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# AVOIDING VIETNAM: THE U.S. ARMY'S RESPONSE TO DEFEAT IN SOUTHEAST ASIA

Conrad C. Crane

September 2002

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### **FOREWORD**

As American operations against terrorism spread around the globe to places like Afghanistan and the Philippines, an increasing tendency has been for commentators to draw parallels with past experience in Vietnam. Even soldiers on the ground have begun to speak in such terms.

Dr. Conrad Crane analyzes the Army's response to that defeat in Southeast Asia and its long-term impact. Contrary to the accepted wisdom that nations which lose wars tend to learn best how to correct their mistakes, he argues that Americans tried to forget the unhappy experience with counterinsurgency by refocusing on conventional wars. While that process eventually produced the powerful force that won the Persian Gulf War, it left an Army with force structure, doctrine, and attitudes that are much less applicable to the peace operations and counterterrorism campaign it now faces.

Dr. Crane asserts that the Army must change in order to operate effectively in the full spectrum of future requirements, and it is time to reexamine the war in Vietnam. His study also draws attention to the service's "Lessons Learned" process, and provides insights as to how the experience gained in Operation ENDURING FREEDOM should be analyzed and applied.

The Strategic Studies Institute is pleased to publish this study as a contribution to the defeat of global terrorism and the transformation of the Army.

DOUGLAS C. LOVELACE, JR.

Director

Strategic Studies Institute

## BIOGRAPHICAL SKETCH OF THE AUTHOR

CONRAD C. CRANE joined the Strategic Studies Institute in September 2000 after 26 years of military service that concluded with 9 years as Professor of History at the U.S. Military Academy. He has written or edited books on the Civil War, World War I, World War II, and Korea, and published articles on military issues in such journals as The Journal of Strategic Studies, The Journal of Military History, The Historian, and Aerospace Historian, as well as in a number of collections and reference books. He holds a B.S. from the U.S. Military Academy along with an M.A. and Ph.D. from Stanford University. He is also a graduate of the U.S. Army Command and General Staff College and the U.S. Army War College. He currently holds the General Douglas MacArthur Chair of Research at the U.S. Army War College.

### **SUMMARY**

There is a commonly accepted maxim that military defeat is the best teacher for an army. But historian Edward Drea has noted "The way an army interprets defeat in relation to its military tradition, and not the defeat itself, will determine, in large measure, the impact an unsuccessful military campaign will have on that institution."

His conclusion is borne out from the American experience in Southeast Asia. While the French Army made a very frank assessment of its performance in Indochina that improved its counterinsurgency capabilities for future wars, the U.S. Army's process for analyzing failure was quite different. While a series of Vietnam studies by high-ranking officers focusing on branch performance and tactical innovations was completed in the early 1970s, the Army's primary emphasis quickly returned to the future European battlefield. Army involvement in counterinsurgency was first seen as an aberration and then as a mistake to be avoided. Instead of focusing on the proper synchronization of military and political tools with objectives necessary for success in low intensity unconventional conflicts, the Army continued to concentrate on mid to high intensity conventional wars. Shaped to a great extent by the work of Colonel (Retired) Harry Summers, the American Army's lessons from Vietnam were far different from the French. While the resulting policies helped produce victory in the Persian Gulf War, they have left a service with a structure, doctrine, and attitude that are still not conducive to involvement in low intensity conflicts or "Operations Other Than War."

In hindsight, the Army that won in the Persian Gulf deserves credit for avoiding the common mistake of preparing to fight the last war instead of the next one. However, enemies like Saddam Hussein are becoming increasingly rare, if not extinct, and the time has come for the Army to look more carefully at Vietnam, which seems more relevant for our current campaign against terrorism. Global missions in Operation ENDURING FREEDOM are evoking increasing comparisons with past experience in Southeast Asia. As distasteful as the proposition may seem, to truly be a Full Spectrum force, the Army must be prepared to deal with all aspects of a conflict resembling that lost war. This will necessitate reforms in training, doctrine, and force structure, as well as service acceptance of smaller-scale contingency missions including counterinsurgency and some degree of nation-building.

The American Army can no longer run away from Vietnam. For it has found us in Afghanistan, Colombia, and the Philippines.

## AVOIDING VIETNAM: THE U.S. ARMY'S RESPONSE TO DEFEAT IN SOUTHEAST ASIA

By God, we've kicked the Vietnam syndrome once and for all.

President George Bush, 1991<sup>1</sup>

Many of my generation, the career captains, majors, and lieutenant colonels seasoned in [Vietnam], vowed that when our turn came to call the shots, we would not quietly acquiesce in halfhearted warfare for half-baked reasons that the American people could not understand or support.

General Colin Powell, 1995<sup>2</sup>

Immediately after their failure in Indochina, the French Supreme Command, Far East, prepared a candid appraisal of their performance. The results were published in 1955 in three volumes, summarizing lessons dealing with politico-military concerns, countersinsurgency in general, and tactics. General Paul Ely, Commander-in-Chief, Indochina, described his study as "a collective selfappraisal." He intoned "We must review the causes of our failures and of our successes to ensure that the lessons which we bought so dearly with our dead not remain locked away in the memories of the survivors." He defended his candor by arguing, "An Army with a long history is sufficiently well-endowed to be able to hear the truth." Based on 1,400 reports written by officers of all ranks, the volumes dwell heavily on the need for pacification and political action at the village level, properly coordinated with all military actions. Assessments were indeed candid, and provided clear lessons for the French Army to apply in future counterinsurgencies such as in Algeria. The French clearly aimed to learn from their mistakes and to do better next time. 3 And they did. The fact that the nation eventually lost the war in Algeria should not detract from the fact that the French Army's counterinsurgency performance was much improved.

This example would seem to support the common maxim that military defeat is an army's best teacher, as it eliminates incompetent leaders and practices, promotes innovative reforms, and forces deficiencies to be fixed. However, historian Edward Drea has noted that such generalizations overstate the case. He writes, "The way an army interprets defeat in relation to its military tradition, and not the defeat itself, will determine, in large measure, the impact an unsuccessful military campaign will have on that institution."

This conclusion is borne out from the American experience with defeat in Southeast Asia. The U.S. Army's assessment of its Vietnam failure was quite different than that of the French. While a series of Vietnam studies by high-ranking officers focusing on branch performance and tactical innovations was completed in the early 1970s, the Army's primary emphasis quickly returned to the future European battlefield.

Army involvement in counterinsurgency was first seen as an aberration and then as a mistake to be avoided. Instead of focusing on the proper synchronization of military and political tools with objectives necessary for success in low intensity unconventional conflicts, the Army continued to concentrate on mid to high intensity conventional wars. Shaped to a great extent by the work of Colonel (Retired) Harry Summers, the American Army's lessons from Vietnam were far different from the French.

While the resulting policies helped produce victory in the Persian Gulf War, they have left a service with a structure, doctrine, and attitude that are still not conducive to involvement in low intensity conflicts (LICs) or "Operations Other Than War." Contrary to President Bush's assertion that opened this monograph, success in Operation DESERT STORM reinforced the Vietnam syndrome for General Powell and his army.

Unlike the French evaluation, the majority of the Vietnam studies produced by the Department of the Army in the 1970s were composed by general officers, with an obvious aim to tout the accomplishments of their organizations. Chief of Staff General William Westmoreland, who was concerned about the lack of authoritative accounts about the war in Southeast Asia in the Army's historical library, and wanted interim reports available for operational planners to consider, initiated the project.

Though the tone of the resulting monographs is very upbeat, they are also filled with many astute criticisms of the Army's performance in Vietnam. They recognize the "lack of understanding throughout all ranks on the nature of insurgent wars and of that in Vietnam in particular" that Americans brought to the conflict, and the difficulties this caused as soldiers and their leaders experienced steep learning curves. They also chronicle the problems caused by 12-month rotations and a divided chain of command, though the emphasis is on the positive accomplishments of U.S. forces. Most of the studies were composed before the fall of South Vietnam, though there were some exceptions, most notably General Donn Starry's *Mounted Combat in Vietnam*, which was written by a task force of Vietnam veterans at the Armor School from 1973-76.

## Force Structure and Training: Refocusing on Europe.

By the time the majority of the Vietnam studies had been completed in late 1973, the Army was out of Southeast Asia and preoccupied with the lessons of a far different war in the Middle East. On July 1 of that year, General William E. DePuy took command of the Army's new Training and Doctrine Command (TRADOC). For the first time the responsibility for service research, doctrine, and training was consolidated under a single commander. In Vietnam DePuy had served as the Military Assistance Command Vietnam (MACV) J-3 and commander of the 1st Infantry

Division, but he saw nothing there to change his conviction that "the principal and directed mission of the Army" was to fight in Europe. While at MACV he had urged General William C. Westmoreland to persuade the Marines to abandon their Combined Action Platoons in favor of large unit operations, criticizing their "counterinsurgency of the deliberate, mild sort."

By 1976, DePuy and a selected team of writers had produced a pragmatic new Field Manual (FM) 100-5, Operations, which aimed to integrate how the Army procured, trained, and fought under a concept called "Active Defense." Influenced primarily by the perceived lessons of the 1973 Mideast War and close connections with the Germans and Tactical Air Command, DePuy produced a manual that focused on high intensity conflict in Europe and aimed to "expunge" the bitter experience of Vietnam. In his oral history he emphasized that he aimed to combine the weapons data from the Arab-Israeli War with tactics drawn from "the very unique environment of NATO" to create a unifying concept for all American doctrine.<sup>8</sup>

While the new manual was his most significant contribution to the Army, its tenets were never really accepted by the majority of officers. Critics said that it placed too much emphasis on the defense and "winning the first battle," ignored the psychological dimension of warfare, and focused too narrowly on Europe. The manual did succeed in making the officer corps care about doctrine, however, and it led to a "renaissance of professional discourse" on how the Army should fight that has continued to the present. 9

DuPuy did not ignore the Vietnam experience entirely. He was very impressed with the battle seasoning obtained by the Navy through the *Top Gun* training program that began in 1969, and he gave the responsibility for developing a similar Army effort to his deputy chief of staff for training, Major General Paul Gorman. Gorman developed the Multiple Integrated Laser Engagement System and a Core

Instrumentation System that were eventually installed at the vast exercise area at Fort Irwin, California in the Army's version of *Top Gun*. In accordance with DuPuy's focus, the National Training Center concentrated on readying units to face Soviet heavy forces. The preparation units received at the National Training Center in combating a mechanized Soviet-style opponent in realistic conditions proved a key element in the swift victory over Iraq, as did the overall "Training Revolution" in the Army that Gorman's initiatives helped spawn. <sup>10</sup>

While the new FM 100-5 was being conceived at TRADOC, Army Chief of Staff Creighton Abrams commanded a force undergoing a traumatic transition. Facing a significant drawdown, the shift to an all-volunteer armed force, and a desire for ethical reform from the rank and file of an officer corps who believed the Vietnam war had weakened service integrity, Abrams' primary goals were to establish an active force structure that maintained 16 division flags while also increasing the readiness of reserve components. His subordinates later claimed that he also had a long-term vision to ensure that no president could ever again fight another Vietnam without mobilization, but that is not clear from available documents. In fact, Secretary of Defense James Schlesinger considered the Army Chief of Staff the epitome of the "good servant" who always deferred to civilian control of the military. 11

Whatever his intent, Abrams and his staff began to integrate reserves into the force structure so that no major deployment would be possible without them, not only ensuring that these units would be available in a major conflict, but also that any president desiring to employ large forces would have to garner the necessary political backing from a country unified enough to support the call up of the reserves required to sustain the operation. Though Abrams' motivation might be unclear, some of his gifted subordinates fully realized the limitations the new force structure would place on the Executive Branch, though they were careful not to admit that publicly until a decade later. <sup>12</sup>

The initial effectiveness of this approach could be seen in the debates over the reserve deployment for DESERT STORM. However, so much of the Army's support structure is in the reserves now that even current operations in the Balkans require such augmentation, and that fact did not limit presidential initiative and instead has caused considerable strain in often-deployed reserve units. This problem with contingency support is exacerbated by a force structure that is still designed to deploy whole divisions, such as in a Fulda Gap scenario to stop a Soviet onslaught. The division support command is not robust enough to sustain subordinate brigades on separate operations in different locations, as is often required by peacekeeping or counterinsurgency contingencies that do not need a force as concentrated as for a mid or high intensity war.

Problems in deploying and maintaining heavy brigades has led the Army Chief of Staff, General Erik Shinseki, to pledge a transformation of the Army over the next decade. This could signify that the Army is finally moving away from a configuration designed to engage the Warsaw Pact on the plains of Europe. However, the memories of overwhelming success in DESERT STORM are still fresh, and many critics remain suspicious of the Army's intellectual commitment to change. <sup>13</sup>

Adjusting the support structure mix will also be difficult, since for some the idea that the Army needs to maintain a "political check and balance" over the Executive Branch's ability to commit troops overseas has become a key objective of the current Total Force policy. However, changing the active/reserve balance for support forces will be essential to meet future contingencies.<sup>14</sup>

## Doctrine: The Influence of On Strategy.

Abrams died in September 1974, leaving his successors to continue his force structure realignment and to wrestle with the new doctrine. For the Army, memories of Vietnam were more to be avoided than contemplated, until Colonel

(Retired) Harry Summers' influential book, *On Strategy*, appeared in the spring of 1981. Produced for the Strategic Studies Institute of the U.S. Army War College and adopted as a text by that institution and the U.S. Army Command and General Staff College (CGSC), it quickly became the prism through which the Army viewed Vietnam.

Inside the frontispiece of the 1982 version issued by CGSC, a short note from Major General Jack Merritt, Commandant of the Army War College, explained:

Enclosed for your information is a copy of "On Strategy: The Vietnam War in Context," the culmination of a US Army War College study effort to draw strategic lessons from our Vietnam experience.

Using Clausewitzian theory and the classic principles of war, the book attempts to place the Vietnam war in domestic context as well as in the context of war itself. Its central thesis is that a lack of appreciation of military theory and military strategy (especially the relationship between military strategy and national policy) led to a faulty definition of the nature of the war. The result was the exhaustion of the Army against a secondary guerrilla force and the ultimate failure of military strategy to support the national policy of containment of communist expansion.

Intended neither as a history of our Vietnam involvement nor as a definite account of the war, the purpose of the book is to provoke and stimulate military strategic thinking so as to better prepare us to meet the challenges that lie ahead.<sup>15</sup>

On Strategy, with its mix of Clausewitzian and Jominian analysis of our involvement in Southeast Asia, has indeed inspired much lively debate within the military. Summers' work helped revive interest in the study of Clausewitz at our military schools and establish policies that influenced the development and employment of the force that won DESERT STORM, though he reinforced the Army's aversion to unconventional wars and may have also helped inspire the current perceived crisis in civil-military relations. Despite its Clausewitzian veneer, the book is

really a more traditional Jominian approach to the war, and it greatly oversimplifies the North Vietnamese strategy of dau tranh to support a conclusion reinforcing the Army's preference for conventional warfare. <sup>16</sup>

Summers' influence was already apparent by 1982, when the debate over the active defense produced a new FM 100-5 emphasizing "AirLand Battle." While the manual's predecessor had ignored any enduring principles of war or specific military philosophers, the new version incorporated ideas from Sun Tzu, Basil H. Liddell-Hart, and Karl von Clausewitz. It was still based most heavily on traditional Jominian principles, however, as evidenced by its lengthy discussions of "combat imperatives," as well as an appendix on the principles of war. In recognizing the importance of an operational level of war between tactics and strategy, and the need to integrate battles and campaigns together to achieve political goals, the 1982 manual reflected a key lesson of On Strategy, that without an operational link strategic failure could still result from tactical success. While the new FM 100-5 still focused on high intensity conflict, it did envision worldwide contingencies.<sup>17</sup>

Though the primary sponsor of the new manual was Starry, DePuy's successor at TRADOC, another key player was Army Chief of Staff General Edward C. "Shy" Meyer. In his previous job as deputy chief of staff, Meyer had critiqued and helped edit early versions of *On Strategy*, and he had taken to heart Summers' call that military leaders had a responsibility to ensure that civilian leadership knew all the imperatives of military operations. In brutally frank testimony to Congress and the president, he warned that the "hollow army" of 1980 could not carry out its missions, and he helped guide the initial stage of the Carter-Reagan defense build-up that would resuscitate American military forces.

Dr. Michael Perlman at the Combat Studies Institute believes that Meyer, who sponsored formal publication of Summers' book, also used *On Strategy* and its lessons as justification to further push the Army away from counterinsurgency and the legacy of Vietnam, and toward the powerful conventional force that could carry out the new AirLand Battle doctrine. Meyer expressed his vision in a 1980 White Paper that pictured a strong, mobile force capable of maintaining strength in the decisive theater of Central Europe, while also projecting power to meet threats to American interests in other regions. He also espoused a number of rules for the use of military force that his successors would help develop into the Weinberger Doctrine. By the time Meyer retired in 1983, the U.S. military was well on the road to the force of DESERT STORM. And On Strategy was not only a key component of the curriculum at Fort Leavenworth and the Army War College, but at the National War College, Naval War College, Air War College, and the Marine Corps Command and General Staff College as well. 18

Some critics such as Russell Weigley claimed that the military's adoption of Summers' book and thesis was just an attempt to prepare to refight the last satisfactory war, World War II. Others have seen it as part of the desire of American officers to retrieve "their professional legitimacy" by avoiding any future wars like Vietnam. Whatever the motivation, response to the book within the military was overwhelmingly favorable. In his foreword to the 1982 Army War College version, Merritt stated that, in his view, the critical strategic analysis of *On Strategy* was "firmly on the mark" and was supported by both the current leadership of the Army, who had been commanders concerned with tactical operations in Vietnam, as well as by retired general officers who had been involved in war planning at the highest levels. <sup>19</sup>

Such support is not surprising, since the book "adopts much of the revisionist critique of the role in the war of the media, the White House, the civilian secretary of defense and his staff, and the antiwar movement." While it does chide the military for not accepting its own share of blame, its praise of American tactical prowess allowed the 1980s

leadership to accept the book's thesis and still "hold their heads high." The oft-repeated, and historically questionable, opening quote of *On Strategy*, "You know you never defeated us on the battlefield," became a mantra of pride throughout the Army.<sup>20</sup>

German General Gunther Blumentritt once observed that giving the sophisticated philosophy of Clausewitz's On War to the military was like "allowing a child to play with a razor blade." To some degree the same can be said for the American experience with On Strategy. While even Summers' worst critics generally agree that he has rejected any "simple-minded stab-in-the-back theory which might exonerate the American military from responsibility for Vietnam errors," unsophisticated readers often interpret him that way, including, from my personal experience, cadets at West Point, lieutenants and captains in Officer Basic and Advanced Courses, and majors at CGSC.

Instructors at military schools have to work hard to dispel such illusions, and that effort has fueled some of the internal criticisms of Summers' work. A few military authors have taken exception to the conclusions of *On Strategy*. William Darryl Henderson contended that those who blame strategic shortcomings for failure in Southeast Asia ignore the lack of cohesion within combat units that had significant impact on operations and was at least an equal contributor to our defeat.<sup>22</sup>

In *The Army and Vietnam*, Andrew Krepinevich claimed that errors in training and doctrine were the main reasons we lost. By failing to deal effectively with the insurgent threat in South Vietnam, the Army accelerated the loss of public support, which led to U.S. withdrawal before the North Vietnamese did finally move to conventional operations. Krepinevich asserts, "Thus the Army, in fighting the war it was not prepared to fight, lost the opportunity to fight the war it knew how to win."<sup>23</sup>

Charles Brower argued that blaming civilian leadership for unclear objectives is too simple. The national aim of an independent, non-communist South Vietnam can be traced back to Harry Truman, and Lyndon B. Johnson (LBJ) clearly and consistently echoed it. LBJ also provided specific political guidance as to the means he was willing to expend in pursuit of that goal.<sup>24</sup>

The fact that such internal dissent existed showed that On Strategy achieved Merritt's goal to provoke thought and debate. Its influence also seemed apparent in military journals, though in different ways. In the early 1980s, Military Review, the professional journal of the U.S. Army published by the CGSC, began to show an increased interest in Clausewitz, though not in Vietnam. As the introduction to a rare article on the war in Southeast Asia stated, "Vietnam is such a nasty word in the American vocabulary today that even military men are loath to look back on it for lessons applicable to the future." With its primary focus on tactical and operational issues, Military Review did indeed turn away from Vietnam and stay focused on beating the Soviets.<sup>25</sup>

The strategic debate over Vietnam took place instead in the pages of *Parameters*, the U.S. Army War College quarterly. In a very positive December 1981 review of *On Strategy*, General Bruce Palmer criticized Summers for "denigrating counterinsurgency more than he intended," but praised him for providing "the strategic framework for examining Vietnam from an even wider perspective." Palmer added, "More important, I hope it will revitalize the U.S. Army's abiding interest in the study of strategy." The book seems to have had that impact concerning Vietnam, at least. Beginning in 1983, a series of articles by many of the leading civilian and military writers on Vietnam, including Summers, provided a lively and enlightening commentary on the war's strategic issues, and also inspired some discussions about low intensity warfare, as well. <sup>26</sup>

By the time the Army's revised FM 100-5 was published in 1986, thousands of the nation's best and brightest future military leaders had been exposed to *On Strategy* in staff college and war college curricula. The 1986 operations manual began with the statement, "All military operations pursue and are governed by political objectives," reflecting the influence of Clausewitz, and it stressed the operational level of war throughout. It even included a special annex explaining Clausewitzian "key concepts of operational design" such as the culminating point and center of gravity, the latter an idea stressed in Summers' book. While the manual's focus remained on defeating the Soviets through AirLand Battle, it did mention LIC, though only in one small section, and there were only two passing references to Vietnam.<sup>27</sup>

The decade of the 1980s did see some rebirth of interest in counterinsurgency at military schools. When instructors trying to resurrect appropriate courses at the CGSC went to the Special Operations School at Fort Bragg, North Carolina, looking for supporting materials, they found that the staff there had been ordered to throw away their counterinsurgency files in the 1970s.28 The American military under President Ronald Reagan's administration eventually did develop a new model for counterinsurgency based on experience in El Salvador, emphasizing economic, political, and psychological programs instead of active military intervention.<sup>29</sup> Despite these developments, an Army officer conducting a detailed study in 1990 of his service's thinking and policies about counterinsurgency came to the disappointing conclusion that "the Army has no institutionally accepted Vietnam strategic critique that adequately addresses the realities of revolutionary war."30

The next FM 100-5, published in 1993, was broader in scope. Initial drafts were heavily influenced by the victory in DESERT STORM, downplayed LIC, and focused on hi-tech, mobile war. The final version, however, was obviously shaped by the disintegration of the Soviet Union and the Army's search for a new mission. While still emphasizing the lessons of DESERT STORM, it had a new chapter on Operations Other Than War. The section on insurgencies and counterinsurgencies was only three paragraphs long,

however, and the pertinent historical perspective of American involvement was taken from El Salvador. The vignette emphasized a U.S. interagency response, with the military's primary role being just to provide logistical support to the El Salvadorian Armed Forces, that allowed the indigenous government to withstand an insurgent offensive and facilitate peace negotiations. Vietnam was only mentioned briefly twice in the publication. The Army's manual FM 7-98, Operations in a Low-Intensity Conflict, which was published at about the same time and has not been superceded, does have a whole chapter on support for insurgency or counterinsurgency that focuses on the Maoist pattern of war and the application of AirLand Battle in LIC. There is also a chapter on counterterrorism, though the main focus of this tactical level manual is on peacekeeping and contingency operations. Vietnam is not mentioned specifically anywhere, though some tactical lessons seem apparent.31

The current FM 3-0, *Operations*, which replaced 100-5, reflects heavily the traditional reliance on the ideas of Jomini and J.F.C. Fuller, with emphasis on "fixed principles" like the Tenets of Army Operations and Principles of War. There is a lengthy discussion of the Elements of Operational Design that includes Clausewitzian terminology, and the Prussian is quoted twice, once to emphasize the importance of battles and again to help explain the fixed principle of Objective. Sun Tzu is mentioned once, but this is a manual dominated by quotes from generals, not theorists.

Its treatment of counterinsurgency takes only one page, and that emphasis is primarily on what support can be provided to help hosts solve their own problems. DESERT STORM and Balkan peace operations provide the most historical examples. Vietnam is mentioned only twice. The currently popular battle at Landing Zone X-ray is used to illustrate close combat, and the United States is criticized for providing so much military support to South Vietnam that it "undermined Vietnamese government authority and

ARVN [Army of North Vietnam] credibility"!<sup>32</sup> That seems a unique perspective on the American involvement in the war, but it does provide another sign of service reluctance to engage in counterinsurgency.

## **Attitudes: Civil-Military Friction.**

Vietnam did not just imbue the Army with a desire to avoid counterinsurgency and nation-building. Some commentators have claimed that the rift between the press and the Service that resulted from media coverage of Vietnam has developed into a harmful "culture of media aversion" within the Army that seriously inhibits its ability to communicate effectively. The post-war emphasis on conventional warfare in Europe also stunted the growth of the Army's cultural intelligence for other regions, which had important repercussions in places like Somalia. The American de-emphasis on Southeast Asia was so deep and rapid that the pool of military and national area and language specialists had dried up by the time significant efforts began to account for POW/MIAs there. That deficiency has hindered the recovery efforts of organizations like Joint Task Force Full Accounting.33

The influence of the Vietnam experience and the Army's view of it as shaped by Summers have also contributed to what some contemporary critics call "the crisis in civil-military relations." Meyer's campaign to make sure that civilian leaders were aware of the "imperatives of military operations" advocated by Summers culminated in the promulgation of the Weinberger Doctrine in 1984, designed to ensure that the nation would never be involved in another Vietnam quagmire. Instead the military would apply overwhelming force quickly in a campaign with clear objectives and public support.

The experience in the Persian Gulf heightened those expectations. Defense analyst Michael O'Hanlon has noted that the "Powell Doctrine," an evolution of the Weinberger Doctrine summarized in the general's opening quote of this

monograph, "can be read as a reason to stay out of any conflicts except Desert Storm." Other critics have savaged the Weinberger-Powell doctrine as "an implicit rejection of force as an instrument of policy" which is just not relevant in today's complex world. <sup>34</sup>

Andrew Bacevich has recently pointed out the irony that the very success in DESERT STORM that reaffirmed the yearning of Powell and his contemporaries for "self-contained decisive conventional war, conducted by autonomous, self-governing, military elites" also ensured the demise of that concept by accelerating the blurring or elimination of the boundaries between war and peace, soldiers and civilians, and military and political spheres.<sup>35</sup>

Today, the propensity to question the military expertise of civilian leaders has increased to the point where Richard Kohn claims, "The U.S military is now more alienated from its civilian leadership than at any time in American history." He and Russell Weigley have pointed to the issues of intervention in Bosnia and gays in the military as situations where the Joint Chiefs of Staff undermined administration policies they disagreed with, rather than carry out the will of their civilian superiors. Weigley argues that a "series of vocal military objections to civilian policies" have sometimes usurped choices that were for the civil government to make. <sup>36</sup>

For contemporary critics, it appears that a military "clinging to orthodoxy" has moved from Summers' mandate to articulate their principles and doctrines to civilian overseers and the American public, to "blanket opposition to missions that fail to conform to their own preferences and priorities," especially those that might lead to involvement in messy insurgencies or unconventional warfare. Abrams' creation of the mobilization "check and balance" on the president's ability to deploy military force can be interpreted as the beginning of this trend. <sup>37</sup>

Much of the current criticism is based on an idyllic view of the history of American civil-military relations, especially during World War II, and a downplaying of any differences between the conduct of total and limited conflicts. However, defenders of the military who argue that the only real problem is "the growing disparity between the quality of military officers and their civilian counterparts" are not going to assuage critics' fears about military arrogance or alienation.<sup>38</sup>

It is ironic that the current book about Vietnam that has replaced On Strategy in the role of reinforcing the penchant of military officers who believe they should more aggressively challenge the judgments of their civilian masters was written by one of Professor Richard H. Kohn's graduate students. Then Major H. R. McMaster finished the manuscript for Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff and the Lies That Led to Vietnam while teaching in the History Department at West Point. The popular book is on reading lists at most professional military schools, and its author has been invited to lecture the Joint Chiefs of Staff. Based on much 20-20 hindsight, McMaster strongly condemns the Joint Chiefs for not standing up more forcefully to their civilian superiors as the critical decisions were made committing the nation to a flawed course in Southeast Asia that could have been prevented. For him, "The "five silent men" on the Joint Chiefs made possible the way the United States went to war in Vietnam."39

### Conclusions.

According to Starry, the only positive aspect of the Army's experience in Vietnam was that the failure was so miserable that it encouraged the acceptance of widespread institutional change; "to do something new and different was very acceptable." Many of the reformers who developed AirLand Battle doctrine and the force to apply it were motivated by a sense of indignation and embarrassment about losing in Southeast Asia. Out of that defeat the Army developed a new doctrine, force structure,

and attitude designed to win an "anti-Vietnam," highintensity conflict with the Soviets in Europe, which proved more than adequate to overwhelm Iraq.<sup>41</sup>

However, even while the AirLand Battle concept was being developed, some military officers saw the drawbacks of such a narrow focus. In a prescient 1977 article decrying the Army's neglect of unconventional warfare, Lieutenant Colonel Donald Vought quoted Starry justifying his approach with "After getting out of Vietnam, the Army looked around and realized it should not try to fight that kind of war again." That mind-set has not served the service well in peace operations, and might have more serious consequences in the future. <sup>42</sup>

A number of recent studies have suggested that the North Vietnamese experience has much to offer for those seeking an asymmetric strategy to employ against the United States. Some of this may already be occurring in Colombia, where some commentators are arguing that the United States is again trying to push a war of tactics against a strong insurgent force because of a lack of strategic and operational knowledge. In addition, our training of Colombian government forces has demonstrated how "lamentably little" American soldiers know about counterinsurgency, a result of losing our institutional memory from Vietnam.<sup>43</sup>

These skills need to be relearned quickly. Despite doctrinal and institutional preferences to have host nations fight their own battles and solve their own problems, American forces are deeply involved in counterinsurgency-style operations in Afghanistan. They are carrying out counterguerrilla and stability operations, ranging from combat patrols to rebuilding schools.<sup>44</sup> The comparisons with Vietnam are evident to frustrated soldiers on the ground.

The commander of a recent operation there explained, "The reason it's so frustrating and aggravating is because the enemy is not fighting. We're trying to find him, and he's

trying to avoid us. So any time we go out, he fades away. It's just like Vietnam. Any time he finds a weak spot, he flows in like water." Similar observations have been made about guerrillas in the Philippines, who have been compared to the Viet Cong in their ability to melt into the local populace. A local commentator noted "Abu Sayef will disappear into the towns and cities until the heat is off. Then they'll reorganize and start their terrorism campaign again." 45

One of the oft-repeated current justifications for the utility of ground forces in a modern campaign is that their presence will force the enemy to mass, thus providing a better target for long-range precision strikes. But the North Vietnamese did not concentrate in response to large American ground formations, and neither has Al-Qaeda. Smart enemies will force pursuers to find them and dig them out. Ground forces are necessary for close combat, not as decoys.

In hindsight, the Army that won in the Persian Gulf deserves credit for avoiding the common mistake of preparing to fight the last war instead of the next one. However, enemies like Saddam Hussein are becoming increasingly rare, if not extinct, and the time has come for the Army to look more carefully at Vietnam, which seems more relevant for our current campaign against terrorism. As distasteful as the proposition may seem, in order to truly be a Full Spectrum force, the Army must be prepared to deal with all aspects of a conflict resembling the lost war in Southeast Asia. That will necessitate reforms in training, doctrine, and force structure, as well as service acceptance of smaller-scale contingency missions, including counterinsurgency and some degree of nation-building.<sup>46</sup>

The original Vietnam studies might be a good place to start to inform this process and would assist General Shinseki in his quest to transform the force. Though not as revealing as their franker French counterparts, they contain many relevant insights. For example, Starry's evaluation of mounted combat from 20 years ago highlights the same problems with mines that we face today in the Balkans and Afghanistan.<sup>47</sup> Other volumes emphasize the importance of joint and multinational operations, even in low-intensity conflict.

Some of the most relevant critiques come from Colonel Francis Kelly's monograph, *U.S. Army's Special Forces* 1961-1971. He emphasizes that in Vietnam the Army could not concentrate primarily on just the military consequences of its actions, only concerning itself with political implications later on. Historically, commanders were used to being allowed to pursue their tactics and operations without any interference from politicians back home, but, as Kelly writes, "In Vietnam military decisions were viewed in terms of the political consequences they might have, a situation to which the average military professional was unaccustomed." 48

The Army is still uncomfortable with the highly charged political atmosphere of a Bosnia or Haiti mission, but that is the future we must face. It may be a bad sign that the current FM 3-0 lacks the same obvious references to Clausewitzian philosophy as its predecessors, for the links between war and politics and the necessity to properly identify the nature of a conflict that the French and Summers argued were overlooked or misperceived in Southeast Asia must be understood by even the "average military professional" today.

The American Army can no longer run away from Vietnam. For it has found it in Afghanistan, Colombia, and the Philippines.

### **ENDNOTES**

- 1. Quoted in Ann McDaniel and Evan Thomas, "The Rewards of Leadership," *Newsweek*, March 11, 1991, p. 30.
- 2. Colin L. Powell with Joseph E. Persico, My American Journey, New York: Random House, 1995, p. 149.

- 3. V. J. Croizat, trans., Memorandum RM-5271-PR, A Translation from the French: Lessons of the War in Indochina, Volume II, Santa Monica, CA: RAND, 1967, pp. 25-26.
- 4. Edward J. Drea, "Tradition and Circumstance: The Imperial Japanese Army's Tactical Response to Khalkin-Gol, 1939," in Colonel Charles R. Shrader, ed., Proceedings of the 1982 International Military History Symposium: The Impact of Unsuccessful Military Campaigns on Military Institutions, 1860-1980, Washington, DC: U.S. Army Center of Military History, 1984, p. 134.
- 5. See, for example, Lieutenant Colonel Francis J. Kelly, U.S. Army Special Forces 1961-1971, Washington, DC: Department of the Army, 1973, pp. iii, 163-164.
- 6. General Donn A. Starry, Mounted Combat in Vietnam, Washington, DC: Department of the Army, 1978, pp. iv-vi.
- 7. Andrew F. Krepinevich, *The Army and Vietnam*, Baltimore: Johns Hopkins University Press, p. 175; Lieutenant Colonel Romie L. Brownlee and Lieutenant Colonel William Mullen III, *Changing an Army: An Oral History of General William E. DePuy, USA Retired*, Carlisle Barracks: U.S. Military History Institute, 1979, pp. 187-192.
- 8. Paul H. Herbert, Deciding What Has to be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations, Fort Leavenworth, KS: Combat Studies Institute, 1988; Brownlee and Mullen, Changing an Army.
  - 9. Herbert, Deciding What Has To Be Done.
- 10. Brigadier General Robert H. Scales, Jr., Certain Victory: The US Army in the Gulf War, Washington, DC: Department of the Army, 1993, pp. 20-23.
- 11. Interview of Lieutenant General Donald Coles by Lieutenant Colonel Albin G. Wheeler and Lieutenant Colonel Ronald E. Craven, and Interview of General James G. Kalergis by Lieutenant Colonel Tom Lightner, both in "The General Creighton Abrams Story" files, The Papers of Creighton Abrams, Carlisle Barracks: U.S. Army Military History Institute; Lewis Sorley, Thunderbolt: General Creighton Abrams and The Army of His Times, New York: Simon and Schuster, 1992, pp. 350-368. Sorley is convinced that Abrams intended to limit presidential power, but that objective is not mentioned in contemporary documents or interviews in the Abrams Papers at the U.S. Army Military History Institute. Interpretations that the true motivation for

the new force structure was purposefully concealed from civilian decisionmakers or that the justification was only created after the fact to preserve current policy are both troubling.

### 12. Ibid.

- 13. Steven Lee Myers, "Army is Restructuring with Brigades for Rapid Response," New York Times, October 13, 1999, p. A13; on the strains caused by reserve deployments, see Reserve Forces Policy Board, Reserve Component Programs, Washington, DC: Office of the Secretary of Defense, March 2000, p. xxvii; Myers, "Military Reserves Are Falling Short in Finding Recruits," New York Times, August 28, 2000, p. 1; Marsha Low, "Military Reserves Fall Short," Detroit Free Press, September 11, 2000; Myers, "Fallout in Texas From Bosnia Duty," New York Times, September 15, 2000; David Foster, "More Missions For Part-Time Soldiers Strain Lives At Home," Boston Globe, September 23, 2000, p. 4; Deborah Martinez, "Reserve Ranks Dwindle As Number of Deployments Increases," Corpus Christi Caller-Times, September 24, 2000; "U.S. Leans Too Heavily on Guard, Reserves," Austin American-Statesman, October 11, 2000, p. 10.
- 14. Reserve Component Employment Study 2005, Study Report, Washington, DC: Department of Defense, 1999, p. 12. For more on the adjustments necessary to the active/reserve combat support and combat service support force structure, see Conrad C. Crane, Landpower and Crises: Army Roles and Missions In Smaller-Scale Contingencies During the 1990s, Carlisle Barracks, PA: Strategic Studies Institute, 2001; and Facing the Hydra: Maintaining Strategic Balance While Pursuing a Global War Against Terrorism, Carlisle Barracks, PA: Strategic Studies Institute, 2002.
- 15. Colonel Harry G. Summers, Jr., On Strategy: The Vietnam War in Context, Carlisle Barracks. PA: Strategic Studies Institute, March 23, 1982, pp. ii, iv. Summers served on the Strategic Assessment Group headed by Colonel Edward Astarita that recommended to Abrams that the Army limit its involvement in the Third World to basically low-key military visits and disaster relief. David E. Johnson, "Wielding the Terrible Swift Sword: The American Military Paradigm and Civil-Military Relations," Cambridge, MA: Harvard University Olin Institute for Strategic Studies, available on-line at <a href="http://data.fas.harvard.edu/cfia/olin/pubs/no7.htm">http://data.fas.harvard.edu/cfia/olin/pubs/no7.htm</a>.
- 16. In 1994, the Center for the Study of the Vietnam Conflict at Texas Tech University held a conference sponsored by the U.S. Army Strategic Studies Institute to examine the content and legacy of *On Strategy*. While recognizing its important influence on the Army,

attendees from around the world had very little good to say about Summers' theoretical or historical accuracy. Though the book remains on the Chief of Staff of the Army's recommended reading list and those of many other military educational institutions, it is no longer taken seriously by academic historians, and, if considered by them, is usually seen as a period piece to illustrate "a view popular in certain segments of the military in the immediate post-war period." Communication by author with Professor George Herring, Visiting Professor at the University of Richmond, January 17, 2001.

- 17. John L. Romjue, From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982, Fort Monroe, VA: TRADOC Historical Office, June 1984; Department of the Army, FM 100-5, Operations, Washington, DC: HQDA, August 20, 1982. The American principles of war really come from the work of J. F. C. Fuller. However, the spirit of such guidelines is in keeping with the Jominian approach historically pursued by the American Army.
- 18. Romjue, pp. 30-33, 61; James Kitfield, *Prodigal Soldiers*, New York: Simon and Schuster, 1995, pp. 197-205; telephone interview with Dr. Michael Perlman, Combat Studies Institute, December 15, 1994; John P. Lovell, "Vietnam and the U.S. Army: Learning to Cope with Failure," in George K. Osborn, *et al*, eds., *Democracy, Strategy, and Vietnam: Implications for American Policymaking*, Lexington, MA: Lexington Books, 1987, p. 136; Summers, "The Army After Vietnam," in Kenneth J. Hagan and William R. Roberts, eds., *Against All Enemies*, Westport, CN: Greenwood Press, 1986, p. 366; Johnson.
- 19. Russell Weigley, "Reflections on Lessons from Vietnam," in Peter Braestrup, ed., Vietnam as History, Washington, DC: University Press of America, January 1984, p. 115; A. J. Bacevich, "The Use of Force," Wilson Quarterly, Vol. XIX, Winter 1995, p. 56; Summers, On Strategy, pp. vii, 1.
- 20. Lovell, pp. 136-137. The official history of the People's Army of Vietnam claims it never really lost on the battlefield, either. If we are to believe it and Summers, we are left with the incongruous image of a war in which neither side lost a battle. The Military History Institute of Vietnam, Victory in Vietnam, Merle L. Pribbenow, trans., Lawrence: University Press of Kansas, 2002.
- 21. Michael I. Handel, *Sun Tzu and Clausewitz Compared*, Carlisle Barracks, PA: Strategic Studies Institute, 1991, p. 5.

- 22. James Fetzer, "The Vietnam War of Harry G. Summers, Jr." The Society for Historians of American Foreign Relations Newsletter, Vol. XX, March 1989, p. 15.; Lovell, p. 137.
- 23. Andrew F. Krepinevich, *The Army and Vietnam*, Baltimore: Johns Hopkins University Press, 1986, pp. 262-268.
- 24. Colonel Charles F. Brower IV, "American Strategy in the Vietnam War, 1965-68," lecture given in March 1992 to Naval War College Senior Course, Newport, RI.
- 25.. For examples of articles on Clausewitz, see Colonel Thomas Vaughn, "Clausewitz and Contemporary American Professionalism," *Military Review*, Vol. LXII, December 1982, pp. 39-44; Patrick M. Cronin, "Clausewitz Condensed," *Military Review*, Vol. LXV, August 1985, pp. 41-49. Quote is from the introduction to Lieutenant Colonel Forrest Kleinman, "The Lost Lesson of Vietnam," *Military Review*, Vol. LX, August 1980, pp. 62.
- 26. General Bruce Palmer, book review of *On Strategy*, *Parameters*, Vol. XI, December 1981, pp. 91.
- 27. Department of the Army, FM 100-5, *Operations*, Washington, DC: HQDA, May 5, 1986.
- 28. Based on recollections of Dr. Steven Metz, now of the Strategic Studies Institute of the U.S. Army War College, of his work with Major Robert Leight at the Command and General Staff College in the late 1980s.
- 29. Steven Metz, Counterinsurgency: Strategy and the Phoenix of American Capability, Carlisle Barracks, PA: Strategic Studies Institute, 1995.
- 30. Michael J. Brady, "The Army and the Strategic Military Legacy of Vietnam," MMAS Thesis, U.S. Army Command and General Staff College, 1990. Major Brady is also very critical of the flaws in *On Strategy*.
- 31. Department of the Army, FM 100-5, Operations, Washington, DC: HQDA, June 14, 1993; Department of the Army, FM 7-98, Operations in a Low-Intensity Conflict, Washington, DC: HQDA, October 19, 1992.
- 32. Department of the Army, FM 3-0, *Operations*, Washington, DC: HQDA, June 2001. Quote is on p. 9-16. George Patton and Ulysses

Grant are quoted three times, and Dwight Eisenhower, Frederick the Great, and Napoleon twice.

- 33. Sean Naylor, "Why the Service Can't Get Its Message Across," Army Times, July 8, 2002, p. 15; "Infantry Chief: Cultural Intel Must Improve," Army Times, November 20, 2000; interview by author with Mr. James Coyle, Casualty Resolution Specialist, J-25, Joint Task Force Full Accounting, Da Nang, Vietnam, June 27, 2002.
- 34. Kitfield, p. 203; O'Hanlon, as quoted in Lawrence F. Kaplan, "Yesterday's Man: Colin Powell's Out-of-Date Foreign Policy," New Republic, January 1, 2001; Jeffrey Record, "Weinberger-Powell Doctrine Doesn't Cut It," Proceedings, October 2000, p. 35.
- 35. Bacevich, "A Less than Splendid Little War, "Wilson Quarterly, Vol. XXV, Winter 2001, pp. 92-93.
- 36. Richard H. Kohn, "Out of Control: The Crisis in Civil-Military Relations," *National Interest*, Spring 1994; Weigley, "The American Military and the Principle of Civilian Control from McClellan to Powell," *The Journal of Military History*, Vol. LVII, October 1993 Special Issue, pp. 27-58.
  - 37. Bacevich, "The Use of Force," p. 63.
- 38. Mackubin Thomas Owens, "Civilian Control: A National Crisis?" Joint Forces Quarterly, No. 6, Autumn-Winter 1994-95, pp. 83.
- 39. H. R. McMaster, Direliction of Duty: Johnson, McNamara, the Joint Chiefs of Staff, and the Lies that Led to Vietnam, New York: HarperCollins, 1997, p. 330. For discussions of the book's flaws and influence, see Eliot Cohen's review in National Interest, Issue 51, Spring 1998, pp. 103-108; and Peter D. Feaver and Richard H. Kohn, "The Gap: Soldiers, Civilians and Their Mutual Misunderstanding," National Interest, Issue 61, Fall 2000, pp. 29-37.
- 40. Alvin and Heidi Toffler, War and Anti-War, New York: Little, Brown, and Company, 1993, p. 46.
- 41. To be fair to the Army, it must be noted that the Vietnam experience affected the rest of American political and military leadership in a similar fashion, creating a preference for quick, conventional victories obtained with overwhelming force, and a reluctance to get involved in protracted "small wars" and nation building. For a recent provocative discussion of this process, see Max Boot, The Savage Wars of Peace: Small Wars and the Rise of American Power, New York: Basic Books, 2002.

- 42. Lieutenant Colonel Donald B. Vought, "Preparing for the Wrong War?" *Military Review*, May 1977, p. 32.
- 43. Brad Roberts, Asymmetric Conflict 2010, Alexandia, VA: Institute for Defense Analysis, November 2000; Steven Metz and Douglas V. Johnson II, Asymmetry and U.S. Military Strategy: Definition, Background, and Strategic Concepts, Carlisle Barracks, PA: Strategic Studies Institute, January 2001; Tom Marks, "U.S. Forces In Colombia Involved In More Than The War On Drugs," Army Times, January 22, 2001, p. 54. Marks notes that the counterinsurgency skills being learned in battle by Colombian forces are no longer taught in U.S. service schools.
- 44. David Isby, "Where To Go From Here?" Washington Times, July 19, 2002, p. 22.
- 45. Peter Baker, "GIs Battle "Ghosts" in Afghanistan," Washington Post, May 16, 2002, p. 1; Donovan Webster, "It Only Looks Like Vietnam," New York Times Magazine, July 21, 2002, p. 32.
- 46. The necessary reforms in force structure and attitudes are discussed in more detail in the two Crane studies mentioned in Note 14.
  - 47. Starry, p. 223.
- 48. Kelly, p. 163. The more recent official histories are also excellent sources for study, such as Ronald H. Spector, *Advice and Support: The Early Years*, Washington, DC: U.S. Government Printing Office, 1985; and William M. Hammond, *Public Affairs: The Military and the Media, 1962-1968*, Washington, DC: U.S. Government Printing Office, 1990.

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