakness in prosecuting the war. And he began preparing his radio speech to the nation explaining why he decided to replace MacArthur, whose critics erroneously assumed that he, most of all, wanted to release the nuclear genie from the AEC bottle.

Although MacArthur did not know about it in Tokyo, the TX-5 (experimental tactical atomic weapon) program had been accelerated during the wartime summer of 1950, and a production directive issued on 11 July. The AEC had high expectations for the M[AR]K-5 and other small fission weapons. Housed in a lightweight casing with an outside diameter of 45 inches, the MK-5 had a predicted energy release of 60,000-70,000 tons of TNT, three or four times the explosive power of the Nagasaki bomb. It could be carried by medium bombers. Soon after came the TX-7, with an energy yield of 15,000-20,000 tons of TNT, which could be carried by fighter aircraft. As that was tested early in 1951, a young physicist confessed being "hooked on tactical nuclear weapons" was asked to go to Korea on a secret mission "to see if, in [his] opinion, there was any good way to use atomic bombs in that war."[10] The visit had to be guarded even from Air Force headquarters, as, the physicist recalled, it was "almost totally SAC-dominated (SAC, in those days, spelled *LeMay*)," and "locked in a bitter battle with the US scientific community (which, in those days, spelled *Oppenheimer*) over the issue of tactical nuclear weapons.

LeMay was uninterested in experimenting further on relatively portable low-yield bombs. His ultimate requirement was for as much blast and heat as possible. He had told physicist Sam Cohen, "you guys develop a bomb that could destroy all of Russia." Small tactical bombs would undermine SAC's strategic H-bomb monopoly. Advocating devices that could be pinpointed, J. Robert Oppenheimer contended that nuclear explosives "can only be used as adjuncts in a military campaign that has other components, and whose purpose is a military victory." They should be, he proposed, "weapons used to give combat forces help that they would otherwise lack" rather than "weapons of totality or terror." Only when the atomic bomb became an "integral part of military operations," he

A B-29 Superfortress takes off from Okinawa for a mission against communist targets in Korea. On 7 April, as MacArthur was about to be fired, the 99th Medium Bomb Wing in California was ordered to pick up the bombs for delivery to Guam, but *not* to proceed to Okinawa as originally planned.

War in Korea, Presidio Press

MacArthur later explained to Eisenhower where he thought nuclear bombs would have done the most good. I would have dropped between 30 and 50 atomic bombs . . . strung across the neck of Manchuria" and "spread behind us—from the Sea of Japan to the Yellow Sea—a belt of radioactive cobal. . . . For at least 60 years there could have been no land invasion of Korea from the north." The JCS had already discussed a radioactive* cordon sanitaire*, and it had even been proposed—if unrealistically—in Congress by Albert Gore Sr. who had probably received the details from a physicist at the Oak Ridge atomic facility in his home state.

thought, would it be "of much help in the fighting of a war." If it became entirely a weapon of increasingly mass destruction, mankind would ban it.

To mask his mission from the LeMay types, Cohen, who had dropped out of graduate school at Berkeley in the middle 1940s, was to go to Korea on an "orientation tour," to observe a war actually being fought, keeping to himself until his return "any ideas I picked up about how atomic weapons might be used, for fear somebody might get the idea we were seriously contemplating such use." Independently, the Far East Air Force (FEAF) in Tokyo in a study coded ORO-R-3 and dated 1 February 1951, estimated that had an air-burst atomic bomb of 40-kiloton size (twice that of Nagasaki) been exploded over Chinese military concentrations at Taechon, between Siniuju on the Yalu and Anju, north of Pyongyang, on 25 November 1950, possibly 15,000 of the 22,000 troops concentrated there might have been destroyed. Six 40-kiloton bombs dropped over the Pyongyang-Chorwon-Kumhwa "Iron Triangle" between 27 and 29 December might have eliminated half of nearly 100,000 of the enemy. The survey went on to estimate other scenarios which never happened into early January, but intelligence had not known then of dense assemblages of enemy troops, and UN positions nearby might have suffered substantially. That the bomb would have been impractical under the chaotic conditions then prevailing must have been clear to MacArthur, who never used the study as an excuse to request atomic weapons. Their use might have boomeranged on his own forces.

Cohen's instructions, looking ahead to more practical weaponry, came in a meeting with Colonel (later General) Ben Schriever, who ran the Air Force's "long-range planning shop." Low-yield tactical weapons, Schriever thought, would waste "precious little fissile material" and, if given an accelerated production priority, could be used against the

communists. He would give the very young Cohen, a civilian, the assimilated rank of colonel and have him go off unobserved by Tokyo and wander around the front, talk to airmen and report back on where and how, if at all, nuclear weapons would be practical.

Cohen's first flight outside the United States was on a troop-transport "jammed with infantrymen and their weapons," droning along "forever and a day" at 150 mph. Crossing the Han on on a reinforced concrete bridge that had taken numerous hits over the months by big conventional bombs and was often patched up by the enemy, he found a purpose for tactical A-Bombs, one of which would have dispatched the entire span into the river. Recently retaken but shattered, Seoul looked to him like photographs he had seen of Hiroshima after the Bomb, and years later he recalled the vista as "like the surface of the moon." Seeing the vastness of the ruins increased his skepticism about using big atom bombs on cities, for they added radioactivity to wholesale destruction and — aside from magnitude — accomplished no more than conventional explosives, he thought.

On "field trips" to air bases like K-13 (Suwon), K-14 (Kimpo) and K-6 (Pyongtaek), he talked to middle-level flying brass such as Colonel Francis Gabreski, an ace with World War II kills, and Colonel Frank Schmidt, who confided as the evening lengthened into midnight that he was in favor of getting out of Korea as soon as possible, since politics made the war unwinnable. "These guys I'll be sending up. I'll lose some. For what?"

Returning to Washington, Cohen told Schriever, "Benjy, you win." Cohen was convinced that it would be far less costly to use efficient low-yield tactical weapons on limited targets and that air bursts would not significantly en danger friendly troops advancing into affected areas. Air Force thinking nevertheless remained dominated by LeMay and fixed upon "total" weapons, while Cohen's morally sensitive scientific colleagues "were aghast that anyone would consider using atomic weapons again in Asia. The only theater for nuclear use they could think of was Europe. It was my first exposure to the 'Hiroshima' syndrome." Seeing Seoul devastated and useless after the enemy fought street-by-street and house-by-house to defend it did not "put the neutron bomb bee in my bonnet," Cohen claimed, but 10 years later he would devise a never-to-be-deployed neutron weapon that could take out the enemy with radioactivity while leaving much infrastructure intact.

The threat of nuclear thunderbolts would emanate less from MacArthur than from the Pentagon. But practical weapons for use in the field did not yet exist, and world opinion might have kept even them from Korea. Meanwhile, in the laboratory of Cohen's mind, the neutron bomb would develop from a Korean impulse he did not yet recognize. ***MR***

Recently retaken but shattered, Seoul looked to Sam Cohen, the key figure in the development of the neutron bomb, like photographs he had seen of Hiroshima. Years later he recalled the vista as "like the surface of the moon." Seeing the vastness of the ruins increased his scepticism about using big atom bombs on cities, for they added radioactivity to wholesale destruction and — aside from magnitude — accomplished no more than conventional explosives.

NOTES

1. General George E. Stratemeyer to General Hoyt S. Vandenberg, 30 November 1950, Vandenberg Papers, quoted in Bruce Cumings, *The Origins of the Korean War: The Roaring of the Cataract, 1947-1950* (Princeton, NJ: Princeton University Press, 1990), 915.

2. All conference transcripts, unless otherwise cited, are from Dennis Merrill, ed., "The Documentary History of the Truman Presidency," University of Missouri, Kansas City, at <www.lexis-nexis,com/cispubs/brochures/truman_docs/truman.htm>.

3. General Curtis LeMay to Vandenberg, 2 and 6 December 1950, quoted in Roger Dingman, "Atomic Diplomacy During the Korean War," *International Security, Winter 1988-89*, 66.

4. MacArthur Memorial and Archive, Richmond, Virginia.

5. MacArthur Memorial and Archive. This request is described in many publications in various ways, including Cumings, 750.

6. A secret study commissioned by the Army at the Operations Research Office, Johns Hopkins University, Baltimore, Maryland, concluded that 34 bombs would be inadequate to impede the estimated 120 Chinese divisions the communists could put in the field, and that 360 would be needed to inflict 30-percent casualties. Since only 26 Chinese divisions were estimated to have crossed into Korea by then, it was possible, according to the study, to stabilize a defensive line of 75 miles with radiation effect using only 15 bombs, but no mention was made of the consequences on friendly troops.

7. Albert Gore Sr., mid-April 1951, adapted by General Douglas MacArthur in off-the-record interviews with Washington Post columnists Jim Lucas and Bob Consodine, quoted in William Manchester, *American Caesar, Douglas MacArthur* (New York: Little Brown and Company, 1978), 878.

8. Memoranda and communications, Documentary History and MacArthur Archive; Truman's comments on Symington's memo are from "Foreign Relations of the United States, 1951," as quoted in Timothy J. Botti, Ace in the Hole: *Why the United States Did Not Use Nuclear Weapons in the Cold War, 1945 to 1965* (Westport, CT: Greenwood Publishing Group, 1997), 37.

9. Memoranda on deploying nuclear bombs in March-April 1951 are from "The Documentary History, MacArthur Archive," and other sources. See also Stanley Weintraub, *MacArthur's War: Korea and the Undoing of an American Hero* (New York: Free Press, 2000), chapters 13 and 16.

10. The young non-Ph.D. physicist was Sam Cohen, who spoke with me about his Korean War experience on 23 Jan 1998. See also Cohen, *The Truth About the Neutron Bomb. The Inventor of the Bomb Speaks Out* (New York, Morrow and Company, 1983), 28-37, 176-79. For further background on the tactical bomb program, see Gordon Dean and Roger M. Anders, eds., *Forging the Atomic Shield* (Chapel Hill, NC: University of North Carolina, 1987); Chuck Hansen, *U.S. Nuclear Weapons: The Secret History* (New York: Orion Books, 1988), esp. 48-55, 134-35, 191; Richard Rhodes, *Dark Sun: The Making of the Hydrogen Bomb* (New York: Touchstone Books, 1995), 130-31.

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1999 MILITARY REVIEW WRITING CONTEST
3D PRIZE

Busting Through

Colonel John F. Antal, US Army

Without a doubt, the most dangerous place in the world is the Korean Peninsula
— David Kay, former chief of the UN Nuclear Inspection Team in Iraq

With three years of combat and 44 years of training experience in Korea, the US Army should have mastered tactics for fighting in restricted terrain. Unfortunately, this is not the case. . . . Imagine a Blue Task Force attack through the NTC's John Wayne Pass opposed by a reinforced OPFOR company with infantry, tanks and massive artillery support. This is the tactical situation faced by combat leaders in Korea should there be a war.

CONSIDER THE UNTHINKABLE: Fearing imminent collapse of their political, social and economic structures, the North Koreans launch a surprise attack on South Korea. The North Korean goal is to execute a short-war campaign plan—to grab as much territory as possible, demand a cease-fire and negotiate the withdrawal of US forces from a position of strength. So far the fighting has been conventional, but the North Koreans have threatened to use chemical and biological weapons. Japanese cities are threatened by the North Korean No-Dong missile—and the Japanese are nervous. Facing possible devastation of Seoul and Tokyo by missile-launched chemical attacks, few regional leaders are willing to call the North Koreans' bluff. The United States desperately rushes all available air power to the region—but it is having minimal effect in the bad weather, and most of the airfields are temporarily unusable after attacks by enemy commando teams, aircraft and missiles. With a smaller army, and commitments all over the world, significant US ground reinforcements will take weeks to arrive.

Time, however, is running out. The Republic of Korea (ROK) and US forces are fighting staunchly but the battle lines move closer to Seoul. Defense is not enough—the enemy must be forced back quickly or Seoul will be engulfed in artillery fire. The weather remains abysmal, with thick fog reducing visibility to a few hundred meters, and most aircraft and helicopters are grounded. US forces in Korea, reeling from hard blows struck by hundreds of North Korean special forces teams, have withdrawn out of artillery range. Somehow the tide of battle must be turned. The ROK/US coalition prepares to launch a ground attack, penetrate the enemy's defenses and knock out as much of his artillery and air defense as possible. The 2d Infantry Division, battered but combat capable, is ordered to spearhead the attack.

An unlikely scenario? For an Army whose thinking is largely European-focused, many might agree. The threat of war in Korea, however, is very real. If war comes to Korea, the ability of US and ROK forces to launch timely ground counterattacks will be decisive. Units earmarked to play a major role in a conflict in Korean would find themselves counterattacking down narrow valleys with little room for traditional *Desert Storm*-like maneuver. Are we prepared to use our technological and training overmatch to its maximum advantage in the rugged, mountainous terrain of Korea? What tactics, techniques and procedures (TTPs) do we apply for decisive operations in restricted terrain?

Operation *Desert Storm* proved that the US Army is the undisputed master of combined arms combat in open terrain.[2] We train for combat in open terrain at the National Training Center (NTC), Fort Irwin, California, the rolling hills of Texas or the open canyons of Colorado. From unit conduct of fire trainer (UCOFT) to combined arms live-fire exercises (CALFEXs), our Abrams tank and Bradley

crews engage targets on relatively flat live-fire ranges at distances of 900 to 2,000 meters. Our Army thinks of battle in open areas that permit us the freedom to maneuver our devastating direct-fire weapons. Even the Army's training literature; TTPs and doctrinal manuals reflect this open-terrain bias. Not a single Center for Army Lesson Learned (CALL) pamphlet has been written on fighting in very restrictive terrain. Even though we have fought more major wars in Asia this century than in any other place on the globe (World War II, Korea and Vietnam), US Army doctrine remains tilted toward a European-style conventional war, largely ignoring mounted combat in other regions and in other terrain.[3]

Many potential battlefields, however, contain mountainous terrain. In Korea virtually all the land is mountainous—although restricted terrain varies in ruggedness. With three years of combat and 44 years of training experience in Korea, the US Army should have mastered tactics for fighting in restricted terrain. Unfortunately, this is not the case. Officers, noncommissioned officers and soldiers arrive in Korea well versed in open warfare but with little understanding of how to fight in restricted terrain. Just imagine what would occur at an NTC rotation if the Blue Task Force was ordered to attack through and secure an objective at the other end of John Wayne Pass, opposed by a reinforced OPFOR company with infantry, tanks and massive artillery support. This is the tactical situation faced by combat leaders in Korea should there be a war.

This article addresses the use of combined arms raids against a North Korean hasty defense during the initial phase of a North Korean attack into South Korea. Although I address a Korean scenario, this discussion applies to other cases of combat in very restricted terrain. This article is based on a study of Korean War "tank raids" and my assessment after six years of training and commanding units in Korea.[4] This article should encourage discussion about combined arms operations in restricted terrain and address the current doctrinal void.

Nature of Combat in Restricted Terrain

Wars should be fought in better country than this.[5]
— Martin Blumenson on combat in very restricted terrain

The first thing that enters most soldiers' minds when they think of mountainous terrain is its value in defense. Defending, however, does not mean sitting still. To be successful the defender must maintain the initiative through the use of firepower and maneuver. Firepower without maneuver is like fighting with one hand tied behind your back—it looks heroic but isn't very smart. Maneuver is "the movement of combat forces to gain positional advantage . . . is the means of positioning forces at decisive points . . . and is rarely effective without firepower and protection."[6] Maneuver puts the firepower where it will do the most damage. Nowhere is the argument for careful study of maneuver and depth more important today than in the rugged hills of Korea.

The modern commander has three counterattack options in restricted terrain: seize the high ground with infantry, bomb the enemy into submission or penetrate the valleys. . . . The second option, bombing the enemy into submission, usually produced indecisive results. The third option, to take the valleys, bypass the heights and maneuver to secure or destroy decisive points succeeded in the Korean War on several occasions with dramatic results.

Korea exemplifies an area of mangrel operations in restricted and very restricted terrain where depth is critical.[7] The ROK/US coalition committed to forward defense in the restricted terrain north of Seoul and along the demilitarized zone (DMZ) for a number of significant political, economic and military reasons. Seoul, the commercial, administrative and political center of South Korea, is only 40 km from the DMZ. With a population of almost 12 million people, Seoul is the 10th largest city in the world. It has much more significance than during the Korean War, when it changed hands four times and was completely destroyed. The memory of that destruction is not lost on the South Koreans, particularly since the North Korean Army (NKPA), the fourth largest in the world, is poised in near-attack status only 40 km away. A North Korean surprise attack is a dangerous possibility. With such limited geographic depth, the need for US maneuver in restricted terrain is obvious.

In general, the restricted terrain of South Korea favors the tactical defense. Commanding hills and narrow valleys prevent the attacker from massing combat power to dominate large areas. The attacker moving down a narrow mountain or steep-walled valley road faces the harrowing prospect of attacking into a trap, where well-sited defenders outnumber his lead forces. An attacker can bring his superior forces only gradually, and then not

completely, against the defender. Enemy flanks are often not assailable except through narrow valleys. Each intervisibility line may hold an ambush. If attacks are made along several avenues of approach, each attack is likely to be isolated from the other. Although an urban explosion in South Korea has expanded the road and highway network and dramatically increased the options for ground maneuver, it has also added another form of restricted terrain to the equation. Maneuver in Korea is hindered by these urban centers as well as by the narrow valleys, steep ridges and chokepoints that channelize and constrict moving combat formations.

We will seldom have enough infantry, nor can we afford the casualties, to clear the high ground with rifles and grenades. The penetration force must have mobility, protection and overwhelming firepower. This means that tanks must form the backbone of the combined arms team that will bust through the enemy's defense. The common excuse that "this is not good tank country" does not respond to the problem.

The defense in restricted terrain, however, also has vulnerable spots. Restricted terrain contains dominating ground that must be held and long valleys that must be protected by the defender to sustain lines of communication and supply. The terrain makes it difficult to maintain the unity and cohesion of large-unit operations. Tidy lines and linear fronts are often impossible. The rugged terrain forces defenders to disperse and rely on the strength of their positions to buttress the defense. Large gaps between strongpoints are the norm and allow the attacker to pick a penetration point and attack the rear of fixed high-mountain positions. Maneuver in restricted terrain is possible if the attacker can concentrate combat power to force a penetration of the defender's strongpoints.

The challenges of attacking in restrictive terrain are not new. Sun Tzu, the ancient Chinese military philosopher, stressed that armies on the attack should stay away from restrictive terrain: "In this type of terrain, even if the enemy entices you, do not advance. Instead, retreat, forcing him to follow."[8] Hundreds of years later an expert on mountain warfare, Jean De Bourcet—whose writings significantly influenced Napoleon Bonaparte—declared that "in a mountain region, the all-important points for military purposes are the defiles, and when these, as is frequently the case, are impregnable against frontal attacks, the general taking the offensive must seek every possible means of turning them, and must so arrange his troops as to fix the enemy's attention on some point other than that of which it is intended to gain possession."[9]

Baron Henri Jomini, in his book *The Art of War*, stressed the offensive in mountainous terrain. "[I]f a country covered with high mountains be favorable for defense in a tactical point of view, it is different in a strategic sense, because it necessitates a division of the troops. This can only be remedied by giving them greater mobility and by passing often to the offensive."[10] In similar fashion, Carl von Clausewitz emphasized that the advantage in mountainous terrain rests with the attacker, not the defender, particularly with regard to hasty defense. "[b]attle in the mountains does not confer all the advantages on the defender . . . when one considers the difficulties of taking up a favorable mountain position at the last moment . . . one will realize that this is a totally unreliable method of defense."[11] The views of Jomini and Clausewitz suggest that an attacker with mobility and concentration of forces can maneuver and defeat a purely positional defense in restricted terrain.

Military analysts of the 20th century concur with Clausewitz. The German army gained vast mountain fighting experience during World War I. This experience is reflected in the German Field Service Regulations of 1933, which state:

"In restricted terrain the attacker often needs only a local and limited superiority in numbers and battle means. Apparently strong heights and rocky positions as well as individual plateaus can be made to fall if we succeed in enveloping, or turning these positions, or by breaking through on a quite small front. The effect of such an attack as a rule is quicker and more decisive in mountains than in the lowlands."[12]

In a similar fashion, the Soviet army believed that "enveloping detachments play an important role in offensives in mountainous terrain."[13] The Germans in World War II successfully demonstrated their ability to launch combined arms operations—including the use of tanks and mechanized infantry—in the mountains of Yugoslavia and Greece. Taking a page from the German book, the British also demonstrated that armor could be used effectively in the very restrictive terrain of Burma. The British used tanks in Burma to spearhead the famous 300-mile drive on Rangoon, capturing the city in three weeks of hard fighting.

A 24th infantry Division tank commander crouches behind his turret after giving the order to fire, Song Sil-li, Korea, 10 January 1952.

War in Korea, Presidio Press

By using armor at Chipyong-ni and Heartbreak Ridge, the US Army found that "armor remained an indispensable part of ground combat, regardless of any limiting conditions under which it had to operate." Aggressive leaders found ways to maneuver tanks and employ combined arms. Despite the very restrictive terrain, they found that "tanks could move better in rugged mountainous terrain than they might have expected. A key was skillful engineer support."

Accordingly the modern commander has three counterattack options in restricted terrain: seize the high ground with infantry, bomb the enemy into submission or penetrate the valleys. The first option was tried unsuccessfully in the Korean War on too many occasions—bloody infantry assaults up steep, well-defended hills. The second option, bombing the enemy into submission, usually produced indecisive results. The third option, to take the valleys, bypass the heights and maneuver to secure or destroy decisive points succeeded in the Korean War on several occasions with dramatic results.

Korean War Tank Raids in Restricted Terrain

Bourcet's belief that the defiles and valleys were significant and his words stressing the futility of frontal attacks should have been studied by American commanders during the Korean War. Unfortunately, several US Army battle streamers from the Korean War carry the names of heroic—and bloody—frontal attacks. Most professional soldiers of that time, trained in the open warfare of World War II, saw the situation in Korea as purely an infantry and artillery war. However, during the initial phase of the battle of Heartbreak Ridge, for example, "artillery alone could not demolish the deep NKPA fortifications, though the 2d Infantry Division's artillery fired 229,724 rounds."[14] US infantry and artillery could not move the enemy off the hills but took 3,700 casualties in the attempt.

The bias of that time was that tanks were not useful in restricted terrain. Some veteran soldiers, including Captain Sam Freedman of the famed 72d Tank Battalion, believed that the solution lay in the use of tanks as part of an integrated combined arms team. Freedman remarked that "tanks can be employed in many spectacular and highly effectual ways . . . the ingenuity of planners who won't take 'no' for an answer has resulted in the discovery of means to bring up tanks for swift and telling strokes that have broken the back of enemy resistance."[15] Freedman and other tankers believed that mobility was partially a state of mind and largely a matter of organization, training and careful planning. The battles of Chipyong-ni and

Although the helicopter permits a quantum leap in mobility in restricted terrain, it only works when weather permits and there is a thorough suppression of enemy air defenses. A combined-arms maneuver force remains the only all-weather, 24-hour maneuver option for conducting raids into the tactical depths of the enemy.

Operation *Touchdown* proved Freedman right.

The Battle of Chipyong-ni validated tank-infantry-artillery-air power cooperation in mountainous terrain and was declared by General Matthew Ridgway to be the most important combined arms battle of the war. The tactical lessons learned at Chipyong-ni, and the relief of the defensive perimeter by Task Force *Crombez*, changed the nature of the fighting in Korea and ended the fear that UN forces would be pushed off the Korean Peninsula.[16] The effect of the Task Force *Crombez* "tank raid" surprised the Chinese and, according to their own after-action reports that were captured shortly after the battle, they were "taught a lesson at the expense of bloodshed."[17]

The value of tank raids was even more dramatic during the last three days of the Battle of Heartbreak Ridge in Operation *Touchdown* from 10-12 October 1951. The 2d Infantry Division employed the 72d Tank Battalion to penetrate the valley to the west of Heartbreak, envelop the enemy defense and win the battle. The accelerated movement of the 72d through the "impassable" Mundung-ni Valley sealed the victory for the 2d Infantry Division by disrupting an entire Chinese infantry division. The 2d Infantry Division attacked with three regiments abreast to fix the defending NKPA as the 72d Armor attack surprised the enemy and dislocated his defense. Operation *Touchdown* proved that a combined arms task force could be decisive even in restricted terrain.[18]

By using armor at Chipyong-ni and Heartbreak Ridge, the US Army found that "armor remained an indispensable part of ground combat, regardless of any limiting conditions under which it had to operate."[19] Aggressive leaders found ways to maneuver tanks and employ combined arms. Despite the very restrictive terrain, they found that "tanks could move better in rugged mountainous terrain than they might have expected. A key was skillful engineer support."[20]

The Combined Arms Raid

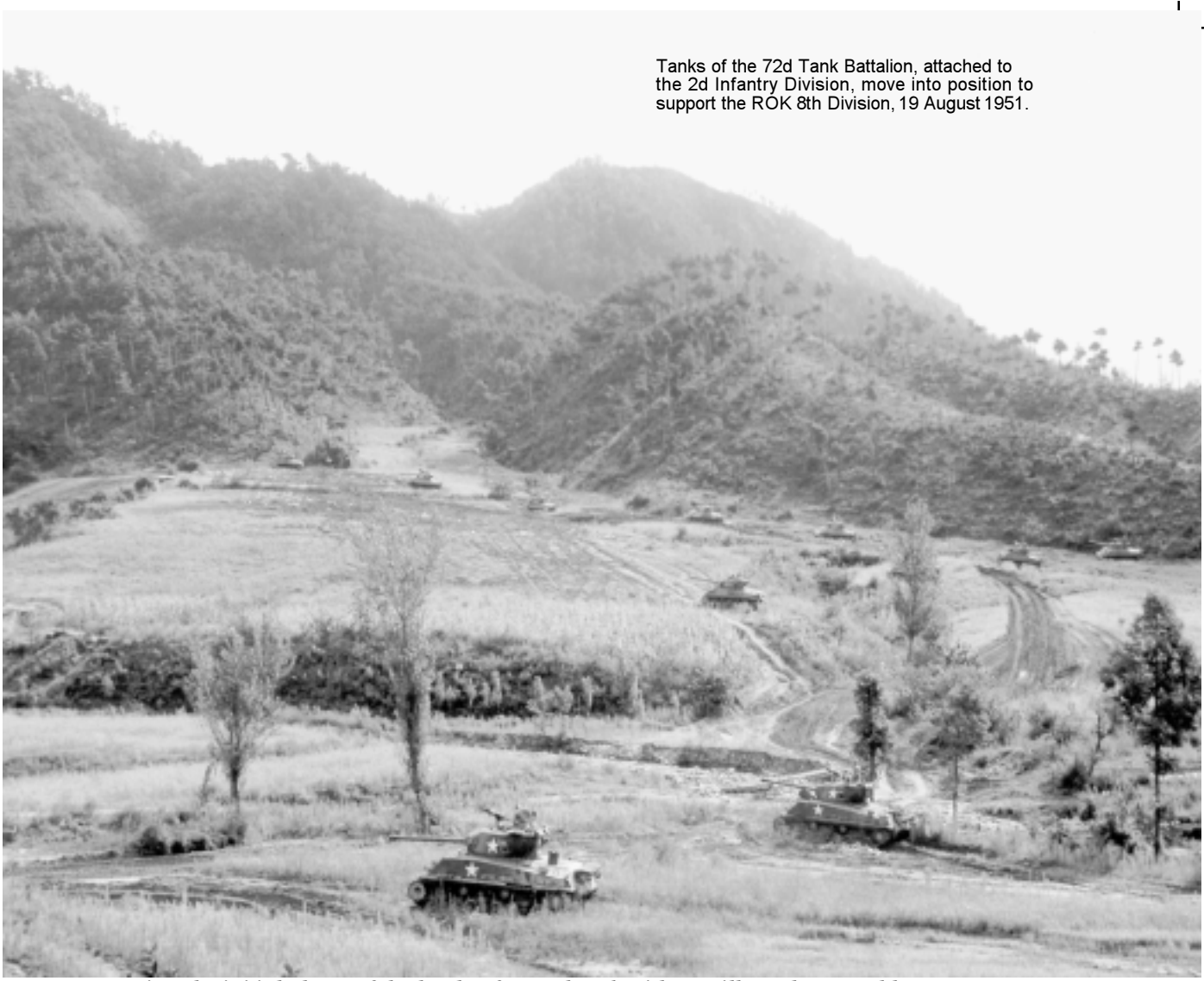
With the rapid development of indirect-fire technology and precision munitions, there are many who believe that victory on a restricted terrain battlefield is merely a matter of firepower. However, until "brilliant munitions" mature, indirect firepower alone will not win wars. The capability of the NKPA and Chinese forces to dig in and avoid defeat from overwhelming US firepower is legendary. No armed force dares assume that superior firepower guarantees victory. We must continue to develop tactics and training that will maximize our technological, organizational and operational advantages.

A successful defense in restricted terrain depends on the "effective simultaneous application of fire and forces to the entire depth of the enemy. . . . The rapid defeat of enemy groupings is impossible today without decisive, flexible and broad maneuver including . . . raiding detachments operating in the enemy rear."[21] In Korea, combined arms raiding forces, concentrated to bust through and exploit a hasty NKPA defense, can turn the tide of battle. Raids offer a means to create depth and regain the initiative for the defender. In restricted terrain they are "not only part of the defenses but are essential in a maneuver defense. Defending commanders with sufficient forces should plan raids in support of their defense."[22]

The principal function of a combined arms raid in restricted terrain is to ensure that maneuver dominates the battlefield throughout its depth. Successful raids can secure decisive points and set the conditions for a series of turning movements or envelopments that would be impossible without maneuver. The goal of maneuver should be "to incapacitate by systemic disruption—whether the 'system' is the command structure of the enemy's forces, their mode of warfare and combat array, or even an actual technical system."[23] Against the NKPA—an army without air support but with significant artillery and air defense capabilities—a powerful combined arms raid may offer the only method to gain depth and retake the initiative.

Eventually an NKPA advance will pause, and when it does, the defender must be ready to strike. Combined-arms raids require a penetration of enemy defenses and the exploitation of the raiding force to secure or destroy an enemy decisive point. The raid should be planned to a tactical depth that is logistically sustainable—usually 10 to 15 kilometers. The mission of the raid force can be terrain or the enemy force itself. A combined-arms raid in restricted terrain will typically have three phases:

- The initial rupture of the enemy positions and the clearing of the enemy along the flanks of the defile or valley to commit the follow-on force.



Tanks of the 72d Tank Battalion, attached to the 2d Infantry Division, move into position to support the ROK 8th Division, 19 August 1951.

War in Korea, Presidio Press

During the initial phase of the battle of Heartbreak Ridge artillery alone could not demolish the deep NKPA fortifications, though the 2d Infantry Division's artillery fired 229,724 rounds. US infantry and artillery could not move the enemy off the hills but took 3,700 casualties in the attempt. It was only during the last three days of the battle that the 2d Infantry Division employed the 72d Tank Battalion to penetrate the "impassable" Mundung-ni Valley and seal the victory by disrupting an entire Chinese infantry division.

- The exploitation by a combined-arms raiding force to secure or destroy a decisive point.
- The defense and linkup or a sweeping attack to return to friendly lines.

Penetrating Enemy Lines in Restricted Terrain

A penetration in the enemy's lines must be made to allow the raiding force to get behind enemy lines. A penetration is defined in FM 71-3, *The Armored and Mechanized Infantry Brigade*, as an attack to "rupture enemy defenses on a narrow front and create both assailable flanks and access to the enemy's rear."[24] FM 100-5, *Operations*, states that the ideal attack might resemble a torrent of water rushing forward and expanding its channels around major resistance. It should move fast, follow reconnaissance units or successful probes through gaps in enemy defenses, then shift its strength quickly to widen penetrations and reinforce successes, thereby carrying the battle deep into the enemy's rear.

A penetration attack in restricted terrain also resembles the water analogy: finding a relative weakness in the enemy defense and conducting a penetration attack along a valley or defile. In restricted terrain the attacker must mass overwhelming combat power at the point of penetration or select a defile or valley that is relatively unguarded in order to catch the defender by surprise with rapid and violent execution. If the direction of attack is well guarded, overwhelming combat power at the point of penetration must stun and suppress the defender

and hinder any reserves from counterattacking in time. Other attacking forces must fix the defender with intense fires along the front.

On the Korean battlefield, the NKPA forces will be dense. Almost every defile and valley will hold forces moving forward or poised in a hasty defense, waiting for supply or reinforcement. Only a very powerful, swift attack force will be able to penetrate an NKPA defense anchored to restrictive terrain. Because penetration is an attack into the strength of the defense, it could be costly in friendly casualties.

Optimum combat power in the lead platoon and combat team is vital. The goal of the combined-arms effort must be to maintain the momentum of the penetration and the goal of the exploitation must be to destroy or secure a decisive point. Capturing a decisive point is a key step in attacking an enemy's center of gravity.

Today, a smart enemy will defend the defiles against an armored penetration by reinforcing his defense with the terrain. Keyhole positions, which allow for single or multiple flank or rear shots at the enemy during limited windows of opportunity without directly giving away the firing position, will anchor his defense along the fingers of the defiles and valleys. It is as if the enemy is firing at you through a keyhole as you pass down a hallway. The attacker, therefore, must prioritize reconnaissance and concentrate decisive combat power at the point of penetration to win the close-range, direct-fire fight at the point of the attack.

To increase force density at the tip of the spear, attackers must put their best and most powerful units up front. The first requirement is the ability to penetrate defended defiles without having to scale every ridgeline and precipice with infantry. We will seldom have enough infantry, nor can we afford the casualties, to clear the high ground with rifles and grenades. The penetration force must have mobility, protection and overwhelming firepower. This means that tanks must form the backbone of the combined arms team that will bust through the enemy's defense.[26] The common excuse that "this is not good tank country" does not respond to the problem. As mentioned earlier, this challenge was met during the Korean War when superb tankers demonstrated "on numerous occasions that they could operate effectively in terrain that doctrinally was considered completely unsuitable for tanks."[27]

Although a dismounted infiltration attack might kick off the penetration battle for the first kilometer and air-assault forces could be used to seize decisive terrain, tanks must lead the rest of the way since only tanks can provide the necessary devastating direct fire and employ mechanical breaching equipment (mine plows and rollers) to punch through hasty obstacle belts. Protection from counterattack and artillery attack is a major issue for air-assault forces, but if they are used, they will require a quick linkup with heavy forces to survive. Although the helicopter permits a quantum leap in mobility in restricted terrain, it only works when weather permits and there is a thorough suppression of enemy air defenses.

A combined-arms maneuver force remains the only all-weather, 24-hour maneuver option for conducting raids into the tactical depths of the enemy. The penetration force, therefore, should be a combined-arms task force with tanks, mechanized infantry, engineers, armored air defense systems, artillery directed by observation helicopters, attack helicopters and close air support. In good weather the combined combat power of ground-attack forces, artillery, attack aviation and close air support can provide overwhelming and devastating power at the point of penetration.

With their mine-plows and rollers, tanks lead the way in the penetration battle. Mechanized infantry in Bradley Fighting Vehicles can provide a converging attack force—or a security force if the terrain is not suitable for tanks or Bradleys. Combat engineers are critical to the continued movement of the penetration, using explosives to destroy obstacles and minefields that cannot be breached mechanically by tanks. When required, the infantry and engineers dismount to secure the next intervisibilty line—not the next ridgeline or mountain top—and always stay within the fire protection of the tanks and Bradleys.

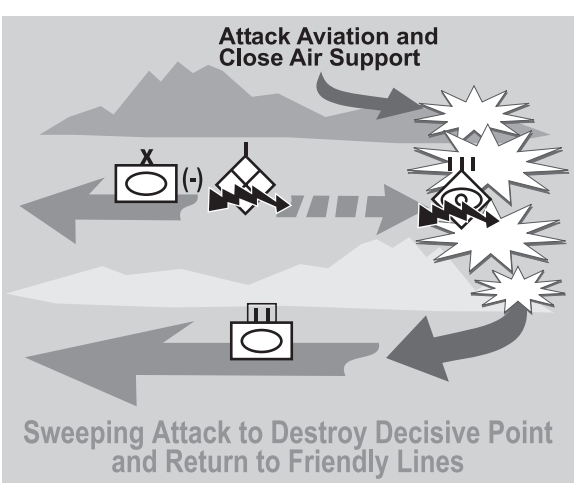
Position Only

Massed indirect fires would set the conditions for success in the valley by conducting a fire strike at the penetration point and maneuvering the fires down along the direction of attack. Elements advancing without cover must have fire support. While the lead tanks work forward, the trail tanks and Bradleys suppress the enemy to both flanks of the defile. Direct-fire engagement procedures must be well drilled to identify targets in three dimensions. Mortar fire must suppress suspected keyhole positions directly ahead of the lead tanks while artillery fires hit farther up the defile. Fires are shifted to suppress defenders and obscure their view as the force advances. Elements unable to advance seek cover and call for smoke and mortar fire for protection. Gaining local fire superiority and maintaining a rapid advance will avoid the enemy's artillery fire traps.

Optimum combat power in the lead platoon and combat team is vital. The goal of the combined-arms effort must be to maintain the momentum of the penetration — to stun and suppress the enemy with armor busting through the valley, mortar fire falling just in front of the tanks, artillery smashing farther up the valley and suppressing likely keyhole positions, attack helicopters killing what is farther in front of the tanks (1,000 meters) and CAS fixing the enemy reserves. In restrictive terrain an armored combined-arms force is the weapon of choice for quick, decisive victory with minimum friendly casualties.

Exploiting the Penetration with a Combined-Arms Raid

Directed by information-age intelligence sources available to today's divisions, the armored combined-arms force finds a gap or makes one, then drives through the dazed defenders. In restricted terrain the attacker is quickly isolated from friendly forces to its rear and flanks. In such terrain the attacker cannot depend on continuous battle lines. To wait for other units to attack across the front, arm-in-arm, surrenders the value of the penetration.



The combined-arms raiding force should be commanded by a single ground force commander. The force should be task-organized based on important calculations: the combat power, quality and training of his forces versus the enemy; the availability of combat multipliers. The higher the quality of the friendly forces and the less time the enemy has been preparing his defenses, the smaller the force can be and still achieve success.

After a powerful, mobile combined-arms force creates a gap it should accelerate and exploit the penetration. The goal of the exploitation must be to destroy or secure a decisive point.[28] Capturing a decisive point is a key step in attacking an enemy's center of gravity, for "decisive points are not centers of gravity; they are the keys to getting at centers of gravity."[29]

North Korea's center of gravity is the NKPA, the *Inmun Gun*. All political power and legitimacy rests on the survival and loyalty of the army to the political structure. The primary decisive points of an attacking NKPA force that has fought its way south of the demilitarized zone are its brigade, division and corps artillery groups.[30] These artillery groups must be located within 10 to 18 kilometers of the front to support the attack.[31] NKPA tactics hinge on the ability to maneuver using artillery firepower or massed infantry infiltration in restricted terrain. The artillery blows a hole and the armor follows. When the armor is held up, the infantry attacks to await the redeployment of the artillery and then the artillery blows a new hole in the defense. Penetrating with massed artillery, then exploiting with armor and infantry is central to the NKPA way of conventional war. Although it has a large amount of long-range artillery in heavily protected bunkers along the DMZ, the NKPA's mobile artillery is a decisive point whose destruction has operational consequences and is a target worthy of committing ground maneuver forces behind enemy lines.

The combined-arms raiding force should be commanded by a single ground force commander. The force should be task-organized based on important calculations: the combat power, quality and train-

ing of his forces versus the enemy; the availability of combat multipliers (artillery, army aviation and close air support needed to set the conditions for the continued movement along the direction of attack; and the length of time the enemy has been preparing his hasty defense). The higher the quality of the friendly forces and the less time the enemy has been preparing his defenses, the smaller the force can be and still achieve success.

The combined-arms raid is an important tool for shaping the battlefield in restricted terrain because it creates depth to gain positional advantage and grab the initiative. The raid of a small group of Israeli tanks in October 1973 unhinged and threatened to defeat the entire Egyptian Third Army. An M1 tank company appearing in the midst of an enemy army artillery group can be a powerful force of decision.

Once the enemy's defenses are penetrated, artillery, attack helicopters and CAS fix or destroy any mobile reserves. The force that conducted the penetration either holds its ground and passes through a combined-arms raiding force or the penetration force continues the attack to a decisive point. At this point the combined-arms raiding force will find itself fighting asymmetrically against enemy elements desperately trying to block its advance—as the 72d Armor did at Heartbreak Ridge. The raiding force must then take a page from the combined arms manuals of the Korean War and be trained to expect to operate "deep in enemy territory; the presence of the enemy to the front flanks and rear is a condition to be expected. All personnel must be conditioned to consider such conditions more normal than otherwise."[32]

While the corps, army and theater commanders fight a traditional deep battle against the enemy's operational echelons, the division commander effects the immediate close fight by attacking deep with a combined-arms raiding force. The raid becomes the division's deep battle and its main effort. "Deep" is a relative term with regard to restrictive terrain. In the desert, tactical moves of 20-30 km in several hours can be normal. In very restrictive terrain, an attack of 10 km can take days. The nature of the terrain compresses time and space for the attacker, making the "deep" raid shallow by open-warfare standards. Considering that the distance from Seoul to the DMZ is less than 40 km, a deep attack of 10 km can be valuable to a division commander.

Taking advantage of every possible mobility corridor, the combined-arms raiding force concentrates against the enemy's fragmentation. As the raiding force approaches the artillery groups, the enemy must decide to keep them in place and block the exploitation force or withdraw his artillery and conduct a delay. If he does not move his artillery, the exploitation force must close with and engage the artillery groups. If the enemy does move his artillery, it is both unavailable for combat and can be destroyed as it deploys on the march. The combination of accelerated armored movement and artillery, helicopter and CAS firepower leaves the defending enemy with only disastrous options.

Once the decisive point is secured or destroyed, the raiding force can either defend and wait to link up with follow-on forces or conduct a sweeping attack back toward friendly lines. A hasty defense will depend on the success of the attack, the strength of the enemy in the area and the time required for forces to link up with the raiding force. Depending on the situation, this could be a high-risk operation if the combined-arms raiding force bypasses resistance and reaches the decisive point with minimal delay. Unless linkup is achieved, the force will face exhausted fuel supplies and increased enemy counterattacks.

The most promising option is to return the combined-arms raiding force to friendly lines by conducting a "sweeping attack," defined by the ROK as an attack by a mobile, armored force to destroy enemy forces along the direction of attack. The sweeping attack penetrates enemy lines, destroys an enemy decisive point and continues the attack back toward friendly lines along another avenue of attack. The sweeping attack places mobile, ground-combat power in much the same role as attack helicopters are used in an engagement forward of friendly lines. The sweeping attack cycles the combined-arms raiding force into enemy territory and back again. A sweeping attack in the restricted terrain of Korea would usually extend the force only 12-18 km deep before returning to friendly lines.

The combined-arms raid is an important tool for shaping the battlefield in restricted terrain because it creates depth to gain positional advantage and grab the initiative. "Raids into the enemy rear have become an important and indispensable part of modern battle as demonstrated by the raid of a small group of Israeli tanks into the rear of the Third Egyptian Field Army in October 1973. This raid

unhinged and threatened to defeat the entire Third Army."[33] An M1 tank company appearing in the midst of an enemy army artillery group can be a powerful force of decision.

Today, US battalions in Korea are vastly superior to similar North Korean units in technology, organization, operations and training. Future combat in restricted terrain should employ small, self-contained, mobile combined-arms forces of infantry, tanks, engineers, artillery and combat aviation. Directed with information-age intelligence, they can rapidly penetrate a gap in the enemy's defenses and exploit the penetration to attack a decisive point. The combined-arms raid in restricted terrain is a difficult option to execute but offers the possibility of operational and strategic success in a place such as Korea. Against the NKPA, whose second-generation antitank weapons cannot penetrate the front or flanks of the M1A1 tank, busting through is an important option for US forces.

Training for the Penetration Attack in Restricted Terrain

Such a minuet of destruction does not occur without practice. Historically, the most successful armies have applied combined arms at the lowest possible level. The greater the training and coordination of the combined-arms force, and the better its breaching capability, the faster the penetration. The faster the combined-arms force moves to its objective—an enemy decisive point—the greater the success and the smaller the friendly losses.[34] Agile plans, excellent reconnaissance, concentration at the tip of the spear and the complete integration of combined-arms are critical for success of the penetration attack in restricted terrain. Winning in restricted terrain will require a high frequency of combined arms training and a thorough understanding of the terrain. Training in open warfare is not enough.[35]

First, the attacking force must be organized for success. In restricted terrain, the battle is carried at the point of the spear. This may be a platoon, section or at times a single vehicle. The lead unit must be organized with ample combat power and mobility assets. In the defile, tank crews will be challenged to destroy an enemy defender who controls all the natural advantages. The tactics of fighting in defiles and restrictive terrain must be thoroughly understood. If the lead tank is destroyed or disabled and the defile is blocked, an entire task force attack may be slowed or stopped. The defender will try to ambush the attacker in the valleys and defiles, at point-blank ranges, from concealed positions. To defeat the ambusher, the attacking tank and Bradley crews must wrest the initiative from the defender.

In this situation the fighting skills of tank and Bradley crews make the difference between success or halting, bloody failure. High-performing tank crews must steal that advantage away from the defender and gain the initiative with techniques to acquire and destroy targets in the close-range, direct-fire fight. Firing first is a decisive advantage to the attacking tank, section, platoon and company. Their battlefield situational understanding is critical to gaining the "3 to 6 second advantage" over the defender.[36]

"Deep" is a relative term with regard to restrictive terrain. In the desert, tactical moves of 20-30 km in several hours can be normal. Restrictive terrain compresses time and space for the attacker, making the "deep" raid shallow by open-warfare standards. Considering that the distance from Seoul to the DMZ is less than 40 km, a deep attack of 10 km can be valuable to a division commander.

The mental agility of the company and task force commanders and that of the task force staff is equally important. Once a combined-arms column of 235 armored and wheeled vehicles attacks—the size of a typical four-battalion armored task force—enters a narrow defile, there are few opportunities to turn around or move away from an enemy fire sack. Original plans may require modification as the enemy situation changes or becomes clear. Attacking forces, therefore, must be able to rapidly modify their direction of attack. In restricted terrain, plans are a basis for changes, so every mission needs a base plan with branches.

Excellence in combined-arms warfare in restricted terrain is a product of frequent practice and trained leaders.[37] Commanders must learn to feel, rather than try to see, the battlefield. In a narrow valley the commander may be restricted to the view of the vehicle in front of him. It is usually impossible to see large portions of battlefield, as commanders are trained to do in open-terrain fighting. In restricted terrain the commander must anticipate battlefield decisions and trust his trained subordinate leaders to command their elements according to his intent.

In short, combat in restrictive takes special training. Tactics in restricted terrain must be practiced and precise—from rapid direct fire in three dimensions

(forward, flanks, rear and up and down the hills), quick target acquisition skills, close-range, direct-fire accuracy, effective use of machineguns and the complete integration of all combined-arms firepower. Providing combined-arms training and organizing forces to penetrate and exploit the penetration in restricted terrain is a major training and resourcing challenge. Commanders should put this training together and practice often enough to master the techniques that win in restricted terrain.

A great army employs good weapons, excellent training and effective tactics appropriate to the terrain and enemy situation. Although the Army must be a full-spectrum force, ready to respond to the needs of the nation, it is important to remember that the possibility of a short-notice, mid-intensity war in the rugged hills of Korea still looms. A quick look at the globe will show that many potential battlefields are located in areas with mountainous and restricted terrain. Many of our potential enemies, composed primarily "second-wave" military forces, will try to leverage the terrain to make up for their training and technological deficiencies.[38] The sparse US Army doctrine on fighting tank and mechanized forces in restricted terrain is not encouraging.[39]

Although much has changed since 1950, the US Army is still deployed in a near-wartime footing.[40] It faces a dangerous, unpredictable and implacable foe whose economy and political stability are crumbling—a foe that also has a large conventional military force, an offensive arsenal of chemical weapons and, very probably, rudimentary nuclear weapons. The volatile North Korean situation will likely end in the next few years in either "explosion or implosion."[41]

The lessons of our history in restricted-terrain combat should not be forgotten. On 26 November 1950, 485,000 Chinese attacked the better-equipped, highly trained and veteran UN force of 365,000 troops. Without air cover, significant artillery support or the vaunted three-to-one advantage, the Chinese surprised and decimated the UN units. Road-bound and imbued with a "tactical and psychological dependence on continuous battle lines, such as has been known in Europe," the UN battalions were cut off and chopped up in one bloody battle after another.[42] The linear view of tactics held by US Army officers contributed to the debacle. Fearing encirclement, many units lost all sense of cohesion and organization when they discovered the Chinese had blocked their lines of communication to the south. The Chinese, on the other hand, were firepower-poor yet excelled at maneuver in restricted terrain. The Chinese attacks forced MacArthur's UN troops back to the 38th parallel.

The lessons from the penetration battles in steep-walled valleys of Korea in 1951 apply to US forces today. We must be wary of a "firepower solves all" mentality and develop tactics, techniques and procedures to develop maneuver in restricted terrain. A raid behind enemy lines is a high-risk operation but offers dramatic operational results. In very restricted terrain, against an enemy with a high density of forces, the combined-arms raid may be the only alternative to a slow, grinding battle of attrition. A well-trained combined-arms task force—using the mobility and firepower of obstacle-breaching M1 tanks, assisted by infantry protected in Bradley Fighting Vehicles, supported by combat engineers, overwatched by Kiowa Warrior and Apache helicopters, attacking an enemy stunned and neutralized by effective 120mm mortar suppression, devastating 155mm howitzer fires and accurate close air support—is the decisive formation in restricted terrain.[43]

In restricted terrain a penetration of the enemy defenses without exploitation is wasted effort. American commanders need an instrument that can transform a penetration into a decisive victory. The combined-arms raid is an important tool for achieving depth in restricted terrain. The answer lies in developing our view on the art of war in restricted terrain. We have the combined-arms instruments; we only need to arrange them in the proper package to reap their maximum potential. If we expect to bust through in restricted terrain, we need to practice the art of penetration and exploitation. Maybe it is time we gave a brigade combat team the mission to fight through John Wayne pass at the NTC. ***MR***

NOTES

1. David Kay, former Chief of the UN Nuclear Inspection team in Iraq, in an *Impower America* interview in the spring of 1994.

2. Combined arms warfare is the simultaneous application of combat, CS and CSS toward a common goal. Combined arms warfare produces effects that are greater than the sum of the individual parts. The combined arms team strives to conduct fully integrated operations in the dimensions of time, space, purpose and resources to confuse, demoralize and destroy the enemy with the coordinated impact of combat power. The goal of this sudden and devastating impact of combined arms is to paralyze the enemy's response and force his destruction or defeat.

3. "Disturbingly, the US Army and the armor establishment in general seemed eager to discount much of the armor experience in each war [Korea and Vietnam] as irrelevant to future conflicts once those wars ended" from David A. Niedringhaus, "US Army Armor in Limited War: Armor Employment Techniques in Korea and Vietnam," Masters Degree Thesis: Ohio State University: 1987, 146.

4.Tactical lessons learned in 1951—from the defensive battle of Chipyong-ni and offensive battle Operation *Touchdown* that ended the battle of Heartbreak Ridge—show that combined arms penetration attacks in restrictive terrain can be decisive. The lessons of Chipyong-ni and *Touchdown* dramatically depict the value of combined arms combat in restricted terrain. When combined arms was employed, casualties were reduced and the opportunities for decisive victory enhanced. The lessons learned offer a metaphor for combat in restricted terrain based on J.F.C. Fuller's combat functions—protecting and hitting. The metaphor

is that of a shield and sword. At Chipyong-ni the infantry acted as a shield, pinning the enemy to battle, while Task Force *Crombez* acted as the sword that hastened the defeat of the enemy's plan. A variation of the same method was employed in *Touchdown* to win Heartbreak Ridge. The infantry battalions fixed the defenders and the armored task force enveloped the position in the west.

5. Martin Blumenson, *Saleno to Cassino, United States Army in World War II* (Washington, D.C., 1969), 234, quoting MG John P. Lucas concerning combat in the very restricted terrain.6. US Army Field Manual (FM) 100-5, *Operations* (Washington, DC: Government Printing Office [GPO], 14 June 1993), 2-5.

6. US Army Field Manual (FM) 100-5, *Operations* (Washington, D.C.: Government Printing Offic3e[GPO], 14 June 1993, 2-5.

7. Restricted terrain slows movement by requiring zig-zagging or frequent detours. Restricted terrain for armored and mechanized forces typically consists of moderate to steep slopes or moderate to densely spaced obstacles such as trees, rocks, or buildings. . . . Severely Restricted terrain hinders or slows movement in combat formations unless some effort is made to enhance mobility. This could take the form of committing engineer assets to improving mobility or of deviating form doctrinal tactics, such as moving in columns instead of line formations or at speeds much lower than those preferred." FM 34-130, *Intelligence Preparation of the Battlefield* (Washington, DC: GPO, November 1993), 2-15.

8. Sun Tzu, adapted and illustrated by Tsai Chih Chung, translated by Brian Bruya, *Sunzi Speaks, The Art of War* (New York: Anchor Books, 1994), 109.

9. Jean De Bourcet from his "Principles of Mountain Warfare," in Sir Basil Liddell Hart, *The Sword and Pen. Selections from the World's Greatest Military Writings* (New York: Thomas Y. Crowell Company, 1976), 93.

10. Antonne Henri Jomini, *The Art of War*, translated by Captain G.H. Mendell (Westport, CN: Greenwood Press, originally published by J.B. Lippincott & Co, Philadelphia, 1862), 151.

11. Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Peret (Princeton, NJ: Princeton university press, 1976), 537. Clausewitz goes on to say that "in a decisive battle, mountainous terrain is of no help to the defender; on the contrary, that it favors the attacker. This is in direct contradiction to the general opinion; but then, general opinion is usually in a state of confusion, and unable to distinguish between diverse aspects of a question. People are so much impressed by the powerful resistance of a minor unit that they assume that all defensive mountain warfare possess extraordinary strength. They are surprised when the existence of such strength in the core of all resistance, the defensive battle, is denied. On the other hand, they are always ready to blame the incredible mistake of cordon warfare for the loss of any defensive battle in the mountains, completely ignoring the force of circumstances that are inevitably involved," 423.

12. German Field Service Regulations, *Truppenfuhrung* [1933], 1989 transcript of 1936 translation by LTC Milburn, US Army Command and General Staff College, Fort Leavenworth (Berlin: Reichswehr, 1933), 147.

13. MG V.G. Reznichenko, *Tactics*, translated at CIS Multilingual Section, National Defense headquarters, Ottawa, Canada, May 1985 (Moscow: Voyennoye Izdatel'stvo, 1984), 130.

14. T.R. Fehrenbach, *This Kind of War, A Study in Unpreparedness* (New York: Macmillan Company, 1963), 521.

15. CPT Sam Freedman, "Tankers at Heartbreak," *Armor* (Fort Knox, KY: US Armor Association, September-October 1952), 24.

16. The tank-infantry cooperation within Task Force *Crombez* was poor, largely due to improper training and procedures. Nevertheless, the relief of Chipyong-ni by a tank raid was a bold attempt to change the conditions of battle with maneuver.

17. Chinese Communist Forces, Headquarters XIX Army Group, "A collection of Combat Experience" (29 March 1951 Critique of Tactics Employed in the First Encounter with the Enemy at Chipyong-ni, Annex Number 1 to Periodic Intelligence Report Number 271, 2d Infantry Division, translated by ATIS, 29 June 1951), 2-4. The report goes on to say, "The enemy's use of tanks surprised us and arrived almost at the door of the Regimental Command Post before they were discovered, seriously threatening the flanks and rear of the 2d Battalion (Chinese). The Regiment immediately ordered the displacement of the 2d Battalion . . . we have underestimated the enemy," 2-4. Communist casualties from the Battle of Heartbreak Ridge were estimated at over 25,000.

18. The truce talks at Panmunjom, which were broken off on 22 August, resumed on 25 October, largely because the fighting at Heartbreak Ridge had so weakened the communist defenses in the area that they would sell their souls to gain time. With the conclusion of the Battle of Heartbreak Ridge, the war of movement was over. Operation *Touchdown* was the last battle of maneuver fought in the Korean War. From this point on, the war became a war of attrition and outpost skirmishes while the negotiations in Panmunjom dragged on. The Korean War finally ended on 27 July 1953. The United States had won time, but not victory. As a result, the battles of the Korean War were largely ignored by history.

19. David A. Niedringhaus, "US Army Armor in Limited War: Armor Employment Techniques in Korea and Vietnam," Masters Degree Thesis: Ohio State University, 1987, 54.

20. Niedringhaus, 27. The relief of the 23d Regimental Combat Team at Chipyong-ni and Operation *Touchdown*, the attack of the 72d Armor down Mundung-ni Valley at the Battle of Heartbreak Ridge, provide insights to the modern application of penetration attacks in restricted terrain. In both cases a tank heavy force was able to penetrate enemy lines and turn the enemy's defenses—just as Bourcet had preached in is writings in the 18th century. The major problem during the Korean War was that the Army was not as well trained or organized to fight as combined arms teams as the situation demanded.

21. Edward N. Luttwak, *Strategy*, *The Logic of War and Peace* (Harvard, MA: Belknap Press, 1987), 16.

22. Bogdan Swita, "The OMG in the Defense" in *Military Review* (Fort Leavenworth: US Army Command and General Staff College, July 1992), 37.

23. Ibid.

24. Luttwak, 94.

25. Department of the Army, FM 71-3 *The Armored and Mechanized Infantry Brigade* (Washington, DC: GPO, 8 January 1996), 4-11. The forms of maneuver are envelopment, turning movement, infiltration, penetration and frontal attack. The forms of maneuver are part of a commander's art of war.

26. Our M1 tanks and Bradley Fighting Vehicles have a decisive role to play in restricted terrain. Tanks and Bradleys provide the technology overmatch that provides the greatest degree of protections and the highest volume of direct-fire. The M1A1 and M1A2, with superior armor protection, provide a mobile, tough, battle-winning platform. The capabilities of the M1AI as compared to NKPA armor and antitank weapons is a decisive advantage. The armor protection of the M1A1 cannot be defeated in the front or flanks by any known direct-fire NKPA tank or antitank weapon. The major killer of attacking tanks is mines, and hasty minefields can be penetrated with M1 tanks equipped with plows and mine-rollers, rocket-launched mine clearing charges [MICLICs] and combat engineers.

27. Niedringhaus, 27. "Initial assessments of armor performance and usefulness in Korea concluded that armor remained an indispensable part of ground combat, regardless of any limiting conditions under which it had to operate," 54.

28. Decisive points are further explained in FM 100-5 as "Decisive points provide commanders with a marked advantage over the enemy and greatly influence the outcome of an action. Decisive points are often geographical in nature, such as a hill, a town, or a base of operations. . . . Decisive points help commanders gain or maintain the initiative. Controlling these points in the attack helps them gain freedom of operational maneuver, thus maintaining the momentum of the attack and sustaining the initiative. . . . Securing decisive points can give the operational commander the flexibility to select from more than one line of operation for further advance." FM 100-5, 6-6 through 6-7.

29. FM 100-5, explains that capturing the enemy's decisive points is critical to gaining and maintaining the initiative. "Normally, more decisive points will be in a theater than a commander can seize, retain or destroy with his available resources. Therefore planning for decisive point is critical," 6-8.

30. Clausewitz, 619. Clausewitz determined that the first task in planning for a war is "to identify the enemy's centers of gravity, and if possible trace them back to a single one. The second task is to ensure that the forces to be used against that point are concentrated for a main offensive." The concept of decisive points is precisely what Clausewitz meant by "tracing centers of gravity back to a single one."

31. The NKPA has 4,500 self-propelled howitzers to support the advance of 3,500 tanks and an active duty force of 1,200,000 men. The average range of NKPA artillery is 11-25 km. To put only one-third of their range forward of the front lines the artillery would have to be positioned within 16.5 km of friendly forces.

32. FM 17-32 *Tank Platoon and Tank Company* (Washington, DC: GPO, 8 October 1952), 2-3.

33.Swita, 37.

34. US and ROK forces must use to their advantage the decided technological and training advantage they possess over the North Korean Army. Accurate artillery, devastating Multiple Launched Rocket Systems, fast, heavily armored tanks and impressive thermal sights and night vision equipment — all of these technological advantages will play a critical role in combat in the defiles. Technology overmatch, although vital, is not the only decisive element of victory. US forces outmatched the North Koreans and Chinese in technology during the Korean War. Today the North Koreans believe that they can negate US and ROK technology with primitive solutions—the use of hundreds of special forces teams; the employment of underground facilities to protect armored formations ready to attack; hardened artillery sites protecting one of the largest artillery forces in the world from aerial attack; and by conducting the attack with surprise and in bad weather. US forces outmatched the North Koreans and Chinese in almost every form of technology during the Korean War of 1950-1953, yet the UN forces were nearly defeated.

35. Jomini, 149-151. "When a country whose whole extent is mountainous is the principal theater of operations, the strategic combinations cannot be entirely based upon maxims applicable in open country . . . if a country covered with high mountains be favorable for defense in a tactical point of view, it is different in a strategic sense, because it necessitates a division of the troops. This can only be remedied by giving them greater mobility and by passing often to the offensive."

36. SSG Stephen Krivitsky, "The Three to Six Second Advantage; Tank Combat in Restricted Terrain," in *Armor* (Fort Knox, Kentucky, May-June 1996), 18.

37. Robert D. Heinl, *Dictionary of Military and Naval Quotations* (Annapolis, Md.: Naval Institute, 1966), 197. "In regard to mountain warfare in general, everything depends on the skill of our subordinate officers and still more on the morale of our soldiers." Clausewitz, *Principles of War*.

38. The concepts of Alvin and Heidi Toffler, as found in their book *War and Anti-War*. The First Wave occurred during the agricultural revolution characterized by hand-to-hand combat; the Second Wave as the industrial revolution represented by wars of mass destruction as in World War I and World War II; and the Third Wave, the ongoing information revolution, is knowledge-based warfare as evidenced in Operation *Desert Storm*.

39. One of the few US Army field manuals that explains how to fight in mountains is FM 90-6, June 1980.

40. The 2d Infantry Division in Korea remains the only US Army division with an alert status measured in 3-6 hours and has all of its tanks, Bradleys and Howitzers uploaded with live, "go to war" ammunition at all times.

41. Comments made by GEN Gary Luck, Commander in Chief US Forces Korea, at Camp Red Cloud, 3 July 1996.

42. Fehrenbach, 158.

43. The M1 tank possesses the only form of armored protected mechanical breaching in the US Army inventory. M1 tanks are equipped with tank plows and mine rollers — very effective against hasty minefields and obstacles laid by an attacker who has reversed roles to the hasty defense.

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Planning for Major Theater Wars: The Worst Case

Major Gregory A. Pickell, US Army

PERHAPS THE SINGLE MOST important duty of US military leaders involves determining the military force required to safeguard the nation and its vital interests. The end of the Cold War has complicated the calculations of national defensive requirements. How, then, does one go about such a process? The answer is at once simple in theory, and exceedingly complex in practice. Since the beginning of the modern era, nations have based defense requirements upon the capabilities of their most likely adversary or adversaries. The United States designed and built a force capable of dealing with the Soviet Union, adhering to this time-honored and inherently valid formula. Unfortunately, the fall of the Soviet Union has eliminated the relatively static requirements upon which US defense capabilities were based. Forecasting military requirements will likely never be as simple again.

Now the United States conducts adversary-based calculus based on Major Theater Wars (MTWs). During the latter stages of the Cold War, the United States planned to fight 1 1/2 wars, meaning a large war versus the Soviets in Central Europe and a secondary regional conflict somewhere else.[1] With the end of the Cold War, the emphasis shifted exclusively to "regional conflicts," or Major Regional Contingencies (MRCs).[2] What planners now call Major Theater War (MTW) lies at the heart of the controversy surrounding US military requirements. The debate has centered on the required capability to fight and win one or two of these conflicts; whether the ability to win multiple MTWs should be simultaneous; and whether the capability to execute "contingency operations" should be added to the MTW requirement.[3]

The central difference between the current debate and the Cold War calculus is the precise delineation of the enemy. Whereas the Soviet Union and its satellites provided a clearly identifiable and largely static capability requirement, the rise of the MTW-based strategy has thrown this aspect of the debate into turmoil. Given that the definition of MTW drives major force structure and resource calculations, the continual resolution of this detail is crucial.

Two factors—technology and force structure—have combined to cloud the precise definition of an MTW, so much so that the issue has become a debate within a debate in many ways. Ironically, both of these factors stem from one event. The crushing victory over the Iraqis in Operation *Desert Storm* provides the contextual framework within which the MTW requirements debate rages. On one side are the technologists, who believe that the success enjoyed by high-tech weapon systems during the war will significantly reduce the requirement for conventional combat forces in future MTWs. On the other hand, military force structure advocates use the force structure during *Desert Storm* as a benchmark against which future MTW requirements can be measured.

The* Desert Storm *scenario represents the war that, given a choice, our military would prefer to fight. . . . Unfortunately,* Desert Storm *represents the "best case," not the "most likely case" and, most important, is at the far end of the spectrum from the "worse case."

The great irony is that both sides have missed the appropriate focus in such a debate: the enemy. A valid discussion of military requirements must first focus upon likely opponents in future MTWs. Once completed, the identification of likely opponents must be closely followed by an analysis of the risk posed to US interests generally or military assets in particular by these opponents. Significantly, while both Iraq and North Korea show up as MTW candidates and both MTWs affect US strategic interests, the Iraqi MTW poses little immediate threat to US

military assets, while the threat on the Korean peninsula is immediate and undeniable. Clouding the issue by naming different "most likely" and "worst case" scenarios is not necessary. The risk posed to US troops in South Korea transforms the Korean MTW into a scenario that, while not necessarily the most likely MTW of the next 10 years, can certainly lay claim to "worst case." A failure by US military planners to orient on an MTW that is both entirely possible and the most damaging should it occur makes a repeat of the Korean War's darkest days not only possible but a near certainty should North Korea attempt to unite the peninsula by force.

Given Korea's standing as a potential worst case scenario, US military leaders' continued reference to MTWs in terms of "*Desert Storm* Equivalents" is striking. Although there are several reasons for this, it boils down to a central rationale—the *Desert Storm* scenario represents the war that, given a choice, our military would prefer to fight. *Desert Storm* was near perfect as wars go—a compliant enemy, ideal geography and climatic conditions, and a host of allies willing to pitch in under US leadership. Unfortunately, *Desert Storm* represents the "best case," not the "most likely case" and, most important, is at the far end of the spectrum from the "worse case." Korea is the military's nightmare, and with good reason—the United States is unprepared to engage in a Korean MTW, and the reasons are as numerous as those that account for US success in *Desert Storm*.

Defining Success

Whether the benchmark MTW is correct or not, the next crucial issue in the requirements debate is defining success for the chosen scenario—another reason why DOD planners favor *Desert Storm*. US military leaders defined success in *Desert Storm* planning as ejecting the Iraqi forces from Kuwait and restoring its legitimate govermnent.[4] This simple definition, coupled with the success enjoyed in its fulfillment, has since provided US military leaders with a relatively clear framework for MTW success criteria.

Other less obvious reasons make the Gulf War attractive to US military planners. The *Desert Storm* data used to develop future requirements is empirical rather than theoretical, and also easily integrates with the most important issue of all: technology validation. *Desert Storm* validated nearly every major US weapon technology. Technology lies at the heart of the current US approach to war and validating the years of research and investment underlies much of the MTW requirements process. No other potential MTW provides the validation potential that makes *Desert Storm* so attractive to US military planners.

Clearly, however, *Desert Storm* validation data and success criteria improperly drive requirements for a significantly different MTW, especially a Korean contingency. In this case, using *Desert Storm* data and criteria ignores unfavorable conditions that make it the worst case scenario.

Whereas the Soviet Union and its satellites provided a clearly identifiable and largely static capability requirement, the rise of the MTW-based strategy has thrown this aspect of the debate into turmoil.... Two factors — technology and force structure — have combined to cloud the precise definition of an MTW, so much so that the issue has become a debate within a debate.

US failures during a Korean MTW would have numerous sources. This is not to say, however, that the United States would suffer decisive defeat on the battlefield; US dominance in strategic air power and other technologies would eventually so devastate North Korea that peace on relatively advantageous terms would be likely. Like the Tet offensive of the Vietnam War, however, the calculus weighing victory or defeat in a Korean MTW will encompass far more than possessing the battlefield as the guns fall silent. In Tet the decisive factor was not the military defeat of the Vietcong, but US domestic opinion. Likewise, in Korea it would not be the possession of the battered hills adjoining the 38th parallel. Instead, the deciding element would likely be the casualty list, and, not surprisingly, we have *Desert Storm* to thank for a benchmark that even military novices recognize as unlikely to be seen again.[5] Nonetheless, the media and the public would inevitably draw such comparisons.

In the event of a conflict with North Korea, the public would focus overwhelmingly on one unit's performance; the 2d Infantry Division (2ID). As the sole US ground combat formation in Korea, 2ID's casualties during the first days of this conflict would be the public's key barometer of the Army's performance. Casualties may seem at first to be an unfair indicator. Public opinion is rarely concerned with fairness, however, and the casualty measure is legitimate insofar as it reflects combat effectiveness in many ways. As a result, this indicator is vital because all of the factors examined in this study play

a role in 2ID's effectiveness. Simply put, 2ID is a product of its less-than-ideal military environment.

Overall public assessment of a Korean MTW based on casualties should not be confused with public support for US involvement in the opening days of such a contingency, which is a fundamental part of American military heritage. Such support has been consistent in situations as varied as *Desert Storm*, Somalia and even early Vietnam. One can confidently assume that US support for 2ID troops would likewise be strong during the initial phase of a Korean MTW. Later, public assessment of military performance would be considerably more equivocal, with potentially profound consequences for a military that depends upon public support. The United States would likely prevail in military confrontation in Korea, but the cost in American lives would result in crippling political and military fallout once the guns fall silent.

Cold Starts, Tripwires and Rational Actors

Before the Korean scenario can be effectively studied, three key assumptions demand examination:

- US forces will be given minimal warning time to prepare for a North Korean attack.
- US Forces in Korea represent a "tripwire" designed to force US participation in the defense of the Korean peninsula.
- The North Korean government is a largely rational actor.

One of the key elements that makes the Korean MTW a worst-case scenario is the limited warning of a North Korean attack. This "cold start" assumption simply extrapolates from the Korean army's nearly constant state of readiness to invade the South. North Korean forces have been reported in a state of war readiness almost continuously in past years.[6] Reports noting NKPA exercises at a level of intensity not seen in recent times clearly illustrate the problem facing US Forces in Korea.[7] Given elevated readiness of the NKPA, US forces can only guess at which NKPA moves are feints and which are legitimate precursors to an invasion. US planners must assume that reaction time to a NKPA buildup and attack will be less than ideal even if we calculate correctly. Therefore, any responsible study must approach a Korean MTW from the perspective of a cold start.

Given the relative size of the of US ground contingent in Korea, it is difficult to avoid the assumption that 2ID and its attachments constitute a tripwire defense in the 1960s' NATO meaning. Two key ideas combine to invalidate this understanding. First, no strategic policy document currently available suggests that USFK constitutes a tripwire defense. Second, US planning fully integrates the US forces in Korea with our South Korean allies in what is hoped would be an immediately successful defense against a North Korean invasion. This political and strategic assumption of a successful defense ties in with an increasing belief in and out of military circles—that the United States must seize the initiative at the outset of a struggle and never relinquish it.

In discussions involving a North Korean attack across the 38th Parallel the most common objection raised is motive. Many experts argue that the likely outcome of such an attack would be disastrous militarily and politically for the North Koreans. While the military outcome would likely be defeat for the NKPA, the conclusion that the NKPA would therefore not attack is an exceedingly dangerous assumption. If published reports are any indicator, the North Korean government ranks among the most irrational in the world today.[8] While it is possible to point to the relative peace that has prevailed since 1953 as evidence of North Korean rationality, the North Korean leadership that presided over this peace has recently transitioned, leaving the rationality issue very much open to question. Military planning based on a belief in rational-actor theory represents an acceptable way of doing business only when one's opponent is clearly rational, and the North Korean government largely fails this test.

Assessing the Contributors to Success

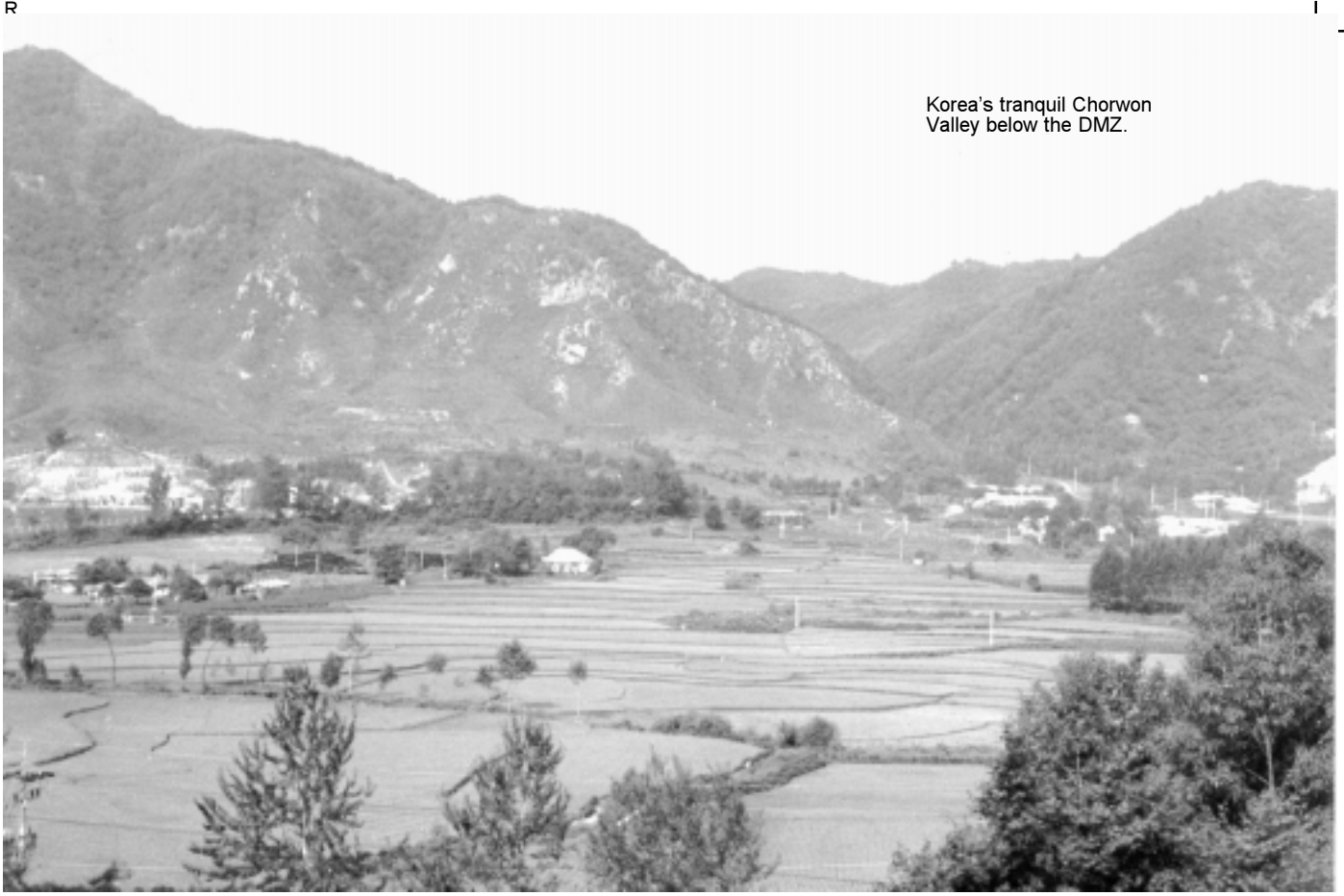
Miscalculations in significant areas could contribute to ineffective US military performance should the North Koreans attempt to unite the peninsula by force.

- Defensive Tactical Doctrine.
- Weapon Systems Technology.
- Air Power.
- Forward Basing.
- Information Warfare.
- Training and Doctrine Development.
- Unit Cohesion.

US dominance in these areas contributed to success in *Desert Storm*. However, this article demonstrates that factors contributing to success in the best-case scenario may be of marginal or insignificant value in a Korean contingency.

In some cases using prior US experience on the Korean peninsula serves as a meaningful benchmark in evaluating the military capability to deal with the North Korea threat. A comparative analysis of this type can be very illuminating and where such comparisons are not relevant, the factors will be evaluated against the current and future threat scenarios to achieve an effective comparison.

US Army



Korea's tranquil Chorwon Valley below the DMZ.

The 2ID AOR sets astride the three primary invasion corridors from the border to Seoul. Consequently, the division's ability to meet and delay or defeat a North Korean advance will be critical to success in the first days of any Korean MTW. . . . Despite these improvements, 2ID will likely not perform well at the tactical level.

US Defensive Tactical Doctrine in Focus—The 2nd Infantry Division. The course of any Korean MTW would hinge largely upon 2ID's performance in adversity. The 2ID Area of Operation (AOR) sets astride the three primary invasion corridors from the border to Seoul. Consequently, the division's ability to meet and delay or defeat a North Korean advance will be critical to success in the first days of any Korean MTW. It is fortunate, then, that the US presence is much more than meets the eye. In addition to the division's six maneuver battalions, USFK boasts a Military Police brigade, a Combat Aviation brigade, engineers and communication units, numerous support assets and other enhancements.[9] In terms of material and manpower, the US posture in Korea is immeasurably more robust than the US posture prior to hostilities in 1950.[10]

Despite these improvements, 2ID will likely not perform well at the tactical level. The reasons for this are manifold, and they include flawed defensive tactical doctrine and inappropriate weapon system technologies, both overshadowed by a refusal to recognize the unpleasant differences between the Gulf War and a Korean MTW.[11]

Parameters	*Desert Storm*	Korea
Type of Operations	Offensive, Mechanized Opns	Defensive, Light Infantry-Based Opns
Operating Environment	Open, Flat Terrain	Mountainous, Restricted Terrain
Engagement Distance	4000 Meters (+)	300-500 Meters(-)
US Force Mix	80% Armor—20%Light	60% Armor—40%Light
Enemy Force Mix	70% Armor—30%Light	20% Armor—80%Light

Figure 1. *Desert Storm* versus Korean MTW

Despite these differences between a *Desert Storm* MTW and a Korean MTW, however, the Army seems poised to fight the Korean MTW using tactics and equipment tailored to the *Desert Storm* scenario rather than the Korean MTW. The result cannot be reassuring.

Perhaps the greatest doctrinal disconnect regards US tactical defensive doctrine, which requires defense in depth coupled with a symmetric battlefield approach. If the NKPA makes its long-awaited move south toward Seoul, it will choose one of the three primary avenues of approach noted earlier. Unfortunately for the defenders, the NKPA would not meet a united 2ID in the chosen corridor. Instead, they would confront approximately 20-30 percent of the division's combat power along any one route, the other 60-80 percent distributed along the other two avenues of approach.[12] In addition, the portion of 2ID in the key corridor would then be further diluted by the distribution of its combat assets along the length of this avenue as 2ID develops what is seen as defense in depth as illustrated above. The odds in this flawed defensive arrangement greatly favor the attacker at every point of contact.[13] Further, this imbalance would not be addressed through the rapid movement of reserves from the less threatened corridors to the point of maximum danger. US defensive doctrine emphasizes mobility among assets such as artillery and attack helicopters.[14] This doctrinal methodology threatens defeat along the primary invasion corridor while the other two-thirds of the division's combat power is rapidly outflanked and forced to withdraw.

One of the key elements that makes the Korean MTW a worst-case scenario is the limited warning of a North Korean attack. . . . Given elevated readiness of the NKPA, US forces can only guess at which NKPA moves are feints and which are legitimate precursors to an invasion.

If the division were to save its armored and mechanized assets for a mobile counterattack, it would be even more vulnerable. In theory the division is more suited to this role; 60 percent of its assets are heavy formations designed with mobility and shock effect in mind. Unfortunately, these units would begin hostilities in assembly areas within range of NKPA artillery.[15] The NKPA ability to target easily divined US assembly areas for counterattack forces with thousands of artillery pieces and multiple rocket launchers would almost certainly cause catastrophic losses within the first hours of an attack. Ironically, units dug in along the DMZ, stand a significantly better change of survival in the event of a North Korean attack.

Weapon System Technologies. A second contributor to this inadequate tactical performance concerns tactically inappropriate weapon system technologies and their employment by 2ID. *Desert Storm* validated a variety of US weapon systems, some of which are dangerously inappropriate in a Korean MTW. While many weapon systems possess versatility that translates to effective performance in Korea, other critical technologies do not. An example of this inappropriateness is the premier US antitank weapon, the TOW II antitank missile system, which performed well in *Desert Storm*, achieving kills in excess of 4,000 meters. Unfortunately, there are few, if any, 4,000 engagement ranges in Korea, and the TOW II would be dangerously ineffective in this radically different environment.[16] The anticipated fielding of the Line of Sight Anti-Tank Weapon (LOSAT), with a l0-kilometer (km) engagement range, provides additional evidence of systems optimized for Desert Storm and entirely inappropriate in a Korean MTW.[17]

Tactical Air Power in Korea. One hallmark of the extremely successful Gulf War campaign was the dominant role played by US air power. The ability to target and significantly degrade the tactical combat capabilities of the Iraqi ground forces led to claims in some circles that Air Force battlefield dominance will be the decisive issue in any future campaign.[18] Indeed, close air support (CAS) in particular provides a potentially decisive differentiation between the ineffective Air Force role in the early stages of the Korean War and air power's role in a future rematch. While US Air Force and Navy aircraft effectively interdicted North Korean communications and supplies in 1950, Air Force and Navy CAS in the early stages of the Korean conflict was not effective. During the first days of the conflict, coordination between Air Force and Navy aircraft and ground personnel was extremely poor, and many fratricide incidents were reported.[19] Despite these problems both Air Force and Navy aircraft vigorously executed CAS, though their effectiveness was clearly open to debate.[20]

Current US CAS coordination is a far cry from the early days of Korea. Air-ground coordination, developed during the Vietnam War and further refined during *Desert Storm*, has largely eliminated the fratricide issue, and ground-attack aircraft such as the A-10 have added a tremendous punch to the air support arsenal. Clearly, the development of this instrument of modem combat can provide defending US forces in Korea a combat multiplier unavailable to the members of the 24th Infantry Division

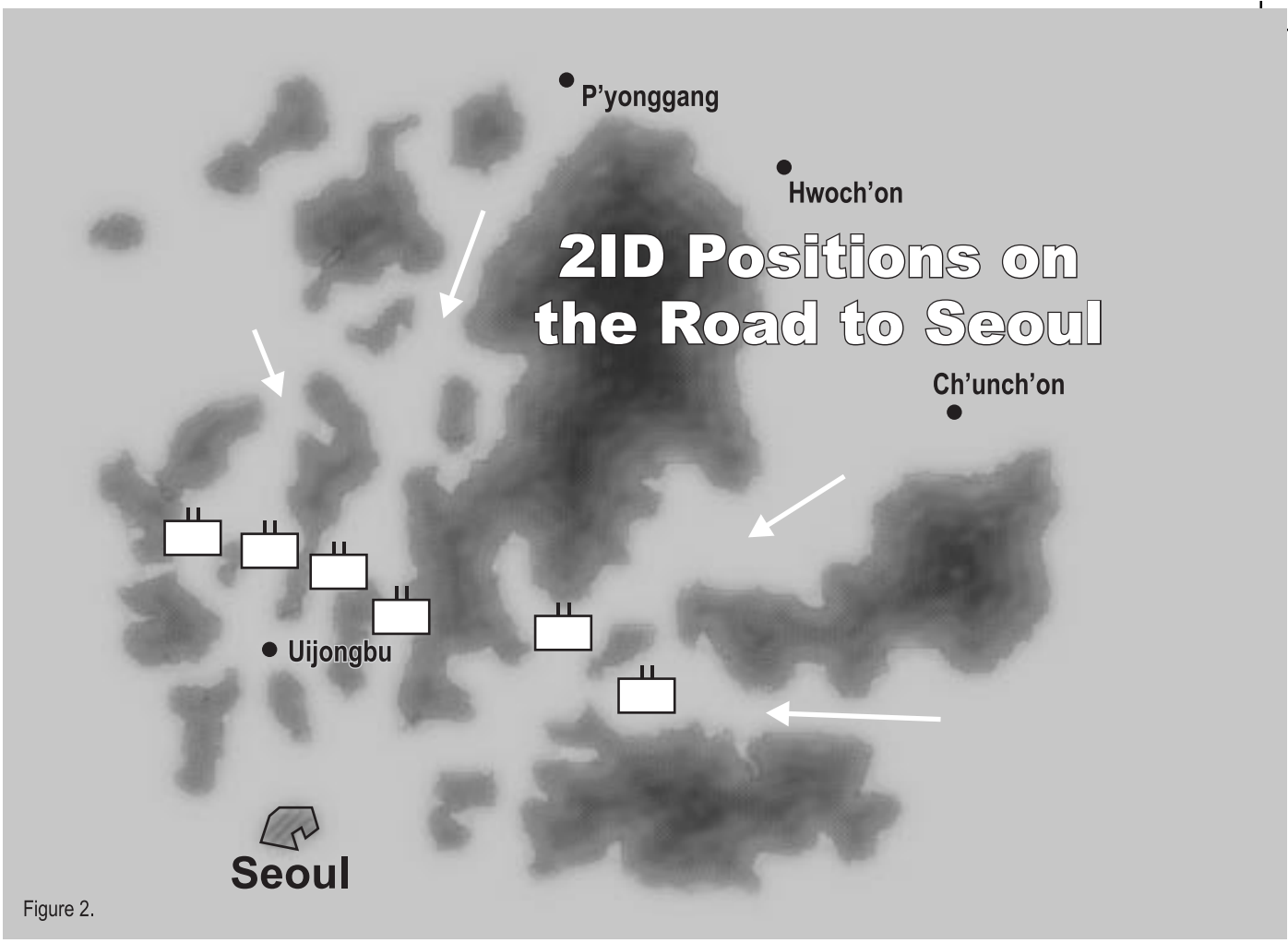


Figure 2.

Perhaps the greatest doctrinal disconnect regards US tactical defensive doctrine, which requires defense in depth coupled with a symmetric battlefield approach. If the NKPA makes its long-awaited move south toward Seoul, it would not meet a united 2ID in the chosen corridor. Instead, they would confront approximately 20-30 percent of the division's combat power along any one route. . . . Moreover, the division would receive very little CAS during the opening hours and days of a Korean conflict.

in July 1950. Most important, US Army defensive tactical doctrine depends heavily on assets such as CAS, and this support is rightly seen as vital to 2ID's survival.[21]

Given the criticality of CAS to 2ID's mission, it is unfortunate that the division would receive very little CAS during the opening hours and days of a Korean conflict. Several factors explain this seeming contradiction. First, as Edward Luttwak has argued, North Korea, with over 18,000 air defense weapons, presents an environment too lethal for US aircraft.[22] DOD doctrine lends credence to this line of reasoning, noting that suppression of enemy air defense and air superiority must be achieved before CAS can be executed: still, suppressing 18,000 NPKA weapons would be a time-consuming and perhaps impossible task.[23] Finally, if one assumes that the US Air Force and Navy aircraft have been allotted the air superiority and battlefield air interdiction (BAI) missions, the CAS assignment falls by default to the South Korean air force.[24] Since most South Korean aircraft are largely unsuited to the CAS role, the result is almost no CAS for the 2ID in the initial days and perhaps weeks of the conflict.[25]

Forward Basing. Another MTW tenet to emerge from the Gulf War is the vital role of forward-based troops and equipment in US military response time. Forward basing allowed rapidly moving troops from US Army Europe to Southwest Asia and using pre-positioned supplies and equipment from Diego Garcia in the Indian Ocean. Both of these advantages enabled the United States to place far more combat capability on the ground in Southwest Asia than would otherwise have been possible. The successful use of forward-based troops, equipment and supplies during *Desert Storm* cemented the concept in US strategic planning.

However, forward basing is not without risk. Dangers range from the loss of basing rights to preemptive strikes by the very enemy these assets are designed to deter. Forward-based forces must be placed so that they are able to respond quickly in

an MTW, but not vulnerable to a preemptive strike. Unfortunately, 2ID violates this fundamental forward-basing tenet, placing its units within range of North Korean 130mm and 170mm guns.

In this case, while basing 2ID seemingly represents the ultimate in reaction capability, it would actually produce in heavy initial losses for these troops in an MTW. This setback would have political as well as military dimensions; the public measures victory or defeat in any MTW's initial

Normal US military tours of duty range from two to three years, and some military experts feel that even this time interval is inadequate to develop long-term unit cohesion. . . . In Korea, positional turnover — the turnover in terms of assigned responsibilities — approaches 125 percent annually. . . . Ironically, the annual turnover of 43 percent among Japan-based personnel in 1950 was considered a "high" rate.

stage by the number of casualties suffered. The 2ID's proximity to the North Korean border, coupled with its static defensive arrangement and the NKPA's knowledge of 2ID battle positions combine to virtually guarantee heavy US casualties in the first hours of such a conflict. It is perhaps the greatest irony that US Japan-based units in 1950 were far more appropriately placed to respond to a Korean MTW than are present day formations.[26] In short, forward basing that was effective in *Desert Storm* can be significantly less advantageous when inappropriately applied in other MTW scenarios.

Information Warfare. Winning the information war is viewed by the US military as key to success on future battlefields.[27] A significant portion of this new conventional wisdom stems from *Desert Storm*, where US dominance of Iraqi command and control (C^2) information systems effectively paralyzed the enemy. This information dominance depends on two key ideas: degrading or eliminating the enemy's C^2 capability, and developing perfect or near-perfect information regarding the enemy's physical location and relative combat power. Unfortunately, neither of these factors will play an important, much less vital, role in a North Korean scenario.

Information warfare assumes that any future adversary will use many of the modem high-tech means of communication seen during the Gulf War. US dominance in high-tech C^2 (and the ability to interdict enemy C^2 capabilities) will then act to paralyze the enemy.[28] Unfortunately, the NKPA relies primarily on simple, low-tech forms of C^2, including antiquated field telephones (land lines) and bicycle or motorcycle couriers. In other words, very few of the forms of communication targeted by US information warfare doctrine exist to be interrupted. Secondly, US information warfare assumes that the enemy will attempt near real-time C^2 of forces moving into South Korea. Unfortunately, the scenario faced by the North Koreans is one that they have faced and planned for since the end of the Korean War. The planning for this simple, one-dimensional scenario has been in place for nearly 45 years. Thus, it is safe to say that the communications that information warfare is designed to interdict were passed years, even decades ago. Under these conditions, the current US emphasis upon information warfare in the C^2 realm will play a limited or nonexistent role in the opening stages of a Korean MTW.

The second tenet of information warfare, the pursuit of perfect intelligence, also runs into difficulty in the Korean scenario. In *Desert Storm*, the ability to develop high-fidelity information regarding the enemy strength and dispositions was instrumental in destroying huge amounts of Iraqi equipment with limited US losses. This tenet of information warfare strategy implies that US targeting and delivery capabilities will lead to the enemy's defeat with little or no loss of American lives.

Unfortunately, this concept overlooks an important component in a Korean MTW by assuming that once the necessary information is derived, the capability will exist to act effectively upon the information. This is generally not the case in Korea. The North Koreans have spent the decades since the 1953 cease-fire digging in their combat assets to an extent not seen in world history (except in Switzerland perhaps). Much of North Korea's heavy artillery and most of its troops and equipment are not only dug in, but revetted in mountain caves as well.[29] Again, the ability to determine the exact location of the enemy is only useful if one retains the ability to act effectively on the information. US intelligence capability can almost certainly point to the location of every cave-reveted North Korean heavy artillery battery that can range the 2ID. Unfortunately, no weapon in the US conventional inventory can effectively attack these positions.[30]

A critical component in any military calculus is the ability to field a military force with the capable of defeating the appropriate threat. The US military has determined that the threat will hopefully take the form of a second *Desert Storm* enemy and has tailored its training accordingly. The primary components that make up the Army's training system are the Combat Training Centers and the Army Battle Lab System.

Training and Doctrine Development. The three Combat Training Centers (CTCs) represent the heart of the Army's current battle training system. They in-

clude the Combat Maneuver Training Center (CMTC) in Hohenfels, Germany, the Joint Readiness Training Center (JRTC) in Fort Polk, Louisiana, and the National Training Center (NTC) in Fort Irwin, California. These three training centers employ state-of-the-art instrumented ranges and MILES equipment to provide maneuver units the most realistic training ever seen short of actual combat.

Unfortunately, while these CTCs are perfectly tailored for combat in many cases, they are not focused on the Korean scenario. One of the many reasons stands out above the rest—lack of appropriate mountainous terrain. There is essentially no mountainous terrain in any of the three CTCs. Ironically, the only exception, the Tiefort Range at the National Training Center, is off limits for training.[31] This lack of effective terrain is a mundane but crucial part of the problem; as T.R. Fehrenbach noted, "The NKPA ran through the valleys stolidly, and bounded up the ridges like rabbits; they had been doing it all their lives . . . again and again, officers were simply not able to organize attacks against the enfilading hills to clear the way."[32]

Further, although the CMTC possesses extensive quantities of rugged terrain (although the greatest elevation differential is approximately 200 meters), little attention is paid to moving through and fighting over this terrain. Instead, maneuver is conducted almost exclusively in the limited clear areas that filter through the terrain.[33] The inherent assumption is that no enemy would eschew the open terrain in favor of the hills. This lack of interest in mountain warfare clearly manifests itself in the composition of 2ID forces; with two light infantry battalions, less than 40 percent of 2ID is capable of fighting in mountainous terrain. By way of comparison, over 80 percent of the NKPA is composed of light infantry.[34] The general inapplicability of the CTCs to the Korean environment largely nullifies their contribution to US training for the MTW most likely to face US ground forces.

The Army Battle Lab System is the central component in the Army's attempt to determine the future of modem warfare.[35] This collection of laboratories has been charged with divining the future nature of combat and developing and implementing appropriate doctrine. As a key facet in this development and implementation process, distributed, interactive and virtual simulations help to forecast and prepare for future conflict to a degree never before envisioned.

Unfortunately, these laboratories suffer from a lack of focus on specific MTW characteristics that largely prevent them from providing directed innovations that might enhance the performance of units such as the 2ID in a specific contingency. As an example, the Dismounted Battle Lab at the home of the infantry, Fort Benning, Georgia, focuses on night fighting, target acquisition, enhanced lethality and improved survivability.[36] Unfortunately, there is no direct, application-oriented link between these focuses and potential MTW environments like Korea. Thus, while the attempt to determine the future of warfare is vital, an approach that focuses outwardly—on likely adversaries and likely operating environments—is also essential.

The rationality issue very much open to question. Military planning based on a belief in rational-actor theory represents an acceptable way of doing business only when one's opponent is clearly rational, and the North Korean government largely fails this test.

Cohesion. Unit cohesion represents a vital aspect of any army's capability to perform effectively in combat. Cohesion most often directly reflects the amount of time that a unit works and trains together before entering combat. US military leaders recognized this vital component in their decision to freeze all personnel in place for the six months leading up to the ground attack during the Gulf War.[37] General Norman Schwartzkopf also understood this requirement, as shown when he rapidly dismantled his staff's plan for rotating individuals in time periods as short as six months.[38] Additionally, the disastrous personnel rotation policies during Vietnam remain in the Army's collective memory.

Given this frame of reference, it is interesting to note that nowhere in the US Army today are rotation times shorter than in Korea. Normal US military tours of duty range from two to three years, and some military experts feel that even this time interval is inadequate to develop long-term unit cohesion.[39] Current policy requires that virtually all personnel rotate out of Korea after 12 months.[40] Worse, positional turnover—the turnover in terms of assigned responsibilities—approaches 125 percent annually.[41] In contrast, US personnel serving in the US Far East Command in 1950 served between one and three years. Those US personnel accompanied on their tours of duty were assigned for three years, and though exact data is lacking, personnel stationed in Japan during this time noted that many officers and senior noncommissioned officers opted for the longer stay.[42] Ironically, one source notes that annual turnover among Japan-based personnel in 1950 was 43 percent—a "high" rate the author blames for the unit's poor showing in the first days of the Korean conflict.[43] Given that unit cohesion is largely a function of personnel working together over time, the much-maligned divisions stationed in

Japan in 1950 arguably retained greater cohesion than 2ID does almost 50 years later.

While the US military's failure to orient its efforts on the most likely MTW is lamentable as well as potentially disastrous, it need not be a permanent condition. The US military's ability to adapt to a rapidly changing environment is well established. The well-directed emphasis on realistic training and modem equipment has produced an unrivaled military capability. If these facilities are provided proper direction, the existence of the Army's Battle Lab system can provide an unparalleled test bed developing effective tactics and technologies. These factors, coupled with the continuing efforts to avoid a "hollow" Army, mean that the current disconnect is eminently fixable.

Potential fixes particular to the Korean MTW are also close at hand. Foremost among these is the much needed relocation of 2ID to a location south of Seoul. Surprisingly, the primary reason why this has not been done already is financial rather than political. Suggestions to effect this move in the early 1980s ran aground over who would foot the massive costs.[44] Were this fix implemented, many problems associated with 2ID's vulnerability would be at least temporarily averted. Other potential solutions include a revision of US CAS planning, at least to the extent that USFK planners recognize that CAS will not save 2ID, freeing planners to examine other options. In short, a variety of available fixes can provide USFK effective direction in its planning for the Korean MTW.

Proper direction will indeed be vital. The current orientation on the "preferred-case" MTW has produced a military establishment that displays little interest in a Korean scenario, which eschews many of the technologies and concepts that make a *Desert Storm II* so attractive. In short, while the US military has changed considerably since the Korean War, without relevant, directed preparation for a Korean MTW, a repeat of July 1950 is not only possible but highly probable, should North Korea attempt to unite the peninsula by force. ***MR***

NOTES

1. Robert P. Haffa Jr., *Rational Methods and Prudent Choices: Planning U.S. Forces* (Washington, D.C.: National Defense University Press, 1988), 41-44.
2. Department of Defense, *A National Security Strategy of Engagement and Enlargement*, DOD Public Affairs, February 1995, 9. Notably, this document describes force "sufficient to help defeat aggression in two nearly simultaneous major regional conflicts." It does not say that the US will win both MTWs simultaneously, only that it will fight them.
3. DOD, Secretary Perry Address to the Mid-Winter Conference of the American Legion, DOD Public Affairs News Release, 27 February 1995. Perry noted that 'threats — call for a force that can fight and win two major regional conflicts nearly simultaneously."
4. Remarks by Colin Powell, 21 February 1995, Kennedy Center.
5. Interview with Richard Fieldhouse, Defense LA, Senator Levin, 14 March 1995. Fieldhouse described testimony by senior military officials to the effect dig the *Desert Storm* casualty toll represented the now benchmark for future conflicts. He noted that he found this benchmark wholly unrealistic.
6. Barbara Opall, "South Korea Tries New Evacuation Plan," *Army Times*, 10 April 1995, 16.
7. Ibid.
8. Defense Intelligence Agency, *North Korea: The Foundations for Military Strength*, Washington D.C., (Unclassified) October 1991, 30.
9. The 2d Infantry Division is a two-brigade division, consisting of six (two light infantry, two mechanized infantry, and two armor) battalions rather than the normal 10.
10. US Army Korea Liaison Office, The Pentagon, Washington, D.C., 27 February 1995.
11. Sources include, Defense Intelligence Agency, *North Korea: The Foundations for Military Strength*, Washington D.C., (Unclassified) October 1991, 42; Brassey's, *The Military Balance, 1993-1994*, International Institute of Strategic Studies, London, 1993, 44-145; Frank Chadwick, *The Gulf War Fact Book*, GDW, 1991, 68-69 and Frank Chadwick, *The Desert Storm Fact Book*, Bloomington IL, GDW, 1990, 50-51.
12. This deployment takes into account the distribution of tactical reserves, which will also be symmetric in its approach. The requirement to symmetrically cover three avenues of approach rules out the retention of an operational reserve under US tactical doctrine.
13. Gregory Pickell, "The Defeat of Task Force Smith, 20 October 1993," Unpublished manuscript.
14. Ibid.
15. DIA, *North Korea. Foundations for Military Strength*, 63.
16. See "The Anti-Armor Problem; a Case Study in Doctrinal Focus and Technology Acquisition," Unpublished manuscript; and DOD, "Tank versus TOW Engagement Ranges," Graphic.
17. DOD, "U.S. Army Weapon Systems," United States Government Printing Office, Washington, D.C. 1994, 183.
18. Jerome V. Martin, *Victory from Above: Airpower Theory and the Conduct of Operations Desert Shield and Desert Storm*, Maxwell AFB, AL, Air University Press, 6.
19. Roy E. Appleman, *South to the Naktong, North to the Yalu*, Office of the Chief of Military History, Washington, D.C., 1961, 51.
20. Ibid.
21. Interview with COL Bratton, Chief of Plans, US Army Korea, 14 March 1995. Bratton noted that the 2ID was "like any other US division" in its CAS requirements, and that US Air Force planning at all levels in theater supported this requirement.
22. Interview with Dr. Edward Luttwak, 16 March 1995. Luttwak noted that the Korean threat environment made the employment of expensive, high technology aircraft prohibitive.
23. US Army Field Manual (FM) 100-5, *Operations*, 1993.
24. Interview with MAJ Paul Buhl, US Army Operations Concepts and Evaluation Office, 16 March 1995.
25. "Air Forces of the World 88/89," Charles Miller, ed., *Interavia*, 450-455.
26. In July 1950 four US infantry divisions were stationed in Japan; the 7th, the 24th, the 25th and the 1st Cavalry. The only US military personnel at risk in the opening days of the Korean conflict were advisors attached to the Korean Military Advisory Group (KMAG). "Lessons for Today in Desperate Stand 42 Years Ago," *Army*, February 1992, 9.
27. Office of the Secretary of the Army, "The Army Enterprise Strategy: The Vision," Washington, D.C., 20 July 1993. Introductory remarks by Army Chief of Staff GEN Gordon R. Sullivan.
28. Ibid., 26.
29. *North Korea: The Foundations for Military Strength*, 41.
30. Bratton interview, 14 March 1995. Bratton noted that, "Current conventional means would be largely ineffective in destroying these sites, although unconventional solutions may provide methods of neutralizing this threat."
31. Defense Mapping Agency, 1085th Map Depot, Annapolis, MD.
32. T.R. Fehrenbach, *This Kind of War, A Study in Unpreparedness*, New York: Bantam Books, 1963, 134-135.
33. "The Defeat of Task Force Smith," 9.
34. *North Korea: The Foundations for Military Strength*, 4l.
35. Army Battle Labs, US Army Training and Doctrine Command (TRADOC) Pamphlet, May 1994. Introductory remarks by LTG Frederick Franks, Commander, TRADOC.
36. Ibid., 15.
37. Buhl Interview, 16 March 1995. Buhl participated in the detailed US operational concept planning for the Desert Storm MTW in 1990-1991.
38. GEN H. Norman Schwartzkof, *It Doesn't Take a Hero* (New York: Bantam Books, 1992), 360-361.
39. Dr. Steven L. Canby, Remarks during interview on 4 March 1995. Canby believes that effective combat units must often train together for three to five years before achieving true cohesion.
40. Interview with LTC Melville, US Forces Korea Liaison Office, The Pentagon, Washington, D.C. Melville noted that some personnel extended their tours or brought their families to Korea at their own expense. He noted that annual personnel turn over ranged from 90-95 percent annually.
41. Buhl interview on 16 March 1995. Buhl was assigned to Korea for four years — none of them sequential.
42. Interview with COL Carl Bernard, US Army (Ret) and MG Michael Lynch US Army (Ret) on 13 March 1995.
43. "Lessons for Today in Desperate Stand 42 Years Ago," *Army*, February 1992, 10.
44. Buhl interview.

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What We Haven't Learned

Captain Robert Bateman, US Army

EARLY SUMMER 1950 marked an unnecessary nadir for the professionals of the US Army. Following World War II, the United States once again disarmed to a degree far below the level of force that it expected to be able to project. The Army maintained 10 understrength divisions, four in Japan, one in Germany and the remaining five in the Continental United States (CONUS).[1] Despite the fact that this phenomenon had already occurred twice in the past 50 years, Army doctrine did not acknowledge the realities of congressionally imposed force structure.[2]

Doctrine is the core of a military institution, yet doctrine is only half the solution. The US Army has demonstrated an incredible capacity to create doctrine that it cannot execute. We develop complex doctrine that requires trained and cohesive units, but we have repeatedly failed our soldiers by committing them to combat without one component or the other. We are all comfortable with our various definitions of "trained." Numerous Army regulations and divisional training publications established standards that individuals and units must meet to earn the rating "trained." The same cannot be said for the term, or even the concept, of cohesion.

The capstone doctrinal manual of the Army, Field Manual (FM) 100-5, *Operations*, and the primary leadership manual, FM 22-100, *Army Leadership*, do not even define the term *cohesion* or use it in the context of their historical examples. Should this concern professional leaders?

On 25 June 1950, eight divisions of the North Korean army rolled across the border at the 38th parallel, invading our allies and prompting the United States to intervene to contain communism. Among the US units that went ashore in the first weeks of combat was the 2d Battalion, 7th Cavalry of the 1st Cavalry Division. Its soldiers were unprepared for combat.[3] In this they were not alone. The dissolution of 2/7 Cavalry on their second night in combat was a phenomenon repeated by numerous American units in the early days of the Korean War. Starting with the now-famous Task Force *Smith* and ending, largely, with the "stand or die" order in the Pusan Perimeter along the Naktong, American units broke and ran more often than we are comfortable remembering today. What lessons have we learned from this?

For the past century, doctrine has been written with the presupposition that the implementing units are fully trained, manned and equipped. Personnel policies, however, operated contrary to the doctrine. . . . The fault often lies at many echelons, and because of this the blame may be diffused. It is the Army overall, however, that is at fault for allowing personnel policies that destroy cohesion and committing ad hoc units to combat.

The Army has, for the past century, written doctrine with the presupposition that the implementing units are fully trained, manned and equipped. Personnel policies, however, operated contrary to the doctrine.[4] Committing tactical units to combat at anything but full strength with a trained and cohesive leadership team at the helm is irresponsible and dangerous. As any professional would readily agree, there is no excuse for committing men unfamiliar with one another to combat. Cohesion is a relatively new term used to describe an ancient concept.[5] It is the cement that holds units together. Sending men into combat without this factor is negligence. The fault, however, often lies at many echelons, and

The views expressed in this article are those of the author and do not purport to reflect the position of the Department of the Army; the Department of Defense or any other government office or agency.—Editor

Soldiers from the 3d Infantry Division take refuge from Chinese mortar fire, 13 February 1951.

US Army

Combat is terrifying. Combat with strangers is even more nerve-wracking. Men transmit their messages, building upon one another's fears even in the absence of visible evidence suggesting the cause for fear is valid. Without some force to maintain the unit as a viable combat element, it descends into chaos and suffers defeat.

because of this, the blame may be diffused. The Army overall, however, is at fault for allowing personnel policies that destroy cohesion and committing ad hoc units to combat.

This article addresses the interrelationship of doctrine and Armywide personnel policies in the periods before combat in both Korea and Vietnam. The central thesis here is that the Army has twice failed to match its doctrinal assumptions with the realities of the military force that exists in peacetime. In this developing age of limited, come-as-you-are wars, we can no longer afford to ignore the effects that Armywide manpower policies have on our units. Few dispute the claim that the luxury of the buildup and training period the United States and its allies had prior to *Desert Storm* was an anomaly. Political and social pressures place greater and greater pressures upon the military to execute perfect tactical operations. We will not accomplish them in the next war if we maintain the current trajectory. In the future we must have tactical units trained and prepared at the outset, not after they relearn the lessons their grandfathers wrote in blood.

Lessons Written in Blood

One of the great dangers in using military history to derive specific "lessons learned" is the potential for abuse. Samuel Clemens once said of statistics that there are "lies, damned lies, and statistics." Much the same could be said of "military utilitarian" military history.[6] With sufficient research, nearly any proposition or position may be defended or advanced with an appropriate example from history. Good history tells the story and allows the facts to speak for themselves.

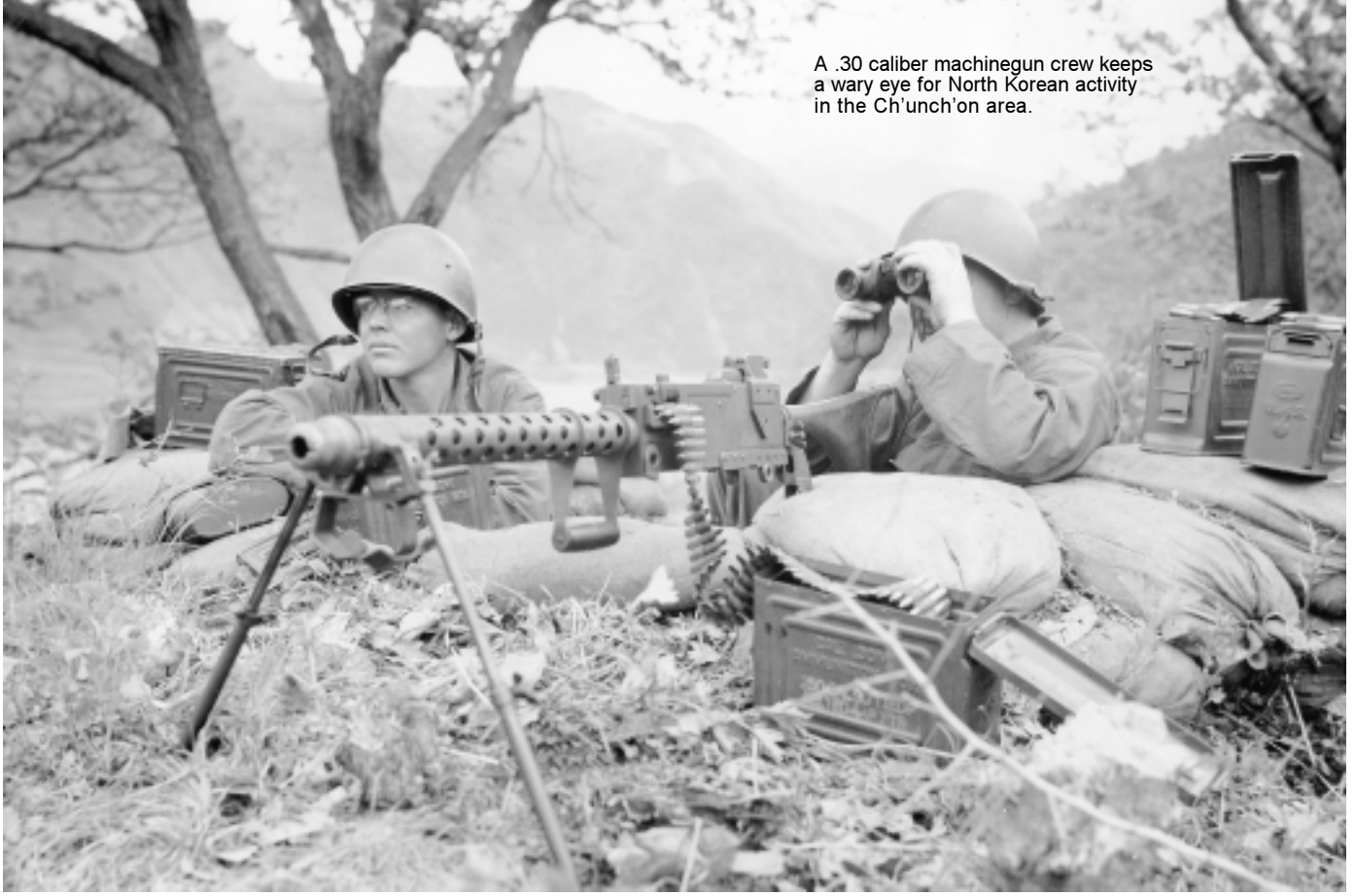
These, then, are the facts.

On 24 July 1950, the day that it arrived on the front lines in Korea, the 7th Cavalry Regiment was more than 30-percent understrength from its doctrinal Table of Organization. As in most regiments, there were only two of the three authorized battalions actually on hand.[7] On the night of 25 July 1950, the regiment was ordered to begin a series of retrograde movements. The 2d Battalion was in contact at the time and on the morning of 26 July 1950 reported one dead, six wounded and more than 199 missing.[8]

The narrative recorded by a participant in a postwar history of the regiment is characteristically vague about the events surrounding the first combat by the battalion.

"During the withdrawal that followed, the 2d Battalion was under continuous attack. The unit became scattered, and out of communications with each other; many platoons did not receive the order to withdraw, and general chaos and confusion resulted as enemy tanks and 'refugees' began firing wildly from the road leading to the rear."[9]

The next morning Captain Melvin Chandler, the commander of H Company, assembled a provisional



US Army

A .30 caliber machinegun crew keeps a wary eye for North Korean activity in the Ch'unch'on area.

It is the crew-served weapons that seal the image. Six 60mm mortars and 14 machineguns were abandoned, not by individuals, but by groups of men. If S.L.A. Marshall, for all his faults, ever got anything straight, it was probably his observation that crew-served weapons tend to stand fast longest and fight hardest because of the mutual psychological support of working in a small team tends to allow crew-served weapons to withstand the battering effects of fear.

force from the stragglers and established a defense farther to the south. His efforts collected approximately 300 soldiers moving to the rear. He then led a patrol north to recover what materiel they could between the current US lines and the lines of the North Koreans.[10]

More facts: On the night of 26 July 1950, the 2d Battalion, 7th Cavalry lost the following equipment: One switchboard, one emergency lighting unit, 14 machineguns, 9 radios, 120 M-1 rifles, 26 carbines, 7 Browning Automatic Rifles, 6 60mm mortars.[11]

We now have two elements of fact to build a historical account. History is the product of men sitting in clean, safe offices, years after the facts occurred, attempting to fill in the gaps. Reading between the lines of these facts, it is not difficult to discern that this was a rout. The evidence is available in numerous personal accounts not cited here; for our purposes, allowing the facts to speak for themselves is enough.

To begin with, we know that the battalion had not occupied a defensive position for very long before the "bug out." Switchboards and land-line communications were therefore probably not yet in place below the battalion level. Nor was it likely that light sets were yet established in company positions. That these items were lost suggests that all was not well even at the battalion headquarters. That is bad enough, but at the company and platoon levels, nine radios were lost. Only officers communicated by radio. However, even though the radios were carried by radio-telephone operators (RTO), that nine of them were lost points to rather complete unit disintegration. In effect, if the officers could not (or would not) maintain discipline in their immediate personal vicinity (RTOs in the infantry are never far from their officers), we begin to see a picture in which it was every man for himself in a desperate surge to the rear.

The image of desperation solidifies with the cold fact that 153 individual weapons—rifles, carbines and Browning Automatic Rifles (BARs) were reported lost. These were discarded, almost certainly, by men gripped with panic. It is the crew-served weapons, however, that seal the image. Six 60mm mortars and 14 machineguns were abandoned, not by individuals, but by groups of men. If S.L.A. Marshall, for all his faults, ever got any-

thing straight, it was probably his observation that crew-served weapons tend to stand fast longest and fight hardest. According to Marshall, and many who have validated his initial observations since then, the mutual psychological support of working in a small team tends to allow crew-served weapons to withstand the battering effects of fear better than most.[12] The lost weapons, the 300 men "collected" by Chandler and the lost communications gear all contribute to a panorama of disintegrating control and small-unit cohesion. Poor communications, the fact that some elements of the battalion were in limited contact with the enemy and the rumors of defeat in other sectors combined to overwhelm the system of discipline and organization.

The bureaucratic Army system dictated when individuals should command according to the needs of the individual, and leaders were replaced and switched according to personnel regulations. We may take this as a given today: command rotations regardless of the situation and high personnel turbulence in peacetime are now standard American practices.

Any number of causes could be paraded forth, but the facts suggest that on the night of 25 July 1950, the 7th Cavalry lost what little cohesion it had and turned into a mob. This mob then further broke down into individuals who dispersed, escaping as best they could toward friendly lines. What caused the disintegration of 2/7 Cavalry?

The Loss of Cohesion

While the analogy may overreach somewhat, one author recently suggested that fear is communicable in military units much as force is transmitted in the obscure field of granular physics: men react to one another's emotions.[13] Combat is terrifying. Combat with strangers is even more nerve-wracking. Men transmit their messages, building upon one another's fears even in the absence of visible evidence suggesting the cause for fear is valid. Without some force to maintain the unit as a viable combat element, it descends into chaos and suffers defeat.

Military historian and sociologist Bruce Watson explains how military units lose their cohesion in a somewhat more systematic way in his book *When Soldiers Quit, Studies in Military Disintegration.* Watson suggests that disintegration, from military unit to crowd, will occur when the following conditions exist. First, he suggests that there must be a failure in leadership. Next, the soldiers' primary groups collapse and become alienated from the institutional objectives of the military. Finally, when the primary groups become desperate because they believe that there is no way to improve their condition within the boundaries of the normal organizational system, the situation is ripe for the loss of formal and approved cohesion.[14]

Watson is right. What happened to the 2d Battalion, 7th Cavalry, and indeed much of the 1st Cavalry and 24th Infantry Divisions, during those first desperate days in Korea was something very similar. Despite the fact that several historians have begun the process of "rehabilitating" the reputation of Task Force *Smith*, the lead element of the 24th Infantry Division, the fact remains that TF *Smith*, like the other battalions of the first divisions committed, dissolved after it was ordered to withdraw.[15]

Our doctrine was not structured to support the reality of the conditions faced by our forces. The most recent edition of the Army's capstone doctrine, Field Service Regulation 1949, was generally just an update of the 1941 edition. It stressed infantry operations at the core of Army operations and the importance of combined arms in all situations, but it did not address the importance of unit cohesion or solidarity.[16] Doctrine did not match the reality of understrength, undertrained units.

How do we ensure that our troops do not fold when placed in situations such as that faced in the summer of 1950? Since it appears that we may again travel a similar trail, and we have not matched our doctrine to our diminishing resources, have we really demonstrated the capacity to learn, to develop wisdom from our collective mistakes?

In 1963 T.R. Fehrenbach published his classic work on the Korean War, *This Kind of War*. The first several chapters read as a study in military unpreparedness. Fehrenbach was a retired Army officer writing history with a purpose. He did not want to see untrained and understrength American units committed to combat again. In the summer of 1965, less than two years after the publication of *This Kind of War*, the United States sent large formations of soldiers in harm's way again. The lead element for the Army was, once again, the 1st Cavalry Division. One battalion in that division was decimated in its first major engagement just a few months later. Once again, 2-7 Cavalry would suffer the effects of the split between Army doctrine and Army policy, this time in the tall grass of a place known as LZ Albany.[17]

Things were generally better for the 1st Cavalry that summer. They had recently completed extensive testing of the new air assault concept and most

US Army

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battalions were highly trained as a result of this process. Unfortunately, one battalion was not. During the course of the training and evaluation process, the unit that would be reflagged as the 2d Battalion, 7th Cavalry had been the opposing force (OPFOR) for the division during the experiment phase and manned at less than 50 percent in soldiers and leaders.[18] Besides the OPFOR role, it also filled many of the division guard and detail requirements. This battalion was not ready for combat. In order to collect the requisite leadership, the battalion commander and command sergeant major ran a dragnet across Fort Benning, Georgia, for the 30 days available between notification and deployment. The battalion deployed with approximately 70-75 percent of its authorized personnel and conducted only one "familiarization ride" in a helicopter. More than 50 percent of the leaders had joined the unit in the preceding 30 days.[19] Added to this chaos were restrictions on which soldiers were even eligible for deployment based upon various factors of time in service and the ends of their enlistment contracts. There was no "stop-loss" for the 7th Cavalry that year—nor for entire the Army throughout the war.

In November 1965 this same battalion participated in Operation *Silver Bayonet* in the Republic of South Vietnam. Deployed just three months earlier, this was its first major combat operation—just days after the battalion had changed command. Now an untried unit, with most of the leadership barely familiar with the soldiers (who were often new to the battalion themselves), had new leadership at the top as well. The bureaucratic Army system dictated when individuals should command according to the needs of the individual, and leaders were replaced and switched according to personnel regulations. We may take this as a given today: command rotations regardless of the situation and high personnel turbulence in peacetime are now standard American practices. But these practices are wrong and contradict our doctrinal objectives.

Although led by one Korean War veteran in a division commanded by another, the 2d Battalion, 7th Cavalry was in some areas just as unprepared as it had been 15 years earlier and for some of the same reasons.[20] Numerous factors caused what later

We are, for various reasons, training less. Our battalions do not measure up, by most any standard, to the criteria established by the Army in its doctrine and are not performing well at the National Training Center or Joint Readiness Training Center. . . . Reorganization along traditional regimental lines may be part of the solution. It will only work, however, with a personnel policy that fosters unit cohesion and true regimental affiliation.

happened at LZ Albany; this article only serves to compare this one battalion's experiences in the first battles of two different wars.

Foundations and Doctrine

While acknowledging the danger of drawing any hard and fast lessons from history, the following facts apply both to the era immediately prior to the Korean War and potentially to today.

Unit cohesion depends on stability and training. Performance in combat depends on cohesion and competence. These observations appear obvious. Unfortunately, we seem to ignore the implications, as evidenced by three further observations about the modern Army at the tactical level.

- We are, for various reasons, training less. Our battalions do not measure up, by most any standard, to the criteria established by the Army in its doctrine. The evidence of this is regularly splashed across the headlines of *Army Times*: The Army is not performing well at the National Training Center or Joint Readiness Training Center.
- Our personnel policies do not support cohesion at the tactical unit level. In fact, the case is nearly the opposite.
- Our doctrine does not, at any echelon, sufficiently acknowledge the importance of unit cohesion.

If the spectrum of war is defined by self-imposed limitations upon the combatants' means, objectives, geographic area and national support, then we are entering a new age of limited war. The limitations placed upon the new American way of war are even more restrictive. For the United States limited war is further constrained by a uniquely American issue, the requirement for perfection.

If we intend to fulfill our charter as a credible force for the implementation of "policy by other means," we must regain lost ground. US military history further suggests that we cannot rely on additional funds or forces.[21] We must therefore focus upon that which we can change. American military power suffers continual trade-offs during fiscal tightening. We cannot afford everything, and our options for dividing funds are simple. We may spend money on training and manpower, equipment modernization, current missions or quality of life issues. Almost every item in the Army budget fits, albeit roughly, into one of these elements. As in the interwar period of 1918-1941, we cannot fund everything. There are, however, ways in which we may use ideas and words to increase our combat effectiveness without significant expenditures. There is room for improvement in our doctrine and the policies through which we "manage" our forces.

The actual tactical composition of the future Army, be it the "medium brigade" or something else, is almost irrelevant to the issue. Regardless of the name, we are leaning toward smaller units as our basic tactical building block. This trend suggests a possible solution with deep roots in Army history. We may use human nature to help build cohesion by bringing back the regiments.

Consider the British: "There was only one religion in the regular army, the regiment; it seemed to draw out of them the best that was in them."[22] Although addressing another army in another period, the factors apply to human beings generally. Divisions are, for the most part, too large to invoke emotional affiliation except when viewed in the past tense. Regiments, true regiments such as the US Army lost with the restructuring into the Pentomic Army of General Maxwell Taylor, may form the basis for cohesion at the tactical level in the future as they have in the past.[23]

We are facing a period of decreased personal commitment to the military and a concurrent loss of professionalism characterized by a devotion to self over a devotion to the institution. While many of the reasons for this are tied to the recent downsizing of the military and the resultant uncertainty that the survivors feel towards the Army as a body, the effects may well prove disastrous unless checked.[24] Reorganization along traditional regimental lines may be part of the solution. It will only work, however, with a personnel policy that fosters unit cohesion and true regimental affiliation.

Without mincing words, we must overhaul the entire personnel system for tactical assignments of enlisted soldiers and company grade officers. We must create a new process that acknowledges regimental affiliation in more than name. This has been tried, in half-measures, before. This time we need to go beyond the well-intentioned experiments of the

COHORT and regimental affiliation systems and redesign our personnel assignment and development programs with one goal in mind: developing cohesion at the tactical level.

Finally, we cannot avoid the fact that training at the tactical level has taken a severe hit in the past several years. While acknowledging that we cannot afford to do everything we would like, given the limited resources provided to us by Congress, we must place this at the top of our priority list and hope for the best in the other areas. This will be difficult. It requires a firm decision at the highest levels and a subsequent ironclad commitment to that decision. The pressures will come from within and outside the Army. Congressmen cannot readily point toward an increase in training readiness for their constituents when the time comes for reelection; it is subjective and not material. It is, therefore, a hard sell when the budget is reviewed. This is especially true in light of the cuts necessary in other areas to pay the bill for training. Yet it is the price leaders must pay to honor our martial ancestors and protect those who follow us. It is the least we can do. ***MR***

NOTES

1. Roy K. Flint, "Task Force Smith and the 24th Division: Delay and Withdrawal, 5-19 July 1950," in *America's First Battles*, Charles E. Heller and William A Stofft, ed. (Kansas: University of Kansas Press, 1986), 269. Also see Edward Daily, *Skirmish: Red, White and Blue, The History of the 7th U.S. Cavalry in Korea* 1945-1953 (Paducah, KY: Turner Publishing Company, 1992). Flint discusses the general manning and material condition of the Far East Command circa 1950; Daily describes the specifics of the training and manning levels of the 7th Cavalry at that time. Daily enlisted in the US Army in 1949 and was assigned to the 7th Cavalry in Japan later that year. His postwar history of the 7th Cavalry is, in part, biographical.

2. William O. Odom, *After the Trenches, The Transformation of U.S. Army Doctrine 1918-1939* (College Station, TX: Texas A&M University Press, 1999). Odom writes about the problems faced by the US Army following World War I, many of which were repeated after World War II.

3. Several histories of the US Army of Occupation stationed in Japan point towards the generally low level of training that many units had. This does not mean there was no training, only that what training occurred was considered inadequate even at the time. Despite the fact that in the months immediately preceding the North Korean invasion and US intervention there had been a push to increase training, resources in time, material and training land constrained the divisions stationed in Japan from conducting anything much beyond rudimentary platoon and company level training.

4. Donald Vandergriff, "The Culture Wars," from *Digital War: A View from the Front Lines*, ed. Robert L. Bateman (Novato, CA: Presidio Press, 1999), 229.

5. Roger A. Beaumont and William P. Snyder "Combat Effectiveness: Paradigms and Paradoxes" in *Combat Effectiveness, Cohesion, Stress and the Volunteer Military*, Sam C. Sarkesian, ed. (London: Sage Publications, 1980), 20-56 and Sam C. Sarkesian, "Introduction" in the same volume. Sarkesian defines cohesion as "the attitudes and commitment of individual soldiers to the integrity of the unit, the 'will' to fight and the degree to which these are in accord with societal values and expectations." While this is a useful definition, some disagreement exists among military sociologists as to the nature of cohesion. Basically this is a chicken-or-egg question. Does cohesion cause higher military effectiveness, or is it the result or byproduct of military effectiveness which may or may not serve to raise that effectiveness even higher? In any case, cohesion is theoretically a sought after commodity.

6. Allan R. Millett, "American Military History: Clio and Mars as 'Pards'," in David A. Charters, Marc Milner, and J. Brent Wilson, ed., *Military History and the Military Profession* (Westport, CT: Praeger, 1992). Millett has written extensively on the state-of-the-art (of military history) since the 1970s. Also see "American Military History: Over the Top," in Herbert J. Bass, ed., *The State of American History* (Chicago: Quadrangle, 1970), 157-182, and his 1975 International Commission for Military History conference paper, "American Military History: Struggling Through the Wire."

7. Flint, "Task Force Smith and the 24th Division: Delay and Withdrawal, 5-19 July 1950," 270.

Note also that T.R. Fehrenbach, *This Kind of War* (London: Brassey's, 1963, 1st Brassey's ed. 1994) takes a slightly different tack in assigning blame. Although Fehrenbach devotes a scant few sentences to the initial withdrawals of the 25th ID and the 1st Cav, he does note the understrength-by-design issue as it related to the 24th ID. Curiously, given his motives in writing the book, he focused more upon what he sees as the "soft" nature of the American recruit of 1950 and less upon organizational failings.

8. Daily, *Skirmish: Red, White and Blue, The History of the 7th U.S. Cavalry in Korea* 1945-1953, 28 and interviews by author with Daily, various dates, 1994-1997. Daily participated in these operations as a private in Hotel Company, 2/7 Cavalry. He was later promoted via battlefield commission to 2LT, and subsequently captured during a North Korean attack along the Naktong perimeter. He escaped some 30 days later near the 38th parallel and evaded capture until he could rejoin US forces. He fought through the summer of 1951 in 2/7 Cavalry until replaced as part of the new individual rotation policy.

9. Ibid., 29.

10. Ibid.

11. Ibid.

12. S.L.A. Marshall, *Men Against Fire* (New York: William Morrow & Company, 1947). Marshall's observations were taken at face value for a long time. Only in the past 10-15 years have his statistics and claims been held up for rigorous examination. Several were found wanting. See Roger Spiller, "S.L.A. Marshall and the Ratio of Fire," *The RUSI Journal*, 133/4 (Winter 1988), 63-69. Spiller noted in the 1989 article that the number of companies Marshall claimed to have interviewed varied widely. In addresses made at Fort Leavenworth in the early 1950s Marshall claimed 603 companies interviewed, while by 1957 the number had dropped back down to "something over 500." In short, Marshall's claims may have been baldly exaggerated. Moreover, it appears that Marshall produced his famous "25 percent fire their weapons" statistic out of whole cloth, since he apparently never actually asked that question in any of the many interviews that he did conduct. Also see Fredric Smoler, "The Secret of the Soldiers Who Didn't Shoot," *American Heritage*, 40/2, (March 1989), 37-43.

13. Robert L. Bateman, "Shock and the Digital Battlefield." *Armor* 107 (January-February 1998), 14-19.

14. Bruce Allen Watson, *When Soldiers Quit, Studies in Military Disintegration* (Westport, CN: Prager, 1997), 156-163.

15. Flint, "Task Force Smith and the 24th Division: Delay and Withdrawal, 5-19 July 1950," 281-282. Flint describes how light (relatively) the casualties of TF Smith had been up until the order to withdraw. After reconsolidation following the withdrawal into Taejon, the TF reported 148 enlisted and 5 commissioned officers missing. This was, in fact, far better than the estimated 250 that were missing in the immediate period following the disintegration of TF Smith.

16. Robert A. Doughty, *The Evolution of US Army Tactical Doctrine, 1946-76*, (Leavenworth, KS: Combat Studies Institute, 1979). Doughty traces the evolution throughout the period covered by this essay. Nowhere is it noted that the Army has ever incorporated the lessons derived from the study of the military by several noted sociologists into its tactical doctrine. To be fair, at the outbreak of the Korean War the seminal study of the behavior of men in combat, Stouffer, et al., *The American Soldier*, had only just been completed.

17. LTG (Ret) Harold Moore, Mr. Joseph Galloway, Larry Gwin (XO, A Co, 2/7 Cav), PVT Robert Towles (D Co, 2/7 Cav), interviews with author, 22-24 November 1996, Ia Drang Reunion, Washington DC; and John Howard (Med Plt, HHC, 2/7 Cav), interview with author on 17 March 1997, Harrisburg, Pa.

18. Harold Moore and Joseph Galloway, *We Were Soldiers Once and Young* (New York: Random House, 1992), 207-208. Moore and Galloway tell the story of the battles of the Ia Drang Valley in November 1965. In their analysis of the defeat suffered by 2/7 Cavalry near LZ Albany, they focus primarily upon the leadership changes in the battalion immediately before the battle. Given space limitations and their focus upon 1/7 Cavalry and the fight at LZ X-Ray, they do not tell the complete story of 2/7 Cavalry. There are other, more institutionally based causes for what happened in the tall grass over the course of 24 hours in late November 1965.

19. CSM (Ret.) James Scott, interview with author, 23 November 1996, Ia Drang Reunion, Washington DC. CSM Scott was the battalion CSM for 2/7 Cavalry through this period and into the fight at LZ Albany. His account of the battle, but more importantly the months before the battle, are detailed and explicit. In describing how the battalion learned that it would be sent into combat CSM Scott relates that the first he personally heard of the deployment was from television, when President Johnson announced that he was sending the "Air Cavalry."

20. Moore and Galloway, *We Were Soldiers Once and Young*, 207-210. The new battalion commander of 2/7 Cavalry was LTC Robert McDade, a Korean War veteran who had spent most of his career after that war in the personnel field.

21. Robert L. Bateman, "Without Malice, Without Sympathy: American Antipathy to the Military, 1607-Present," *ARMY* (January 1999), 36-47. Like Odom in *After the Trenches*, but over a longer timeframe, Bateman examines the near perpetual phenomena of American unreadiness that occurs as a result of the American attitude towards military forces over the course of history.

22. Lord Moran, *The Anatomy of Courage*, 2nd ed. 1966 (Garden City Park, New York: Avery Publishing Group, 1987), 184.

23. Robert Bateman, "The Uses of History" *ARMY* (Summer 1999).

24. David McCormick, *The Downsized Warrior, America's Army in Transition* (New York: New York University Press, 1997), 157-194.

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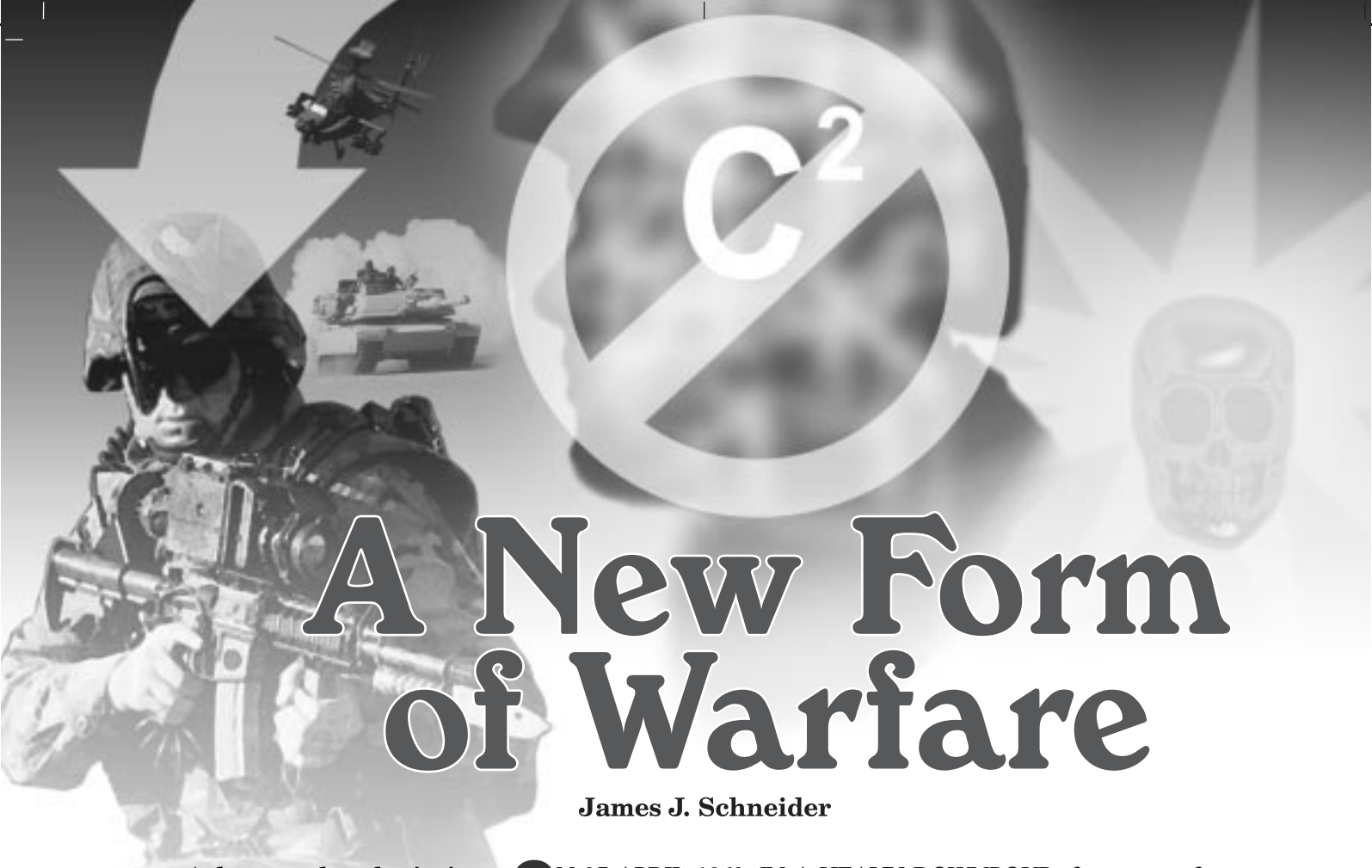

A New Form of Warfare

James J. Schneider

***As horses and mechanization revolutionized maneuver and industrialization geometrically advanced firepower, information technology is transforming communications, command and control. James Schneider argues that degrading an enemy's command and control paralyzes its military force as surely as successful maneuver exhausts it and a strategy of attrition aims at annihilation. Schneider outlines this third form of warfare, relates its historical roots, explains its current applications and calls it* cybershock.**

ON 27 APRIL 1863, IN A HEAVY DOWNPOUR, four corps of Major General Joseph Hooker's Federal Army of the Potomac began the first operational maneuver in military history. Thanks to the employment of the Beardslee field telegraph, a large portion of his army moved off the battlefield before Chancellorsville. General Robert E. Lee, past master of Napoleonic warfare, was "temporarily baffled" by the strange Union maneuver.[1] But five days later, at Lee's direction, Thomas J. "Stonewall" Jackson thwarted it. Jackson's blow to Hooker's army was also unique in that it was perhaps the first instance in military history where a force was defeated by *cybershock*, the systemic paralysis of an army through its inability to direct and control itself effectively.

Understanding the concept of cybershock is important because it offers a conceptual structure to elevate the disparate notions of command and control warfare (C^2W) and information operations (IO) to the same level as maneuver and attrition. Indeed, this article argues that cybershock is a new kind of defeat mechanism wholly analogous to, but distinct from, attrition and maneuver. Historically, cybershock evolved in the wake of the emergence of operational art. Only now with the current emphasis on information operations has the Army begun to seriously consider the practical and revolutionary implications of cybershock as a new form of offensive and defensive action.

Delbrück's Cut

In 1900 German military historian Hans Delbrück published the first of four volumes in *History of the Art of War within the Framework of Political History*.[2] The project embraced the history of warfare from the Persian Wars around 500 B.C. to the end of the Napoleonic Wars in 1815. Toward the end of his study, Delbrück concluded that the whole history of warfare could be expressed by two patterns of defeat. The first pattern he called a strategy of annihilation (*Niederwerfungstrategie*);

the second, a strategy of exhaustion (*Ermattungstrategie*). Annihilation aimed at the destruction of the enemy's army through a decisive battle. Here the dominant mechanism of defeat was attrition. Exhaustion, on the other hand, sought the enemy's moral and logistical collapse through a combination of battle *and maneuver*.[3]

Building on an initial insight from Carl von Clausewitz, Delbrück noted that employing a particular strategy depended on the military means available and the political purpose for which the war was being waged.[4] A strategy of annihilation was appropriate for a war fought for unlimited aims with unlimited means; a strategy of exhaustion was a war fought for limited aims with limited means. Most often the selection of war aims became a function of the perceived domination of one side over another. A perceived deficit in military means, Delbrück believed, drove the weaker side to adopt exhaustion, the stronger side to seek annihilation. The correlation of forces, furthermore, entailed a particular force posture. A strategy of exhaustion, implying weakness, suggested a defensive posture since defense is the stronger form of war. A strategy of annihilation implied strength and suggested the weaker but more decisive offensive posture.[5]

The Heat of Battle

Delbrück's framework enumerated the two defeat patterns that had dominated military history until the Industrial Revolution. For thousands of years annihilation found its tactical expression through attrition in the techniques of the old armies based on physical shock. Beginning around the 17th century, the increasing use of firearms required permanent bases of operations. The emerging logistical importance of the base of operations created a new geometric relationship in a theater of operations among the base of operations, lines of operations and objective point. This relationship for the first time gave rise to *maneuver* as a viable and second method of defeat.

Maneuver, movement to achieve or deny positional advantage over an opponent, exploited the new theater geometry and logistics of new firepower-based armies, since positional advantage was most often sought against the adversary's line of operations. The ensuing maneuver and counter-maneuver led to a kind of *danse macabre* punctuated with mutual embraces of battle. The dynamics of maneuver and battle led inexorably to logistical exhaustion and suggested an underlying physical mechanism for annihilation and exhaustion in pre-industrial armies.

In *On War* Clausewitz asks a fundamental question: "What usually happens in a major battle today?" He replies, "the first thing to strike one's imagination, and indeed one's intellect, is the melting away of numbers. . . . The battle slowly smolders away, like damp gunpowder. . . . Gradually, the units engaged are burned out, and when nothing is left but cinders, they are withdrawn . . . like burned-out cinders."[6] One can extend Clausewitz's evocative metaphor to gain insight into the essential physics of classical battle. *Armies in battle burn, melt and vaporize*. The heat of battle is calibrated in the temperature of casualties. Armies enter battle in a solid state of cohesion, like a block of lead. The heat and energy of combat attrition may be so great as to vaporize instantly the entire mass in a battle of annihilation and cause a great disintegration of morale and will to fight. The combination of attrition and maneuver may slow the process with an intervening "liquid" phase of logistic collapse before the army is swept away in a disintegrated cloud of human ash and iron debris.

"Gradually, the units engaged are burned out," said Clausewitz, "and when nothing is left but cinders, they are withdrawn . . . like burned-out cinders." One can extend Clausewitz's evocative metaphor to gain insight into the essential physics of classical battle. **Armies in battle burn, melt and vaporize.**

But by the end of the American Civil War, the essential physics of war would undergo a profound change and constitute the world's second Revolution in Military Affairs (RMA).

The Industrial Revolution and the Complexity of Warfare

The "complexification"—to use John Casti's term—of 19th-century armies was ultimately the consequence of entirely new technologies.[7] The armies of the pre-Industrial period evolved in train with the simple machines invented during the Agricultural Revolution (8,000-3,000 B.C.). These simple machines—the lever, wedge, wheel and axle, pulley and screw—can be characterized as point technologies because of how they focus or leverage mechanical force at a single point. Clausewitz made a similar observation concerning Napoleonic warfare of his own day. He wrote that in battle "all action is compressed into *a single point* in space and time."[8] In contrast, technologies of the Industrial Revolution were dominated by innovations in distributed technology. The steam engine, the railroad, the telegraph, the dynamo, nitro-based explosives and the magazine rifle all changed the geometry of warfare from action compressed into a single point to action distributed in breadth and depth. Fundamentally, this distribution transformed the simple armies of Napoleon into modern armies of great complexity.

Cybershock in warfare causes paralysis by attacking the enemy's nervous system in the same way that maneuver causes exhaustion by defeating the opponent's metabolic system — his logistics. . . . Cybernetic paralysis drives an organized system into disorganization by destroying the coherence, connection and flow of information among the component parts of a complex system.

Complexity theory tells us that the pre-Industrial armies of physical shock and fire action were rather *simple*, perhaps even *complicated*, military systems. On the other hand, a *complex* system such as the modern army that appeared in the wake of the Industrial Revolution is a "network of many 'agents' acting in parallel. . . . The control of a complex adaptive [learning] system tends to be highly dispersed. . . . A complex adaptive system has many levels of organization . . . [which] are constantly revising and rearranging their building blocks as they gain experience. . . . All these processes of learning, evolution, and adaptation are the same. . . . All complex adaptive systems anticipate the future."[9] The various aspects of complexity all turn on the way a complex adaptive dynamic system uses information.

A modern complex military system uses information in five ways. The first is the manner in which it uses information to describe itself and its enemy. The more information required to describe itself and an adversary, the more descriptively complex this relationship is. Second, a complex military system uses information to organize itself. Indeed, organization is a process that structures information. The increase in organizational complexity itself creates more information. Third, after the Industrial Revolution armies became algorithmically complex—the number of tasks or steps necessary to defeat an enemy increased dramatically. The size of planning staffs grew beginning in the Civil War and modern war became increasingly protracted. The emergence of operational art during this period was another consequence of the algorithmic complexity of modern armies. Wars could no longer be won with a few battles. Instead, commanders and staffs had to design and execute a whole complex mosaic of deep, extended operations to defeat an adversary.

Fourth, information acquisition became more complex. No longer could the commander sit upon his horse, gaze out on the battlefield and simply apprehend all the information in one unfolding battle. Everything became hidden: the commander and his staff actively had to seek out information on countless battlefields throughout the theater of operations. Finally, complex military systems became cybernetically complex: greater information was required to direct and control the industrial armies. In this new environment messages had to travel faster than their messengers.

National Archives

Field telegraphers of the Military Telegraph Corps at an advanced position. The soldier in the background at right operates a hand-cranked generator mounted in a wagon.

The Messenger and the Disembodied Word

Imagine if your body—a complex adaptive system—controlled itself using nerve impulses traveling at the speed of a galloping horse instead of the speed of an electron. Clearly your body would fail and die. Or imagine if the speed of mental activity that gives rise to rational thought moved at the speed of a messenger instead of the speed of light. The simple armies of the pre-Industrial epoch controlled themselves in just such a fashion. Soon electrons replaced messengers on horseback. The invention of the telegraph solved the greatest command and control question of military history: How could information flow faster than a messenger could travel? The solution was simple: detach the message from the messenger, encode it and send it along a copper wire at near the speed of light. This disembodied message further enabled distributed forces across a theater of operations.

Hooker's attempt to exploit this new technology at Chancellorsville quickly demonstrated that the new freedom of complexity also created a new vulnerability to the danger of paralysis. As complex military systems emerged, they created a whole new pattern of defeat, placing cybershock and paralysis on par with attrition and annihilation and maneuver and exhaustion. The cybershock-paralysis defeat pattern does not replace or compete with the other two, however. Instead, cybershock supplements and complements attrition and maneuver. Cybershock induces deep systemic paralysis throughout a complex military system, culminating the transformation in warfare first wrought by the Industrial Revolution more than 100 years ago.

How Cybershock Works

Unfortunately, today's RMA debate trivializes the profound influence of the Industrial Revolution, which spawned such complex systems as the nation-state, free market economy, distributed armies and extended societies—all held together by a velocity of information exchange

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The promises of information technology demand vigilant scrutiny, for military systems are rarely destroyed by paralysis alone.

unheard of before. The complexification of the world created a new kind of vulnerability that cybershock has since sought to exploit, a vulnerability to systemic paralysis. The actions of all complex systems are controlled and modulated by the reliable free flow of information and energy. Cybershock in warfare causes paralysis by attacking the enemy's nervous system in the same way that maneuver causes exhaustion by defeating the opponent's metabolic system—his logistics.

Cybershock creates paralysis in five ways. First, through the use of operations security (OPSEC), deception operations and psychological operations (PSYOP), the enemy is denied complete information of both his adversary and himself.[10] Second, active and intense reconnaissance blinds the enemy and becomes the most critical element in the struggle for information. Third, the shock of surprise places a tremendous burden on the enemy's military nervous system as it creates a broad state of panic. Fourth, today's electronic warfare (EW) destroys the organizational coherence and cohesion of the target, essentially inducing a kind of epileptic seizure in the opponent's nervous system. Finally, the activeness and rapidity of friendly operations induce a kind of cybernetic stupor in the enemy: his entire nervous systems goes into overload and general dissonance sets in. Because he does not know what to do, the enemy does not act. Paralysis and disorganization are complete: the enemy's army has been reduced to its component parts, an army only in name. New technology allows us to attack the enemy's nervous system directly with electrons instead of bullets.

It would be a serious error to imagine that one could defeat an enemy through paralysis alone. All three patterns of warfare are complementary and mutually reinforcing. The synergism among them thus creates an integrated system of attack and defense designed to destroy a complex military system. Attrition, maneuver and cybershock together cause disruption (see figure).

The final outcome in this relationship is disintegration and the destruction of the will to fight. Failure to consider the modern patterns of war in their totality can only lead to defeat. In particular, the promises of information technology demand vigilant scrutiny, for military systems are rarely destroyed by paralysis alone. One of the remarkable qualities of complex military systems is that they are *self-organizing*.

Black Lights: the Paradox of Self-Organization

There is an interesting paradox in the realm of boxing. Sometimes a boxer may receive a hard shot to the head that causes an immediate knockout. Some boxers report seeing "black lights" before sinking into oblivion; they see and become surrounded by a shimmering, glowing aura of darkness. Such boxers experience the paradox of being conscious of their unconsciousness. Some boxers are able to recover and continue to fight after this interval of conscious unconsciousness because higher cognitive centers of the brain residing in the neocortex shut down, but the lower areas of the brain, called the limbic system, kick in and preserve a primitive sense of awareness. A similar phenomenon occurs in modern armies and calls into question the ultimate utility of information warfare.

Cybernetic paralysis drives an organized system into disorganization by destroying the coherence, connection and flow of information among the component parts of a complex system. However, a complex system is one in which "a great many independent agents are interacting with each other in a great many ways. . . . The very richness of these interactions allows the system as a whole to undergo *spontaneous self-organization*. . . . These complex, self-organizing systems are *adaptive,*

in that they . . . actively try to turn whatever happens to their advantage. . . . Finally, every one of these complex, self-organizing, adaptive systems possesses a kind of dynamism that makes them quantitatively different from static objects. . . . Complex systems [like armies in battle] are more spontaneous, more disorderly, more alive."[11] Sun Tzu, the ancient Chinese philosopher of war, noted the same phenomenon. He wrote, "In the tumult and uproar the battle seems chaotic, but there is no disorder; the troops appear to be milling about in circles but cannot be defeated. . . . Apparent confusion is a product of good order."[12] Elsewhere, Ralph Waldo Emerson writes, "War disorganizes, but it is to reorganize."[13]

These writers have highlighted a fundamental characteristic of modern war: that overall systemic paralysis and disorganization can be offset, up to a certain point, by self-organization and reorganization at lower levels of command. The German notion of *auftragstaktik,* for example, is based on the self-organizing ability of tactical units and local commanders. It is important, therefore, to note how military systems and other self-organizing complex systems differ from biological systems. For biological systems like the human body, paralysis is total in the sense that a person with a broken neck does not experience a sudden self-organization and control of his limbs. An army, on the other hand, may suffer complete cybernetic collapse—the analogue to a broken neck—but spontaneously reorganize at lower echelons of command and continue on with its mission.

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The implications of self-organization should be apparent: the final defeat of a disorganized enemy may depend ultimately on his physical and protracted destruction in detail. If an enemy still has the will to fight, his fate will have to be decided with a simple bullet rather than a complicated piece of hardware or an elaborate scheme of maneuver. Such campaigns as Iwo Jima and Okinawa should remind us how rare—and sweet—victories such as the Gulf War are. In the end there are few shortcuts to victory, but there are many roads to defeat. A commander and planning staff exploring avenues to victory should remember the three historical categories: the integrated annihilation, exhaustion and paralysis of the enemy. ***MR***

NOTES

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Army Values and a Rope With Three Cords

Major Jeffrey S. Wilson, US Army

That sir which serves and seeks for gain,
and follows but for form, will pack when it
begin to rain, and leave thee in the storm.[1]
—*The King's Fool,* King Lear

IT IS AXIOMATIC that leaders must put selfish interests aside and take care of those whom they lead. To allege otherwise would blatantly refute all the military values and ethics we hold dear. Once we accept that, unlike Shakespeare's fair-weather figure, good leaders internalize their obligation to care for those they lead, the vexing issues are what taking care of soldiers actually means and how doing so translates into battlefield success.

Most military leaders certainly understand what the phrase does not mean. It does not mean that leaders should keep soldiers out of harm's way at all costs; if it meant that, there would be little use in having an army in the first place. It clearly does not mean that leaders should provide soldiers the same level of comfort that their fellow civilians enjoy or that soldiers should not work or train under hard physical and psychological conditions. A military organization taken care of this way would be coddled to its grave in battle. Despite centuries of leadership principles and dogmas, it is still difficult to detail concisely what exactly it means to take care of one's soldiers and exactly how that care facilitates mission success.

By borrowing a phrase from the Old Testament Book of Ecclesiastes, leaders can understand a soldier as a "rope of three cords."[2] I characterize these three cords of the soldier as spirit, sinew and significant others and contend that leaders truly care for soldiers by ministering to the needs of those cords. When parents allow their sons and daughters to join the American profession of arms, they repose the deepest special trust and confidence in military leaders to develop and nurture the spirit, sinew and significant others of their children. Further, the seven Army Values of loyalty, duty, respect, selfless service, honor, integrity and personal courage provide leaders with the most effective rubric to use in constructing soldier-care oriented command climates.

In terms of values, the US military establishment is inherently dualistic. On the one hand, it preserves and promotes Judeo-Christian values upon which the founding fathers based our national system of government. On the other hand, the military has, to an extent, molded itself to the times. To some degree, the values of the military as a whole are the values of its parts; namely, the values of the women and men who have elected to serve in the All-Volunteer Force. While these two sets of values are not necessarily mutually exclusive, significant conflicts cause an undercurrent of tension at all levels. In a way, this is a natural state for the US military.

Because humans wage war, victory ultimately rests with the side whose soldiers can best perform the often-horrific tasks required amid war's physical chaos and psychological trauma. . . . Keegan notes that "the study of battle is therefore always a study of fear and usually of courage; always of leadership, usually of obedience; always of compulsion, sometimes of insubordination. . . . It is necessarily a social and psychological study."

Believing that any particular country "has the kind of [military] its total ethos, its institutions, resources, habits of peaceful life, make possible to it," British journalist and social philosopher D.W. Brogan characterizes the United States as a "country which is law-respecting without being law-abiding."[3] Free of the centuries-old cultural rigidity of European

countries and thus free of European class segregation, Americans view authority and authoritarian bureaucratic structures with healthy skepticism.

Thus, in the US military, there is "more give-and-take, more ignoring of unessentials, more confidence that in the hour of battle human virtues and common sense will do as much as automatic discipline of the old eighteenth-century type."[4]

On the battlefield, simultaneous forces can significantly diminish a soldier's spirit. . . . Leaders cannot afford to argue that such issues are solely in the chaplain's lane and dismiss them as "touchy-feely" concerns for which they have neither the time nor the temperament. Rather, leaders have an obligation to find ways to minister to their soldiers' spirits, especially under conditions of hardship and stress. The Army values provide a way to do that.

Therefore, if the US military hopes to instill a set of values central to both organizational effectiveness and individual character development, then our military will have to work harder than similar organizations in more stratified and traditional nation-states. This work begins with understanding the unique needs of each cord that make up the soldier (spirit, sinew and significant others). When leaders know their soldiers under this rubric, they will be able to apply Army Values directly and teach the soldiers to apply the values themselves. In short, Army values are combat multipliers and must take their rightful place in leaders' kitbags.

Despite postmodern claims to the contrary, war is essentially a spiritual endeavor. Both morals and morale are critical to unit success, but the cord of the soldier that I characterize as spirit encompasses and supercedes either of these individually. Because humans wage war, victory ultimately rests with the side whose soldiers can best perform the often-horrific tasks required amid war's physical chaos and psychological trauma. John Keegan notes that war requires, "if it is to take place, a mutual and sustained act of will by the two contending parties, and if it is to result in a decision, the moral collapse of one of them."[5] Keegan does not say that victory necessitates the physical collapse of the opponent. Because battle is essentially moral or spiritual, "the study of battle is therefore always a study of fear and usually of courage; always of leadership, usually of obedience; always of compulsion, sometimes of insubordination . . . . It is necessarily a social and psychological study."[6]

If the study of battle is the study of morals, then it is also a study of values and of how values are either reinforced or defeated in combat. Brigadier General S.L.A. Marshall said that of all the lessons his innumerable interviews with combat veterans taught him, the most valuable was "the falseness of the belief that wealth, material resources and industrial genius are the real source of a nation's military power."[7] Marshall concluded that simple "courage is the real driving force in human affairs . . . and . . . every worthwhile action comes from someone daring what others fear to attempt."[8] Thus, we see that a soldier's spirit, the first of the three cords of the soldier, is of utmost importance to military leaders who hope to succeed under conditions of great stress. Marshall notes that, to effectively minister to the soldier's spirit, leaders must abandon "slide rule" leadership and concentrate on "knowledge of the human heart."[9] Army Values provide an effective, accessible rubric for understanding the human heart. If internalized, these values will enable soldiers to overcome significant physical and psychological stresses and complete their missions with honor.

On the battlefield, simultaneous forces can significantly diminish a soldier's spirit. Enemy propaganda tries to convince our soldiers that our cause is unjust, our leaders corrupt and our chances of victory slim. In an open society, even "friendly" or nonaligned media may make similar claims. Combat itself can diminish soldiers' ability to discriminate between legitimate and illegitimate targets and even diminish the value of life itself among war-weary soldiers. Since ancient times war narratives have recounted deployed soldiers' alienation from all that they valued in the past and hoped for the future.[10] Leaders cannot afford to argue that such issues are solely in the chaplain's lane and dismiss them as "touchy-feely" concerns for which they have neither the time nor the temperament. Rather, leaders have an obligation to find ways to minister to their soldiers' spirits, *especially* under conditions of hardship and stress. The Army values provide a way to do that.

By emphasizing loyalty and engaging soldiers in meaningful discussions about its many dimensions, leaders can deflect soldiers' doubts about the justice of a particular project. Leaders can acknowledge that private doubts about the moral legitimacy of legal orders are natural in stressful and life-threatening situations. However, the soldiers' oath upon entering the profession of arms is taken

US Army

With temperatures in the low teens, a 2d Infantry Division soldier on the Elsenborn Ridge, Belgium, chases wires without gloves or a winter parka, 23 December 1944. The raised sleeve and white wrist reveal the cold's effect on his right hand.

"Months after the new combat boots and jackets arrived in Italy many frontline soldiers still wore soaked leggings and flimsy field jackets. The new clothing was being shortstopped by some… soldiers who wanted to look like the combat men they saw in the magazines. None of these shortstoppers took the clothing with any direct intention of denying the stuff to guys at the front. I suppose these fellows in the rear just looked at the mountainous heap of warm combat jackets piled in a supply dump and didn't see anything wrong with swiping a couple for themselves. [However], the Army had shipped over only enough of the new clothing to supply the men in the foxholes."

"freely, without mental reservation or purpose of evasion."[11] If orders and ethics conflict, our only options are to disobey lawful orders and face the legal consequences, or resign from the service at the earliest opportunity. While we remain in uniform, our primary loyalty is to the oath we took when we came in, and leaders who remind soldiers of this during times of mental stress will enable them, despite fear and danger, to do what they already know intuitively is right.

Leaders can use the Army values of duty, respect and selfless service to help soldiers address the potential devaluation of life that combat can cause. If we understand duty as fulfilling our obligations, then it becomes clear, that even under stress, we have an obligation to respect other people, treating them as we want others to treat us.[12] In relation to citizens of an enemy country, this means that we earnestly discriminate between combatants and noncombatants when we use force. If we fail to do our duty to demonstrate such respect for other lives, especially if we fail to do so in a quest to bring a greater measure of safety to ourselves, we violate the Army value of selfless service. We cannot honestly say that we place the welfare of the nation and the Army above our own individual welfare if we disgrace both by doing unnecessary harm. Army values help prevent soldiers from sacrificing their integrity under stress.

The second of the three cords of the soldier is sinew. By this term, I mean to describe the soldier physically. The soldier has physical needs that leaders are obligated to meet. No matter how hearty the spirit, even highly trained, conditioned and disciplined soldiers cannot fight long if not physically sustained. Army values are not magic wands; they cannot provide rations to hungry soldiers, bullets to empty rifles or fuel to dry gas tanks. Whereas virtually all leaders understand their obligation to sustain their soldiers physically, and the US Army logistics system is perhaps the best in the world,

history shows that soldiers unnecessarily suffer physical hardships even in the midst of plenty. Primarily, such failures to provide for soldiers' sinew reflect a flawed value system of those charged with the special duty of doing so. A story of such a lapse in values occurred in World War II.

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Similarly, a surrounded infantry company in Vietnam, low on ammunition, awaited resupply:

"An Army UH-1 helicopter hovered over the company to kick cases of ammunition out the side door. The ammo was supposed to land within the company's perimeter. The helicopter pilot radioed down that the fire was so heavy he was going to leave without dropping all the ammunition on board. [A lieutenant on the ground] radioed back: "If we don't get it, you don't leave." The pilot could not be sure whether the beleaguered lieutenant would make good on his threat to shoot him down. He stayed until all the ammunition was kicked out. It was an accurate drop."[14]

In both cases, it is fairly easy to see how solid leadership could have refocused the soldiers' attention on their core values and given them the moral armor to accomplish their mission with honor. The uniform example shows how easy it is for soldiers to become selfish and disrespect their comrades when they either think the offenses will not hurt anyone or simply do not care whom they hurt because the victims are far removed. Logistics leaders need to exemplify and reinforce selfless service, loyalty and integrity, remembering that even the appearance of impropriety can cause almost irreparable damage to the relationship between combat and support units. The Vietnam example shows that personal courage is a core value necessary for all dimensions of military life.

In a broader sense, senior leaders responsible for soldier's sinew must practice a core values-based planning process that will prevent the kind of supply problems that almost halted the Allied advance across France in World War II. During the Normandy campaign, values failures among some senior logisticians almost spelled disaster.

"Surges of demand were well out of phase with supply. Thus, the Army, after months of artillery ammunition shortages, ended the war with more ammunition in European storage than was fired during the entire eleven-month campaign . . . failures of accountability and inspection contributed to shortfalls as supply personnel could not locate needed items. Perhaps more critically, many US senior officers were indifferent toward supply matters. Although tolerating no insubordination in the conduct of tactical matters, they often [were themselves personally guilty of violating logistics orders and policies set at theater level]. Beyond that, a "us versus them" relationship between the combat and service forces hindered the supply efforts."[15]

Leaders can only feed the sinew of the soldier when they selflessly place soldier welfare above interagency, interunit or interpersonal rivalries and carry out the sustainment mission with integrity and honor. Sometimes it takes personal courage to fight bureaucratic inertia or high-level ignorance of true conditions to get the soldiers' needs to the line when needed. In fairness, combat soldiers themselves can contribute (sometimes significantly) to their own supply problems. At least in the Normandy Campaign, "the American Army had weak supply discipline . . . Wherever American troops traveled, they left a trail of discarded equipment in their wake. What they did not throw away they often sold or bartered for something useful such as food."[16] I personally witnessed the same phenomenon during the after-operations phase of Operation *Desert Storm*. I saw dumpsters at the port of Ad Dammam full of discarded serviceable field gear that soldiers evidently felt was too much trouble to pack and ship home. The Army value of respect applies to Army equipment, which American taxpayers have funded

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US Army

A civilian contractor turns over the key to a factory-fresh M1A1 tank to the 2d Armored Division's Tiger Brigade in Saudi Arabia, fall 1990

During the after-operations phase of* Desert Storm, *I saw dumpsters at Ad Dammam full of discarded serviceable field gear that soldiers evidently felt was too much trouble to pack and ship home. The Army value of respect applies to Army equipment, which American taxpayers have funded and for which soldiers have a duty to be responsible stewards.

and for which soldiers have a duty to be responsible stewards. Army values are essential tools as leaders take care of soldiers' sinew, the second of the three cords.

The significant others who surround a soldier form the third cord. While the term seems perhaps a bit too "New Age" for a discussion of Army values and leadership, it effectively describes how leaders must understand soldiers in terms of interpersonal relationships that extend far beyond the unit itself. These extended relationships directly affect soldiers' ability to perform under stressful conditions and leaders must understand their role in maintaining and strengthening their soldiers' relationships outside the unit. Gone is the old attitude that the Army would have issued you a family if it wanted you to have one. Over half of the soldiers in the Army are married, and many of those who are not are either single parents or custodians of one or both of their own parents. The Army now strives to help soldiers keep their family lives in order with childcare facilities and classes on child rearing, checkbook management and marital stress. Programs such as Army Emergency Relief offer resources in family crises. Family housing on most posts has improved steadily over the past few years, and unit family support group planning, organization and management are taught at precommand courses. The Army has internalized its institutional responsibility to minister to soldiers' significant others.

Nevertheless, the Army faces significant challenges in this area. Deployments are increasing in both frequency and duration. Money shortages have slowed infrastructure repair and construction throughout the Army. The transition to TRICARE has thrown family health care in turmoil. Retirement benefits do not amount to as much as they used to, and Army transition assistance programs are overtaxed with mid-career soldiers seeking to leave while they are still young enough to develop a full second career in the civilian sector. All Army values come into play as leaders assess their obligation to their soldiers' significant others. Loyalty extends to the families of soldiers as well as the soldiers themselves. Families who support the unit in good faith ask only that unit leaders display that same kind of loyalty in passing out information and taking care of family concerns while the unit is deployed.

The Army has a duty to provide the families of its soldiers the aforementioned facilities and services and must never succumb to the attitude that a quality living environment is a nice to have extra that we must forsake in order to buy more weapons. The Army should take every opportunity to display respect for family members, promoting unit appreciation awards, volunteer recognition ceremonies and similar programs. Army leaders must be as selfless as possible in the cases where a soldier's family needs directly conflict with unit needs. Do you

really need the soldier bad enough to deny him emergency leave during an NTC rotation to attend his grandmother's funeral? Granting the leave may well take personal courage on the part of the leaders, especially if the soldier is in a shortage job specialty, but doing so would undoubtedly show soldiers the integrity and honor of their seniors.

Leaders, by personal example and thoughtful education of subordinates, can make a difference when it counts the most by simply recognizing that, to a new soldier, that unit constitutes the whole Army. The commander becomes the soldier's impression of what commanders in the Army essentially are. The soldier makes similar judgements about the first sergeant and other leaders.

Conversely, leaders must take every opportunity to instill in soldiers the notion that they themselves must translate the seven core Army values into core family values as well. If the soldier fails to do so, no amount of outside help will keep his or her family together when the unit deploys. Thus, Army values provide a rubric for understanding and ministering to soldiers' significant others, the third cord. "The relationships between seniors and subordinates within our Army should be based upon intimate understanding. . . on self respect. . . and above all, on a close uniting comradeship."[17] This is not to say that fraternization rules should relax or that everyone needs to like everything about everyone else in the unit. However, leaders, by personal example and thoughtful education of subordinates, can make a difference when it counts the most by simply recognizing that, to a new soldier, that unit constitutes the whole Army. The commander becomes the soldier's impression of what commanders in the Army essentially are. The soldier makes similar judgements about the first sergeant and other leaders.

To the new soldier, everything from the standing operating procedures regarding passes to the way the unit conducts motor stables reflects what the Army as a whole is about. When it comes time to reenlist, the soldier makes a decision about a future in the Army based upon his or her experiences in one small corner of it. That experience, in my view, is positive only to the degree that the unit leaders have exemplified and promulgated the core Army values.

Army values have an instrumental role in taking care of the three cords of soldiers, but their impact extends beyond specific positive effects as a combat mutiplier. The values of loyalty, duty, respect, selfless service, honor, integrity and personal courage also possess intrinsic value, independent of any extrinsic goods they might foster. Army values have deep, historic national roots. The day we renounce these values we fundamentally alter our national identity. While the primary missions of the Army are to deter war through combat readiness and win war if it is forced upon us, the military also has another very important mission. Because its members generally internalize the values they practice daily, a military serves as "a well from which to draw [moral] refreshment for a body politic in need of it."[18] A person can be "selfish, cowardly, disloyal, false, fleeting, perjured and morally corrupt. . . and still be outstandingly good [in many pursuits]. . . What the bad man cannot be is a good sailor, soldier or airman. Military institutions thus form a repository of moral resource which should always be a source of strength within the state."[19] Army values shape that repository as they shape the force. ***MR***

NOTES

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2. *The Bible*, Today's English Version, Ecclesiastes 4:12, "A rope with three cords is hard to break."
3. D.W. Brogan, *The American Character* (New York: Knopf, 1944), 162.
4. Ibid.
5. John Keegan, *The Face of Battle* (New York: Penguin Books, 1978), 301-302.
6. Ibid., 303.
7. S.L.A. Marshall, *Men Against Fire: The Problem of Battle Command in Future War* (Gloucester, MA: Peter Smith, 1978), 208.
8. Ibid., 209.
9. Ibid., 156.
10. I use the term alienation here to denote the feeling of being forcibly disconnected from the things one thinks are valuable to a meaningful life by circumstances beyond one's control.
11. Lawrence P. Crocker, *The Army Officer's Guide*, 42d Edition (Harrisburg, PA: Stackpole Books, 1983), 5.
12. The Army values card issued to every soldier defines respect as "treating others as they should be treated." While one could take this a number of different ways, I assume here that the authors of the card are inferring that all people should be treated with a certain level of dignity and respect, in accordance with the proverbial Golden Rule, which is a basic pillar of the American way of life.
13. Bill Mauldin, *Up Front* (New York: Award Books, 1968), 135-137.
14. George C. Wilson, *Mud Soldiers* (New York: Scribners, 1989), 22.
15. Steve Waddell, *United States Army Logisitcs: The Normandy Campaign, 1994* (Westport, CT: Greenwood Press, 1994), 164-165.
16. Ibid., 165.
17. Marshall, 155.
18. Sir John W. Hackett, "The Military in the Service of the State," *The Harmon Memorial Lectures in Military History*, Number 12, (Colorado: United States Air Force Academy Press, 1970), 19. Hackett also offers the idea that this mission may, in the long term, be more important that the more immediate and instrumental mission of warfighting.
19. Ibid., 18.

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Personality Styles of Effective Soldiers

Major Michael Russell, US Army

MANY OF THE MILITARY'S efforts are directed toward developing, refining and procuring hardware. Less effort is being made, however, to profiling personality styles of the successful professional soldier. What makes a good "war asset"? This article asserts that the military is composed of two fundamentally different types of individuals, each with unique advantages and weaknesses. Both types are always present in the military population to a greater or lesser degree. Times of peace favor one style; conflict favors the other. Unfortunately, US military forces tend to enter conflict with an incorrect balance of these types, thus suffering greater initial losses than necessary, due as much to inadequate leadership as to failed hardware. This tragedy is both predictable and preventable.

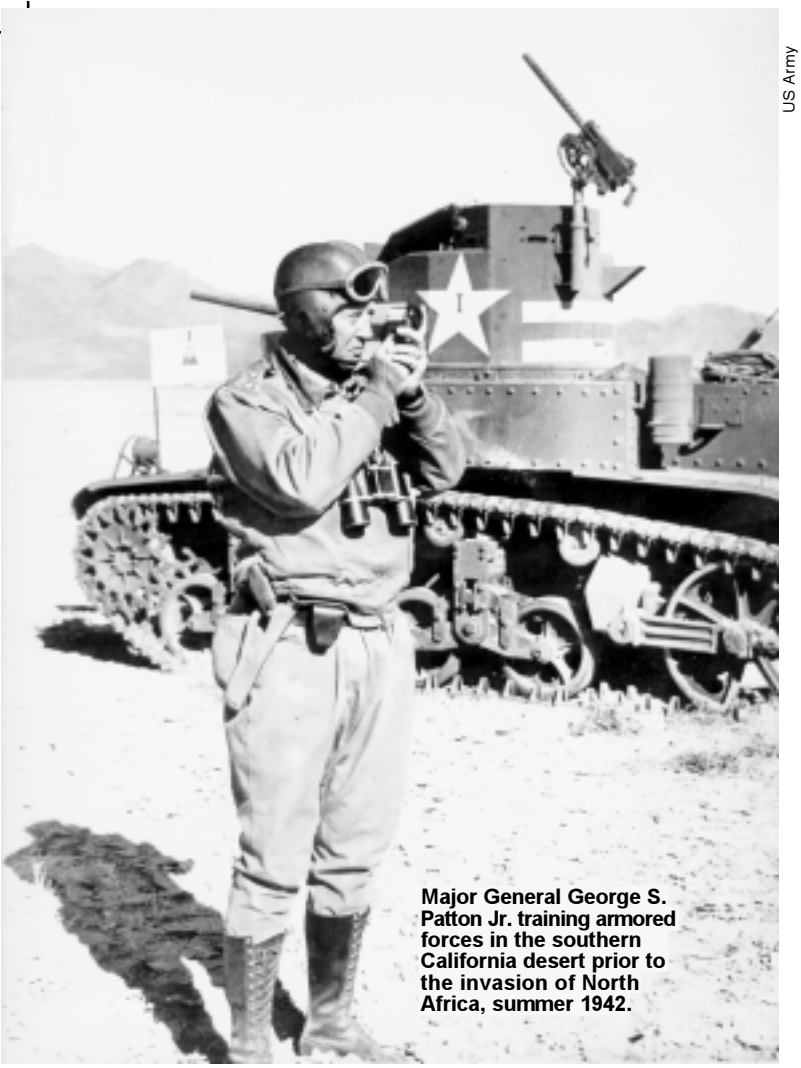
The military is composed of two fundamentally different types of individuals, each with unique advantages and weaknesses. Both types are always present in the military population to a greater or lesser degree. Times of peace favor one style; conflict favors the other. Unfortunately, US military forces tend to enter conflict with an incorrect balance of these types, thus suffering greater initial losses than necessary.

Psychologists have labeled and developed tests for many different personality characteristics. The American Psychiatric Association lists approximately a dozen types of personality disorder, including proposed and established entities, in their Diagnostic and Statistical Manual.[1] A personality *disorder* is said to exist when the individual has only a limited number of coping strategies, some of which may be dysfunctional, and is diagnosed only when the style causes "significant difficulty in social or occupational functioning."[2] Individuals with personality disorders have difficulty prospering in the military. Military life, with its frequent changes in job and locale, requires considerable flexibility, which the disordered individual usually lacks.

A consequence of having any sort of personality, however, is having a personality *style*. These styles mirror the traits that, in extreme forms, are labeled disorders. Some of these traits are becoming popular terms, such as "narcissistic" and "histrionic," while others are less commonly used. The labels capture a certain style of being that colors how people think, act and react — the decisions they make and why they make them.

To provide a nonpejorative label to these groups, I will use an idea coined by the American Psychiatric Association in their diagnostic manual, which groups these different styles into three major groupings, or clusters.[3] Cluster A comprises people who are described as odd or unusual. Cluster B is a collection of styles of people prone to externalizing, who deal with psychological tension by directing it outward toward the external world. Cluster C contains people prone to anxiety, who tend to internalize (worry, ruminate) about their conflicts. To apply common labels, for example, most introverts are found in cluster C and most extroverts are found in cluster B, although this is only one aspect of their stylistic difference.

On the whole, the military is composed of healthy and effective individuals. Many of the most dysfunctional styles are weeded out early. This includes nearly all of cluster A population. The styles seen in abundance among the career military, therefore, are mainly representatives from clusters B and C. Psychologists would tend to label cluster Bs as mildly Antisocial or Narcissistic. Those individuals who are in cluster C are mainly variants of the Obsessive-Compulsive or Dependant Personality styles.



US Army

Major General George S. Patton Jr. training armored forces in the southern California desert prior to the invasion of North Africa, summer 1942.

One of Patton's early evaluations read: "This officer would be invaluable in time of war but is a disturbing element in time of peace." He failed to be selected for Command and General Staff School, a prerequisite for advancement, and languished as a major until he was 49. . . . Likewise, Dwight Eisenhower began the war as a colonel with very little chance of promotion to brigadier. When things changed, they changed very swiftly.

There are differences in how effectively individuals employ a given personality style. Most trial lawyers, politicians, police officers and juvenile delinquents, for example, all share the same basic style but differ in how effectively they employ it to meet their needs. One noted psychologist, Harrison Gough, rates individuals not just by style but on how well they have obtained the best qualities of that style.[4] Each person taking his "California Psychological Inventory" is rated on a seven-point scale of actualization as well as being classified as to type. A prison inmate may thus be a cluster B at level 1 — a successful politician may be a cluster B at level 7. For purposes of comparison, I would like to consider people of equal caliber: matched on intelligence and other measures of effectiveness but differing in fundamental personality style.

Type B	Type C
Adventuresome	Dependable
Imaginative	Conscientious
Innovative	Detail Oriented
Daring	Punctual
Decisive	Selfless

The table above lists the positive features of each style. Their limitations are that they possess to a lesser degree the features listed for the other style. A cluster C personality style is motivated mainly by harm avoidance. To dip briefly into psychological phraseology, he has a substantial superego, with many internalized values, which drives him to do things to avoid the anxiety that comes from threat. This threat may be either from their internal conscience or from fear of imagined external consequence. In contrast, his comrade with cluster B dynamics is less disabled by anxiety and is motivated mainly by mastery and goal attainment. To put it concisely, one style strives to obtain the positive, the other strives to avoid the negative.

To apply this to the military, it has long been recognized that a peacetime army differs in many ways from that of an army at war. This is intuitively obvious: destruction of personnel and equipment, even enemy equipment and personnel, is somewhat antisocial. To plan the ultimate defeat of an entire army or nation on the battlefield requires at least a dose of narcissism. Therefore, those personality attributes that make for a war "hero" are primarily from cluster B. These people do not function as well in garrison — such individuals thrive on challenge and require constant stimulation.

By contrast, cluster C individuals do thrive in garrison. Their reasons for joining the military are different, as are their motivations for staying. Cluster B individuals are drawn by the potential for excitement and adventure. Cluster Cs are drawn to the security of the military system, the guaranteed employment and often by a sense of duty or obligation. For some, the attraction is not much different from that of any other civil service position.

The tension between wartime and peacetime personalities is therefore unavoidable. The variables at play in the peacetime Army tend to attract and maintain cluster C individuals while repelling and punishing cluster B personnel. There is often little opportunity for rapid advancement or glory in our peacetime Army, and people seeking these things will move on to more promising employment. In

an era when one recorded slip, or one bad mark ends a career, only those who cautiously make no errors can survive. In a zero-defects environment, harm avoidance rules.

As an extension of this observation, the longer a military is at peace, the more pronounced this tendency becomes, until a fully "peacetime army," with a peacetime force structure, has developed. This does not appear to be a quick process. There is always a fresh supply of both types of individuals at the entry level, but as differential promotion takes place, the mid and upper levels shift. In previous eras, it may have taken two decades to complete this transition. Under today's rules of promotion, it may take less than a dozen years.

Is this shift undesirable? A military composed of largely cluster C individuals offers fewer disciplinary problems and will score higher on most measures of garrison function. Yet history has repeatedly shown us what happens when a peacetime army goes to war. The phenomenon is so frequent as to be the rule rather than the exception.

Cluster C individuals often have great difficulty with two things—taking risks and making decisions. David Shapiro wrote eloquently of the problems facing an individual with one of the cluster C styles when asked to make a decision: "Among the activities of normal life, there is probably none for which this style is less suited. No amount of hard work, driven activity or willpower will help in the slightest degree to make a decision. . . .What distinguishes obsessional people in the face of a decision is not their mixed feelings, but rather in the fact that these feelings are so marvelously and perfectly balanced. In fact, it is easy to observe that just at the moment when an obsessional person seems to be approaching a decision, just when the balance seems to be at last tipping decisively in one direction, he will discover some new item that decisively reestablishes that perfect balance."[5]

Sometimes a decision can be reduced to following a rule or a formula, which they will do quite well. However, the ambiguity and "fog" of war make such rules hard to follow. An army can be ground to a standstill by layers of frozen, immobile individuals afraid to make a mistake.

Doctrine, a sometimes-useful set of guidelines, is also a prosthetic device for the decisionally impaired. Doctrine will sometimes cover for the cluster C's indecisive nature but excellent ability to follow rules. The peacetime proliferation of rules rises in frequency with the percentage of cluster C individuals in power. Such over regulation usually worsens the disaster to come: rules stifle innovation, "prepare for the last war," and are usually more geared to garrison management than battlefield leadership. On the eve of the Spanish American War, retired General William T. Sherman, observing the wreckage of his once-proud army, wrote that "a general to be successful would have, as we did in 1861, to tear up his Army Regulations and go back to first principles"—which was what eventually happened.[6] E.K.G. Sixsmith, writing of Eisenhower, notes that wherever he served, "he hated anything that savored of war department rigidity or inflexibility."[7]

On the whole, the military is composed of healthy and effective individuals. Many of the most dysfunctional styles are weeded out early. This includes nearly all of cluster A population. Psychologists would tend to label cluster Bs as mildly Antisocial or Narcissistic. Those individuals who are in cluster C are mainly variants of the Obsessive-Compulsive or Dependant Personality styles.

General Ulysses S. Grant recognized precisely the dichotomy of men this paper addresses. He wrote in his memoirs, "It did seem to me, in my early army days, that too many of the older officers, when they came to command posts, made it a study to think what orders they could publish to annoy their subordinates and render them uncomfortable. I noticed, however, a few years later, when the Mexican War broke out, that most of this class of officers discovered that they were possessed of disabilities which entirely incapacitated them from active field service. They had the moral courage to proclaim it, too. They were right; but they did not always give their disease the right name."[8]

Both the Civil War and World War II graphically illustrate the disaster of an initial lack of leadership. Many of the Union's best officers deserted to the South, but during the war's opening months, many observers thought the Army of the Potomac could win in "three months." Instead, its fearful leaders were paralyzed and humiliated. It fell to Grant, a man employed at the war's conception as a clerk in his father's store, who had failed at farming, real estate and an attempt at elected office, to turn the war to the North's advantage.[9]

Much the same happened during World War II. Within a year of the war's initiation, the leaders of the 1930s were replaced with men, not necessarily

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younger, but different, who had languished in the peacetime Army. General George S. Patton Jr. is a notable example. He suffered adverse officer evaluation reports throughout the 1920s and 30s. One of Patton's evaluations read: "This officer would be invaluable in time of war but is a disturbing element in time of peace."[10] He failed to be selected for Command and General Staff School, a prerequisite for advancement, and languished as a major from 1917 until he was 49. In 1938, he was placed in a terminal position and expected to retire, starting the war as a lieutenant colonel. Likewise, Dwight Eisenhower began the war as a colonel with very little chance of promotion to brigadier. When things changed, they changed very swiftly.

It appears that the rapid promotion of successful leaders in time of conflict will usually favor the cluster B types: whereas the cluster B sees potential for great victory on the battlefield, the cluster Cs are preoccupied with thoughts of avoiding great defeat.

If this pattern is repeated so often, why is it allowed to continue? For one thing, cluster B individuals are not without their flaws. They tend to demand immediate gratification and be less reliable for the completion of mundane tasks than their cluster C counterparts. Their primary positive attribute to a military force is their sense of invulnerability, which spurs them to attempt deeds that the more rational people might not.

Managing and Motivating by Rewards

LTC José M. Marrero, US Army

As military professionals, we all face leadership and management challenges. Among these, we have the responsibility of appropriately rewarding our subordinates. But whom do we really reward? And, equally important, what kind of behavior and specific traits do we reward? Don't we reward in many cases:

- Fast work instead of quality work?
- Noisy joints instead of quietly effective behavior?
- Complication instead of simplification?
- Busy work instead of smart work?
- Mindless conformity instead of creativity?
- Short-term Band-Aids or quick fixes instead of solid and long-lasting solutions?
- Appearances instead of realities?
- Subordinates who are strictly "loyal" to us instead of those who are also loyal to their own subordinates?

Those in the last two categories are out to impress the boss exclusively without paying much attention to the people under them. Additionally, many rely more on cosmetics and their theatrical abilities instead of efficient, solid and long-lasting products. Certainly, when we reward a subordinate, we also reward and promote his behavior throughout the unit. In other words, we send an implicit message to all others: "These are the traits we want to see in this outfit." Consequently, we reinforce whatever behavior pattern we are rewarding, so commanders must look beyond appearances and cosmetics. Those who do can identify actors as well as efficient workers and reward them accordingly.

Consider this scenario. A captain receives a less than outstanding officer evaluation report (OER) and has trouble understanding why. After all, during the rating period, he made sure the battalion commander saw him in action and saw his battery in the best light. He chatted with the colonel, impressed him with astute observations and joked around with him all to foster a closer relationship. He took pains to show he was in control of everything. He always had his uniform pressed and his boots shined. Who deserved a better rating than he did?

He complains to the colonel, "This is the first time in my military career that I have received anything, well, less than outstanding on an OER. No one can question my loyalty to you. Every time you have asked me to do something, I was there. I came through, whatever it was. And every time you've needed me, you could count on me. I don't . . . and I don't. . . ."

The colonel looks out the window, evidently taking a second or two to organize his thoughts. The colonel knows the captain well, and has listened attentively while expressly keeping from interrupting him.

Lining up his thoughts like high-explosive rounds, the colonel fires them off: "You've said it! You've always been there for me. For me—not for your subordinates." The senior officer pauses, then continues, "Captain, you must be loyal in every respect."

"But sir, I have been loyal . . . "

"Loyal? To whom? A loyal leader doesn't just serve his superiors! You cannot be loyal to me if you are not loyal to your soldiers! Genuine leaders take care of their people all the time, even when the boss is not there. Do you think the boss has to be present to know how you're doing? How do you think I pegged you? A good unit not only should look good but must be good! Take care of your men, Captain. That's all."

The accumulated peacetime inertia makes the military less likely to need its skills and increasingly recalcitrant to commit to combat. The cluster B leader who believes in his troop's superiority and their ability to succeed is unquestionably more likely to advocate military engagement than is a cluster C leader who would fear their defeat.

Is it possible to find individuals with the strengths of both styles but without the weaknesses of either? At higher levels of functioning, both styles acquire the ability to assume qualities of the other—a veneer of compulsiveness for the cluster B, a gung-ho facade on the cluster C. But stress tends to strip away these veneers. The father of American psychology, William James, wrote in 1898 that "The Character (personality) is set in stone by age 18, a continuing truism."[11] Essame, in his review of Patton, wrote "the qualities essential in a commander and those in a good staff officer are poles apart."[12] The style of an effective staff member, "tactful, patient, reticent and diplomatic," are simply not those of the combat leader.[13] As I have repeatedly observed men who rise to positions of authority by longevity alone, it is simply not possible to completely change one's stripes, even when called upon to do so.

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The solution for the future is not as simple as retaining effective cluster B individuals in a peacetime

We should ask ourselves whether we reward the right traits. Are we more impressed by people who talk about their accomplishments or by those who let their work speak for itself? Do we reward long work hours instead of efficiency? Do we appreciate it when our leaders insist on modest, economical products, or do we prefer to see our budgets wasted on window dressing that makes their products look more attractive? Do we reward quantity or quality? Effusiveness or efficiency?

Every human being, regardless of intellectual capacity, is motivated by the possible consequences of his actions. He does his work best when he expects to be rewarded. If every leader, however junior, can find a way to motivate each of his subordinates, he can significantly increase productivity.

Motivating through rewards is a part of leadership, and rewards need not be written. Rewarding people while a project is under way often produces better results than waiting until the project is completed. Similarly, giving a soldier free time is often a better or fairer reward than a medal. Simply giving a subordinate a "Well done!" may also be appropriate.

What a leader does or fails to do also communicates something to his subordinates. "Silence means consent" in more instances than just tactical situations—when a leader, for example, fails to correct a soldier who is out of uniform, he is practically giving him permission to do so. Likewise, every time we ignore the apparent laziness of a few soldiers while making our way through a training area, we are rewarding negative behavior. On the other hand, when a leader fails to reward a subordinate's good behavior, he diminishes the value of that behavior in the eyes of the subordinate, and he also diminishes the likelihood that the behavior will continued. The next time we are moved to reward someone, let's stop and think: Are we about to reward appearance or substance? We might even ask whether we may have shared in molding the wrong kind of officers. Could it be that the captain above started out on the right track, only to notice that those who sought their own reward were the ones who received it?

Guided by the professional, and moral definitions of loyalty, many officers live it to the letter, whether they are properly rewarded or not. They focus on their unit missions. They know what moderation and balance mean. They are tactful. They work instead of talking about work. And no matter how successful they may be, they do not become arrogant, lest they lose the proper focus.

Let's take a good look at our units and soldiers, then ask ourselves again: Whom do we really reward?

The answer should reveal the traits we value most in our subordinates.

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military; cluster C has a legitimate role. Throughout it history America has fought major armed conflicts every 20 to 30 years. In some of these major conflicts (1812, 1846, 1865, 1898, 1917, 1941, 1950, 1965, 1990), disasters also befell American forces because of an overabundance of cluster B soldiers. Cluster C individuals provide order essential to effective support and logistic functions. Lacking a standing army, a call to arms for an impending conflict will attract mainly cluster B individuals. Without a standing infrastructure of support personnel to maintain it, there will be substantial problems with logistics, which will hamstring an army as effectively as a lack of will to fight.

The Spanish American War serves as a prime example of the worst of both worlds, when a tiny bureaucratized and micromanaged peacetime Army was overwhelmed by volunteers. Major General Rufus Shafter, a Medal of Honor winner, certainly did not lack for fighting spirit. Teddy Roosevelt outshone Shafter, not so much by spirit, but by the ability to supply and equip his forces with private and personal funds outside the hopelessly overwhelmed military logistic chain.

What, then, can be done to maintain a proper balance of these forces? Many suggestions could be made to correct this situation, but five seem most salient:

- Recognize that "leadership" is not a synonym for "management." Peacetime initiatives will likely seek to make systems more "quantifiable"; inevitably these quantities will measure management rather than leadership. In peace or war, the ability to inspire, motivate and, perhaps above all, the moral courage to make tough decisions should be cherished and rewarded.
- It is important to maintain funds for training, deployment and opportunities for advancement.

The Spanish American War serves as a prime example of the worst of both worlds, when a tiny bureaucratized and micromanaged peacetime Army was overwhelmed by volunteers. Major General Rufus Shafter, a Medal of Honor winner, certainly did not lack for fighting spirit. Teddy Roosevelt out shined Shafter, not so much by spirit, but by the ability to supply and equip his forces with private and personal funds outside the hopelessly overwhelmed military logistic chain.

- In adolescence those who will eventually grow up to be our best leaders resemble German Shepherd pups—they chew up the furniture. To grow effective leaders, the personnel system should allow people to recover from mistakes if they are otherwise laudable. Some of the best sergeant majors I have served with decry the fact that "zero defects" standards do not allow soldiers today to make the same mistakes that they themselves were permitted.
- It would not be possible today for good war assets to maintain themselves in uniform more than a few years. The "up or out" policy rapidly eliminates effective wartime leaders and would have retired Patton sometime in the 1920s. It may be time to reconsider this policy.
- People naturally prefer the company of their own types. However, these different styles are both vital for a successful military in peace and war. The next major conflict may not permit the "handover" time from peace to war mix. The best and most effective teams contain elements from both camps—respect for the strengths that other styles bring to a team is our best strategy for maintaining the force structure for victory. ***MR***

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Idealistic Strategic Planning

by Lieutenant Colonel Michael Bell, US Army, Retired

Strategic planning has become extremely important in government organizations. Unfortunately, many do not understand what strategic planning really is, nor do they have an idea about how to begin. Vice President Al Gore recently said, "At the beginning of fiscal 1998, after learning from the pilot programs, all federal agencies must develop 5-year strategic plans linked . . . to measurable outcomes."[1]

Returning recently from a meeting with an official from an activity at my installation, I was struck with the concept of how little understanding we have of the process of strategic planning. This particular meeting's purpose was to respond to a request for facilitation of a "strategic planning" workshop. As I listened to what the official had planned for his organization—refining goals, objectives and tasks for the next one to three years—I realized it was not strategic planning but some form of long-range planning.

I commend the organization for taking the time to develop a plan, but it was not strategic planning. Strategic planning consists of creating a future for an organization by discovering organizational purpose (why do we exist?), developing organizational values, creating a vision for the future and developing strategies to achieve that future state.

My experience working with leaders of major organizations indicates there are several reasons for preferring long-range rather than strategic planning. First and foremost is the "make it happen on my watch" orientation. This creates a tendency to plan only for the tenure of the reigning senior leader. Whether his tour is for two, three or more years, plans will only endure for the length of the leader's tenure and will change as rapidly as do the leaders.

True strategic planning sessions focus on tomorrow and how things could be better than the way they are. We are comfortable with the daily problems associated with work and gain much satisfaction from doing "things" daily. But how much effort is directed toward a future state 10 to 25 years hence?

Trying to create or describe a future state is often outside the "comfort zone" and written off as unrealistic or unachievable; thus, no attempts are made to plan for the future. Instead, the focus is on where we are today and how we should deal with today's problems. Solutions to today's problems are still focused on the present state.

Long-range planning depends heavily on our experience of the recent past and our sense of what is realistic. This keeps us in a present state of mind. Strategic planning has little to do with past experiences or daily tasks and problems. Long-range planning, sometimes called operations planning, is quite different and begins with today's resources, problems, demands, constraints and opportunities. It uses a series of extrapolations of past events modified by judgment and apparent necessity to create a picture of what can be expected in the future.

Both kinds of planning might cover the same time frame and involve strategy development. But, while long-range planning starts where you are and works forward, strategic planning begins with the future and works backward. Both perspectives are useful, although they frequently result in different and even contradictory views of the future.

Making the Best Decisions Today

Strategic planning presumes the future and is based on the assumption that we can create a future that is desirable, one that is different from

*Organizational Leaders are Goal Oriented

our present and one that is ideal. Unfortunately, traditionalists resist true strategic planning as a waste of time and effort. They describe it as "pie in the sky" and unrealistic thinking. It would be nice to have at least one structure to follow that would afford the organization the opportunity to create its future and which might transcend senior leader tenure and love of the present state.

Strategic planning is a normative approach to thinking about the future. You create a dream, then make it happen. It is quite literally inventing the future by imagining it first, then working to bring the imagined into reality. Everything the organization does or does not do is based on the dream and the plan to make it happen.

Clearly, there are several ways of looking at the future. One is to look at what is real; another looks at what is ideal. The transformation process organizations might undertake toward creating the desired future is imbedded in the strategic planning process.

Realistic strategic planning begins with what one really wants to happen, unencumbered by life tasks, problems or limitations. Organizational members describe what the future will be with respect to purpose (why we exist), culture, environment, demands, constraints and opportunities. Organizational values are discussed in terms of behaviors that must be demonstrated and which will facilitate achieving the future. All of these culminate in a vision of the future. Mission clarification, in terms of what we should do and should not do, is discussed. This process enables us to put our vision into action. All of our efforts, resources and energies are then focused toward the vision.

From Vision to Action

There are several steps in the Vision-to-Action Process. They include determining organizational values, purpose and vision; analyzing the mission; and determining goals, objectives and tasks.[2]

Organizational values. To determine the organization's values, members must reach agreement on how they will behave with and toward one another and what it is they value. The process requires they first share personal values; for example, family, religion, security or honesty. By sharing personal values, they prepare themselves to discover and define things they collectively value, such as successful, structured, powerful, caring and meaningful work.

Because values tend to be abstract, members must reach agreement on some form of statement to describe the behaviors associated with the values. These "normative statements" lend clarity to the behaviors we each expect and define our actions in relation to the values. Without normative statements, we have nothing more than "bumper sticker" statements.

Organizations that do not define their values leave much to misinterpretation. Leaders and followers alike are accused of not "walking the talk," so to speak. Normative statements provide a behavior that is observable.

Organizational purpose. Once the organization has created and defined those things it collectively values, it must answer the question, "Why do we exist?" Purpose places everything into context for the organization. A statement of organizational purpose should quickly and clearly convey how the organization fulfills its need. Purpose need only be meaningful and inspirational to people inside the organization; it need not be exciting to all outsiders.

We should not do anything in conflict with our purpose. All our resources and efforts should support our purpose. The purpose should be unique and enduring. It should separate us from other organizations. Also, it must be something more than "We serve to perform service X to customer Y."

Many confuse purpose with mission. Missions have a finish line. Purpose defines "why"; mission defines "what." The Civilian Leadership Training Division, part of the Center for Army Leadership, defines its purpose as, "Cutting Edge Leadership Services for America." The statement transcends the present state and focuses organizational members to provide a cultural change in the way leadership is presented and how it is executed.

Organizational vision. A vision is a picture of the future we seek to create described in the present tense as if it were happening now. A statement of "our vision" shows where we want to go and what we will be like when we get there. There are many ways to create a vision. The leader might provide the vision, or members might create one. Both will work, but the latter provides more ownership by organizational members.

Why bother to create a vision? Many realists see this process as a waste of time and effort. What senior leaders really want is for their organizations to remain viable and productive, and we cannot do it without the so-called "soft stuff." People, what they value individually and collectively, as well as the vision is what energizes leaders. It is not just the work.

Without a vision, we truly just react and are not in a place to be proactive. So why bother? There are several reasons.

- Because we want superior performance. We talk of self-managed work teams or empowering people, but no matter what words we use, they express the same fundamental purpose—getting the best performance out of each person.
- To improve quality. Vision allows members of an organization to commit to providing total quality in all they do.
- For our customers. If we can genuinely satisfy customers and be

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a real resource to them, we can all feel great about the service we provide.

- For an energized, committed organization. With drawdowns and reduced resources, it is important to provide a clear vision to employees that will energize them and make them willing to commit to the organization. Without doing so, employees cannot make the contributions of which they are capable. Most want to contribute to the fullest extent; the vision gives them something to which they can contribute.
- To lead the organization through periods of change. If there is one thing we face continuously, it is change. People with a vision react more quickly in a changing environment, because they can anticipate what is going to occur—which is different from trying to predict the future. Vision allows us to create the changes we want to occur.
- Because the times demand it. Think back five years. What were you doing? Think back 10 years. Now think ahead 10 years. Can you do it? You had better! By developing your vision you will actually be creating what you want your future to look like, instead of merely reacting to it.
- Because we want it. We each bring our own level of commitment and presence to this process. But the most compelling reason I can give for developing a vision is because of wanting to work in an organization that has one.[3]

Leaders by themselves are never on time or on budget. Managers by themselves never do anything innovative like creating a vision. Organizational leaders should understand there is a difference in their work and management's work. Leaders owe the organization a clear picture of the future it wants to create and clear strategies backed with logic to enable their achievement. Management can then create specific steps, timetables and budgets to implement strategies, clearly focusing on the outcomes desired and the necessary budget. Not allowing budget constraints and daily problems to cloud planning efforts is important.

Once the team creates a vision, it must be put into action. All leaders' and managers' efforts should be focused on the vision. If efforts do not support the vision and strategies, the initiative is not resourced. Priorities might change, but this should not affect the purpose or vision. If there is a clear purpose and vision, people will see the connection to the statements and ideals. In the Army, civilians are key, because they hold the organization's institutional knowledge. They provide the continuity and connection to the vision.

Creating a vision that will withstand changes in priority and leadership is important, as is educating new leaders as they come on board. The Vision to Action Model takes into account all aspects that affect planning and vision. It provides a methodology to move from "just words" to a plan infused with action and energy.

Mission analysis. Viewing the organization from a systems perspective, we see that the mission usually comes from the environment; that is, the higher organization. We must take the time to analyze the things we do that truly support the purpose and vision and those that do not. "Shadow missions"—things we do that consume all our time but which do not support the mission—must be eliminated.

The mission, with the vision, helps us develop strategies to close the gap between what we want and what we now have. We must look at the organization's culture and climate to develop strategies. We must first describe the problem. Culture permeates all we do and is subtle in itself. Climate is readily understood, while culture is misunderstood. We must describe both as we want them to be in the future and how we know they currently are.

Goals. Organizational leaders and the organizations they lead should be goal oriented. Most of us tend to be task or daily routine oriented. Task orientation gives us great satisfaction of accomplishment, but goals move us toward the future. If leaders are not goal focused, who will be? Without idealistic goals, we are only living day to day. In the absence of shared goals, people tend to create their own, which can be contrary to the organization's.

Objectives and tasks. Almost all divisions, branches, teams and groups work on organizational goals and create goals for themselves. These can also be classified as objectives. Teams and groups create measurable objectives to support an organization's goals. These are then taken to the organization and made part of the strategic plan. This creates a sense of ownership and commitment.

Finally, individuals work on tasks that need to be accomplished in support of stated objectives and goals. Employees should be allowed to contribute at all levels. Their ability to do so is a result of their competence and commitment and will give them a personal investment in the organization. ***MR***

NOTES

1. Vice President Al Gore, quoted in "Government Performance Management Review Act from Red Tape to Results: Creating a Government That Works Better and Costs Less," Report of the National Performance Review, 7 September 1993, revised 10 September 1993, 73.
2. Developed by David M. Bell, Civilian Leadership Training Division, Center for Army Leadership, US Army Command and General Staff College, Fort Leavenworth, Kansas, 1991.
3. MG Robert Orton, opening remarks, Strategic Planning Conference, US Army Training and Support Command, Fort Monroe, Virginia, 1995.

Green Fields Beyond

by Lieutenant Colonel Drew Bennett, US Marine Corps

We shall attack through the mud and blood of the trenches and to the green fields beyond.

—British concept for tanks during World War I[1]

The ongoing revolution in military affairs assures us that tomorrow's world will be radically different from the world we know. To prevent our military from becoming obsolete, Joint Vision 2010 describes a framework for dealing with the challenges of the future and provides a template for the evolution of our Armed Forces. The vision, based on

emerging technology, prescribes information superiority and uses four operational concepts: dominant maneuver, precision engagement, focused logistics and full-dimensional protection. This vision foresees joint forces using technology to dominate an opponent across the range of military operations; that is, full-spectrum dominance.

While Joint Vision 2010 acknowledges the importance of quality forces in terms of people, leader development, training and readiness and first-rate equipment, it does not address how that quality force will react to the unexpected. In the rapidly changing security environment, joint combat readiness depends on how our forces solve problems. Unfortunately, when it comes to solving military problems, many serving in joint billets spend too much time attempting to sell their services. Quality forces must evolve beyond this myopic thinking to maximize force capabilities in 2010. Joint forces are certain to encounter the unexpected. Therefore, in addition to developing the technologically advanced operational capabilities outlined in Joint Vision 2010, they must develop a certain ethos. The future will demand more than just a high-tech military; the United States needs a joint force of problem solvers.

The concept, development and employment of British tanks to break the costly stalemate of trench warfare during World War I is one example. The early history of the tank provides useful insight into joint problem solving. Lessons from this case study can enhance the human dimension of Joint Vision 2010 and increase future combat readiness.

The Tank Concept

Throughout history many leaders attempted to combine mobility, protection and firepower. Examples include Ramses III's chariots, Hannibal's elephants, Attila's battle wagons and Leonardo Da Vinci's armored shell. Modern tanks became feasible with the development of the combustion engine and improvements in steel plating, prompting several people to advocate the use of tanks. However, it took more than just concepts and technology to move from feasibility to actuality.

In 1914, events brought together problem solvers who had the drive and vision to push beyond concept to reality. British mining engineer Hugh Marriott visualized the military potential of the Holt tracked vehicle after seeing it demonstrated in Antwerp, Belgium. He passed his observations to British engineer officer Lieutenant Colonel Ernest Swinton, who believed the Holt could be converted into a trench-crossing machine that could be used to break the deadlock on the Western Front. While on leave, he passed his observations to Secretary of the Committee of Imperial Defense Colonel Maurice Hankey. They agreed to forward the idea.

On 26 December 1914, Hankey wrote a memorandum summarizing his idea. This document became known as the Boxing Day or Hankey memorandum.[2] Hankey suggested using armored vehicles to carry troops, smash trenches and overrun machinegun positions. First Lord of the Admiralty Winston Churchill read the Boxing Day memorandum and, on 5 January 1915, wrote to Prime Minister Herbert Asquith requesting a committee be formed to research the idea. This request was approved, and the Admiralty Landships Committee was formed.[3]

During World War I, the military was searching for ways to move quickly beyond the stalemate in the trenches to the "green fields beyond." This deadlock was not identified until after the start of the war, and even then many senior military and political leaders believed that committing another million men would be the solution. This group was able to conceive only of top-down solutions that reinforced the current paradigm.

The idea of the tank resulted from a different way of thinking. The concept was just as much a bottom-up idea advocated by enthusiasts seeking sponsors as it was a top-down idea from senior planners and staff officers soliciting feasibility input. More important, it was a major shift from the contemporary paradigm. Instead of using more infantry or more artillery to achieve greater attrition, the tank provided a unique solution focused on mobility.

Tank Development

Initial development of the tank fell to the British Navy and Naval Air Service until the Landships Committee was formed. Even then, there was little support from the War Office. It was not until 1 July 1915 that the War Office submitted specifications and requirements for the proposed tanks. On 30 July 1915, design and production requests were sent to William Tritton, the managing director of the company that manufactured the Foster-Daimier tractor.

In September, responsibility for the tank project was turned over to the Ministry of Munitions. The first prototype, "Little Willie," did not meet requirements and experiments continued. The second prototype, "Mother," was successfully demonstrated on 2 February 1916. Secretary of State for War Earl Kitchener reportedly remarked that it was a "pretty toy." The War Office ordered 50. After a successful demonstration to King George V, the order was increased to 100. The tank, now designated the Mark I, would undergo numerous modifications based on performance in the field, evolving into the Mark VIII before the end of the war.[4]

Lack of resources hampered Germany's tank production. Committed earlier to building a blue-water fleet along with an armada of submarines, German industry was exhausted. The tightening British blockade aggravated this condition. Also, 8th Army Commander and later

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Chief of the General Staff Paul von Hindenburg did not like the tank idea. Although the Germans did produce about 20 tanks, they were more interested in using captured tanks and developing antitank weapons.[5]

Tank Employment

During the war, many British officers wrote papers on tank employment and advocated ideas such as using large numbers of armored and motorized "heavy rollers" or "destroyers" equipped with machineguns in successive surprise attacks, supported by infantry, artillery and air, to breach wire, clear trenches, destroy machinegun positions, attack headquarters and fight other tanks.[6] Unfortunately, their advice was ignored by the commander of the British Expeditionary Force, Field Marshal General Douglas Haig, the General Staff planners and local commanders who executed the operations. Haig viewed the war in Napoleonic terms—a breakout followed by a horse-cavalry pursuit of a defeated army.[7]

Similar to artillery or engineers, tanks were generally seen as auxiliary support for infantry. Tank crews were often rushed to the battlefield without proper training, coordination or maintenance. On 15 September 1916, strategic surprise evaporated in an attack on the Somme when only 49 tanks reached the starting point. A mobile reserve of tanks was never formed; they were parceled out to infantry units. Cavalry either outran the tanks or were cut to pieces. Infantry often failed to protect their tanks, sending them to take and hold objectives on their own.

The first major tank victory was the Battle of Cambrai on 20 November 1917. Originally planned as a raid, the Cambrai offensive employed over 300 tanks. The attack was a tactical surprise in that it did not have the usual extensive artillery preparation. Also, tanks and infantry extensively trained before the battle. At the end of the first day, the tanks had broken through the four enemy trenches and penetrated 4 miles into the enemy rear, unheard-of success at that time. Unfortunately, without a tank reserve and at the limit of their operational reach, the Allies were vulnerable to a counterattack that recaptured most of the terrain. Drawing the wrong conclusion altogether, several senior commanders blamed the tanks for their failure to hold the ground they had uncovered.

The most successful World War I tank attack was the Battle of Amiens on 8 August 1918, which has been credited with breaking the confidence and will of the German Supreme command.[8] Finally, some of the lessons learned and advice from the "problem solvers" were implemented. Over 400 heavy and medium tanks supported by supply tanks and gun carriers were used. The tanks had wireless radio sets and fought with air, artillery and infantry in a well-integrated combined arms effort.

Why did the British have such trouble employing a weapon capable of ending the war? For one thing, the tank and tank corps were perceived to threaten the infantry's existence. This belief was compounded by the narrow view of officers who were trained for and remained in the same regiment and who, therefore, had little experience of anything outside their area of interest. While we tend to idolize the stability and cohesion of the "regimental tradition," its sterility of thinking and dogmatic adherence to status quo significantly hindered tank evolution.

Another factor that retarded acceptance of the tank was the failure to accept advice from below, articulate it and apply it as doctrine. The Germans did not have this problem. German Chief of Staff of the 8th Army Lieutenant General Erich Ludendorff—later the quartermaster general—often went to front-line troops for solutions to problems. Under his direction, information from his visits and after-action reports was used to create a new doctrine for the defense.[9]

The British also believed that winning the war was always just around the corner, one push away. Haig was willing to give up the surprise created by using the few tanks available because he believed those few might be all that were needed to finally break through to defeat the exhausted German army. However, an inflexible military system locked in tradition found it difficult to incorporate the new weapons or to change tactics. The result was that the Allies fought a costly war for one or maybe even two years longer than necessary.

Joint Forces Relevance to Combat Readiness

British attempts to use the tank in World War I illustrate the unexpected problems an armed force can face when changing technologies, doctrine, tactics and force structure in a joint environment where there are competing demands and limited resources. At the strategic level, the tank's concept and development marked a victory of innovation over bureaucracy. At operational and tactical levels, it was often a failure of change to overcome tradition. Several lessons from this historical example apply to the joint forces' future combat readiness:

- Most problems impact the entire joint force, not just one service.
- Problem identification and solutions can come from anywhere.
- The joint force must integrate solutions throughout the entire force.

Joint Vision 2010 says, "The nature of modern warfare demands that we fight as a joint team." Rarely will a problem only affect one service. The more we synchronize joint service efforts to improve overall effectiveness, the more the services become dependent on, not independent of, one another. Even in World War I, Germany's priority of resources to their navy and the British blockade of German ports adversely affected their tank development. The greatest British successes came with coordinated tank and air employment. Today's symbiotic relationship among land, sea and air forces will increase as the range, guidance and lethality of weapons increase.

Because military problems affect all services, joint forces must access all available talent when confronting a pressing issue. However, as the pace of operations increases, the time available to identify and solve

problems decreases. Even so, this process must be thorough—top-down, bottom-up and side-to-side. Service parochialism can be fatal; as resources decline we must fight the instinct to protect service turf. Instead, we must produce the most efficient and effective solutions.

Problems that affect the entire force require solutions that apply to the entire force. If future joint forces are to be more effective and responsive due to significantly improved command and control based on fused, all-source, real-time intelligence, greater interoperability and more detailed synchronization, we must have a system that integrates these throughout the force. Solutions that are not fully developed and integrated will not resolve the problem.

Relevance to Joint Vision 2010

Incorporating these lessons in preparing for the future requires a joint environment that encourages problem solving. Regardless of how much we increase joint operational capabilities, we will still encounter the unexpected and need people able to look beyond the "regimental tradition" of service parochialism. In the race to keep up with emerging technologies, we must not forget the human dimension. More and more technology will not win the next war, just as more and more men did not win World War I. The next conflict will be won by innovative and determined people who use technology to overcome unexpected obstacles.

While Joint Vision 2010 provides a direction toward which the services can evolve, the services also need direction for developing future leaders and a joint ethos.[10] Without diluting service traditions or cohesion, joint force members must transcend past perspectives to reach the most effective, efficient and widely applicable solutions. To this end, Joint Vision 2010 should articulate the joint ethos—the distinguishing characteristic of all joint service members—of problem solving. That would be the first step in orienting service members and separate military services toward the attitude required to achieve full-spectrum dominance.[11]

Developing a joint force able to think out of the box, identify problems, find solutions and integrate them on the battlefield should be a part of the joint vision and would greatly influence the future combat readiness of joint forces. We know we must keep up with technology and update tactics, techniques and procedures to get to the green fields beyond. When confronted with the mud and blood of future warfare, the attitude of our force will determine whether we reach our goal. ***MR***

NOTES

1. Attributed to LTC J.F.C. Fuller, this is the unofficial motto of the Royal Tank Corps, whose colors and regimental tie contain brown, red and green to represent the "mud," "blood" and "fields."
2. In Great Britain, the day after Christmas is known as Boxing Day because "boxes" or presents are given to errand boys, mail carriers and other employees.
3. Guy Hartcup, *The War of Invention: Scientific Development*, 1914-1918 (New York: Brassey's, 1988), 82-83.
4. Ibid., 85-86.
5. Shelford Bidwell and Dominick Graham, *Firepower: British Army Weapons and Theory of War—1904-1945* (Boston: George Allen and Unwin, 1995), 137; B.H. Liddell Hart, *The Tanks*, Vol 1 (New York: Praeger, 1959), 45; Hartcup, 91.
6. J.F.C. Fuller, *"Plan 1919," Toward Combined Arms Warfare: A Survey of 20th Century Tactics, Doctrine, and Organization* (Fort Leavenworth, KS: Combat Studies Institute, 1984), 321, 329-33; Liddell Hart, 24-25, 57-59, 92-94.
7. Allan R. Millet, ed., *Military Effectiveness*, Vol I *The First World War* (Boston: Unwin and Hyman, 1987), 20.
8. Liddell Hart, 185.
9. Timothy T. Lupfer, "The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War," *Leavenworth Papers*, No 4, Fort Leavenworth, 1981, 8-21.
10. Howard D. Graves and Don M. Snider, "Emergence of the Joint Officer," *Joint Force Quarterly*, Autumn 1996, 57.
11. Liddell Hart, 13; Hartcup, 81-82; Richard M. Ogorkiewicz, *Armor* (New York: Praeger, 1960), 141.

MR Almanac

Army National Guard: Korean War Mobilization

by Captain William M. Donnelly, US Army Reserve

Between 1950 and 1952, 138,600 Guardsmen made up 43 percent of the Army force. The US Army National Guard (ARNG), including eight divisions, three regimental combat teams (RCTs), 98 battalions, 67 companies and 94 detachments, received mobilization orders in 1950.

Like the regular Army and the organized reserve corps, the ARNG was not ready for war; all had serious problems with manpower, equipment and training. The performance of guard units was like that of regular and reserve units—a few excelled, most were good to adequate, and a few failed. And, like regulars and reserves, a guard unit's performance rested on leadership, training and acceptance of service.[1]

The 1950 Army National Guard

In June 1950, the best guard units were cadres that could quickly expand into combat-ready units. Because the Army had mobilized or deleted every guard unit during World War II and discharged all guardsmen afterward, the guard had to reorganize and begin training every unit in the new troop list. Congress and President Harry S. Truman provided enough funding to fill only 350,000 of the 617,500 positions in the postwar ARNG, forcing the National Guard Bureau (NGB) to place units on reduced tables of organization (TOs).

As with regulars, most guard units did not have full complements of required equipment, and what they did have was often obsolete or worn out. Army planning, based on World War II experience, assumed there would be sufficient time for

mobilized guard units to receive enough recalled reservists, trained draftees and equipment to bring them to full strength and to conduct adequate predeployment training.[2]

In 1950, the quality of unit leadership was uneven. Most general and senior field grade officers had extensive guard or reserve service or active-duty experience from one or both world wars. Many had graduated from special guard versions of Army post-commissioning schooling. The majority of company grade and some junior field grade officers had received commissions during World War II, but often not in their postwar guard branches. Few had attended the "associate" versions of basic and advanced courses, and those lacking wartime service in their branch had experience only in weekly drills and two weeks of summer field training.

Many units with links to the 1940 troop list retained a cadre of proven officers; units without such links often had trouble finding trained, experienced officers. In some units, World War II veterans dominated senior noncommissioned officer (NCO) ranks, and the majority of enlisted men were drawn from those who had been too young to participate in World War II. These recruits brought great enthusiasm but also created problems, especially personnel turbulence.[3]

The young enlistees' greatest effect was on unit training. The NGB's three-year training plan was keyed to a three-year enlistment tour and focused on individual soldier skills. While some units held additional drills for staff training, the two-week summer field training was often the only opportunity for staff and unit collective training.

An Army Field Forces (AFF) report noted that with continuous personnel turnover, "it is doubtful if the training and overall efficiency of the guard will ever reach its desired standards." Variations in competence among officers and NCOs, equipment shortages, inadequate armories, few training areas, failure to fill all regular Army instructor billets and time constraints further complicated training management.[4]

Mobilization and the Manpower Shortage

During July 1950, the Army stripped its general reserve in the Continental United States to provide Eighth Army reinforcements and replacements to be deployed to Korea. By early August, the cupboard was nearly bare. The Army had to order thousands of inactive and volunteer reservists to Korea. Planning had allotted many of these reservists to mobilized guard units, so most units, except those slotted in autumn 1950 for Korea, did not receive all the reservists needed to fill junior officer, NCO and technical specialist positions. Because the training base could not expand fast enough to serve guard units as well as the Eighth Army, almost all guard units received untrained draftees for enlisted fillers.[5]

Under an extension of the 30 June 1950 Selective Service Act, guard units could be ordered into federal service for 21 months. Concerned about economic and political repercussions, the Army staff worried that an already overstretched Army could not supply the necessary equipment, fillers and training support. Some doubted guard units could be ready in time to influence events in Korea. Another concern was that guard units sent to Korea would be unavailable for other contingencies. Because of the continuing bad news from Korea, the need to rebuild the general reserve and the need to build an antiaircraft artillery (AAA) defense of the zone of the interior (ZI) should the war expand into World War III, Army leaders concluded they would need to use at least a portion of the guard.[6]

The AAA units were predominate in the first two increments of alerted units.[7] Other nondivision units included field artillery, maintenance, truck, engineer, signal and several other types of battalion and group headquarters companies and detachments. The period between alert and induction was three to four weeks. The Army G3 earmarked a number of non-AAA units during August and September, but the Army's success at the battle of Inchon led planners to delay their deployment.

As the Eighth Army moved deeper into North Korea, six guard truck companies and two truck battalion headquarters received orders to deploy as reinforcements for the sagging logistic system. Chinese intervention emphasized the Eighth Army's shortage of nondivision units, and in December 1950 and early January 1951, nine field artillery battalions, six combat engineer battalions, three bridge companies, three maintenance companies and three headquarters detachments from the guard received orders for Korea.[8]

Many regulars doubted guard officers could prepare and lead a division, and they feared political turmoil would result if a guard division suffered heavy casualties. The depleted general reserve overrode these concerns, and on 31 July, Chief of Staff General J. Lawton Collins ordered four divisions and two RCTs into federal service to cover base areas such as Iceland and Alaska. Collins did not want to violate the divisions' integrity—with the risk of causing a political storm—to provide units for this mission when separate RCTs were available. Army field forces had recommended which guard divisions to select, ranking them on the basis of their personnel status, training status and the AFF's evaluation of their leadership. However, only two of the four divisions were to come from the AFF list

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because Collins and Secretary of the Army Frank Pace Jr. believed spreading the burden equally across the nation was important.[9]

Young enlisted guardsmen looked forward to the adventure and excitement of active duty. The many World War II veterans, most only then hitting their stride as civilians, reacted with apprehension and resignation softened some by the comfort of serving with friends and neighbors. Many guardsmen agreed with 45th Infantry Division commander Major General James C. Styron: "There's a rich heritage in the Thunderbird history, and although it may be a dubious honor, it still is an honor to be considered one of the nation's best outfits."[10] Senior guardsmen and supportive politicians expressed traditional concerns over the use of the units because it would be necessary to break up guard divisions, replace senior guard officers with regulars and strip guardsmen from their units, violating the slogan that had become the guard's major selling point: "Go With Those You Know."

Editorial opinion generally viewed partial mobilization as a necessary, if unwelcome, development and celebrated the citizen-soldier tradition. Partial mobilization created problems for guardsmen not mobilized; some employers would not hire those who might soon be in federal service.[11]

Before induction, some units promoted officers and enlisted men or commissioned NCOs as second lieutenants. Not all regulars thought this helpful, believing it moved some guardsmen beyond their level of competence.[12] The alert notice authorized units to run recruiting campaigns. The success of these campaigns varied, but only a few units reached full TO strength. Losses usually cancelled out gains. The guard's success in enlisting younger men backfired. Army regulations prohibited induction of soldiers younger than 17. The 45th Infantry Division had to discharge 1,218 soldiers—16 percent of its enlisted strength. The next most common reason for discharge was failing the induction physical.[13]

Other losses occurred because of deferments and the extensive confusion about deferments. Units often lacked copies of appropriate Army regulations and received conflicting guidance from higher echelons. Governors and adjutants general usually tried to insulate the process by appointing a board of officers to hear requests. These measures did not prevent appeals to politicians for assistance, but governors usually declined to override a board's decision.[14]

Postmobilization Training and Turbulence

The AFF plan for units' postmobilization training had two phases. On arrival at a training site, units were to conduct basic training for junior enlisted guardsmen, prepare officers and NCOs as future trainers, integrate reservists and regular fillers, send guardsmen to various Army schools and receive draftee fillers. Nondivision units were then to conduct the Army Training Program (ATP); divisions were to follow the AFF Master Training Program (MTP). The ATP and MTP began with individual soldier skills and moved through collective training at each echelon, with progress measured at each echelon using Army Training Tests (ATTs). The MTP concluded with combined arms exercises at RCT and division levels.[15]

Units encountered multiple sources of friction during postmobilization training. Most locations lacked adequate buildings, supplies, staffs and ranges and were not prepared to act as training sites.[16] Some staffs saw guard units as convenient sources of manpower. Fort Lewis, Washington, stripped 40 percent of the 300th Armored Field Artillery (FA) Battalion's enlisted strength to fill units going to Korea—even though the 300th itself was also on orders for Korea—then backfilled the 300th with soldiers stripped from non-FA units. Administrative concerns crippled other units. Because the corps artillery headquarters at Camp McCoy, Wisconsin, could not handle the paperwork load for 10 guard and reserve units, Fifth Army placed these units under the post commander, an infantryman with neither the experience nor staff to properly supervise artillery ATPs.[17]

Planning for postmobilization training assumed there would be a total mobilization as there had been during World War II. Thus, MTP and ATP results projected inadequate levels of equipment and repair parts. Units submitted requisitions to fill these shortages, but small stockpiles and Eighth Army's needs meant few units completed the training program with a full set of equipment and supplies. This created significant difficulties for both individual and collective training and placed extra wear on available equipment.[18]

The greatest source of friction was personnel turbulence. Units sent guard officers and NCOs to Army schools, which was a good long-term investment, but doing so left many units with a serious number of vacancies in leadership and key technical positions. Some units had to delay training until enlisted fillers trickled in. Some units began training without their fillers. The units would later have to establish ad hoc basic training elements to train and integrate new personnel.[19] Because of the Army's limited training base and the demand for replacements, many guard units became emergency supplements to its training system; after completing individual training, recruits were shipped overseas.

The relentless demand for replacements led to levies. Units usually tried to fill the levies with reservists or with their first set of enlisted fillers. In February 1951, the 28th Infantry Division lost 3,000 enlisted fillers to a levy; a month later it lost another 3,000. Sometimes a levy's requirement, such as rank or skill, forced a unit to fill it with guardsmen, which created resentment.

Other turbulence came from within as commanders sought to fill positions with the best-qualified people. In some units, commanders shuffled subordinate leaders to break up hometown connections. Some senior guard officers in divisions were transferred to positions outside the unit, replaced either by promoted guardsmen or regulars. Division commanders also relieved battalion and regimental commanders whose units failed ATTs—a painful but

necessary duty: "We dropped a number in spite of our friendship because we knew we had to have top-notch officers in every instance."[20]

Concerned about the 28th and 43d Infantry divisions' readiness to deploy to Germany as part of the NATO buildup, AFF ordered them to participate in Exercise SOUTHERN PINE, held at Camp MacKall, North Carolina. AFF observers praised the skill and discipline of individual soldiers, higher level staff work and the ability of both divisions to learn from mistakes. However, both divisions received extensive criticism of unit performance and of their combined arms operations. Observers attributed these problems to NCO and junior officer inexperience and disruptions created by levies.

The AFF recommended that both divisions conduct intensive training at battalion level and lower before deploying. AFF chief General Mark W. Clark wrote: "Naturally, when we follow our national military policy of placing our faith in our citizen units, we do not get the same results with civilians as division commanders as we do with carefully selected regulars. However, I am satisfied with both of them. Both are playing the game, working hard and, I believe, will do a good job. They have seen the light and requested the relief of certain of their key subordinates who could not measure up to their responsibilities."[21] Third Army commander Lieutenant General John R. Hodge wrote that both divisions were "basically in far better shape than were the divisions I saw in any of the 1941 maneuvers, either National guard or regular" and that they "are reasonably ready to go."[22]

Korea, Germany and the ZI

Fourteen percent of mobilized guard units served in the Far East, 11 percent deployed to Europe as part of the NATO buildup and 73 percent remained in the ZI. Those in the ZI were assigned to either the general reserve or to the Army Antiaircraft Command.[23]

Guard officers held most senior and many junior positions, and enlisted guardsmen usually leavened the greater number of draftee and reservist fillers. The nondivision units in Korea during early 1951 performed as well as their regular counterparts and provided the Eighth Army with field artillery, engineer and transportation support critical to defeating China's spring offensives.[24]

Commander of the Far East Command General Matthew B. Ridgway planned to leave the 40th and 45th Infantry divisions in Japan and transfer their soldiers into the Eighth Army as individual replacements. Collins, believing this plan would create a political storm by implying the Army did not trust its MTP to produce combat-ready units, vetoed the idea and directed the divisions to replace two regular ones in Korea. Between December 1951 and January 1952, guard divisions swapped locations and equipment with the 1st Cavalry and 24th Infantry divisions and remained guard in character until June 1952, when their last guardsmen rotated home.

Despite regulars' doubts, guard divisions performed as well as other US divisions in the frustrating war. The divisions were on two learning curves: one for all units new to combat and one for conditions particular to the war. Much of the latter—raiding, patrolling, field fortifications, high-angle indirect fire—had not been stressed in the MTP, but the divisions responded. They established extensive training programs, formed special patrol groups, closely supervised subordinate units and circulated lessons learned.[25]

Guard units sent to Germany joined Seventh Army's rigorous round of practice alerts; field training; large-scale, multiunit exercises; and ATTs. Despite busy training schedules, many units, especially service support units, had to battle against "garrison mentality" and "short-timer's syndrome" as guardsmen, reservists and draftees got closer to their release dates.[26]

By mid-1951, limited national mobilization, the rotation program in Korea and the NATO buildup created a severe manpower crisis. Guard units in Germany and Korea—preparing for the loss of their guardsmen, reservists and 1950 draftees—complained of the insufficient numbers and low quality of replacements. To maintain their effectiveness, divisions established internal schools, and all units created on-the-job training programs to enhance necessary skills.[27] Almost all regular, reserve and guard units in the ZI attempted to remain combat effective, but they were targeted as a rich source of trained manpower for overseas units, useful additions to the still-insufficient Army training system and convenient units in which to "store" short-timers.[28]

The press of the manpower dilemma was unrelenting. While on Exercise LONG HORN, at Fort Hood, Texas, the 163d Military Police (MP) Battalion lost seven officers and 105 enlisted men. Its commander noted that these numbers "reflected approximately the same losses the organization might have suffered in combat without replacements." Even the AAA Command was not exempt. During 1951, it had a 46-percent turnover.[33] Morale suffered. In May 1951, a warrant officer wrote that those selected to fill levies in his battalion were "not too enthusiastic about going; however, they're adopting what seems to be the only attitude to take—'What the Hell'."[29]

In 1950 and 1951, communities realized that mobilization of their units was an undesirable but necessary measure. Protests centered on perceived unfairness, which mainly concerned World War II veterans serving again on active duty, and fears that regulars would mistreat guardsmen. Among guardsmen, bitterness over this issue never approached the intensity found among involuntarily recalled inactive reservists. But, it did increase, especially among those sent overseas after the war stalemated and college draft deferments began.

The fear that regulars would mistreat guardsmen was a hardy perennial. Guardsmen and their supporters were not shy about using adjutants general or home-state politicians to redress grievances. Collins remained sensitive to political implications of using Reserve Components, but clearly, on issues considered crucial by regulars—which units to mobilize or deploy and the stripping of units—guardsmen and their advocates lost. For example,

when an Oklahoman protested orders sending his division to Japan, Styron pointed out that a guard unit in federal service was "under Army orders and will go wherever it is assigned."[30]

Today's ARNG differs in significant ways from that of 50 years ago. But, it remains the Army's reserve of combat units and is an important link between the Army and the American people. As the regular Army becomes smaller, the guard's importance increases. Should the Army be engaged in war or suffer serious casualties and reverses, we might again have to address the concerns Collins faced in Korea. ***MR***

NOTES

1. This article is based on William M. Donnelly, "Under Army Orders: The US Army National Guard During the Korean War," Ph.D. dissertation, Ohio State University, 1998; John K. Mahon, *History of the Militia and the National Guard* (New York: Macmillan, 1983), 209; National Guard Bureau (NGB), "Induction and Release of Army National Guard Units, 1950-1956," copy at the US Center of Military History, Washington, DC.

2. Command Report, Record Group 407, National Archives, College Park, Maryland (RG 407, NA); John M. Kendall, *An Inflexible Response: United States Army Manpower Mobilization Policies, 1945-1957*, Ph.D. dissertation, Duke University, 1982, 52-77, 116-31; Mahon, 198-205.

3. Donnelly, Chapter 1.

4. NGB, "Notes and Comments for Unit Commanders—The Three-Year Training Plan," draft, Army Decimal File, Box 1102, Record Group 168, National Archives, College Park, Maryland (RG 168, NA); Inspection Report, "Report of Staff Visit to National Guard Units of Texas and Oklahoma," 11 January 1950, Box 26 (RG 337, NA).

5. James F. Schnabel, *Policy and Direction: The First Year* (Washington, DC: Center of Military History, 1972, reprint 1992), 120-22; Kendall, 180-83, 206-10; Richard B. Crossland and James T. Currie, *Twice the Citizen: A History of the United States Army Reserve, 1908-1983* (Washington, DC: Office of the Chief, Army Reserve, 1984), 94-100.

6. Schnabel, 122-23; Kendall, 172-73.

7. NGB, "Induction and Release." The AFF did not maintain the integrity of AAA groups and brigades. Instead it selected units based on unit readiness ratings. Most group and brigade headquarters arrived at training sites to take command of units with which they had not worked.

8. NGB, "Induction and Release"; William Berebitsky, *A Very Long Weekend: The Army National Guard in Korea, 1950-1953* (Shippensburg, PA: White Mane Books, 1996), 14-25, 268-69; Schnabel, 134-36.

9. Schnabel, 122-25. The Chief of Staff's selections meant that each of the six numbered armies in the ZI provided either a division or an RCT. Two of the four divisions mobilized in 1951-52 came from the AFF list.

10. MG James C. Styron, quoted in "45th to Train at Camp Polk for Duty: Recruits Are Sought," *The Daily Oklahoman*, 2 August 1950.

11. Donnelly, Chapter 2; COL William B. Rose, "Training the National Guard," student thesis, US Army War College, Carlisle, PA, 1954.

12. Donnelly, Chapter 2; Command Report, 1950, Second Army, Box 943 (RG 407, NA).

13. Memorandum from NGB Information Office for GEN Robert John Fleming Jr., 27 November 1950, "Report on Divisions and RCT's Inducted into Federal Service," File 325.452 General, National Guard Bureau Decimal File 1949-1950, Box 1083 (RG 168, NA); Unit Command Reports for 1950 (RG 407, NA).

14. Donnelly, Chapters 2 and 7.

15. Unit Command Reports, 1950 and 1951 (RG 407, NA); Office, Chief of Army Field Forces, "Master Training Program for National Guard Divisions," 15 October 1950, NGB Decimal File 1949-1950, File 353 General, Box 1107 (RG 168, NA).

16. Command Report, 1950, 28th Infantry Division (RG 407, NA); Command Report, 1950, 45th Infantry Division (RG 407, NA); Command Reports, 1950, 703d, 705th, 713th and 715th AAA Gun Battalions (RG 407, NA).

17. Ibid.

18. COL James J. Winn to Chief, AFF, "Report of Visit to Artillery Units, Fort Hood, Texas, Camp Carson, Colorado, and Camp McCoy, Wisconsin, memorandum, 17 January 1951, Box 41, Inspection Reports (RG 337, NA); Command Reports, 1950 and 1951, 245th Tank Battalion (RG 407, NA); Command Reports, 1951, 703d, 705th, 713th and 736th AAA Gun Battalions (RG 407, NA).

19. Donnelly, Chapter 6.

20. Daniel B. Strickler, *Memoirs of Lieutenant General Daniel Bursk Strickler* (Lancaster, PA: Forry and Hacker, 1972), 168; Donnelly, Chapters 3 through 6.

21. GEN Mark W. Clark to LTGs Edward R. Brooks and Stephen J. Chamberlain, Letters, 23 August and 5 September 1951, Box 34, Inspection Reports (RG 337, NA); GEN Mark W. Clark for GEN J. Lawton Collins, Subject: "Suitability of Major General Kenneth F. Cramer for Continuation in Command of the 43d Infantry Division," Memorandum, 1 October 1951, AFF Decimal File 1951-1952, Box 38 (RG 337, NA).

22. LTG John R. Hodge to GEN Mark W. Clark, Letter, 27 August 1951, Box 34, Inspection Reports (RG 337, NA); "Army Games Show Many Deficiencies," *The New York Times*, 29 August 1951.

23. The Adjutant General's Office, "Directory and Station List of the United States Army, 4 September 1951," copy in US Army Military History Institute; NGB, "Induction and Release."

24. Donnelly, Chapter 3.

25. Donnelly, Chapter 4; Berebitsky, 135-75, 211-33.

26. Donnelly, Chapter 5.

27. Donnelly, Chapters 3 through 5.

28. Kendall; monthly report "Readiness Dates of Major Units in the U.S.," File G3 322, Record Group 319, National Archives, College Park, Maryland (RG 319, NA); "Army Faces Wide Cuts," *The New York Times*, 17 July 1952; "TAC Units to Give Basic," *Army Times*, 6 September 1952.

29. Donnelly, Chapter 6; Berebitsky, 251-52; Wilfrid O. Boettiger, *An Antiaircraft Artilleryman from 1939 to 1970* (privately printed, 1990), 125.

30. Donnelly, Chapter 7. The quote is from "45th Will Keep Training, Grant Short Furlough," *The Daily Oklahoman*, 25 February 1951.

Organic Tactical Air Transport, 1952-1965

by Edgar F. Raines Jr.

In 1951 Lieutenant Leonard Kimmick Jr., of the 21st Infantry Regiment, had a dream. As the men of his regiment climbed the steep Korean hills, burdened with weapons, ammunition, grenades, rations, bedrolls, ponchos and shelter halfs, he envisioned a better future—a future with whirling wings. Assign helicopters, he proposed, as an organic part of infantry battalions under the control of the battalion motor officer. A helicopter could haul the men's extra equipment to a captured objective, resupply ammunition and quickly transport wounded back to the battalion aid station.[1]

Even in 1951, Kimmick's dream was not fantasy. US Army ground forces had been using organic fixed-wing aircraft for some time. The field artillery had obtained its own aircraft, labeled air observation posts, in June 1942. Each firing battalion of field artillery, division artillery and artillery group headquarters received two L-4s, militarized versions of the popular Piper Cub. Eventually, artillery sections at corps, field army, army group and theater also received aircraft.

Aircraft also proved valuable in route reconnaissance, column control, commander and staff transport, courier work, aerial survey, aerial photography, radio relay, emergency wire laying, emergency medical evacuation and emergency resupply.[2] These successes led the War Department to expand the program beyond the field artillery with the begrudging acquiescence of the Army Air Forces.

By 1951 seven branches of the Army had aircraft, but a lack of suitable landing areas in Korea, the number of aircraft in a division and their increasing performance led many division commanders to establish provisional aircraft companies. In January 1953, Eighth Army developed experimental tables of organization and equipment (TOE) for divisional aviation companies, which functioned as administrative rather than tactical units. They contained 26 aircraft.[3]

The introduction of helicopters added greater flexibility, complexity and controversy to a subject that often struck sparks between the Army and the Air Force.[4] As early as December 1943, Headquarters, Army Ground Forces (HQAGF), expressed an interest in replacing L-4s with light observation helicopters. Then, in early 1945, the Army Ground Forces Equipment Board called for an extensive program of light, medium and transport helicopters as well as observation and armed helicopters. Although the War Department set aside these recommendations, in 1946 the Army began testing the Bell YH-13 helicopter as a potential replacement for fixed-wing, light observation aircraft. Added funds generated by the Berlin crisis allowed the Army to buy a limited number of production units in 1948. They began reaching units in

the continental United States in 1949.[5]

That same year, the Office of the Chief of Army Field Forces, the successor to HQAGF, generated requirements for light-, medium- and heavy-lift helicopters. The Army Staff approved the creation of five experimental transport helicopter companies in May 1950. However, intense opposition from the Air Staff delayed procurement of these helicopters until 1951.

There were no Army helicopters in the Far East when the Korean War broke out, but US Air Force and Marine Corps helicopter units soon arrived in theater. On a time-available basis, they evacuated wounded soldiers and Marines from the front lines. The first Army helicopters to deploy were part of a Medical Service Corps aviation detachment assigned to support a mobile army surgical hospital.[6]

The increasing number of helicopters assigned to Eighth Army made it possible for the field army, corps and even division headquarters to receive one or more observation helicopters. Commanders and their chiefs of staff used the helicopters to visit subordinate headquarters, survey the front lines and better understand the terrain immediately in front of their units. In 1952, the Department of the Army (DA) assigned 10 observation helicopters to each division, making helicopters more available for the liaison and reconnaissance missions they were already flying. While observation helicopters could provide emergency resupply for front-line units, their cargo capacity was necessarily restricted.[7] The Sikorsky H-19 Chickasaw, a utility helicopter, with a payload roughly comparable to the fixed-wing Beaver, first reached units in the continental United States in 1952.[8]

From the beginning, the Army planned to organize aircraft into fairly homogeneous Transportation Corps aviation companies consisting of two observation and 21 transport helicopters. Eventually, they would be grouped into battalions and assigned to field army headquarters for attachment to subordinate units during operations. DA programmed 12 battalions, each consisting of three companies, for activation over the next five years.[9]

Because the small helicopter industry used essentially handcraft production methods, the Army had to spread its orders over a number of companies and purchase a variety of different models to attain its goal. Within two years the Army acquired a second utility helicopter, the Piasecki H-25 Army Mule; two light cargo helicopters, the Piasecki H-21 Shawnee—irreverently referred to as the "Flying Banana"—and the Sikorsky H-34 Choctaw; and a medium cargo helicopter, the Sikorsky H-37 Mojave. However, some time passed before they reached troop units in any number.[10]

The helicopter's chief advantages for the Army were its vertical takeoff and landing capability, short range and relatively slow speeds. Helicopters could operate from normal Army depot and troop areas and be controlled directly by the user. Chief of transportation Major General Frank A. Heileman, who was responsible for maintenance and procurement of Army helicopters, recognized their tactical uses, but he focused on their logistics impact. This emphasis reflected both his administrative responsibilities and the Army's limited experience with helicopters.[11]

In the years immediately after World War II, the Marine Corps had pioneered the tactical employment of helicopters. Marine Commandant General Alexander A. Vandegrift formed a provisional helicopter squadron at Quantico, Virginia, to test the idea of substituting helicopters for amphibious landing craft. Thus, when the Marine Corps entered the Korean War, it possessed the outlines of a tactical doctrine and considerable practical experience in mass helicopter flights.[12] The Army had monitored the Quantico experiments, but it did not gain experience in using helicopters en masse until 1952 when it formed the 6th and 13th Transportation Companies (Helicopter), equipped with H-19s.

Marine Corps helicopters mounted the first helicopter-borne movement of troops in combat in Operation *Summit* on 21 September 1951 moving 224 Marines from their marshalling area to the objective within eight minutes. Although the Army's logistic use of helicopters had matured by war's end, its tactical experience with them, apart from aeromedical evacuation, remained slight.[13]

The Korean experience heavily influenced helicopter operations in the immediate postwar years. Ambushes behind the lines, a restricted road net and broken terrain combined to encourage the Army to increasingly rely on both fixed- and rotary-wing air transport in the combat zone, which normally was defined as from 50 to 100 miles in depth. Here Army aviation had focused and would continue to focus its operations.[14]

Others during this period sought to integrate helicopters into patrol work. One author proposed making a transport helicopter organic to the infantry regiment's intelligence and reconnaissance platoon. The US Army Infantry School at Fort Benning, Georgia, studied the use of helicopters in raids, although it was not yet prepared to endorse the concept.[15]

By early 1956, instructors at the US Army Command and General Staff College (CGSC), Fort Leavenworth, Kansas, had developed tentative doctrine for an infantry division to command and control offensive helicopter operations. Because transport helicopters were grouped in battalions under the direct control of field army headquarters, the division G3 contemplating a raid would have to request helicopters for the raiding party from higher headquarters. Then, the G3 would have to arrange through joint channels for fighter cover in case the raiders ran into trouble. Because the helicopters were not armed, raiders could not conduct an assault landing into a prepared position; they would have to land unopposed as close as possible, then move over land.[16] In addition, without organic firepower aboard helicopters, raids would have to be conducted within division artillery range to provide preparatory fires and defensive fires if necessary. Thus, the raids would have to be shallow and entirely tactical in scope.

One way out of this dilemma would be to use helicopters as weapon carriers. The US Army Field

Artillery School, Fort Sill, Oklahoma, began experimenting with transporting 105-millimeter howitzers by helicopter. The school quickly discovered that a 105-millimeter howitzer could be disassembled into three sling loads and transported by an H-19. However, it took nine H-19s to move one gun, one gun crew and sufficient ammunition. With practice, disassembly and re-assembly of the gun took 20 minutes on each end of the trip. Although cumbersome, this technique made it possible for a patrol to operate beyond the divisional artillery zone and still enjoy organic fire support.[17]

This early attempt at integrating helicopters with minor infantry operations suffered from organizational, doctrinal and equipment deficiencies. Successful raids and patrols depend on being able to respond rapidly to an ever-changing situation. The bureaucratic coordination required to bring raiders, helicopters and fighter aircraft together suggested that the response in combat would be anything but timely. Subsequent experience would show the need for suppressive fire on the landing zone between the lifting of artillery fires or close air support and the troops actually landing. Finally, the equipment was hardly ideal. The first generation of transport helicopters was barely satisfactory. Lift capacity was limited. Moreover, they were vulnerable to ground fire and lacked self-sealing tanks and armor. Also, high levels of field maintenance support were required.

As the CGSC faculty refined employment concepts, a technical breakthrough occurred in 1951 as the Navy flight-tested a gas-turbine-powered helicopter. Subsequently, the Army Staff contracted with Bell Helicopter to develop a turbine-powered craft that eventually became the UH-1, familiarly known as the Huey. Bell flight-tested the first copy in November 1956, and the Army received the first production models in late 1959.[18]

The organizational problem was resolved in 1953 when CGSC instructor Lieutenant Colonel John M. Kinzer proposed that an infantry division could make an air assault using helicopters alone. The key, he argued, was developing an eight-ton, heavy-lift helicopter, the size required to move a 155-millimeter howitzer. The gas-turbine engine made his vision possible.[19]

Major General James M. Gavin, former chief of the Army's Weapons Systems Evaluation Group, using studies developed during the Korean War, argued that the Army needed to employ a helicopter force in a cavalry role. Troops mounted in helicopters would possess the necessary speed and agility to perform reconnaissance and screening missions. Gavin asserted that firepower and tactical mobility had competed throughout history with first one then the other in ascendance. The atomic bomb had given firepower a tremendous advantage over mobility. The helicopter would redress the balance for the Army. These themes—the need for an air cavalry force and the importance of mobility—permeated the Army's rationale for employing fixed- and rotary-wing units for the next 10 years.[20]

Gavin's invocation of the atomic bomb reflected the doctrinal ferment going on in the Army. Even as the Korean War raged, Army exercises in the United States postulated the impact of atomic weapons on organization, equipment and tactics. The next war would be an area war, not a linear one. Even if the enemy chose not to use atomic warheads, the threat of their use would keep defenders dispersed. Logistics installations would also have to remain small and scattered to avoid attracting an atomic attack.[21]

This model of future war had vast implications for Army aviation in general and organic tactical air transport in particular. With friendly units scattered, early detection of enemy forces in the division area became a priority and made some kind of sky cavalry absolutely essential. Helicopter-borne infantry would conduct ground reconnaissance, set up blocking positions and harass enemy columns. Division commanders also needed a quick reaction force to fix an enemy column until mechanized and motorized reserves could converge to destroy it. Helicopter-mounted infantry could meet both needs. The dispersion of depots meant a field army commander needed more light and medium fixed-wing transports with greater cargo capacity and with slightly improved range. The new aircraft needed the same unimproved, short-field landing and takeoff characteristics as the Beaver.[22]

The sky cavalry concept caused controversy with the Air Force and within the Army itself when the first provisional unit deployed during Exercise SAGE BRUSH in 1955. Its employment violated the Pace-Finletter agreement that defined the battle zone. The Armor community wanted helicopters attached to mechanized cavalry regiments to ferry the infantry troops needed for ground reconnaissance. The intelligence community wanted aircraft equipped with radar and infrared detectors to passively collect intelligence. The US Army Aviation School at Fort Rucker, Alabama, advocated a mix of armed helicopters, troop carriers and electronic collection aircraft. This use eventually won out in the early 1960s.[23]

In contrast to the disputes about the tactical employment of helicopters, the development of fixed-wing transports proceeded without controversy. In 1953, the Army tested the efficiency of fixed- versus rotary-wing cargo aircraft and discovered the former was more efficient for any flight of more than 40 miles. De-Haviland of Canada remained the Army's manufacturer of choice for cargo airplanes. Its single-engine U-1 Otter could carry nine combat-loaded soldiers or 3,000 pounds of cargo. In 1959, the first CV-2 Caribou entered the inventory. The Caribou, with a capacity for three tons of cargo or 32 combat-loaded soldiers, possessed excellent short-field takeoff and landing characteristics and could operate in extremely primitive conditions. When the first Caribou deployed to Vietnam in 1961 for field testing, Army aviators discovered the aircraft could operate out of all 130 military airstrips in country. Air Force C-47s and C-119s could use only 30.[24]

In response to the expanded role envisioned for airplanes and helicopters on the atomic battlefield, both CGSC and the US Army Infantry School had reorganized their airborne departments to give the employment of Army aviation equal

weight in the curriculum with airborne assaults. Each also assumed responsibility for preparing doctrinal publications. The Airborne-Army Aviation Department at the Infantry School is credited with having pioneered the term "air mobility" to refer to helicopter-transported infantry assaults. The Department of Airborne Operations and Army Aviation at CGSC introduced the phrase "airmobile operations."[25]

In 1960, DA organized the Army Aircraft Requirements Review Board, commonly known as the Rogers Board after chairman Lieutenant General Gordon B. Rogers, the deputy commander of Continental Army Command (CONARC). Charged with projecting the Army's aviation-equipment requirements for the next 10 years, the board concluded that the Army should continue to exploit low-speed, low-level flight and procure only aircraft that could use austere forward airstrips.[26]

Of more immediate concern was the Army's decision to abolish the Pentomic division. Chief of Staff General George H. Decker came to office in 1960 convinced that the pentomic division was unsuited for a conventional war. Among its shortcomings, the division lacked mobility. The Army reorganized around the Reorganization Objectives Army Division (ROAD) consisting of three brigades, each with three infantry battalions, and containing roughly twice the number of aircraft as the Pentomic division. Aircraft were organized into an aviation battalion (its airmobile company could move one infantry company in a single lift), an air cavalry troop as part of the divisional reconnaissance battalion and direct support aviation sections in artillery and brigade headquarters. The air cavalry troop was the Army Aviation School's old sky cavalry troop under another name.[27]

The new division was simply the most visible manifestation of a shift in emphasis as Army leaders saw they needed the ability to deter or quickly fight and win "brushfire" wars that if unchecked could spread into a general nuclear war. Increasing the Army's tactical proficiency and mobility became the primary justification for Army tactical airlift.[28]

ROAD was the first of a series of organizational innovations to affect Army aviation during the 1960s. During the late 1950s, the Artillery School had continued to experiment with moving 105-millimeter howitzers by air, but now artillerymen could move an entire battery plus fire-control equipment. However, they still had to break individual howitzers into two sling loads. In 1959, the Army began procuring the Vertol CH-47 "Chinook." Powered by two gas-turbine engines, Chinooks could lift an entire 105-millimeter howitzer in a single load. The Army received the first test aircraft in 1961. Its advent removed the most serious technological constraint to forming an airmobile division.[29]

In the late 1950s, Colonel Jay D. Vanderpool, the officer responsible for developing the armed helicopter, prepared plans for a helicopter mounted division, which he briefed to the then director of Army aviation, Major General Hamilton H. Howze. Nothing resulted from his proposal. However, Howze was later a member of the Rogers Board and tried, without success, to persuade the board to examine alternative concepts of organization and employment of Army aviation in addition to equipment needs. He did succeed in attaching a short appendix on "The Requirement for Air Fighting Units."[30]

In 1962, Secretary of Defense Robert S. McNamara directed DA to establish a board to study innovative methods of employing the helicopter. He designated Howze as its head. Working through the summer of 1962, the Howze Board, technically the Tactical Requirements Mobility Board, recommended that the Army immediately field three standard "type" aviation units: an air assault division equipped with enough organic helicopters to move one infantry brigade and supporting elements in a single lift, an air transport brigade capable of sustaining an airmobile division exclusively through an air line-of-communications, and an air cavalry brigade in which every member of the organization was helicopter mounted and all equipment was helicopter transportable.[31]

Faced with these radical proposals, the Department of Defense (DOD) directed DA to further test the air assault division and air transport brigade concepts. The Army activated the 11th Air Assault Division (Test) and the 10th Air Transport Brigade, equipped with Caribous and Chinooks, at Fort Benning in February 1963. At the same time, the Air Force convinced DOD to establish a parallel test of a ROAD division backed by the full panoply of modern tactical air support. The Air Force was convinced that such a force would be equally effective but less costly.[32]

Army Chief of Staff General Harold K. Johnson viewed the two tests on successive weeks. Comparing one division to the other, he commented, was like comparing "a gazelle and an elephant," but he added, the Army needed both. However, DA opted to activate the air assault division but not the air transport brigade. The division deployed to Vietnam as the lst Cavalry Division (Airmobile) less than 90 days after its activation. The following year, the Caribou and the follow-on DeHaviland CV-7 Buffalo were transferred to the Air Force.[33]

Late in World War II, some Army officers had recognized the helicopter's potential for tactically moving troops. Korea, with its rugged terrain and poor road network, reinforced this perception. Between the Korean and Vietnam Wars Army

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officers had discussed airmobile operations in almost purely tactical terms. Almost continuous friction with the Air Force contributed to this focus. Only a few public hints suggested that some Army officers might be thinking in terms of grand tactics, what is now called the operational level of war. The use of an air transport brigade to support a field army, as recommended by the Howze Board, certainly suggested a depth of operations greater than the tactical; however, the overwhelming bulk of the published writing was tactical.[34]

The intellectual deficiencies of the Army's work with airmobile forces; that is, the failure to consider their implications for the conduct of war on the operational level, anticipated the difficulty the Army would have between 1965 and 1973 in converting tactical successes into operational and strategic victories or even articulating the linkages between the three levels. In a sense, the Army's work with airmobility in the 1950s and early 1960s served as prologue for Colonel Harry Summers' observation about Vietnam—that the Army had won all the battles and lost the war.[35]

Since at least the 1880s the professional essence of the US Army has been tied up with the concept of combined arms—the idea that only by bringing to bear all the available weapons and the capacities of its various branches can a force prevail on the modern battlefield. In this mental construct, an airplane or a helicopter became just another piece of equipment, like a truck or an armored personnel carrier (APC), to be integrated into existing units to increase their capabilities.

The evolving nature of war and the technical capacities of the aircraft determined how they were organized and employed by the Army in the 1950s and 1960s. Moreover, since at least the latter stages of the American Civil War, the Army had confronted the fact that infantry could no longer carry prepared positions by frontal assault without incurring unacceptable losses. Over the next century, the Army explored alternatives—fire and movement squad tactics, rapid-fire artillery, the tank, the APC and airborne assault tactics. The helicopter promised to allow the infantry to literally rise above this dilemma. At the same time, to the foot-slogging infantry in the field, the helicopter was a wonderful, labor-saving device, which allowed them to reach their objective with less physical exertion and to husband their energy for the assault. Afterward, the helicopter permitted ample and timely resupply so infantrymen who seized a position were much more likely to hold it against counterattacks. The Army consequently acquired an airmobile capability much more quickly than the state of its budget might have suggested was feasible.

Incomplete as it was, Army thinking about the employment of light infantry forces underwent a revolution in the 1950s. The era's often-temperamental helicopters, with their reciprocating engines and limited lift capacity, may have soaked up maintenance, but their performance just as surely showcased the potential of "the rotary-wing revolution." That potential involved restoring the infantry's battlefield agility worn away by increased firepower and mechanization, products of the industrial revolution.

In seeking to rapidly concentrate widely dispersed forces, Gavin advocated precisely coordinated and timed movements only recently possible. The modern concept of simultaneity—attacking enemy front-line and reserve forces in depth throughout the theater—is in many ways the reverse image of what he was attempting to attain, and it requires a communications capability the reformers of the 1950s lacked. By proposing that air cavalry continuously monitor and occasionally harass advancing enemy columns, reformers sought to provide commanders with sufficient reliable information to maneuver around the dangers of the atomic battlefield. However, the world was still one of analog communications, paper maps, acetate overlays and grease pencils and small-unit commanders forced to determine their own positions by dead reckoning. "Enhanced situational awareness" was still a computer revolution away. Given these genuine limitations, it is certainly questionable how well the Army, even if built to Gavin's specifications, could have coped with a real atomic battlefield.

However, the attempt to cope with that danger pushed Army doctrine and equipment in fruitful directions for waging conventional war. Similarly, logisticians such as Heileman discerned the need for a dispersed, flexible and responsive supply system and saw Army aviation as a key component in its creation. Here, too, lay the germinal of some revolutionary ideas.

The legacy of the 1950s to the reformers of the 1990s lies not in the solutions proposed but in the open-mindedness and energy with which those earlier leaders addressed the problems of modern combat in a very different technological environment. ***MR***

NOTES

This essay is a slightly revised version of a paper the author presented at the 1997 Air Mobility Symposium sponsored by the Air Force History Foundation, the Air Force History and Museums Program and the Air Mobility Command, Scott Air Force Base, Illinois. They graciously permitted its publication in this forum.

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MR Review Essay

The Vietnam War—The Other Side

by Colonel Griffin N. Dodge, US Army, Retired

Most of the literature published in the United States about the Vietnam War examines the American experience. Tai Sung An, author of *The Vietnam War* (Fairleigh Dickinson University Press, Cranbury, New Jersey, 1998, 347 pages), takes an alternative approach: "The central focus of this book is on the various aspects of the Vietnamese Communists' political, military, diplomatic and other behaviors during the Vietnam War [also known as the Second Indochina War]."

An briefly sketches Vietnam's 3,000-year history, then quickly brings Vietnam into the 20th century. He includes biographical information on Ho Chi Minh, the dominant Vietnamese personality of the Vietnam War era. An characterizes Ho Chi Minh as an ardent Vietnamese nationalist completely dedicated to communist ideology who possessed political cunning and, above all, cold-blooded ruthlessness. An contrasts this characterization with the contrived public image of the kindly, "venerable Uncle Ho."

Throughout the book, An cites publications on the US experience in Vietnam as well as other recently translated North Vietnamese documents and publications. He also scrutinizes a variety of other sources such as captured documents and radio broadcasts. From his extensive research, he creates an intriguing portrayal of North Vietnamese leaders during the "Second Indochina War." An notes that of those involved in the Vietnamese Communist Party during the early 1930s, many survived to witness the 1975 victory of their revolutionary struggle. It was their "steely determination," intense nationalism and clever political maneuvering that sustained the leaders even after Ho Chi Minh's death in 1969. However, An suggests that in light of the terrible losses and destruction and the subsequent social and economic failures North Vietnam suffered, it was a Pyrrhic victory.

The leaders, with the unwavering objective of expanding North Vietnamese communist control over South Vietnam and, incidentally, Laos and Cambodia, maintained a totalitarian communist state in North Vietnam while conducting direct and indirect warfare. An describes the internal conflicts and intense external pressures the leaders experienced. The reader cannot help but be impressed by the remarkable tenacity of those leaders and the profound discipline they demanded of themselves and of the North Vietnamese people.

An's descriptions of the political skills demonstrated by various leaders in their interactions with foreign governments are fascinating. Their ability to work their patrons, the Soviet Union and the People's Republic of China, against each other to North Vietnam's benefit is little short of amazing. Also remarkable are the descriptions of their ability to recognize the constraints placed by the United States on its own operations. The North Vietnamese exploited those constraints in conjunction with their strategy of "fighting while talking." Thus they forged ahead in the drive toward their ultimate goal of dominance over all of Indochina. Their remarkable dedication and political skills were apparently either unknown to or ignored by US leaders, who attempted to interact with

North Vietnamese leaders as if they were rational and reasonable Americans.

An's portrayals of South Vietnam's leaders are in clear contrast to their northern counterparts. He stereotypes southern leaders as corrupt, isolated from the population at large and lacking strategic goals. An's comments about province chiefs—senior military officers appointed to administer the provinces—are particularly harsh. His portrayals are consistent with the "conventional wisdom" of the period and likely describe some individuals. However, the two province chiefs with whom I personally associated from 1972 and into 1973 did not fit An's stereotype. They constantly interacted with the population and were dedicated to improving local economic circumstances, enriching local lifestyles and encouraging an environment in which local leaders could be selected in free elections.

On occasion, An wields his "field marshal's baton" and critiques US tactical operations. His comments usually rehash earlier writings on the same issues. He often cites "pacification" as attempts by South Vietnamese leaders to "win the hearts and minds" of the people. But, he fails to mention the Civil Operations and Revolutionary—sometimes "Rural"—Development Support (CORDS) program.

CORDS paralleled and supported South Vietnam's pacification programs from mid-1967 to early 1973. While not unusually successful in winning hearts and minds, CORDS and indigenous pacification efforts resulted in positive accomplishments. Those pacification efforts were even effective in enticing large segments of the population away from Vietcong influence.

The *Vietnam War* is not for the casual reader, nor is it for the reader unfamiliar with the complexities of the Vietnam War. Its narrow focus knowingly disregards some aspects of US involvement. The more than 1,200 endnotes, many citing multiple sources, can be a distraction. In contrast, the index is brief and inadequate. However, for the student of the Vietnam War and for military professionals, the book provides a unique and valuable perspective. Its interesting conclusions and "lessons" make it well worth reading. ***MR***

Colonel Griffin N. Dodge, US Army, Retired, received a B.A. from Colorado State University and an M.A. from the University of New Mexico. He is a graduate of the US Army War College. He served in a variety of command and staff positions in the Continental United States, Vietnam and Germany. He is a frequent contributor of book reviews for MR.

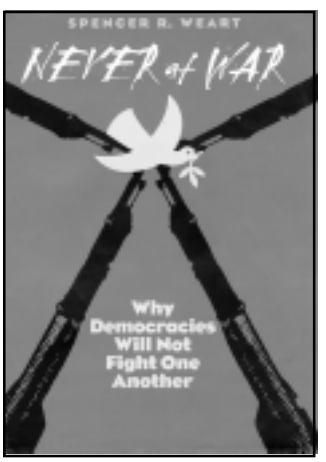
MR Book Reviews

NEVER AT WAR: Why Democracies Will Not Fight One Another by Spencer R. Weart. 432 pages. Yale University Press, New Haven, CT. 1998. $35.00.

The United States and its allies recently witnessed the late Soviet Union's democratization. We believed the transformation of our enemy's domestic political institutions would transform its foreign and military policies, making it far less a threat to world peace. Why did we believe this, and were we right?

Are democratic nations really less likely to resort to war than autocracies or dictatorships—be they hereditary, communist, fascist or fundamentalist? Spencer R. Weart's book *Never at War* contains one of the most definitive discussions of this issue. After a panoramic investigation of world history from antiquity to the present, Weart concludes that, yes, democracies are inherently peaceful. In the last paragraph he says that the most effective way to "attain universal peace [is] to achieve universal democracy."

Weart's exhaustive research confirms America's seat-of-the-pants intuition. Exactly why democracy promotes peace is another issue—one that does not attest to the inherent wisdom of our preconceptions. Traditionally, Americans distrust government and officialdom. We tend to believe democracies are more pacific than dictatorships because they give more power to "the people," who have vested interest in peace, and less power to the government, which has a vested interest in expanding its own powers through edicts and expenditures. Because war enhances state power, it is naturally attractive to government. According to this logic, if democracy is peaceful, it is largely because the people govern and not the office-holding class.



Weart rejects arguments that emphasize constitution limitations on government power. He focuses on political culture—what he calls "the central tendency of political leaders to deal with [their] foreign counterparts as they deal with one another at home."

Officials in democracies rise to high office by compromise, bargaining and consensus; officials in dictatorships get power by threat, fear and terror. The former are likely to seek compromise in international disputes; the latter will likely pursue domination.

Contrary to populist prejudices, government might actually be too peaceful, at least in a democracy. Weart attributes appeasement of

dictators to democracies' noble but naive presumption that dictators gain power through compromise and will accept reasonable terms in resolving an international problem. Often, those well-intentioned officials only confirm that threats and terrors are as effective in international as in domestic politics.

Weart has a few words of warning, particularly for populists. Some of the most democratic societies in world history have been the most warlike. Those governments, more anarchy than democracy, allowed their citizens so much freedom they could steal and pillage virtually at will. In the process, they provoked war and retribution on a continual basis. This sobering analysis applies today when Eastern European democracy looks like a halfway house between autocracy and anarchy—the next real danger to world peace.

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TOJO: The Last Banzai by Courtney Browne. 260 pages. Da Capo Press, New York. 1998. $14.95.

Tojo: The Last Banzai was originally published in 1967. It is one of only two biographies of Japanese General Tojo written in English. Both are still in print. The other, *Tojo and the Coming of the War* (Stanford University Press, 1961, $65.00), written by Robert J.C. Butow, examines Tojo's life and place in the Imperial Japanese Army's history.

Butow's work is based on a wide range of Japanese and English language sources and is one of the standard historical works in English on the period. In contrast, Browne's study is a much briefer, popularized biography. He interviewed the general's widow, gained her confidence and through this source gives special insight into the man. Both treatments are equally useful.

Tojo: The Last Banzai is eminently fair minded. In fact, some would consider it overly understanding. Browne views Tojo as a conservative Japanese would—as an upright government official determined not to surrender to American economic blackmail over Japanese expansion in East and Southeast Asia, preferring war to surrendering national goals. The portrait Browne presents is interesting and compelling.

I unreservedly recommend this book to those interested in learning more about Tojo, the way the Imperial Japanese Army viewed his life, the Pacific War from a Japanese perspective or the insular and intellectual context of Japanese militarism.

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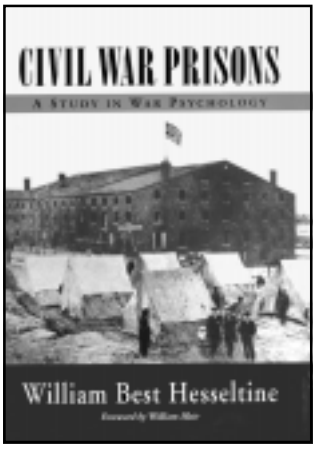

CIVIL WAR PRISONS: A Study in War Psychology by William B. Hesseltine. 290 pages. Ohio State University Press, Columbus, OH. 1998. $29.95.

William B. Hesseltine first published *Civil War Prisons* in 1930. The book grew out of his dissertation research at Ohio State University and has long been the definitive work in its field.

Hesseltine's controversial study examines a festered wound—the belief that the South bore the principal responsibility for wartime atrocities in prison camps. Though figures vary depending on sources, a conservative estimate is that 26,436 of 220,000 Southern prisoners died in captivity compared to 22,576 Northerners who perished in Southern camps.

What made the original edition of the book particularly controversial was Hesseltine's dismissal of the charge that the Confederacy conspired to kill Northern prisoners. In his view, Northern propaganda was so effective during and immediately after the war that it became easy to imagine Confederate atrocities. The trial and subsequent execution of Andersonville prison's commandant Major Henry Wirz only fueled radical Republicans' hatred of their former adversaries. The feeling grew as the accounts of atrocities emerged from Andersonville survivors.

If Hesseltine's work has a shortcoming, it is that it sheds no new light on who was responsible for Northern propaganda efforts that so demonized the South. What responsibility did President Abraham Lincoln bear? Hesseltine alleges that Lincoln's decision in 1863 to end the prisoner exchange led the South to continue to hold Northern captives even though they did not have the resources to care for them. Moreover, despite Northern rhetoric concerning the welfare of black soldiers in Confederate prisons, Lincoln and his generals focused more on depriving the South of manpower than on alleviating the plight of prisoners. This indictment is reminiscent of Confederate President Jefferson Davis's assessment that Lincoln's administration preferred legal trivialities and a war of extermination over caring for its own soldiers.

Though Hesseltine presents a far more benevolent view of the Southern perspective, he does not let the Confederacy completely off the hook. He considers Andersonville's horrible conditions the exception rather than the rule but alleges that such conditions were the result of the Davis administration's haphazard response to a sudden explosion of need. However, Hesseltine is harsher on Lincoln's motives than he is on Davis's.

William Blair's foreword is particularly instructive in placing this edition in the proper political perspective. Nothwithstanding Hesseltine's penchant for making controversial statements to elicit an emotional reaction, *Civil War Prisons* has withstood the test of time and remains a valuable contribution to Civil War literature.

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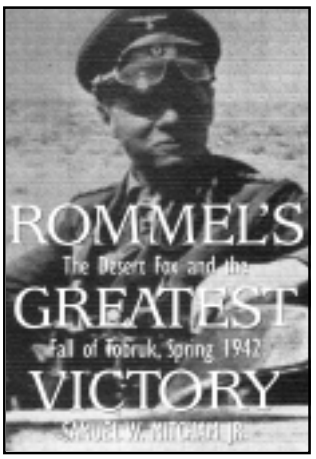

ROMMEL'S GREATEST VICTORY: The Desert Fox and the Fall of Tobruk, Spring 1942, by Samuel W. Mitcham Jr. 243 pages. Presidio Press, Novato, CA. 1998. $27.95.

Field Marshal Erik Rommel's Afrika Corps' successes in 1941 won him the reputation of battlefield invincibility and the *nom de guerre* "The Desert Fox." His successes were tactical in the grand scheme of things because although he had surprised and defeated the British 8th Army in several fights, he could not dislodge Commonwealth forces and failed to reach the Suez Canal. He could not achieve the strategic aim of conquering Egypt and denying the canal to Axis enemies.

In *Rommel's Greatest Victory*, Samual W. Mitcham Jr. ably describes events leading to the Tobruk garrison's capitulation on the morning of 22 June 1942. The battle, which lasted 29 days, had begun when Rommel's forces reached the fortresses' outer defenses on 10 April 1941. Mitcham's balanced treatment of both combatants describes a closely run battle for each side.

As is frequently the case in mobile warfare, Rommel eventually prevailed because of skill, audacity and luck. In the case of Tobruk, indecisiveness, incompetence and perhaps bad luck precipitated the British loss, which stunned British Prime Minister Winston Churchill and the Commonwealth.

Rommel and his forces also erred during the fight. Losses of senior German officers captured, wounded and killed were high as the fighting swirled from one strongpoint to another. Combat strength vacillated wildly, but Herculean effort by tank repair units enabled combatants to continue the fight. In the end, leadership, competence and aggressiveness prevailed.

This is an extremely well written, readable book. Much effort was put into the battle's chronology, which follows success and failure among individual British and German units. Mitcham also includes an interesting epilogue, which details what happened to battle participants during the remainder of the war and after its end.

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ONE DAY TOO LONG: Top Secret Site 85 and the Bombing of North Vietnam by Timothy N. Castle. 352 pages. Columbia University Press, New York. 1999. $24.95.

Few secrets of US wartime operations in Southeast Asia were more closely guarded than US Air Force Operation *Project Heavy Green*. Operating near the crest of a remote mountain in northeastern Laos, scarcely 12 miles from the Laotia-North Vietnamese border, the top-secret radar bombing facility's sole purpose was to guide Thailand-based strike aircraft against North Vietnam's most sensitive bases.

To the North Vietnamese, the high-tech facility posed a dangerous, intolerable challenge. In November 1967, barely four months after the facility began operating, an elite North Vietnamese commando unit destroyed it in a bloody predawn assault. Seven of the 19 Americans escaped, three were killed. The fate of the remaining nine remains a mystery.

The US government classified all military and CIA operations in Laos, as in North Vietnam, because US presence in the politically neutral country violated the 1962 *Geneva Agreements* that barred all foreign military forces. But there were other reasons for hiding the tragedy at Site 85. As Timothy Castle reveals in this exhaustively researched and responsibly written expose, the event was a scandal that soon led to a self-serving search for scapegoats and reprehensible conduct by senior Air Force officers in Southeast Asia and the US ambassador to Laos. Castle notes: "[Q]uestions, recriminations and cover-up began immediately."

Castle's suspenseful writing style and dogged tenacity penetrate the decades-long US government efforts to hide this shameful event. This authoritative account is also a refreshing departure from the all-too-common practice of describing dubious adventures without documenting sources. A curious exception to this otherwise excellent documentation is the lack of an index, which would prove a useful addition to future editions.

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LIKE MEN OF WAR: Black Troops in the Civil War, 1862-1865, by Noah Andrew Trudeau. 576 pages. Little Brown and Company, New York, NY. 1998. $18.00.

The British poet Lord George Byron once complained about making heroes of every character with passing notoriety: "Every week and month sends forth a new one," he lamented. The same might be said of books on the American Civil War. With increasing regularity bookstore shelves are filled with "new" analyses of major battles or "undiscovered" diaries, notebooks or battle plans that offer "fresh insight" into the United States' most traumatic conflict. All but the most ardent devotees must be wondering how much more can really be said.

The answer, in part, lies in Noah Trudeau's new book, *Like Men of War*. This detailed and engaging study of African American soldiers' contributions to the Union's war effort will interest even the most jaded Civil War scholar. Using materials long available in the public domain but seldom, if ever, examined with such meticulous care, Trudeau reveals how Blacks from the South, often with inadequate arms and virtually no training in the art of war, fought honorably under the Stars and Stripes. By the end of the war,

nearly 180,000 had enlisted. Northerners often did not appreciate their service, frequently looked on them as a temporary expedient to defeat the Confederacy and had no real use for them as people or respect for their loyalty and bravery under fire. Trudeau further describes the unsavory practices Union generals and politicians used to enlist slaves and freedmen.

Tacticians will thrill to the accounts of hundreds of minor skirmishes in which African American units played a role. Chronicling the hour-by-hour movements of units as small as companies and platoons gives the book a sense of immediacy. Trudeau allows the historical record to speak for itself, editorializing rather sparingly, then only highlighting his conclusions. As a consequence, this book does not preach; it reveals the often untold and under-appreciated story of African American soldiers who fought for their personal freedom and the Constitutional form of government that protected the rights of everyone in America. *Like Men of War* traces how our national ideals can inspire men and women of all colors and ethnic backgrounds.

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USA, Retired,
Reading, Pennsylvania

MUSSOLINI AND THE BRITISH
by Richard Lamb. 356 pages. John Murray, London. Distributed by Trafalgar Square, North Pomfret, VT. 1998. $45.00.

Mussolini and the British is a valuable case study in diplomacy, foreign policy and strategy. Richard Lamb completely recasts the common interpretation of Anglo-Italian relations' role in the origins of World War II.

England and Italy were not inevitable enemies. Lamb argues that British attitudes toward *Il Duce*—Mussolini—were an unending series of missteps and misunderstandings. Successive British administrations missed several significant opportunities to prevent an alliance between Fascist Italy and Nazi Germany.

That Mussolini and Adolf Hitler were anything but natural allies is not surprising. Italy was never enthusiastic about the *Anschluss* of Austria to Germany. Mussolini had worked hard to bring Austria under his own sphere of influence. He was even less excited about the thought of German domination in the Balkans or forging an iron-clad military alliance with Hitler.

Lamb's research suggests that divisions between Germany and Italy were not only wide but ripe for exploitation. This remarkable and engaging study in balance of power diplomacy demonstrates that Mussolini tried to steer an independent, even at times anti-Hitler, foreign policy and that the British persistently failed to take advantage of the situation.

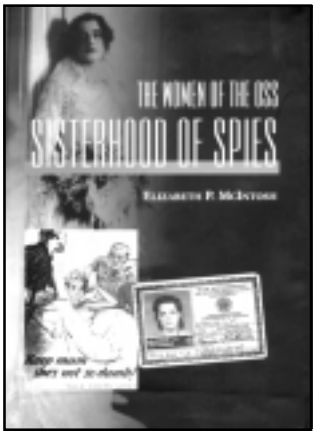
Lamb makes no excuses for Mussolini. He argues that the Italian leader was not an "inhuman ogre," yet he has no trouble pointing out Mussolini's brutal, amoral side. Lamb's criticisms of British estrangement from *Il Duce* are therefore curious; Mussolini proved time and again a faithless ally. How could the British ever trust him?

This story is particularly relevant today. Currently, many world powers possess both bright and dark sides. Before Saddam Hussein became the "great Satan," he was a quasi-American ally, a bulwark against the expansion of Iranian revolution. Today Iraq is out; Iran is in. Iranian leaders have signaled they might be ready to reopen engagement with the United States. However, many people are uncomfortable with the Islamic republic's progress in human rights and geo-strategic designs for central Asia.

Similar perplexing issues of whom to trust face the US in other regions. Since US national strategy places a premium on collective security and regional stability, these timeless issues are more important than ever.

Mussolini and the British provides a well-researched, finely written, clearly organized study of the challenges of dealing with nations and leaders you just can't trust. I strongly recommend this book.

LTC James J. Carafano,
USA, Washington, DC



SISTERHOOD OF SPIES: The Women of the OSS by Elizabeth P. MacIntosh. 304 pages. Naval Institute Press, Annapolis, MD. 1998. $29.95.

World War II is "hot" again. However, the popular subject's focus is still mainly on men—the blockbuster movie, *Saving Private Ryan* (Dreamworks Home Entertainment, Universal City, CA, 1999, $24.99); Stephen Ambrose's various histories based on extensive interviews of World War II veterans; and several other best sellers by nationally recognized personalities, such as newsman Tom Brokaw, who highlights the accomplishments of the Depression-era generation in his book *The Greatest Generation* (Random House, New York, 1998, $24.95).

Sisterhood of Spies by Elizabeth P. MacIntosh attempts to rectify the situation, although it focuses predominantly on civilian women within the Office of Strategic Services (OSS), not the smaller military contingent.

It is a is fascinating book. MacIntosh combines historical narrative, case studies and oral histories to trace both the development of the OSS and women's expanding roles within the agency, ending with a description of how that tradition has affected the missions women currently perform in the CIA. Despite its title, the book does not take up women as operatives—spies—detailing German positions or blowing up bridges, although women did indeed function in those roles.

MacIntosh, an OSS operative, served primarily in Asia. She used those experiences in her memoir

Undercover Girl (published in 1947 under the name Elizabeth P. MacDonald). Her association with the OSS and its follow-on, the CIA, is much more extensive.

During World War II, regardless of professional background or expertise, women were shunted into administrative and support functions that allow any bureaucracy to function. The brilliance of the one-legged spy Virginia Hall was all the more impressive when compared to the vast majority of women—such as Julia McWilliams Child, the future chef, who served with the OSS in China—who did research and analysis or who managed the operational support for field agents.

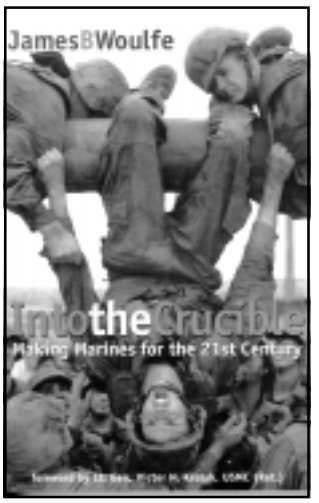
Regrettably, MacIntosh does not elaborate on the contributions of the small cadre of military women who served. Did their OSS service have a similar impact on their military careers, or were they cast aside in the great post-war drawdown? Unfortunatley, MacIntosh was not able to borrow more extensively from her interviews—in the style of Ambrose. The mundane bulk of the women's labors produced different kinds of memories.

The book is highly readable and enjoyable. It truly makes me wish I could personally meet MacIntosh. She is a great American and has served her country well in war and peace. She sounds like a great lady, and judging from her book, she is not the exception within the "sisterhood of spies."

LTC Dianne Smith, ***AFCENT, Brunssum, Netherlands***

INTO THE CRUCIBLE: Making Marines for the 21st Century by James B. Woulfe. 183 pages. Presidio Press, Novato, CA. 1998. $24.95.

Recruit training for all branches of the US military services had a rude awakening in 1965 when several recruits died during rigorous training exercises. Congress demanded change, and all branches responded accordingly. Each service paid more attention to selection and training of drill instructors and the nature of the recruit curriculum. *Into the Crucible* describes how the US Marine Corps is adapting its training to place recruits under maximum stress before



graduation. The exercise worthily climaxes the preparation to become a Marine. The Corps terms this short stress test "the crucible."

The crucible is a series of physically demanding, simulated combat scenarios a platoon must complete together. This phase of recruit training emphasizes problem solving, team building and the Corps' special elan by associating the course's physical challenges with the Corps' history.

Each test problem is named after a Marine recipient of the Congressional Medal of Honor. The drill instructor relates solutions to problems with the exploits for which that Marine demonstrated extraordinary bravery. The message is clear: this is your role model. The leadership role in problem solving rotates throughout the platoon. Such techniques are also widely used in business and managerial training since being introduced 50 years ago by the Outward Bound Program.

The simulated combat scenarios use walls, barrels, real barbed wire and overhead machinegun fire. However, strips of sawdust simulate rivers and other physical ground features, for swamps and real rivers caused the deaths of recruits in the past. The students carry full packs, endure long hikes, little food and an almost total lack of sleep. There is no doubt the course is a maximum-stress operation.

James B. Woulfe's remarkably naïve writing style is irritating at first but effectively provides the instruction's flavor as well as the content. A hypothetical platoon of ethnically mixed recruits headed by a battle-wise Marine sergeant is the focus of the contrived experience. The trainees possess a sensible mix of competence. Some are awkward, others agile, some bright, others less so. The platoon achieves its goal with most of the obstacles, fails in a few, and after-action reviews consider the reason for failures. Such techniques could almost be lifted from a Harvard Business School managerial curriculum.

The experience is presented in the form of conversation between the drill instructor and the recruits, but it is palpably contrived and clearly not intended to be realistic. The artificial narrative merely demonstrates how drill instructors should encourage dialogue.

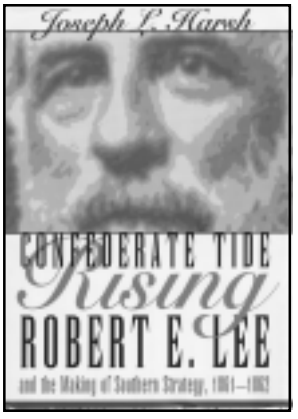
It is appropriate for the Marine Corps to teach recruits its policies concerning drugs, honesty and discipline. But it is a stretch to believe that Marine recruits engaged in a maximum-effort, 45-mile hike, interspersed with other physical challenges will be receptive to lectures on family values, marriage, divorce, sexual harassment and ethnic discrimination. Unfortunately, the author intersperses his narrative with such homilies. The most effective venue for such spiritual and political training is scarcely among a bunch of tired, wet, dirty, hungry Marine recruits whose feet hurt and who only wish to complete the operation so they can relax in a hot shower.

The crucible experiment is unique in its emphasis on problem solving by every member of a recruit platoon. It presumes that even those who will primarily be followers will benefit from understanding leaders' responsibilities. It prepares recruits to meet the unexpected challenges that occur in combat. If we are to believe Woulfe, the exercise reinforces the ethos of the Marine Corps by recalling its proud history—a theme constantly repeated during previous weeks of boot camp.

It is fitting that the commandant of the Corps, Charles C. Krulak, who sponsored this variant in recruit

training, is the son of a previous commandant, General Victor "Brute" Krulak. Recruit training under "Brute" was characterized by a Marine drill instructor wearing a flat hat and thrusting his chin an inch or less from the terrified eyes of a young recruit. It will be difficult to measure whether the crucible is better training for a combat Marine, but society and the nature of future wars make it logical to find better ways of training recruits for future challenges.

RADM Benjamin Eiseman,
USNR, Retired,
Denver, Colorado



CONFEDERATE TIDE RISING: Robert E. Lee and the Making of Southern Strategy, 1861-1862, by Joseph L. Harsh. 278 pages. Kent State University Press, Kent, OH. 1998. $35.00.

Scholars, historians and pundits have long been at odds over whether the Confederacy ever had a cogent strategy for winning the Civil War. If it did, who was responsible for creating and articulating it as a Southern national policy? Now, backed by superb research and keen analysis, Joseph Harsh's first book, *Confederate Tide Rising*, presents a sharply focused study of the South's strategy at the war's beginning.

Harsh is a professor of history at Virginia's George Mason University and the founding president of the Northern Virginia Association of Historians. Initially, he was interested in why Confederate General Robert E. Lee took his army across the Potomac River and invaded Maryland in 1862, a decidedly risky and aggressive move that seemed contrary to the South's strategic circumstances and limited resources. What Harsh found compelled him to write this vivid study of Southern war aims, policy and strategy and of the relationship between Confederate President Jefferson Davis and Lee.

At first, Davis favored an offensive defense to protect Southern independence and territorial integrity while embracing all slave states within the Confederacy, especially the undeclared Border States. However, given the South's limited manpower and materiel, it soon became clear that the South could not win a war of attrition while standing on a perimeter defense. The war aims far exceeded the resources available.

Although the South at first achieved some significant successes, severe setbacks begged for a change in the South's strategic vision. Kentucky had been lost; Tennessee was almost lost; Union forces had captured New Orleans, penetrated Mississippi and threatened Charleston; General George McClellan's huge Union army was only 25 miles from Richmond. By late May 1862, the South had nearly lost the war.

Davis has been criticized for his strategy of perimeter defense and for meddling with his field commanders. Harsh convincingly contends, however, that while Davis was an exceptionally strong war president, he largely confined himself to offering general guidance to his commanding generals. He expected them to create their own strategies within the framework of his guidance.

In 1862, when Lee assumed command of the Army of Northern Virginia, Davis found the right partner for developing a viable Southern strategy. Davis, the statesman, and Lee, the soldier, knew the South's chances for victory were slim. They realized that coordination, concentration and aggressive operations were key factors for any winning strategy, and they were well aware their odds of winning would increase if the North failed to properly use all of its resources and energies. If the North grew weary of the war, it might abandon the effort as too costly in money and blood.

Lee especially knew offense offered the only path to victory. Defense would only prolong the inevitability of defeat. Only the offense allows a force to seize and maintain the initiative; choose the time, place and manner of battle; inflict maximum punishment on the enemy; and create a sense of invincibility and control of events. Lee's subsequent offensive operations drove McClellan back and crushed General John Pope's army at the Second Battle of Manassas. Harsh argues that the Maryland invasion was a calculated risk that fit nicely into the South's overall strategy to take the war to Northern territory.

Harsh's crisp narrative of moves and countermoves contains excellent insights about translating strategy and policy into maneuver and tactics. His well-presented argument and credible conclusion offer a sound perspective on this often-misunderstood feature of the war.

COL William D. Bushnell,
USMC, Retired,
Sebascodegan Island, Maine

CGSC Notes

continued from back cover

seeks to identify and locate surviving Korean War veterans to facilitate their participation in 50th-anniversary commemorative activities. Former Assistant Commandant of the Marine Corps General Raymond G. Davis, a Korean War Medal of Honor recipient and foundation co-chairman, remarked: "We do not seek to commemorate the war, but rather the veterans thereof and the sacrifices they made to preserve democracy on the Korean peninsula almost 50 years ago."

Additional information and registration forms are available from the foundation's web site <www.uskorea2000.org>. Individuals may also request an information and registration packet from US-Korea 2000 Foundation, Inc., 4600 Duke Street, Suite 416, Alexandria, VA 22304-2517. Please include name and complete mailing address. You may also contact the foundation by calling (703) 212-8128, faxing (703) 684-0193 or E-mailing <Info@USKorea2000.org>.

The foundation is a private, publicly supported, nonprofit organization serving the Korean War veteran community through individual and corporate philanthropic outreach. For more information on helping financially or assisting in other ways, please contact Deputy Executive Director Harry Mohr at the numbers listed above, or you can E-mail him at <HMohr@USKorea2000.org>.

Korea Bound?

American Forces Press Service has established a website to showcase US Forces Korea (USFK). The site presents articles, photos, maps and video clips on such topics as the USFK mission, history of US involvement in Korea and an overview of what service members should expect during a tour of duty in Korea. The site is at <www.defenselink.mil/specials/korea/>.

MR Letters

Not THAT Dull

I read the article "Threat Convergence" by LTC Bill Flynt (*MR*, September-October 99) with interest. The picture of Bhagwan Shree Rajneesh reminded me of the salmonella poisoning incident that hit too close to home when I was a high school freshman in The Dalles, Oregon. No one in my family became ill due to the poisoning, but many of my friends did.

When I first noticed that the author spelled my hometown "The Dulles," I felt slighted. Then I chuckled and wondered whether the author had actually been there. The Dalles is a small town of 12,000, and a visitor not interested in outdoor activities might indeed think that "The Dulles" is more appropriate.

CPT Heather Green,
141st Support Battalion,
Oregon ARNG

Editor's Note

Some *MR* readers objected to LTC Bill Flynt's discussion of cults in "Threat Convergence." The term "cult" refers to a group—Christian, Jewish, Muslim, pagan or other sect—outside the religious mainstream. Title X of the US Code assures soldiers their constitutional religious liberties, whether or not their beliefs are popular. ***MR***

CGSC Notes

Transformation of the Army

The Command and General Staff College (CGSC) is actively involved with the Chief of Staff's campaign to transform the Army. CGSC has been working on two very important missions for TRADOC in relation to the stand up of the initial medium weight brigade at Fort Lewis, Washington. The first effort is being led by the Center for Army Tactics (CTAC) with support from the Combined Arms Doctrine Directorate (CADD), the Directorate of Logistics and Resource Operations (DLRO), the Directorate of Joint and Multinational Operations (DJMO) and the Center for Army Leadership (CAL), to lead a team effort across TRADOC schools to write the Operational and Organizational Concept (O&O) for the Command and Control Combat Computer Information Surveillance Reconnaissance portion of the brigade. The O&O is written and will be approved within the next month. CTAC will also be in support of a couple of C4ISR rock drills and is the College lead for Army Experiment 7 which will focus on brigade training.

The second effort is headed up by CADD to determine tasks associated with an ARFOR headquarters. Specifically, CADD will be looking at the tasks of a division headquarters and an ARFOR headquarters to determine augmentation required if the division must be an ARFOR. This is groundbreaking work for the Army. The way ahead will be to help fulfill the mission given by the Army Chief of Staff that every corps is capable of being a Joint Force Land Component Command and/or a Joint Task Force.

The Combat Studies Institute (CSI) is developing a history of change in the Army as it has gone through organizational change such as during the building and subsequent failure of the Pentomic Division.

CAL is heading a coordination effort along with Task Force TLS (Training, Leader Development and Soldier Support) to help coordinate and develop a campaign plan to train brigade leaders. CAL will also be working a subsequent task to help define the institutional role in the training of subsequent members of brigades as the organization becomes more common and the soldiers come through the institution enroute to those brigades. Look for a series of articles in the May-Jun edition for a more in-depth review of these efforts.

DJMO

An interagency panel will visit CGSOC from 2-3 February to address students in National Security Policy Formulation (A512). This panel of action officers representing the Joint Staff, State Department, intelligence community and National Security Council staff will discuss how interagency coordination helps the President make national security decisions.

In early January, Lincoln Benedicto, of the State Department, will join the Department of Joint and Multinational Operations. He will teach A517, Diplomatic Instrument of Power, and represent the State Department at on-post activities. He will also facilitate State Department participation in exercises conducted by BCTP such as Prairie Warrior, and advise all activities on State Department capabilities and functions. He will be available to teach classes or conduct professional development programs in his areas of expertise. POC is Bob Walz at 684-3979 or MAJ Bob Finn, Operations, 684-2536.

MR bids farewell to Production Editor

Production editor Phil Davis leaves *Military Review* after 18 years. He began here in 1981 as the books and features editor and German translator, assuming his current position in 1988. During his tenure he has seen widespread changes in *Military Review* and the military's role—from the rise of electronic publishing to the fall of the Soviet Union. He was instrumental in the *MR*'s transition from cut and paste techniques to cutting-edge technology. Having survived 10 editors in chief and six managing editors, Phil leaves a legacy of professional dedication and publishing excellence. He takes over as editor of *The Air Scoop* (the USAFE safety publication), in Ramstein, Germany. Phil has been a keen eye, organizational stalwart and good friend. We will miss his talent and devotion but wish him and his wife, Becca, good luck and Godspeed.

Korean War Veterans Sought

Fiftieth anniversary activities to commemorate the Korea War will begin on 25 June 2000 and continue through 27 July 2003. All Korean War veterans are encouraged to register with the US Korea 2000 Foundation. The foundation is looking for anyone who served in the Armed Forces, including the Coast Guard and Merchant Marine, for at least one day between 25 June 1950 and 27 July 1953. Actual service in the Korean Theater of operations is not a requirement. Family members of deceased Korean War veterans are also encouraged to participate.

According to Department of Veterans' Affairs statistics, less than 20 percent of Korean War veterans belong to any national veterans' organization. The foundation

(Continued on page 95)