

“Operationalizing *Joint Vision 2010*”

General Henry H. Shelton, Chairman, Joint Chiefs of Staff—See page 81

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From the Editor

In March 1994, Generals Gordon R. Sullivan and Frederick M. Franks Jr. set the US Army on a course to the future that would transform it into an information-based organization, necessitating a complete overhaul of units, equipment, operating procedures and doctrine. Over the past four years, through a series of Advanced Warfighting Experiments (AWEs), the Army tested prototypes of a vast array of equipment along with associated tactics, techniques and procedures. Having recently announced the heavy division redesign, the Army is well on its way to achieving Sullivan and Franks' 21st-century vision.

This edition of *Military Review* provides an in-depth look at the division redesign's analytical process, the AWEs conducted at Forts Irwin and Hood and the resulting organizational structure and operational concepts.

In the first article, Major Jon J. Peterson describes how the AWEs provided a comprehensive examination of the division design's effectiveness, thereby "changing the way the Army changes." Next, Colonel Albert F. Turner explains *Joint Venture (JV)*, a vehicle for change that resulted from a partnership between Army Materiel Command, US Forces Command and US Army Training and Doctrine Command to produce a new organization design. *JV*'s three-year experimentation and data collection effort culminated in a new division design. However, *JV* doesn't end there—it continues as a means to accelerate development, fielding and implementation of good ideas.

Then, Lieutenant Colonels Billy J. Jordan and Mark J. Reardon point out that existing warfighting doctrine was inadequate to describe how the Army will use digitized technology to fight now and in the future. They outline an operational and organization concept called *distributed operations* that capitalizes on the new division design's capabilities while ensuring applicability to the entire force. This concept will be incorporated in the soon to be published US Army Field Manual (FM) 100-5, *Operations*. Colonel John J. Twohig, Major Thomas J. Stokowski and Major Bienvenido Rivera then provide a brief overview introducing the new division's operational and organization concepts and highlighting specific organization design features. As a further illustration of design change, Majors Michael L. Boller and Lawrence A. Levine describe how Army Battle Command Systems will align disparate processes into the C² spine—a family of command systems running in series, rather than in parallel, analogous to the spine's vertebrae—to facilitate the formation of a common operating picture.

This issue also features a leadership section, in which retired Lieutenant General Paul E. Blackwell and Lieutenant Colonel Gregory J. Bozek remind us that the advent of information-age warfare has not minimized the impact of personal leadership on the course of battle. Rather, the human element of decision making and leadership has heightened leadership's importance and remains relevant now and in the future. Nola M. Sleevi argues that although Sun Tzu, Napoleon and "Stonewall" Jackson differed in leadership style and in the specific application of the rules of war, they were congruent in their thorough study of warfare, enabling them to prudently apply the basic principles and overcome war's uncertainty.

In other articles, Colonel Sean J. Byrne discovers "Sam Damon" in the person of General Clarence R. Huebner, a man who embodied the concepts now considered key to effective leadership. Likewise, Major Michael E. Bigelow writes about General Hunter Liggett's ceaseless study and reflection on war, through which he was able to transcend personal experience, constrained resources and contemporary technology to grasp military art's essentials. Taking a different tack, this year's MacArthur Leadership Award winner, Major John Mark Mattox, delves into the fifth-century writings of Bishop Augustine to gain insight into what constitutes the enduring moral leadership values upon which successful armies are built.

This fall the Army will release the new FM 22-100, *Army Leadership*. Major Jonathan J. Smidt explains how the 1998 manual has evolved into a comprehensive discussion of character-based leadership, values, attributes, levels of leadership, skill domains and leadership actions. The familiar concept "be, know, do" remains at the 1998 manual's heart. In this edition's *Insights*, General Henry H. Shelton outlines *Joint Vision 2010*, the conceptual template for future joint warfighting, and offers his perspective on how to best "operationalize" future capability and versatility today.

LJH

Sharing Secrets?

I am writing in response to the review by Peter C. Unsinger of my book, *Sharing Secrets with Stalin*, in the November–December 1997 issue of *Military Review*.

Unsinger expresses his displeasure with some book aspects and implies that I have not sufficiently treated the question of the relation of the Office of Strategic Services (OSS) to intelligence cooperation with the Union of Soviet Socialist Republics. Therefore, it is relevant to note that I was the first to consider that question in detail. I devoted a full chapter to it in my book, *The Shadow Warriors*, published in 1983. However, neither I, nor anyone else to my knowledge, has been able to show that the OSS ever possessed “raw high-grade operational” intelligence that could have been passed to the Soviets either through formal exchange channels or the “communist international” members in OSS ranks, who Unsinger cites. A quick survey of my colleagues in the British Study Group on Intelligence, which still includes Bletchley Hall veterans, indicates they too have no information suggesting that OSS ever received *ULTRA* operational decrypts or, in fact, any *ULTRA* or comparable-grade material except as it might apply to psychological warfare and some X-2 activities.

Bradley F. Smith, *Soquel, California*

Rommel Myth

Colonel James R. Robinson, in his September–October 1997 *Military Review* article, “The Rommel Myth,” asserts that German World War II Field Marshall Erwin Rommel was not a great general or a military genius or a “great captain.” Robinson bases his conclusion on what he perceived B.H. Liddell Hart’s evaluation to be. However, Robinson has failed to analyze Hart’s “great captain” classification or state why he disagrees with it or why it should not characterize Rommel. Robinson also does not define “great gen-

eral” and “military genius” or explain why Rommel does not fit these categories either.

What was “the Rommel Myth”? Robinson admits Rommel was a successful tactician who took the initiative; fought aggressively; made quick, astute decisions and achieved memorable victories. According to Robinson, that is not what makes a great general. Rather, a great general is one whose military successes attain strategic-policy goals. But, if we use so narrow a definition, Robert E. Lee, Hannibal, Charles XII and a host of other highly regarded commanders were not great generals either.

Was Rommel really inept in his appreciation of what Robinson calls the “operational art”? Were his tactical operations oblivious to strategic results? If he had won at El Alamein, there is a strong possibility that England’s Prime Minister Winston Churchill would have been toppled. Although not an intent of fighting the battle, removing Churchill would have been a significant political outcome of a battlefield victory. Rommel did not fight for the sake of fighting. If Germany had fully supported him logistically, his repeated success would have meant the taking of Cairo, Alexandria and the Suez Canal. Britain would have been cut off from Middle East oil, and that would have been a significant strategic accomplishment.

It is true Rommel’s German superiors expected much from him, but they would not allocate adequate resources to him. If the Germans had taken Crete and used it to facilitate the flow of increased logistics to Rommel, he would have been able to accomplish much more. It was not Rommel’s function, given his position, to control his logistics. Such was not in his power.

The complex, conflict-filled interaction between Rommel and his superiors over logistics, objectives and priorities should not be used to detract from Rommel’s reputation as a remarkable military leader. Whether or not he had

the traits of a leader of large bodies of men is not relevant to an evaluation of his actual accomplishments.

Joseph Forbes, *Pittsburgh, Pennsylvania*

Force Structure for Army Relevancy: Alternate Views

Published reports indicate the US Army is planning to address several problem areas by downsizing the number of personnel and amount of equipment authorized for existing force structure. For example, an armored or mechanized division will have fewer soldiers and fewer M1A2 tanks and Bradley Fighting Vehicles. This supposedly will alleviate the shortage of qualified soldiers in combat jobs and reduce equipment-maintenance expense. It is certainly no secret that the Army is stressed by the high personnel tempo (PERSTEMPO) that open-ended missions — operations other than war (OOTW) — such as in Bosnia and Southwest Asia and lesser known places, require. Moreover, the budget for force modernization is severely strained, causing plans for Force XXI to be scaled back. However, there may be other solutions to these problems than suggested by force-structure manipulations. For example, a more creative use of the Army National Guard (ARNG), integrated into the Army’s missions in the National Military Strategy (NMS), could achieve many of the Army’s ends. A recently published article illustrates the shortsightedness of some senior officers in not considering all of the Army’s resources to alleviate the problems.

US Army Field Manual (FM) 100-5, *Operations* (1993), adds versatility as a fifth battle tenet, together with initiative, agility, depth and synchronization. The addition of versatility is a step in the right direction, according to US Army Colonel Steven P. Schook in his article “Paying the Price for Versatility” (*Military Review*, September-

October 1997). By developing versatility within units and in doctrine, the Army will encompass the broader capabilities needed for joint operations in the full spectrum of conflict as called for in the current NMS. Schook suggests several ways the Army can adjust doctrine and force structure to win congressional and public support for an increased budget and a more prominent role in executing the NMS.

The broad range of mission requirements, from conventional warfare to the increasing demands for OOTW have stretched the Army's current force structure too thin. High operations tempo (OPTEMPO) and PERSTEMPO have become detrimental to achieving and maintaining full-spectrum readiness. According to Schook, adjustments to force structure are needed if the Army is to fully incorporate versatility as a battle tenet. Forces must be able to "quickly change unit configurations and tackle the next mission across the entire spectrum of conflict" in today's strategic, force-projection Army. In theory, this should have the effect of balancing OPTEMPO and PERSTEMPO and better position the Army as a relevant force in the current strategy.

Schook believes the problems are compounded because we are in one of the most intense periods of change in the Army's history. Factors such as "a budget that does not support a 10-division Army, base realignment and closure, the transition from forward presence to power projection and an increase in OOTW and potential regional conflicts," point to the need for new ideas and solutions.

Otherwise, suggests Schook, the Army risks continuing to lose in the battle for relevancy and appropriation. In Schook's view, the Army must fully embrace OOTW as a mission requirement, perhaps at a higher priority than conventional warfare capabilities for two major theater wars (MTWs) required by the NMS. Schook asks, "How do US military units perform OOTW without sacrificing the ability to wage the entire spectrum of conflict, including two MTWs?" He expands, saying, "If we continue to hedge in deference to MTWs and do not properly embrace OOTW, we risk losing the ability to meet the requirements of the *Quadrennial Defense Review's* (QDR's) and our NMS. Our continued inability to firmly address the first two dilemmas in a timely and balanced manner defers the tough decisions to Congress."

Schook proposes the following solutions to these "dilemmas." The Army should totally embrace the OOTW mission by placing it on mission-essential task lists (METLs) and assigning the mission to major commands (MACOMS) and divisions.

Schook also recommends modifying the force structure to supplement doctrine with the means to conduct such operations. He also promotes keeping the same number of brigades as we now have under the 10-division Army, creating a "holistic" division able to fight the full spectrum of conflict from beginning to end. This means adding (or converting) a light brigade to a heavy division, modifying the division staffs, adding an assistant division commander for OOTW, beefing up di-

vision support commands (DISCOM) and "holding the line" on a 10-division Army.

These modifications could produce real versatility and, Schook asserts, by clearly articulating the Army's doctrinal commitment to support the NMS, the Army will gain momentum with Congress and the American people and, thus, command a larger share of defense resources. Schook ends by saying this new direction for the Army is a "marketing plan for DOD [Department of Defense] and Congress."

Nowhere in Schook's article does he mention the Army National Guard's (ARNG's) and US Army Reserve's (USAR's) vast capabilities and resources. Any restructuring of Army forces to address full-spectrum requirements is incomplete without considering these vital Army components. The QDR and the National Defense Panel's (NDP) report emphasize a major role for the Reserve Component (RC) in conducting our NMS. The QDR, and NDP to a lesser degree, validates the requirement for US forces to conduct, unilaterally if necessary, two nearly simultaneous MTWs. Clearly, the Army must maintain forces capable of conventional land maneuver warfare. The problem, which Schook articulates well, is that increasing and ongoing OOTW missions are crowding out readiness for combat because the Army is "not organized efficiently and is spread too thin." This totally overlooks the traditional role of the ARNG as an Army component.

Historically, the ARNG's primary mission has been to expand the conventional combat forces needed for war and to back up the Active Component (AC). To the best of my knowledge, this has not changed. The level of readiness for missions should be based on risk and probability. The reason for the two-MTW requirement is that if one MTW erupts, and we become engaged, we will become unacceptably vulnerable without the capability to engage in a second MTW. The back door would be wide open for our vital interests to be challenged anywhere else in the world. The probability of having to actually engage in the second MTW is low, as long as the readiness to do so is maintained. What better force structure

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One Team, One Fight, One Future

The US Army's *One Team, One Fight, One Future* concept describes how the Total Army will achieve integration, through maximizing the contributions of the Army National Guard, Army Reserve and the Active Army. This concept document lays out the foundation for the Army's approach; the major challenges we face in the years ahead; the progress made so far; the new ideas that will take us the next giant step toward merging the Army's three components into one fully integrated, seamless Service; and, most important, our vision for maintaining a quality, trained and ready force.

For more information about the Army's *One Team, One Fight, One Future* concept, go to download page <<http://www.hqda.army.mil/ocsa/oneteam.htm>>.

Division

XXI Redesign

As our nation moves into the 21st century, the US Army's mission reflects global trends that indicate the increasing likelihood of our future political and military involvement in world affairs. As an organization, we have shifted our intellectual and physical focus away from the Cold War and Industrial Age warfare toward new operational designs that effectively leverage technology and warfighting ability. By maximizing the synergistic effects of maneuver, firepower, protection and leadership, we can project the force, protect the force, gain information superiority, shape the battlespace, conduct decisive operations and sustain transition the force while conducting full-dimensional operations.

Our focus for Force XXI operations must include organizations and leaders empowered to design and develop rapidly expansible, strategically deployable and effectively employable forces capable of achieving decisive results in war and other operations as joint, combined or coalition partners. Army XXI Division (DXXI) represents the first step in the Force XXI process that will restructure the US Army to a capabilities-based force designed to dominate the 21st-century battlefield across a broad spectrum ranging from high-intensity conflict to stability and support actions. This process is reshaping the force by turning joint and Army long-term visions into reality through a disciplined, forward-looking methodology. This change's measured pace allows us to move more efficiently along a glidepath toward the Army After Next and beyond while maintaining readiness and meeting near-term contingencies.

DXXI's evolving battlefield dynamics will allow US forces to dominate any battlespace, region or situation. DXXI was designed to ensure the proposed force structure integrated new weapon systems; improved intelligence, reconnaissance and surveillance technologies; and provided for digital command and control and a force of unmatched lethality. This redesign has resulted in significant manpower and equipment savings, increased tactical mobility and a reduced logistic tail. DXXI supports distributed operations using maneuver and firepower—facilitated by information superiority—to destroy enemy forces and seize and retain key ground. Advances in information management and distribution will expedite the horizontal integration of battlefield functions and aid commanders in tailoring and employing their land forces.

Although smaller than the current Army of Excellence division, DXXI's real-time information capability enables commanders to develop intelligence and synchronize force employment and weapon systems to destroy the enemy's capability to wage war. Improved sensors can find, identify and accurately locate targets in depth, while increasingly lethal weapons engage, overwhelm and destroy enemy forces in all types of weather and terrain. Battlefield insights taken from the Gulf War and Combat Training Center rotations have led to clearly defined requirements that incorporate doctrine, training, leader development, organizations, materiel and soldier systems. Although this smaller, more deployable division provides a force capable of conducting distributed operations over broader and expanded areas with enhanced lethality, survivability, sustainability and operations tempo, it is not yet complete. This section's articles address several key issues that describe DXXI's potential capabilities and limitations.

Changing How We Change

Major Jon J. Peterson, US Army

THE REVOLUTIONARY FORCES that are transforming the fabric of global society require that the Army restructure the process by which it fields new equipment, modifies doctrine and trains the force. Dramatic conceptual and operational change is difficult for any organization — the Army is no exception. Faced with a new set of dynamics regarding missions, technology, manpower and force deployment, the Army's smaller, Continental United States-based force must rapidly deploy to fight and win in any environment with the fewest number of casualties.

Leveraging the exponential increases in computer technology — both in military application and simulation capability — and the promising agility and lethality of developing systems, is the Army's significant response to those challenges. An additional challenge is to ensure those systems and capabilities are evaluated and integrated at a rate that meets or exceeds the rate of change in global technology and military development. The Army is using the Force XXI process to apply simulation technology, weapon system capabilities, computer information distribution and management capabilities to accomplish these goals within the constraints of broader missions, reduced manpower, changing technology and increased deployability.

But once the necessity for change has been identified, how do we do it? What are the criteria for change, and at what level do we institute change? These questions and many others define the analytic challenges that face the Army. Under the Force XXI process "umbrella," the division was targeted as the basis for change because: "Divisions create combat power throughout the commander's area of operations by combining maneuver, firepower, protection and leadership. Division commanders seek to apply overwhelming combat power, bringing all these elements quickly and violently to bear and giving the enemy no opportunity to respond

The CSS redesign . . . represents a dramatic shift in concept, organization and capability from the AOE division. The CSS analysis used constructive simulation and computer-aided map exercise (CAMEX) seminars to examine the CSS concepts and enablers. This effort provided insights into the concepts' strength and enablers' significance. Extensive study through the simulations and CAMEX in the CSS analysis and continuing effort during the Division Design Analysis (DDA) has helped refine the concept.

with an effective opposition."¹

The key to the 21st-century division lies in leveraging technology and warfighting ability, through the *patterns of operation*, to maximize the synergistic effects of maneuver, firepower, protection and leadership:

- Project the force.
- Protect the force.
- Gain information superiority.
- Shape the battlespace.
- Conduct decisive operations.
- Sustain/transition the force.

This analysis was conducted across doctrine, training, leader development, organizations, materiel and soldier systems to produce an overall understanding of a new division design's potential.

When developing new systems for the force, time is an ever-present difficulty that must be managed. New system or software upgrades often occur faster than we can integrate them into the force. This has the potential to stall the modernization effort in a never-ending loop of waiting for the next generation of software and hardware, which promises to be much better than today's version. The systems must

be developed, tested and fielded much faster than ever before to address the rapidly changing global military environment.

The solution, in part, is the spiral development process depicted in Figure 1. This process puts prototype instruments in the hands of soldiers — with contractors and analysts alongside the soldiers — where suggestions or difficulties are incorporated or fixed

The DDA was the primary effort aimed at determining the effectiveness of various division designs in several theaters. The Vector in Command simulation model was used in an analytical simulation that employed classified data to realistically evaluate effectiveness. . . . The DDA has served as the common thread throughout the course of the Joint Venture Axis from its initial planning in March 1995, through its final analytic efforts in January 1998.

as they are revealed. The systems and employment concepts are modeled in simulations, analyzed for performance and adjusted where warranted. Armed with the simulation's results, the systems are employed in a live exercise, where observations are made on the performance and utility of the systems and concepts. The live exercise results are used to refine the model, and the simulation is run again to gain insights. Exhaustive final analysis and review by senior Army leaders produce the guidance for the next design.

The traditional approach differs markedly from the methodology described above. In the past, an equipment upgrade meant several months of development and testing before the operators ever got their hands on the machine. There was little soldier involvement, and the end results sometimes produced equipment that did not perform to the required standards once it was fielded. The spiral development process is designed to mitigate those problems by simultaneously testing and developing in the actual operating environment.

As depicted in Figure 1, the 4th Infantry Division (Mechanized) (Experimental Force) [EXFOR] was fully integrated into the spiral development and analysis process. The process allowed simultaneous analysis and feedback on several force aspects and how those aspects were correlated. This was a key difference from previous force development methods. Product development does not rely solely on a

specifications sheet; it should be based upon soldier experiences using the systems in various environments, as intended.

Joint Venture Analysis

The US Army Training and Doctrine Command (TRADOC) established the *Joint Venture* office to oversee and provide guidance for development of the concepts, equipment, organization, procedures and training for the Force XXI division. The overall plan for *Army XXI Division* analysis consisted of four primary elements:

Division Advanced Warfighting Experiment (DAWE) Analysis. *Approach:* One-time experiment using subject-matter expert (SME) observers and survey techniques. *Focus:* Battle Command, Army Battle Command System (ABCS), command post (CP) design.

Divisional Design Analysis. *Approach:* Constructive analysis designed to compare the Army of Excellence (AOE) to other alternatives in a variety of scenarios. *Focus:* Division design, performance, division combat service support (CSS).

Task Force (TF) XXI AWE Analysis. *Approach:* Combination of constructive analysis and experimentation using the Model-Exercise-Model (M-E-M) paradigm. *Focus:* Digitization

CSS Evaluation. *Approach:* Variety of analytical efforts, primarily constructive, to examine the new CSS concepts and enablers. *Focus:* CSS Concept.

The intent, which resulted in the *Joint Venture* Capstone Report, was to look at a possible division design from many sides to gain a complete understanding of the proposed changes' benefits and consequences.

These events were conducted at different times, with lessons learned applied to subsequent events, but more important, the separate analyses concentrated on different aspects of the effort without losing focus of the whole. The analytic methods used and

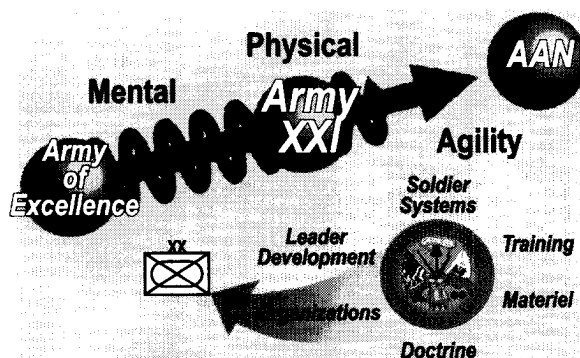


Figure 1. Force XXI: A Process of Spiral Development

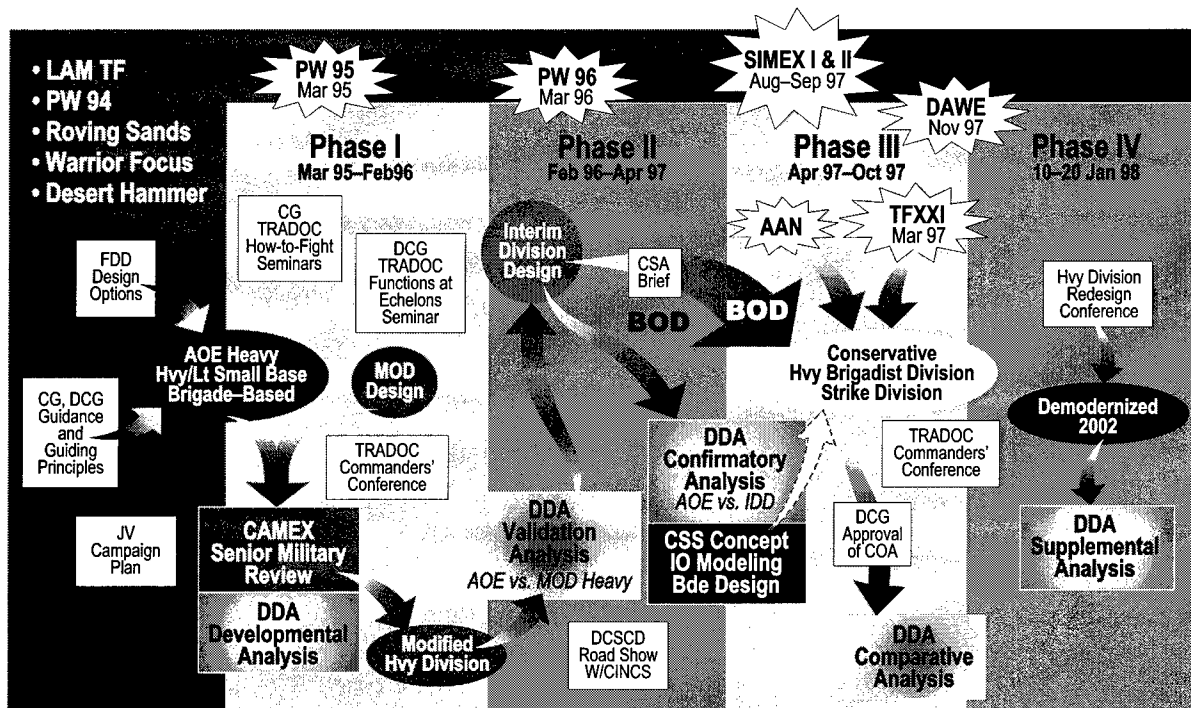


Figure 2. Analytic Path for Force XXI

environment created for each effort were developed to gain the information desired from the effort. However, as shown in Figure 2, there are several related experiments — using constructive simulation, live exercises and warfighter tools — to gain insights into specific division design aspects that complement the insights gained in other efforts. As General Gary E. Luck stated, “We must not be so analytical in our approach that we forget to fully use the intuition of our warfighters and their vast experience. . . 30-plus years of warfighting skills should count as much as *analytics*.”²

The CSS redesign is one of the most significant departures from the current organization. It represents a dramatic shift in concept, organization and capability from the AOE division. The CSS analysis used constructive simulation and computer-aided map exercise (CAMEX) seminars to examine the CSS concepts and enablers. This effort provided insights into the concepts’ strength and enablers’ significance. Extensive study through the simulations and CAMEX in the CSS analysis and continuing effort during the Division Design Analysis (DDA) has helped refine the concept.

The TFXI event was an M-E-M experiment focused on digitization. It provided information on the “value added” through digitization, then tested the reality of the different concepts and systems through live exercises at the National Training Center (NTC), Fort Irwin, California. The learning curve turned out to be steep as soldiers discovered the system’s capa-

The DAWE put the division’s operations under a microscope. There were SMEs observing events and systems in support of the study plan issues, BCTP observers gathering insights on battle command, contractors gathering training insights and CAP team members observing the events and synthesizing the insights and observations of all parties.

bilities and limits. Tactics, techniques and procedures were developed from only the sketchiest employment concepts. The man-machine interface and developing software sometimes required workarounds, but the event provided a wealth of information that was used to update and modify the systems, simulations and procedures. The final step included modifying and re-running the simulation based upon insights gained in the live exercise and applying those insights to the next effort.

DDA

The DDA was the primary effort aimed at determining the effectiveness of various division designs in several theaters. The Vector in Command simulation model was used in an analytical simulation that employed classified data to realistically evaluate effectiveness. As shown in Figure 2, the DDA process started well before the DAWE, and excursions



US Army

A Quick Fix EH-60 Black Hawk hovers above an AN/TSQ-114 Trailblazer intercept and direction finding system during an exercise at the NTC.

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to test specific division design aspects continued to provide meaningful information.

The DDA has served as the common thread throughout the course of the *Joint Venture Axis* from its initial planning in March 1995, through its final analytic efforts in January 1998. Throughout this analytic process, the division design evolution has held to the fundamental operational concept questions:

- What, how and how often is the division to perform specific missions?
- What resources does the division need to perform tasks it is required to do all or most of the time?

The latter question gets to the heart of the design problem. If there are tasks the division is to do all or

most of the time, then it needs to have those assets organic to its structure. If the tasks are occasional, "once in a while" missions, then the assets can be put at echelons above division and provided to the division as required.

The notion of 21st-century warfighting developed over this same period, as guided by the TRADOC commander and deputy commander, with the proponent school commandants providing information for the early concept development. The direct byproduct of that vision is the division operational concept, which created the requirements the division design is to satisfy.

The Force XXI DDA provided the definitive analysis for the division design aspects of the *Joint Venture Axis*. The DDA's various phases and the major focus of each phase follow:

- Phase I, March 1995 through February 1996, supported the development of the interim division design decision.
- Phase II, February 1996 through April 1997, refined the constructive analysis representation of Force XXI operations, with emphasis on information operations (IO) and CSS concept development.
- Phase III, April 1997 through October 1997, incorporated the lessons learned from the TF XXI NTC rotation into the final set of design alternatives.
- Phase IV, December 1997 through January 1998, answered a limited set of questions about the recommended final division design in preparation for the February 1998 decision.

These phases depict the analytic path the DDA followed, with the theme that the entire process has been a careful blending of traditional and nontraditional techniques, flavored with substantial quantities of professional military judgment. Two significant points in this process are the intensity of effort and rapid progress in obtaining results. Many prominent retired and active duty general officers contributed their expertise and experience during the DDA phases. That expertise, combined with modern analytic methods, resulted in less than four years from study directive to design decision. The culminating, and perhaps most visible, event in the analysis was the DAWE. While there were certainly many systems involved — and data was collected on them — the DAWE's purpose was not to validate specific systems or evaluate the lethality of new or proposed munitions, but rather to test the battle command ability of a redesigned division equipped with enhanced communication, destruction and intelligence sensor systems. One could describe the DDA process as determining "how sharp and strong the

sword is," while the DAWE determined whether a warrior could "pick it up and wield it in battle."

The DAWE development began almost two years prior to execution, during DDA Phase I. As the division designs were being tested for lethality, survivability and supportability, the decision was made to determine how these increases in mobility, lethality, information collection and other improvements actually helped or hindered the commander during an intense conflict. The Exercise *PRAIRIE WARRIOR* 96 scenario was briefed as a possible vehicle for the AWE, and fictional Lantica was approved as the theater of conflict.

Joint Venture provided eight overarching issues to examine during the AWE. These issues and initiatives, solicited from the various TRADOC schools and agencies and nominated for examination during the AWE, represented specific proponent concerns. Unfortunately, not every issue could be included or formulated within the approved scenario. Some were not truly relevant to the DAWE's eight overarching issues. For others, the DAWE was just not the right venue. The approved issues became the DAWE study plan focus.

The issues' incorporation within the scenario's context, the modifications to the suite of simulation models used and the concepts to be explored during the experiment were all discussed and approved during monthly process action team meetings chaired by *Joint Venture* staff and attended by all involved parties. The first actual player event was a Battle Command Training Program (BCTP)-hosted warfighting seminar, where the EXFOR tested its emerging "how-to-fight" concepts against a notional opposing force (OPFOR) in the Lantica theater. The lessons learned from that seminar led to additional, focused training seminars using the *patterns of operation* as a guide. These training seminars were hosted by III Corps — specifically for the training of 4th ID — but were attended by members of all major agencies involved in writing and scripting scenario portions. This helped clarify Force XXI concepts and the latest notions on how they apply in battle.

The TRADOC deputy commander provided the "distilled" guidance concerning the DAWE focus. These questions, later labeled "the primary questions," were direct, cut right to the point and relatively simple to understand but, as it turned out, very hard to answer directly. The TRADOC Analysis Center, Fort Leavenworth, Kansas, began to develop a method to address the questions, specifically looking across the existing issue categories. A team of military analysts was formed to address these questions and to integrate information from SME observ-

ers; issue leads; BCTP observers; "ground truth," as determined by the simulation; and the unit itself, through direct observations and questions.

This team, called the capabilities and potential (CAP) team, developed insights and observations by analyzing the scenario and operations orders for

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events that appeared to contain the elements which would lend insights into the primary questions. The team's analysis focused on the capabilities that the Force XXI systems, concepts and organization provided the division, as well as the potential those systems display, considering they are currently not the objective systems. Since battle command is the main focus of BCTP personnel, they are viewed as the SMEs on evaluating battle command. The CAP team worked closely with BCTP to develop the events and focus the analysis.

The DAWE put the division's operations under a microscope. There were SMEs observing events and systems in support of the study plan issues, BCTP observers gathering insights on battle command, contractors gathering training insights and CAP team members observing the events and synthesizing the insights and observations of all parties. In addition, system proponents were present, taking notes on how to improve their objective systems and working to keep the prototype systems operating as advertised.

Conducted 5 to 13 November 1997, at Fort Hood, Texas, the DAWE employed a free-play, CP warfighter exercise with digitized division and brigade tactical operations centers (TOCs) in the field. The 4th ID operated as the EXFOR in the DAWE, representing the armor variant conservative heavy division design, to include the new centralized CSS concept, portraying force year 2003. The DAWE was driven using the Joint Training Confederation of models, modified to the degree possible, to represent

BCTP gathered observations on the effect of . . . systems and concepts upon battle command. These observations and insights assisted the CAP team in the "horizontal" analysis portion, where the cause and effect of an event were crosswalked between battle command actions and the issue database. . . . Analysts could go back to any point in the battle and compare ground truth to perceptions and decisions that were made. The ability to reference these three sources allows a holistic description of the DAWE events and their causes and effects.

the modernized division and its operational concept. The 4th ID employed the current suite of ABCS systems. They included: the Maneuver Control System; All-Source Analysis System; Advanced Field Artillery Tactical Data System; CSS Control System; and Forward Area Air Defense Command, Control and Intelligence.

During the DAWE, the world-class OPFOR was modified to present a viable opponent for the 4th ID. The experiment design required a force of differing technologies—one portion with roughly 1998 technology, the other 2003, to provide an appropriate match to the year played by 4th ID. The OPFOR consisted of three combined arms armies (CAAs) and two tank armies (TAs). The 1st CAA was the less advanced force, while the 2d CAA and 3d CAA, as well as the 4th TA and 9th TA, were fully modernized forces with systems and capabilities projected to be available in the world market in 2003.

This integration of analysis methods for the DAWE resulted in significant and credible insights. The "vertical" analysis portion was designed to address the systems and concepts issues. The issue analysis plans identified elements that could be answered with observation data from an SME. BCTP gathered observations on the effect of those systems and concepts upon battle command. These observations and insights assisted the CAP team in the "horizontal" analysis portion, where the cause and effect of an event were crosswalked between battle com-

mand actions and the issue database. The third point of the triangulation is simulation ground truth. Through a system called *Vision 21*, CAP analysts could go back to any point in the battle and compare ground truth to perceptions and decisions that were made. The ability to reference these three sources allows a holistic description of the DAWE events and their causes and effects.

The methods used to evaluate concepts, systems and capabilities have evolved. We have changed the way in which we effect change in the force. The Force XXI division redesign process remains an exhaustive effort along many axes as follows:

- Test the lethality and effectiveness of the new weapon systems. This was accomplished in the DDA effort.
- Evaluate the Force XXI CSS concept. The CSS analysis provided much-needed initial insights, and CSS evaluations continue.
- Conduct a live test under controlled conditions to validate model assumptions and provide operational information on the systems' performance. This was accomplished during the NTC TF XXI exercise.
- Integrate the disparate systems and evaluate division battle command using the Force XXI systems, organization and concepts. This was accomplished through the DAWE.

While each of these major efforts is focused in a specific direction, collectively they provide a broad yet detailed analysis of the division design's effectiveness. The Force XXI division design was built around a warfighting concept — enabled by certain technologies — with a view to future missions, organization, pace and capabilities. While some areas still require further study, the simulations and analyses results indicate the Force XXI division is a capable, highly lethal organization that can conduct a broad range of operations. Throughout the process, the analytic efforts have proved to be credible, relevant and suitable for application to the next division modernization, as well as the development of the first digitized corps. **MR**

NOTES

1. US Army Field Manual 71-100, *Division Operations* (Washington, DC: Government Printing Office, 1996), vi.
2. Remark made following a TRADOC prebriefing for the Winter Commanders' Conference; subject: Force XXI experimental division design, 26 February 1996.

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Joint Venture: Both Process and Product

Colonel Albert F. Turner Jr., US Army

FORCE XXI. What have you heard about it? Is it something at "Toys 'N Us"? Shades of the 9th Infantry Division (Motorized)? A few articles in professional journals or *Army Times*? Do these articles suggest it is an end state, a journey, a process, a way to create change, the "bow wave" of the future, a digitized force, a modernized force or some general's "bumper sticker"? Some of these, none of these or all of them? Do you care? You should. To understand Force XXI, one must know what it is and how it has led to new development in our 21st-century Army.

Allegedly equipped with technology too difficult for the average soldier to use; technology that changes every 18 months; multiple moving parts that are supposedly interoperable but whose update management is extraordinarily complex, Force XXI has its fair share of detractors and critics. In response to naysayers everywhere, Force XXI is process *and* product. It is the way in which the Army has created the climate for change and one that the other services are now modeling. It is a method for identifying the best end state to achieve and is the actual definition and documentation of that end state. And perhaps, one of its greatest benefits is that it has a variety of unexpected outcomes—all of which will only better serve the Army and nation as it looks at and thinks about change in the future.

Creating the Process

The Force XXI Process began in March 1994 with a visionary letter addressed to the US Army co-authored by then Army Chief of Staff General Gordon R. Sullivan and US Army Training and Doctrine Command (TRADOC) Commander General Frederick M. Franks Jr. They described an environment in which they stood several years in the future and looked back at the Army of the early 1990s. From there they reviewed the intervening changes in the environment. Their conclusion was that the Army would have to change. Change in itself is not alarming; it is normal. Units are always in some state of

AWEs are at the Joint Venture Process' heart. They are where the Army brings together all of the good ideas across the spectrum of doctrine, training, leader development, organizations, materiel and soldier systems (quality people), and employs them in a warfighting environment. By March 1997, the Army had conducted seven AWEs, although none enjoyed the fanfare associated with the TFAWE.

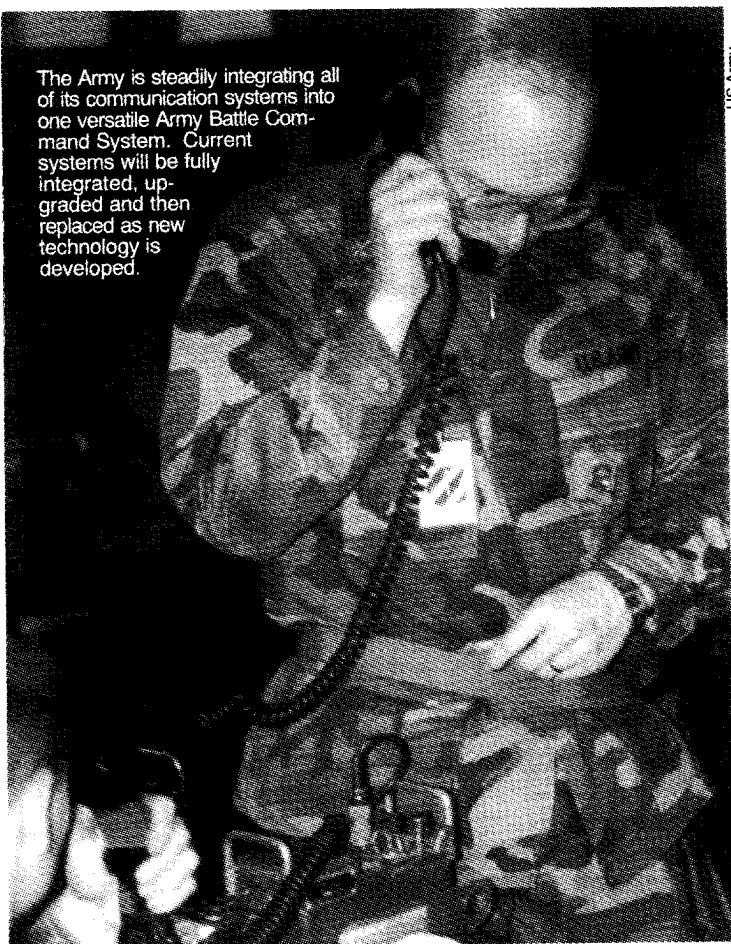
transition. The challenge is in the degree of change. The vision of these two senior leaders called for significant change to the Army's equipment and operating procedures. Those changes would be based on information.

Information. The vast majority of us who are serving or have served in tactical units during our careers lust for information. We long to know where the other platoons, companies or battalions are. We desperately need to know if food, fuel and ammunition are on the way. We cursed the radio silence from the scouts out front who were tracking the enemy's movement, even when deep down we knew either their radios or ours were probably not reaching far enough. We stare at our tactical operations center (TOC) maps and intuitively know that they are wrong despite the TOC staff's earnest and honest efforts. Most of all, we yearn to know where the enemy is, in what strength and doing what activity.

Our passion's net result is that we spend an inordinate amount of time "not fighting" the enemy with our formations, but developing information sufficient that it allows us to conduct that fight. And we always hedge. Although fairly certain the enemy will come from one direction, we always constitute a reserve to react to the unexpected, or position a portion of our forces just in case the enemy does adopt a less likely alternative. Each time we implement

The Army is steadily integrating all of its communication systems into one versatile Army Battle Command System. Current systems will be fully integrated, upgraded and then replaced as new technology is developed.

US Army



A sergeant first class interviewed by ABC News during a field training exercise at Fort Hood was challenged that his prototypical equipment was not working all that well and that he might desire to return to the older and better-established equipment. His emphatic response was "No, it would be like going back to tin cans and string after being introduced to cellular phones."

that risk mitigation tactic, we say to ourselves, "If I only had a better certainty of the enemy position, I could really optimize my formation and flat out destroy the enemy."

Franks and Sullivan, through their own professional experiences and through their understandings of future horizons, saw information as the key. Thus, they directed the tactical Army's redesign. Redesign would be based on information technology's enabling capabilities. Thus, a vision was born—a redesigned Army with vastly improved information-sharing capabilities.

Because one cannot simply decree that the Army will have new technology and will therefore be better, the rank and file Army, the American people and Congress will not accept it without the necessary proof of performance. Nor will it be accepted without the understanding and support from the Joint Staff.

New ideas must address the concerns of each constituency—and innovative designs must truly be able to fight in a real environment, not just simulation.

Consequently, *Joint Venture (JV)* was created. *JV* was a partnership among Army Materiel Command, US Forces Command and TRADOC. All three commanders agreed to work together toward a common goal—a new organizational design and the process to create it. *JV* was not joint in the "purple" sense, although the Army never turned away from joint considerations and always encouraged sister service participation. Rather, it was a joining together of three major commands (MACOMs) that in the past had three distinct missions but, for this effort, were going to combine assets and direction to create a synergy previously unseen.

Synergy. Synergy, a powerful word, means "working together; combined action or operation."¹ From this process a powerful product ensued. Mere words cannot describe the advances evident on the battlefield. However, one need only query those who have been involved, namely the soldiers who man the equipment, and you will get near-unanimous response—this is the way of the future. A sergeant first class interviewed by ABC News during a field training exercise at Fort Hood, Texas, was challenged that his prototypical equipment was not working all that well and that he might desire to return to the older and better-established equipment. His emphatic response was "No, it would be like going back to tin cans and string after being introduced to cellular phones." Clearly he could see the potential brought about by the synergistic efforts of the three MACOMs, the developers, users and testers involved in the process.

This synergy did not happen overnight. Building the understanding and vision for what the Army needed and wanted first had to go through an intellectual process—a mission analysis. The Sullivan and Franks document was very visionary and forward looking. It had to be converted into warfighting terms. To that end, TRADOC conducted a series of seminars designed to identify the future warfighting conditions the Army might encounter. These conditions were ultimately defined as the *patterns of operations* and were descriptors of the various phases the Army might pass through en route to victory in a future theater. A seminar led by various proponent school commandants and attended by the Army's senior leadership was conducted on each pattern. Future friendly force mixes and potential enemies—who they might be and their possible mixes of technology—were considered during these seminars. It was only after conducting this mission and quasi course of action analysis that the community turned its attention to what the new

Army might and should look like.

Advanced warfighting experiments. TRADOC Commander General William W. Hartzog described this process through which the Army initially developed 11 different candidate division designs and finally winnowed it down to one.² The 4th Infantry Division (Mechanized) [4th ID(M)] reorganized its 1st Brigade Combat Team (1 BCT) to replicate that design. That brigade fought at the National Training Center (NTC), Fort Irwin, California, in March 1997 in an event called the Task Force Advanced Warfighting Experiment (TFAWE).

AWEs are at the JV Process' heart. They are where the Army brings together all of the good ideas across the spectrum of doctrine, training, leader development, organizations, materiel and soldier systems (quality people), and employs them in a warfighting environment. By March 1997, the Army had conducted seven AWEs, although none enjoyed the fanfare associated with the TFAWE. The previous AWEs' purpose was to provide a series of building blocks allowing the Army to assess its direction and ensure that we remained consistent and capable in our approach.

AWEs are not classic experiments. A classic, scientific experiment describes a hypothesis and the multiple variations or conditions that might affect the outcome. Then, in a series of controlled events, one variable at a time is altered to determine the impact on the hypothesis. Warfare is not that sterile or static. Warfare is an infinite variety of ever-changing conditions that individually can have multiple effects on outcomes. The Army's leadership was comfortable with the concept that conducting AWEs without individually controlling each variable would still allow leaders to make overall assessments of the value of the new capabilities being planned for troop use.

The challenge of getting the 4th ID(M) to the NTC in March 1997 is where the JV Process truly emerged as a synergistic effort. Over 300 "good ideas" were initially proposed to be overlaid on the 1BCT. Ultimately, over the course of two years, that was narrowed to 72. The rest fell by the wayside due to a lack of funds, lack of maturity or because they just did not work. The experiment revealed a desired AWE outcome: identify good ideas for investment, identify good ideas for further experimentation and identify ideas for discarding. Fully 85 percent of the good ideas ultimately evaluated were found during the NTC rotation to have good potential for future warfighting.

The process of identifying, segregating and grading initiatives or proposals is a Force XXI strength. Materiel developers, testers and users combine their efforts to contribute to improving the force's warfighting ca-

pabilities. Developers create and propose the initiative. The user and the doctrine community assess whether it fits into the overall vision and Army direction. If it gets through that gate, then the testing community creates the data collection and analytic environment that will allow an overall assessment of the

Demonstrated clearly in the TFAWE, the inclusion of information technologies had significantly improved capabilities which enabled mental agility. . . . The combination of lessons learned from the TFAWE and AAN prescribed that the emerging division design would focus on information exchange coupled with legacy weapon systems. It would be a design that set the conditions for future evolution as the AAN-suggested technologies became available.

initiative's contribution. All three communities retain their independence and fundamentally have veto power. Rarely was the veto exercised. Instead, all professionally collaborated on ways to make things work if they truly believed there was future potential.

This collaborative effort successfully outfitted a BCT with virtually all new equipment and systems (but not platforms). The process was not easy because there were technology glitches by the dozens (if not hundreds) along the way. In this experimental environment, the bill payer was generally time taken away from the unit's NTC train-up calendar. It became an experiment within an experiment—how to completely reorganize a formation while sustaining its deployability and warfighting potential.

Adjusting the Vision

With the TFAWE's successful completion, the Army renewed in earnest the redesign process. The TFAWE had convinced all professionals who observed it that this was truly an enhanced formation. Furthermore, the enabling technologies offered tremendous potential to capitalize on those new capabilities in the future division design.

The JV Process had, in the meantime, been informed about yet even newer requirements and capabilities. The process and the redesign efforts adapted accordingly. When the vision was created in 1994, Army XXI was an end state—an Army equipped with information technology. By mid-1997, the Army After Next (AAN) series of wargames and analyses had suggested to Army leadership that the distant-future Army would be one characterized by both mental and physical agility. Demonstrated

clearly in the TFAWE, the inclusion of information technologies had significantly improved capabilities which enabled mental agility. But physical agility, such as faster platforms, lighter armor, greater weapon ranges and effectiveness, improved power plants

The RC's significant importance to the Army's new design is highlighted by the fact that there are several hundred Army Reserve and Army National Guard soldiers embedded in the design. They are not fillers or delayed-arrival reinforcements. They are part and parcel of the division and should deploy with the division, if and when it is summoned to a contingency.

and fuel efficiency, required technology breakthroughs that clearly remained beyond our current reach. The combination of lessons learned from the TFAWE and AAN prescribed that the emerging division design would focus on information exchange coupled with legacy weapon systems. It would be a design that set the conditions for future evolution as the AAN-suggested technologies became available.

Still, before the Army could commit to a new design, it was necessary to experiment with it in the context of larger formation operations—division and corps. Consequently, during the summer of 1997, the Army conducted an analytic process that produced a smaller variation of the division design that had recently fought at the NTC. The 4th ID(M) reorganized (on paper) into this new design and trained to fight the world-class opposing force in a Battle Command Training Program warfighter exercise (WFX). This exercise, which included the assessment of several more new initiatives and processes, would be the division advanced warfighting experiment (DAWE).

Even as the division trained for the WFX, the analysis continued on the TFAWE results. The testing community reviewed all of the data and made recommendations on those systems that had demonstrated good potential for warfighting, and those which did not. Subjected to scrutiny and debate at the highest levels, to include multiple briefings to Congress on Capitol Hill, the successful systems were entered into the Army's current and future budgets. The first fruits of *JV* were being reaped.

The DAWE was conducted in November 1997. The WFX was nine days long, four days longer than a normal WFX. It employed a suite of simulation models never before assembled in one place for a single exercise. Those models were integrated into

the 4th ID's suite of computers through a series of software-driven simulation support modules, which also had never before been stressed to such a degree. The scenario was challenging—4th ID(M) was an unopposed early-entry force and operated single-handedly in sectors as large as 200km x 250km before corps was able to close in-theater. It fought four combined arms armies (CAAs), each organized differently. They were equipped with different technology mixes and capabilities representing those that our nation might face in the near future to the truly high-tech, distant-future peer competitor. The *JV* partners directed this challenging environment to satisfy both themselves and their constituencies that this truly would be a capable future force.

The DAWE's successful completion was the final experimental step in the *JV* division design process. The informal campaign plan that the *JV* partners had followed now called for decisions. The analytic community completed its data analysis and reported on the division design's strengths and weaknesses during the DAWE. Three years of experimentation and data collection were complete, and it was time to apply professional judgment to the informed debate. In a series of conferences, options were scrutinized, debated, stonewalled, compromised and, finally, decided. Issues on what was good for the nation, Army, individual branches and the soldier were at the discussions' heart. The product, a new heavy division design, was one that all who participated could stand by and support when it was presented to the Army chief of staff and his four-star commanders.

All decisions were finalized in March 1998 and unveiled to the nation during a press conference in June 1998. The heavy division redesign portion of the tactical Army was complete and ready for implementation. The task identified by Sullivan four years earlier had been achieved.

The Byproducts

The *JV* Process does not end there. It is an ongoing process and a means to accelerate development, fielding and implementation of good ideas. It has evolved over its four-year life and continues to adapt as environmental conditions change. Remember, change is normal. There have been a number of byproducts, not the least of which are new equipment and systems, that have resulted from *Joint Venture*.

Spiral development. One of the first has become a *JV* watchword or bumper sticker. *Spiral development* describes a method by which lessons learned are built upon previous lessons learned, none of which have gone through a deliberate and stultifying vetting. Spiral development also describes a collaborative process by which the user, developer and



The Army of Excellence was an Army built around the “big five:” Abrams tank, Bradley Fighting Vehicle, Multiple-Launch Rocket System, and Apache and Black Hawk helicopters. These five individual systems brought tremendous improvements to the warfighting business. But they were individual systems that improved singular capabilities. The system of systems described in Force XXI is the integration of upgraded versions of the big five, plus many other modernization programs, all linked by information-sharing technologies.

tester sit shoulder-to-shoulder and collectively create a product that meets the user's needs, can be built at reasonable cost by the developer and which will pass the regulatory testing requirements. Spiral development describes a method of capturing the effects of one change and forecasting the ripple effect of that change throughout the environment, and then adjusting for all tertiary effects. Spiral development is acceleration in development, testing, resourcing and fielding. The old adage of “Lead, follow, or get out of the way” applies in spades to spiral development. Failure to adapt to the acceleration, resistance to changing older methods and hesitation to commit are anathema to spiral development and Force XXI.

Much of the hesitation is generally centered on the Department of Defense (DOD) 5000 series regulations, which prescribe the development and acceptance testing process through which all new systems must pass. It is a process designed for single systems in a stovepipe environment. It is a process that, whether by design or not, can take 12 to 20 years before fielding major pieces of equipment, and 4 to 10 for lesser ones. It is not a process that accommodates multiple systems—all of which interact and share similar states ranging from infancy to maturity. Yet, especially in the computer hardware and software world, it is commonly accepted that there is a major new development every 18 months. Imagine if each new computer system being fielded had to be tested to

the fullest extent per the DOD 5000 requirements. Moreover, if each multiple interactive system had to be relatively mature to provide a valid test environment, the materiel finally reaching the soldiers some years hence would be hopelessly out of date. Spiral development has been the means by which needed changes to DOD 5000 have been identified.

Forcing functions. The AWEs and spiral development have created another byproduct—forcing functions. The AWEs themselves have been forcing functions. They have been a mark on the wall that has proved to be immovable. Great skepticism existed early on about the Army's ability to have all of the necessary pieces in place to conduct an AWE. Ultimately, it all came together through the superhuman efforts of the triumvirate identified before—the user, developer and tester. One of the Army's great strengths is that no one wants to fail, and all will do whatever they can to ensure that they personally do not fail. The forcing function of a “put up or shut up” date makes all produce. It may seem cynical and risky forcing immature or less-capable products into the hands of the user, but the proof is in the results. While not all systems or doctrine have been mature or totally capable, the assembled products' synergy has more than overcome individual weaknesses and created a more capable force. Were the Army to take counsel of its fears and adjust the forcing function as problems emerged, we would never achieve results.

JV has forced recognition that the future Army will be integrated through a "system of systems." The Army of Excellence was an Army built around the "big five:" Abrams tank, Bradley Fighting Vehicle, Multiple-Launch Rocket System, and Apache and Black Hawk helicopters. These five individual systems brought tremendous improvements to the war-fighting business. But they were individual systems that improved singular capabilities. The system of systems described in Force XXI is the integration of upgraded versions of the big five, plus many other modernization programs, all linked by information-sharing technologies. There are computers in command posts and vehicles. There are tracking systems on some of the logistics fleet, radios that transmit both voice and digital, new downlinks to national intelligence systems and software in each and every one of those and many other components. Accomplishing the hardware and software integration and interaction is challenging but achievable—it has been done! But a change in one component causes changes in many others. Mapping and programming these changes is a necessary evil. In an ideal world, the Army would have had the vision 20 years ago to create a single, all-purpose computer and communications capability. Unfortunately, 20 years ago we could not imagine such a possibility, much less a capability. Likewise, it is perhaps foolish to suggest that we should now cease working on what we have because it is so terribly unwieldy. Cumbersome it may be, but it is light years ahead of the analog environment. Four years from now—the amount of time the *JV* Process has been in action—will witness two, if not three, generational advances in computing capability. The answer is simple—we adapt for the good of the soldier.

Another *JV* tactical army redesign process outcome is in the Army's approach to the Reserve Component (RC). RC integration has always been key to the nation's victories. The relationship has ebbed and flowed over the years. The RC's significant importance to the Army's new design is highlighted by the fact that there are several hundred Army Reserve and Army National Guard soldiers embedded in the design. They are not fillers or delayed-arrival reinforcements. They are part and parcel of the division and should deploy with the division, if and when it is summoned to a contingency. This implies a need for change in RC access. Presidential Select Reserve Call-up (PSRC) does not allow for small-

scale (several hundred) mobilization. Yet Army leadership is committed to these RC soldiers being part of the division in all of its activities. A *JV* outcome suggests changes to the legislation governing PSRC are in order. Likewise, changes to the way the RC trains and mobilizes are due in this new relationship. Active Component division leaders must take a much more proactive role in the preparation of their RC division members. The ultimate goal is to reinforce all of the "good news" stories that emerged from RC readiness during Operation *Desert Storm* and eliminate any memory of the bad news.

We have a new heavy division design. We have identified and documented the need for change in regulations, doctrine and legislation. We have also created new environments that enable future change and evolution, and these are just some of the major outcomes from *JV*.

The Way Ahead

The *JV* Process does not end here. Remember, the initial charter from Sullivan was to redesign the tactical Army. Only the heavy portion of the Army is done. The light divisions, including air assault and airborne, remain undone. Future AWEs will address these organizations' unique needs and operating environments. Consequent redesign, as appropriate, will be done over the next two years.

Likewise, the Army is looking at other types of forces. It is an oversimplification to state that heavy forces are extremely lethal but slow to arrive in a distant theater, while light forces are faster to arrive but lack lethality. Still, in the broadest sense, it is accurate and suggests a need for middle weight forces—forces that can arrive sooner than heavy, but be more lethal upon arrival than the light. Future experimentation will look at those requirements and organizational designs.

Force XXI and *Joint Venture* is a process, product and program—a vehicle for change. Likewise, it is a frenzied collaboration by dedicated professionals trying to get new capabilities into the warfighters' hands sooner. *JV* is something that the entire Army can take pride in, for it has produced what it was told to do—a new Army! **MR**

NOTES

1. Webster's Ninth New Collegiate Dictionary (Merriam-Webster, Inc., Springfield, Massachusetts), 1198.
2. GEN William W. Hartzog and LTC James G. Diehl, "Building the 21st-Century Heavy Division," *Military Review* (March-April 1998).

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Restructuring the Division: An Operational and Organizational Approach

Lieutenant Colonel Billy J. Jordan, US Army, and
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THE DISSOLUTION of the former Soviet Union effectively ended the Cold War and simultaneously ushered in an era of massive change within the NATO military alliance that had faced Soviet divisions across the inter-German border for more than four decades. Each NATO partner grappled with these unforeseen circumstances in its own way. The United States was faced with its own unique set of conditions. These included the integration of information-age technologies within its military forces, addressing the rising cost of cutting-edge weapon systems in the face of an absent peer competitor and determining who really posed a threat to its national security. These initiatives were undertaken within a framework featuring the US military simultaneously converting from a predominately forward-deployed force to a Continental United States (CONUS)-based, power-projection force. By examining competing post-Cold War challenges, senior US Army leaders determined that a fundamental revision of basic warfighting organizational structures was urgently needed.

In 1991, the US Army began to seriously re-evaluate global threats, refine its strategic deployment requirements and examine how new technologies could be leveraged to maximize the combat effectiveness of land combat organizations and equipment. The changing strategic vision clearly indicated that the diminished number of forward-based heavy divisions did not provide the National Command Authorities sufficient flexibility to address evolving military and political needs.

The Gulf War had also highlighted the incredible hurdles associated with moving US Army, Europe and CONUS-based heavy forces to immature theaters. For decades, the Army had relied on pre-positioned equipment stocks to significantly reduce shipping requirements and movement times for heavy forces tabbed to reinforce forward-deployed divisions in Germany and Korea. Now the Army

An operational and organizational concept is intended to convey ideas, thoughts and general notions that describe what capabilities are required to conduct combat, CS and CSS battlefield operations. . . . Normally, a concept would be developed without parameters, and then a force designed to meet the concept. In this case, the basic force structure, the 4th ID (M) was already in place, and the final decision . . . confirmed the new division would be limited to approximately 15,000 soldiers.

had to prepare itself to face unexpected and unfamiliar strategic challenges globally.

The Army quickly realized that it could no longer afford a warfighting campaign strategy focused exclusively on European pre-positioned equipment. Heavy divisions, the striking power of the land component commander's (LCC's) campaign forces, must now move their equipment from CONUS to other theaters where supporting infrastructure must be developed simultaneously with combat forces deployment. These new challenges quickly called into question the feasibility of existing Army of Excellence (AOE) divisions designed to fight a familiar foe amid a mature theater infrastructure.

Creating a New Division Structure

In response to the acknowledged need for change, the Army opted to conduct extensive experimentation to identify the optimal organization for future divisions. In preparation for advanced warfighting experiments (AWEs), Army leaders asked the US Army Training and Doctrine Command (TRADOC) to consider several new division designs with the aim of creating a streamlined heavy division that embraced existing information technologies to achieve

a significant increase in combat effectiveness. By combining digital information systems with newly developed direct- and indirect-fire systems, commanders could ensure their maneuver forces could

Doctrine writers . . . had been following the AWE with great interest since September 1995 and were prepared for the challenge of creating doctrine for the Army's new digital division. "Strawman" doctrine drafted by CADD drew heavily on the division staff's experience and proved a good start point for the detailed process that followed. CADD coordinated with experts from the various branches . . . and conducted internal reviews to develop and revise the emerging doctrinal concepts as new insights became available.

identify opportunities and mass overwhelming effects against an unprepared enemy at any battlefield decisive point.

In the initial stages of developing the division design for the AWE, the Army went through a number of unconstrained design iterations to determine the most affordable, effective and lethal force. Originally, 11 different division designs were proposed. Each organizational design was examined to determine how effectively it could address the changing global challenges while remaining within the Army's projected force structure limitations. Almost from the onset, force structure designers were bounded by the constraint to maintain a ceiling of 15,000 soldiers within the new organization. That figure resulted from the Army's ability to leverage technology that permitted the reduction and realignment of AOE combat support (CS) and combat service support (CSS) assets. A comparable cut was made in the division's combat elements due to the increased individual and collective lethality of newly fielded weapon systems. This "sizing" process also generated concurrent discussion on what traditional organic capabilities should remain within the division and what functions could be "passed back" to echelons above division (EAD).

After much discussion and review, the field was finally narrowed to three candidate designs to support the AWE: the "Conservative" Heavy Division—renamed Division XXI (DXXI)—Strike Division and Brigadist Division. The combat effectiveness of each proposed design was tested in simulation modeling to determine which would be adopted for unit testing. The modeling program identified the DXXI as having the optimal mixture of lethality, effective-

ness and affordability. The Strike and Brigadist Division designs were discarded when the DXXI was identified as the candidate design to undergo further evaluation during the AWE. The experimentation plan's next phase, which used an Active Component division to conduct testing, was intended to identify how new technology could be leveraged to enhance the new division design's effectiveness.

The decision was made to convert the 4th Infantry Division (Mechanized) [4th ID(M)] (Experimental Force) [EXFOR] to the interim DXXI design, providing the Army with a "living" test-bed where emerging technologies, new organizational designs and evolving tactics, techniques and procedures (TTPs) underwent rigorous examination in a field and garrison environment. Based on the lessons learned from the AWE, the Army's senior leaders mandated its adoption as the objective division structure, following some changes to the original design. The DXXI design validation program's goal was to ensure the proposed force structure:

- Integrated new weapon systems.
- Improved intelligence, reconnaissance and surveillance technologies, set amid a framework of digital command and control (C²).
- Created a proven force of unmatched lethality.

How Will DXXI Conduct Operations?

The questions raised by evolving strategic, operational and tactical challenges cannot be answered solely through an organizational solution. TRADOC also realized that fielding this new organization required a fundamental change, given the Eurocentric and linear underpinning of our existing AirLand Battle (ALB) doctrine, in how we would maximize its capabilities. By examining existing warfighting doctrine, TRADOC discovered that it would prove inadequate to describe how the Army will use digitized technology to fight now and in the future. As a result of preparing for and executing the AWE and other analytical processes, it was evident that the AOE division operating in the ALB framework was inadequate to meet future Army warfighting requirements.

The doctrinal process of redesigning a heavy division that would exploit digitization as well as other new technologies took its first major step with the publication of TRADOC Pamphlet (Pam) 525-5, *Force XXI Operations*, in August 1994. Several other TRADOC pams were published expounding on more specific topics, including the important 525-70, *Battlefield Visualization*. TRADOC Pam 525-71, *Force XXI Division Operations Concept*, published in May 1996, provided a foundation upon which TRADOC drafted emerging doctrine and



A 1st Armored Division M728 destroys a Bosnian-Serb bunker near Dubrave, Bosnia, January 1996.

Decisive operations are all military actions that strike directly at decisive points. In offensive and defensive actions, decisive operations consist of all actions to overwhelm an enemy force or to seize or retain key terrain. In stability or support actions, decisive operations achieve the immediate military objective of intervention. Such actions could include disarming opposing factions in a conflict, opening LOCs for humanitarian assistance, evacuating noncombatants or implementing a peace agreement in support of a host nation rebuilding effort.

TTPs for the EXFOR Division as it went through the AWE process.

The Combined Arms Center (CAC) at Fort Leavenworth, Kansas, produced three versions of US Army Field Manual (FM) 71-100-5, *EXFOR Division Operations, Tactics, Techniques, and Procedures*, as well as two versions of Army Training and Evaluation Program 71-100-5-MTP, *Mission Training Plan for the EXFOR Division Staff*, between March 1996 and June 1997. These publications attempted to capture what the 4th ID (M) was doing and provide some continuity as the division leadership and staff rotated over time. Each version evolved based on feedback from the TRADOC schools and centers and personal observation of the unit, along with participation in unit training seminars and exercises by the authors. The TRADOC pams, Army FMs, coordination with 4th ID (M) and extensive interaction with the TRADOC schools and centers gave CAC a foundation upon which to develop approved "how to fight" doctrine for the digitized division.

Doctrine writers at the US Army Command and General Staff College, particularly the Combined Arms Doctrine Directorate (CADD), had been following the AWE with great interest since September 1995 and were prepared for the challenge of creating

doctrine for the Army's new digital division. "Strawman" doctrine drafted by CADD drew heavily on the division staff's experience and proved a good start point for the detailed process that followed. CADD coordinated with experts from the various branches, other Fort Leavenworth agencies—especially the Force Design Directorate—and conducted internal reviews to develop and revise the emerging doctrinal concepts as new insights became available.

Amid the exciting backdrop of change following the AWE's completion, Lieutenant General Montgomery C. Meigs, the CAC commander, tasked CADD to put together an operational and organizational concept (O&O) for DXXI. The O&O's intent was to capitalize on the 4th ID (M) efforts and stimulate the initial debate concerning the end result of the lengthy division redesign development process. The O&O was also designed to drive the tough decisions needed to forge a lethal, modern division, faithful to the tenets of TRADOC Pam 525-5 but within the parameters articulated by the Army's senior leaders.

The O&O Concept

Army O&O concepts are an integral part of the force structure design process. They have been developed for every major manpower and equipment

initiative since the late 1950s. Hence, DXXI O&O authors found themselves faced with operating within a set of well-defined boundaries. Using the basic concepts contained within the TRADOC Army XXI pams and capitalizing on the experience of 4th ID (M) during the AWE, CADD undertook the mission to create an O&O that clearly defined the DXXI capabilities.

An O&O concept is intended to convey ideas, thoughts and general notions that describe what capabilities are required to conduct combat, CS and CSS battlefield operations. It prescribes where and when operations occur and how they fit with other concepts for related operations, and it is typically futuristic. Normally, a concept would be developed without parameters, then a force would be designed to meet the concept. In this case, the basic force structure, the 4th ID (M) was already in place, and the final decision by the Army Board of Directors (BOD) in April 1997 confirmed the new division would be limited to approximately 15,000 soldiers.

DXXI O&O Development Process

The O&O concept had to be logical, coherent and balance the competing demands for force structure so that any change to the force structure had to be linked to the specific requirements in the O&O concept. However, some assumptions were necessary to facilitate development of a strawman O&O concept that clearly defined the DXXI structure and prevented the possible exponential growth of mission requirements and subsequent growth of force structure. The assumptions used to construct the basic O&O concept framework were:

- DXXI will fight as part of a US corps in a mid-intensity environment in a major theater of war.
- DXXI will be tailored for all missions.
- DXXI C², administration and logistics structure can accept various tailoring packages to support specific missions and environments.
- DXXI can conduct distributed operations and Level I rear area security operations.
- DXXI can command and control operational-level fights and rear area security operations against a Level II or III threat and for line of communications (LOC) security. This requires EAD assets to execute those missions.
- DXXI may conduct combat operations outside the corps joint task force (JTF) structure under only two circumstances.

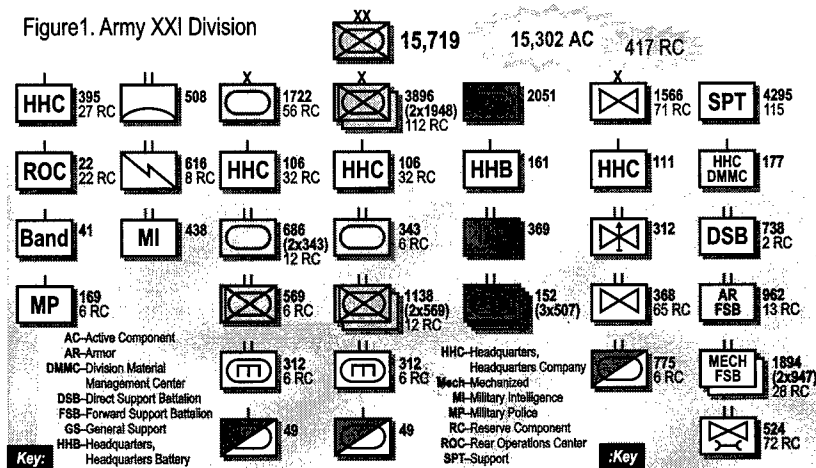
First, during initial entry operations while the corps or JTF is deploying; and second, if the division is a forward-deployed force in a theater without a corps or JTF.

After strawman O&O concept development, a series of week-long conferences were held at Fort Leavenworth in January 1998, starting with a Council of Colonels (COC), followed by a General Officer Steering Committee (GOSC) and culminating in a General Officer In-Process Review (GOIPR). At each conference, many departments and agencies throughout the Army, as well as several US Army Forces Command units and all TRADOC schools and centers, were represented. The DXXI COC made several initial recommendations, which were then considered, revised and expanded by the GOSC. The GOSC results led to a significant revision of the existing O&O. The reworked O&O was again reviewed and finalized during the GOIPR prior to presentation to the Army BOD in February 1998. During this forum, the proposed concept was approved as the foundation of DXXI doctrinal and force structure development. Figure 1 illustrates the proposed division redesign.

DXXI Operations

While developing a warfighting doctrine concept that capitalized on the DXXI design capabilities, CADD was also charged with ensuring that the doctrine applied to the entire force. Thus was born the new doctrinal concept of "distributed operations," which had to be broadly based and applicable to all organizational constructs within the US Army. Distributed operations doctrine is intended to replace ALB doctrine, which had been developed specifically for conflict in Western Europe against Soviet forces. Distributed operations apply to all military actions—offense, defense, stability and support—and to both Army XXI and AOE forces.

Figure 1. Army XXI Division



Distributed operations provide a revised approach to how commanders may tailor, task-organize and employ their forces for any situation.

Distributed operations encompass those activities and functions executed throughout the height, width and depth of an area of operations (AO) designed to accomplish the assigned mission. These activities may be executed simultaneously or sequentially and against multiple decisive points or a single decisive point, based on the factors of mission, enemy, terrain, troops and time available (METT-T). The distributed operations framework of decisive, shaping and sustainment operations organizes the battlefield based on purpose, rather than geographical location within an AO.

The concept of distributed operations also recognizes armies as resilient and adaptive organizations, able to withstand attacks directed sequentially against their individual components. Distributed operations' aim is to inflict paralysis on the enemy, resulting in the rapid and total collapse of coherent resistance. Each attack on an objective creates an effect, the sum of which is greater than if each attack were discrete. Thus, rather than a single concentrated attack, the commander executes multiple (lethal and nonlethal) attacks using overwhelming force, at a tempo the enemy cannot match. *Simultaneous operations*—the concurrent application of military force to attack multiple locations throughout the enemy's entire organizational structure—also enables this single operation to result in the enemy force's disintegration. Presenting the enemy commander with a rising crescendo of competing crises ensures he cannot effectively respond to them all. This leads to the opposing force's accelerated mental and physical disintegration.

Decisive operations are all military actions that strike directly at decisive points. In offensive and defensive actions, decisive operations consist of all actions to overwhelm an enemy force or to seize or retain key terrain. In stability or support actions, decisive operations achieve the immediate military objective of intervention. Such actions could include disarming opposing factions in a conflict, opening LOCs for humanitarian assistance, evacuating non-combatants or implementing a peace agreement in support of a host nation rebuilding effort.

Shaping operations are all military actions conducted to set the conditions for the success of decisive operations. In offensive and defensive actions, shaping operations include actions to deny the enemy the use of terrain and the electromagnetic spectrum; to destroy or degrade his essential capabilities, especially C², logistics, fire support and air defense; and isolate key components of his military organiza-

tion. Shaping operations also entail maneuvering friendly forces to positions of advantage from which to launch decisive operations. In a stability or support situation, shaping operations can include those actions designed to create conditions that facilitate

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long-term stability or return to normal conditions. Shaping operations might include actions such as using engineers to repair infrastructure, conducting psychological operations to prevent confrontation among factions, or initiating combat operations by friendly forces to prevent warring factions from upsetting the return to stability.

Sustainment operations are as vital to the commander as the other two components of distributed operations. They consist of all military actions taken to protect and ensure the functioning of one's force, its capabilities and its freedom of action. In all types of operations, these include CSS operations and sustainment-base and associated LOC security. By their nature, sustainment operations are not decisive, but failure during sustainment operations can cause the overall effort to fail.

Comparing DXXI and AOE Division Capabilities

The O&O concept states that DXXI's primary mission is identical to the AOE division, which is to conduct combat operations to defeat or destroy enemy ground forces. While the basic division tasks have not changed dramatically, the manner and scope in which DXXI accomplishes them is significantly different from its AOE counterpart. The O&O concept highlights the fact that digitizing C² architecture and weapon systems has led to a quantum leap in the division combat operations' tempo.

DXXI conducts distributed operations at the time and place the commander chooses by using its improved C², linked with improved target acquisition

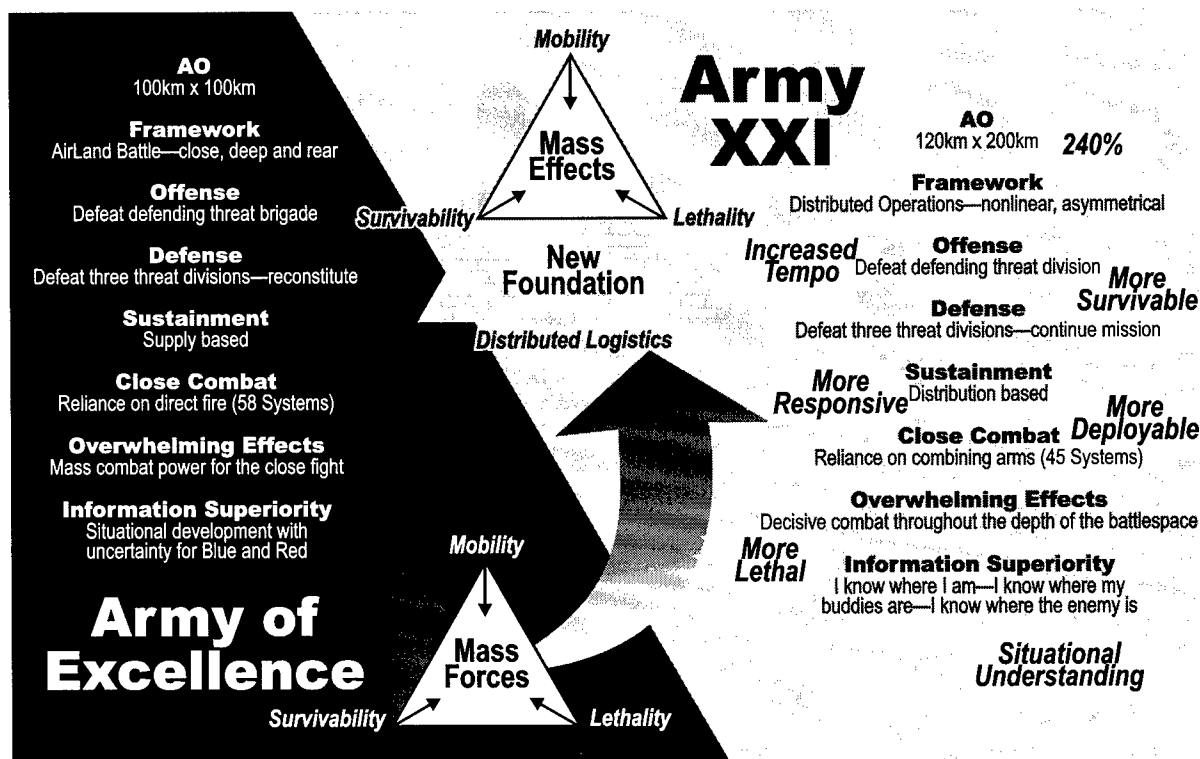


Figure 2. Army of Excellence/Army XXI Division Comparison.

capabilities optimized for the employment of precision weapons, to simultaneously strike the enemy at multiple decisive points throughout its AO. DXXI accomplishes this via linkages to national and theater assets, as well as organic sensors, which provide commanders at multiple echelons within the division with superb intelligence and a relevant common picture (RCP) of the battlefield. The division uses this RCP to execute collaborative planning, create a superior situational understanding and conduct rapid maneuver to exploit the effects of precision fires. By comparison, the AOE division passes information vertically through multiple command echelons, each of which requires time to analyze and digest the data before passing it on, thus slowing down the decision-making tempo and often distorting the data. Figure 2 highlights the similarities and differences of the two different division designs.

In offensive operations, the DXXI organization is designed to maintain a higher operations tempo (OPTEMPO) in order to defeat a defending enemy force of equivalent size, whereas the AOE division was expected only to defeat a brigade-size force. In defensive operations, the precision fires and accelerated OPTEMPO possible with the DXXI design result in a more survivable organization that can successfully defend against three enemy divisions and still retain sufficient combat capability to quickly transition to follow-on missions. The AOE division

had a similar defensive capability but generally required substantial, extensive and deliberate reconstitution before it could be used to conduct follow-on missions.

DXXI reconnaissance and surveillance (R&S) forces provide a "focused telescope" to enable both maneuver and fires, reduce risk, aid in decision making and answer the commander's critical information requirements. The DXXI design has significantly enhanced R&S capabilities compared with its AOE counterpart. Information superiority, gained through links to national or theater assets and enhanced by organic R&S capabilities, is the major contributing factor that allows DXXI to habitually operate over a 120 x 200 km area, compared with the 100 x 100 km sector for an AOE division as depicted by Figure 3.

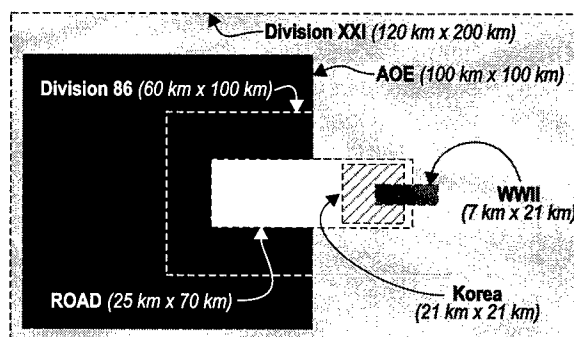


Figure 3. Division Frontage Comparison—1941 to 1998.

Rather than relying largely on direct fires to prevail in close combat like the AOE division is forced to do, DXXI integrates its organic combined arms capabilities to produce overwhelming effects throughout the depth of the battlespace, to include close combat. Information superiority, when translated into situational understanding, also increases the lethality of DXXI close combat through the digital linkages between C², direct-fire platforms and indirect-fire systems. DXXI pinpoints critical enemy systems to engage with precision munitions within a compressed period of time. Digital linkages facilitate the maneuver element's ability to quickly follow up precision fires to exploit the effects and complete destruction of enemy forces.

The increased synergy between the separate DXXI combined arms team components led to the redesign of its maneuver battalions. DXXI features maneuver battalions organized with three maneuver companies equipped with a total of 45 combat platforms compared with the AOE division's four companies and 58 combat platforms. This redesign decision, which resulted in significant manpower and equipment savings, also increased tactical mobility (smaller physical footprint), reduced the logistic tail and decreased strategic deployment requirements while sacrificing none of the division's overall lethality.

The organic DXXI fire-support capabilities have also been improved over its AOE counterpart. The DXXI artillery organization will have a two-battery Multiple Launch Rocket System (MLRS) battalion that includes a target acquisition battery. This battalion enhances the division's counterfire abilities by combining the sensor-to-shooter links into a single C² structure. The additional MLRS battery also doubles the firepower available for general-support mission execution. Improved rocket and cannon munitions, coupled with attack aviation, allows the division commander to execute shaping and decisive operations through a mixture of standoff attack or close combat. R&S assets will include dedicated organic target acquisition systems to expand the footprint of the division's long-range precision fires.

The DXXI sustainment structure also differs markedly from the AOE division support command (DISCOM) design. DXXI will feature a much-reduced logistics system that proactively tailors CSS to address specific mission requirements. This is in sharp contrast to the unwieldy AOE CSS structure that often stockpiled resources in anticipation of possible use. DXXI's centralized logistics includes battlefield distribution, throughput and stockage management enabling technologies. This centralized logistics concept has created a more agile and mobile support organization under which all division CSS assets

have been assembled. All DXXI organic CSS elements are assigned to the DISCOM. However, forward support battalions and forward support companies (FSCs) will still be habitually associated with

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their respective maneuver organizations to provide continuous, responsive support. Maintenance and supply assets organic to all maneuver battalions have been collocated with the FSCs.

Sustainment during combat operations is closely linked with maneuver and fires. Given the need to maintain an accelerated OPTEMPO through rapid resupply and combat power regeneration, support considerations are taken into account by the commander from the mission's onset. Task organization, scheme of maneuver and fires, as well as branches and sequels to the basic plan, all incorporate anticipated CSS requirements.

Last, unlike the AOE design, DXXI features Reserve Component (RC) integration as an enhancement to its organic force structure. The division rear operations center will remain an integral part of the DXXI C² architecture to assist in synchronizing and orchestrating sustainment operations. Other anticipated missions for individual RC soldiers include division and brigade staff augmentation, civil-military affairs representatives at brigade level, as well as division and brigade liaison teams.

Streamlining DXXI

While technology offered a potential path toward streamlining the DXXI design, other organization options also offered potential. Among these was a concept calling for the migration of organizations and functions common at both division and EAD, which presented an attractive option when determining how the structure could be reduced without

degrading warfighting capabilities. It was decided that DXXI would be tailored to conduct its assigned mission in accordance with METT-T. A number of common functions, originally organic to the division, would be provided to DXXI by EAD for each mission.

DXXI was designed from the onset to be tailored, based on the factors of METT-T. This tailoring is designed to "plug in" enabling components, which the division employs, to accomplish missions across the full spectrum of military operations. Although the DXXI has substantial capabilities and is a vast improvement over the AOE division, it, like its predecessor, will require augmentation to accomplish specific missions or perform certain functions.

If DXXI is to act as a joint force land component command element or as an Army forces JTF component, it must be tailored with headquarters assets to accomplish the task. The digitally equipped division provides the commander with many critical networks necessary to link multiservice and joint operations. Like the AOE division, if DXXI is required to simultaneously support suppression of enemy air defenses, counterfire and maneuver brigades or win and maintain parity in the counterfire battle in a mid-intensity conflict, it will require additional assets, usually in the form of two or more artillery brigades. Like the AOE division, DXXI requires EAD bridging, general engineering, countermobility and survivability assets to conduct river crossings, prepare deliberate defenses, protect critical division elements and build and maintain routes and logistics facilities.

The air defense artillery battalion retained its ability to provide air defense coverage of some division assets. However, significant corps and echelons above corps (EAC) assets are required to provide full air and missile defense coverage. Without augmentation from corps or EAC assets, DXXI organic air defense assets cannot simultaneously protect all high-value assets, such as C² nodes, CSS elements and

fire-support systems. Additional EAD augmentation may be required by METT-T for military police; CSS; and nuclear, biological and chemical decontamination or wide-area smoke and obscurants.

The DXXI AO, encompassing 120 x 200 km, is supportable by current and near-term communications capabilities. However, the new design requires EAD communications support augmentation to conduct split-based CSS operations. Expanding the DXXI AO beyond 120 x 200 km will also require EAD C² communications support.

The DXXI design mission must support distributed operations using maneuver and firepower, facilitated by information superiority, to destroy enemy forces and to seize and retain key ground. DXXI must also be capable of conducting stability and support actions in a joint and combined environment. The DXXI mission reflects global trends that strongly indicate the increasing likelihood of our future political and military involvement in world affairs. By addressing these possibilities before they occur, the US Army has ensured that its soldiers will be better prepared to fight and win once committed in support of our national strategic objectives.

The unique development approach used to field this organization will provide benefits throughout the entire Army. The creation of a new doctrinal concept leading the way toward future warfighting, which will be incorporated in the soon to be published 1998 FM 100-5, *Operations*, was a direct result of the DXXI development process. The methodology used during the AWE has also offered the Army a proven vehicle for future force development. The experimentation process that resulted in a DXXI design also ensured it could meet all design constraints while retaining an unmatched ability to defeat enemy forces or seize and secure key terrain. The heavy division, when reconfigured as the DXXI organization, will undoubtedly remain a relevant and capable warfighting organization well into the 21st century. **MR**

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Structuring Division XXI

Colonel John J. Twohig, US Army,
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ARMYY XXI DIVISION represents the first step in the Force XXI process that will restructure the US Army to a *capabilities-based* force designed to dominate the 21st-century battlefield across a broad spectrum ranging from high-intensity conflict to stability and support actions. This process will reshape the force by turning joint and Army long-term visions into reality through a disciplined, forward-looking methodology. The measured pace of this change will allow us to move more efficiently along a glidepath toward the Army After Next (AAN) and beyond while maintaining readiness and meeting near-term contingencies.

The first step is harnessing the mental agility conveyed by applying information technologies. This is central to the *Army XXI Division* concept. The next step—AAN—will merge *Division XXI's* mental agility with physical agility achieved through revolutionary developments from new technologies, organizations and concepts. Another important *Division XXI* design feature is the seamless incorporation of the Reserve Components. As the 4th Infantry Division transitions to the *Division XXI* design, it will become an integrated division containing Active, US Army National Guard and US Army Reserve soldiers and units. This article provides a brief overview that introduces *Division XXI* operational and organizational concepts and highlights specific features of the new organizational designs.

Operations and Organizational Concept

The *Army XXI Division* provides the joint force commander (JFC) a flexible, combined arms force optimized for offensive operations. The division conducts distributed operations facilitated by information superiority to destroy enemy forces and seize and retain terrain. Additionally, the division will be capable of conducting a full range of stability and support actions in a joint and multinational environment. The operations and organizational (O&O) concept will provide a highly lethal, survivable and

The Army XXI Division is designed to operate in an area significantly larger than that of the current AOE division. To operate successfully in this larger area, the division shapes the subordinate brigade fight with enhanced long-range lethal and nonlethal means supported by the benefits of information superiority. In this way, the division achieves optimal advantage before committing forces to decisive operations. This larger AO will dictate that the division commander employ subordinate unit capabilities throughout the battlespace.

maneuverable division against conventional and asymmetrical threats. This combined arms team takes advantage of increased situational understanding to employ its enhanced assets at the right time and place. The enhanced capabilities that make the *Army XXI Division* significantly different follow:

- Superior situational understanding allows maneuver forces to move to points of positional advantage with greater speed and precision. This enables the division to avoid enemy strengths and to combine the effects of direct and indirect fires to seize and retain terrain or to destroy enemy forces.
- Increased lethality results from superior situational understanding, in particular, improved target acquisition and tracking, coupled with improved indirect-fire munitions and more lethal attack helicopters. These modernized targeting and attack systems' greater lethality enables the division to conduct both shaping and decisive actions more effectively.
- Velocity management and total asset visibility give logisticians operating under the centralized combat service support (CSS) system the tools to improve the effectiveness of support to the division and to accomplish it with fewer CSS personnel.



A 1st Cavalry Division unit refuels on the move en route to the breach in Iraq's forward defense line, late afternoon, 26 February 1991.

Superior situational understanding, information superiority and distribution-based logistics provide the division commander the mental agility to mass the effects of the division's enhanced systems without having to mass forces. . . . The Army XXI Division O&O concept specifies the requirement for tailorable organizations that operate as part of a JTF or corps and are capable of full-dimensional operations, including decisive actions in a high-threat environment.

Before discussing the details of each organization, let us review the overarching design principles that drove the organizational changes. As with any unit design, the O&O concept provides the basis for building the organization. The *Army XXI Division* O&O concept specifies the requirement for tailorable organizations that operate as part of a JTF or corps and are capable of full-dimensional operations, including decisive actions in a high-threat environment. The following principles derived from this guidance:

- Organize around information.
- Dominate battlespace—speed, space and time.
- Control battlefield operations tempo (OP-TEMPO) with overwhelming lethality and superior survivability.
- Mount, execute and recover from operations simultaneously.
- Achieve quick, decisive victory with minimum casualties.
- Be rapidly deployable and operationally agile.
- Enhance tailorability through modularity.
- Divert tasks that inhibit primary mission, "to fight and win."
- Be effective in war and stability and support ac-

tions as part of a joint and multinational team in all environments.

Finally, *Army XXI Division* clearly recognizes the need for seamless integration of Active Component (AC), Army National Guard and Army Reserve forces into multi-component organizations to meet current and future operational requirements. This division design marks the first steps in this regard. It imbeds Reserve Component (RC) personnel at the section, squad, platoon and company levels. This integration takes advantage of the RC's unique and critical skills and encourages mutual trust and confidence between young leaders from the three components as they grow together in the Army.

Battle command. The *Army XXI Division* command and control (C²) system integrates all of the division's functional elements to plan, prepare and execute the full range of operations in all environments. The C² system provides communications for division command posts (CPs), maneuver brigades, DIVARTY, DISCOM, separate battalions and reconnaissance elements throughout the AO. Based on Army Battle Command System (ABCS) technology, the division's C² system provides for the management of the distributed division database and

provides the relevant common picture (RCP) to all brigade-equivalent units and separate battalions in the division. The C² system provides a secure, robust and survivable division communications network for voice, data and video. When taking on an

To satisfy its stringent requirements for intelligence, the division takes advantage of improvements in collection assets, digital communications and data processing to collect, analyze and disseminate enemy information with unprecedented speed and reliability. Integral to this effort will be the Army XXI Division's enhanced capability to access and incorporate information from joint force, theater and national intelligence systems and to readily fuse information from all intelligence disciplines into a focused all-source product.

expanded C² role, such as acting as a joint force land component commander/Army forces commander or employed as a separate unit apart from a parent corps, the division will require augmentation commensurate with the operation's scope.

Headquarters company (HHC). The requirement for information superiority prompted the addition of an information operations cell that works directly for the chief of staff. This 6-man cell provides the operational planning and integration for degrading enemy C², protecting friendly C², establishing situational understanding and sharing information horizontally and vertically across the division.

To enhance the ability to operate in a joint or combined environment, the division has 10 digitally equipped, 3-man liaison teams (two AC and eight RC) which pass critical information quickly and concisely to lesser-equipped units.

To enhance C² on-the-move, the division headquarters and headquarters company (HHC) receives the next-generation C² vehicles. These systems provide fast and highly maneuverable platforms to create a mobile CP and tactical operations center (TOC). These platforms house a full range of systems that provide continuous access to the division's distributed database and to the battlefield RCP.

The dramatic increase in new communications required a full-time G6 staff. Therefore, the signal planning function, along with a 42-soldier cell, migrated from the signal battalion to the G6 section. Led by a lieutenant colonel, it is now a permanent division primary staff.

A new 28-man engineer cell headed by a colonel now helps fill the void left by the elimination of the engineer brigade headquarters. This cell provides the engineer C², planning and management functions required to execute the division's engineering effort. Additionally, the division rear operations center moved into the division main CP to gain staff efficiencies and consolidate functions underneath the assistant division commander for support.

Signal battalion. To accommodate the expanded battlespace of distributed operations, the signal battalion implements the Warrior Information Network (WIN) concept. WIN increases the number of tactical satellite downlinks in the battalion, adds an additional Enhanced Position Location Reporting System (EPLRS) net control station and drives the modernization of various other items of signal equipment. This modernization reduces the number of line-of-sight, net control and Joint Tactical Information Distribution Systems, yet increases the battalion's capability to support the division. Additionally, moving most of the signal planning functions to the newly created division G6 section streamlines the signal battalion HHC's organization. Other changes are the movement of CSS functions from the HHC to the area companies and the addition of medics for signal sites that operate in remote locations.

Intelligence. To satisfy its stringent requirements for intelligence, the division takes advantage of improvements in collection assets, digital communications and data processing to collect, analyze and disseminate enemy information with unprecedented speed and reliability. Integral to this effort will be the Army XXI Division's enhanced capability to access and incorporate information from joint force, theater and national intelligence systems and to readily fuse information from all intelligence disciplines into a focused all-source product.

The intelligence and reconnaissance units within the division consist of a cavalry squadron, military intelligence (MI) battalion, brigade reconnaissance troop (BRT) and battalion scouts. The cavalry squadron will field a combined ground and air reconnaissance capability built around M1A2 Abrams tanks, the Future Scout and Cavalry System (FSCS) and the RAH-66 Comanche helicopter. Brigades will also have a ground reconnaissance capability in a troop of FSCSs. However, a significant division limitation is that it possesses few human intelligence (HUMINT) and counterintelligence (CI) capabilities and will rely on the corps or theater for HUMINT/CI support and augmentation.

MI battalion. The MI battalion possesses greater intelligence collection capabilities than its AOE predecessor in all areas except CI/HUMINT, and has

A National Guard M109 howitzer is carefully backed into the bay of a C-5 Galaxy belonging to an "associate unit" made up of active Air Force and Air Force Reserve air mobility wings, Volk Field, Wisconsin, April 1998.

Larry Sommers, Wisconsin National Guard



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new, direct links to higher-echelon intelligence collectors, such as Joint Surveillance Target Attack Radar Systems and joint unmanned aerial vehicles (UAVs) (*Predator*). The addition of tactical UAVs (*Outrider*) to the MI battalion will provide the division with day-night, all-weather surveillance in the form of electro-optic, infrared or synthetic aperture radar sensor payloads. Three of the tactical UAV elements will be direct support (DS) to the maneuver brigades, with one tactical UAV platoon general support (GS) to the division. New-generation signal intelligence collectors and ground-based common sensors, combined with the division aviation brigade's Advanced *Quickfix* electronic warfare helicopters, will provide the division with continuous electronic surveillance, as well as a potent capability for electronic attack.

Under G2 direction, the division analysis and control element (ACE) will employ the All Source Analysis System (ASAS) and Common Ground Station (CGS) to link to higher-echelon intelligence collection and to rapidly fuse data into intelligence

products for timely dissemination throughout the division. DS Analysis Control Teams (ACTs) will provide beefed-up intelligence processing and analysis at the brigade level. As with the ACE, the ACTs will employ ASAS and CGS to tailor intelligence products to the maneuver brigade's needs. There is also one additional ACT for mission-dependent DS to flex between the aviation brigade and the DIVARTY.

Mobility, countermobility and survivability. The division's organic engineer battalions will focus primarily on mobility while providing only a limited degree of countermobility. The division will rely upon the corps for appropriate support in countermobility, survivability and sustainment engineering. The major difference between the AOE and new division engineer design is the elimination of the engineer brigade HHC and movement of the planning function to the division HHC. Consequently, the three engineer battalions become organic to the maneuver brigades. In addition, the centralized CSS concept removes maintenance and food service functions from the engineer battalions, which

streamlines the battalion HHC and line companies. Three RC soldiers are integrated into the division HHC engineer cell, and six of each battalion's 10 medics will come from the RC.

Chemical. There are significant differences in organic chemical assets between the AOE heavy division and the new division design. The AOE division chemical company consisted of a division chemical

Two noteworthy design features concern engineers and logistics. Based on the habitual relationship of engineer battalions to maneuver brigades, and with the elimination of the engineer brigade headquarters, the engineer battalion is now organic to the maneuver brigade. With respect to logistics, centralizing CSS into the DISCOM frees the brigade and battalion commanders to focus on combat operations.

section; nuclear, biological and chemical (NBC) center; company headquarters; four decon platoons; a smoke platoon and an NBC recon platoon. *Army XXI Division* passes back 134 AC chemical decon and smoke spaces from each heavy division to the corps. This results in a division that retains NBC staff expertise in the division HHC's mobility, countermobility and survivability cells (TOC and Main CPs) and a chemical recon capability in the form of a 21-soldier NBC recon detachment attached to the division cavalry squadron headquarters troop, consisting of six Fox vehicles, each with 3-soldier recon teams. Chemical "passbacks" from the division to the corps create a corps-level recon/decon chemical company and add a fourth smoke platoon to the existing corps mechanized smoke company. These passbacks will be assigned to a corps chemical battalion and will support the corps' subordinate divisions on a mission-dependent basis.

Military police (MP). The division MP company increases in strength by 10 people over the AOE design. Rather than the AOE configuration of three DS and three GS platoons, the *Army XXI Division* MP company contains three forward support platoons and two division support platoons. The larger company results from an increase in the size of MP squads from nine to 10. The company will benefit from the improved survivability afforded by the RCP and the new armored security vehicles. The company's six medics will come from the RC.

Maneuver. The ground maneuver brigades conduct decisive battles and engagements using com-

bined arms, built around their organic maneuver battalions, engineer battalion, reconnaissance troop and supporting arms and services. Two noteworthy design features concern engineers and logistics. Based on the habitual relationship of engineer battalions to maneuver brigades, and with the elimination of the engineer brigade headquarters, the engineer battalion is now organic to the maneuver brigade. With respect to logistics, centralizing CSS into the DISCOM frees the brigade and battalion commanders to focus on combat operations.

Armor and mechanized infantry battalions. The maneuver battalion changes include reducing the number of weapon systems from 58 to 45 (by eliminating a company), standardizing mortars at four tubes and one fire direction coordinator, and standardized battalion scouts at six systems. The new systems' enhanced capabilities—M1A2 SEP, M2A3 ODS, new mortar, LRAS and FSCS—coupled with improved situational understanding make these smaller battalions more effective and more deployable than the unimproved, larger AOE organizations. Additionally, opting for three 9-man squad dismounted platoon organizations, rather than two 9-man squad organizations under the AOE, increased the number of dismounts within a battalion from 216 to 243. CSS is now centralized into the DISCOM forward support battalion (FSB) except for medics and ambulance sections.

Brigade reconnaissance troop. The addition of the BRT, coupled with LRAS fielding, and the eventual FSCS fielding to battalion- and brigade-level scouts, dramatically improves the brigade's reconnaissance capability. Initially, the troop will have two scout platoons and a direct support "Striker Platoon" from the supporting field artillery battalion. As the FSCS is fielded and demonstrates the Striker capabilities, the Striker platoon will be eliminated and the BRT will grow to three platoons, further enhancing the brigade's organic reconnaissance capability.

Division cavalry squadron. The Division Cavalry (Div Cav) Squadron gives the division commander the flexibility to conduct 24-hour, all-weather reconnaissance and security operations across the division AO, with digital linkage among the squadron, BRT and battalion scouts. The Div Cav conducts screen and guard missions and the entire range of reconnaissance operations. It can also be employed in economy of force roles. The Div Cav continues to be organized into three ground troops and two air troops equipped with M1A2 SEP, M3A3 ODA and initially the OH-58D Kiowa Warrior helicopter. These systems will eventually modernize to the FSCS and RAH 66 Comanche, which will ex-

pand the Div Cav's reconnaissance and security scope to cover the division's extended AO. Based on the semi-independent nature of its operations, the Div Cav retains organic CSS, including an aviation unit maintenance troop.

Aviation brigade. The aviation brigade conducts attack, reconnaissance, security, C² and limited GS aviation missions to include the command of attached echelons above division aviation assets. Enhancements to the aviation brigade command, control, communications, computers and intelligence include the addition of liaison teams and additional staffing in the S2 section. The enhanced capabilities of the AH-64D Apache Longbow and the future fielding of the RAH-66 Comanche, coupled with the overall division's information dominance, reduce the requirement for organic attack battalions from two to one. The expanded battlespace and shift to distribution-based logistics necessitated the addition of a third GS aviation company into the GS aviation battalion. This third company, including its associated CSS, will be resourced by the RC.

Fire support. The DIVARTY continues to provide support to committed forces, a means to weight the main effort, limited counterfire and suppression of enemy air defense. It also has the capability to temporarily delay follow-on enemy echelons to preclude defeat in the close fight.

The DIVARTY, through its fire support elements, provides fire support planning and coordination from division through maneuver company level. Additionally, the DIVARTY provides the hook to field artillery assets from corps and the link to the joint force air component commander (JFACC) to gain access to air, sea and space assets. The DIVARTY maintains the same basic structure as in the AOE. However, internal organizations have been streamlined. There are no longer fire support personnel below company level, and Paladin crew size is reduced from nine to eight.

In the future, conversion to Crusader, Army Tactical Missile System Block II, Sense and Destroy Armor, Military Strategic/Tactical Relay and other improvements will further enhance fire support capabilities. Recently, Army Chief of Staff General Dennis J. Reimer decided to standardize the organization of Multiple-Launch Rocket System (MLRS) battalions at all echelons to three batteries of six launchers. Therefore, the division MLRS battalion will convert from the originally planned 2x9 plus TAB to 3x6 plus TAB, with one firing battery and associated CSS being resourced in the RC. A Striker platoon is organic to the cannon battalions and is assigned a DS role to the BRT. The Striker concept is only a near-term necessity, since the

Striker capabilities will be embedded in the FSCS.

Air defense. The Army XXI Division short-range air defense (SHORAD) battalion's mission is to provide area protection from enemy aerial threats to the maneuver brigades and other division troops. The SHORAD battalion also affords point defense of the division's high-value targets, and its commander serves as the division's air defense coordinator. The SHORAD battalion will accomplish this complex mission with a number of new and upgraded weapons and communication systems.

The high-mobility multipurpose wheeled vehicle-based Avenger platform replaces the less-versatile manportable air defense system, and the M2 Bradley-based Linebacker weapon platform arrives to be-

The Army XXI Division SHORAD battalion's mission is to provide area protection from enemy aerial threats to the maneuver brigades and other division troops. The SHORAD battalion also affords point defense of the division's high-value targets, and its commander serves as the division's air defense coordinator. The SHORAD battalion will accomplish this complex mission with a number of new and upgraded weapons and communication systems.

come the battalion's other major weapon system. The Avenger and Linebacker both feature full "slew-to-cue" capability and fire the reliable Stinger munitions round. These weapon platforms combine with technologically enhanced communication systems to form a fully digitized sensor-to-shooter system of systems capable of quickly and reliably detecting and destroying enemy aerial threats. The new Sentinel low-level air defense radar system and the Forward Area Air Defense Command and Control System instantly project integrated C² data to air defense systems across the division AO. The EPLRS delivers a rapid exchange of data from sensor to shooter and provides a 2-second update on fast-moving targets.

The SHORAD battalion is also equipped with the Joint Tactical Information Distribution System, which allows the battalion to receive and contribute target data to the Joint Surveillance Network. This significant capability makes the SHORAD battalion an essential player in-theater and JFACC counterair operations. The SHORAD battalion has fewer weapon systems than the AOE air defense battalion, but with enhanced target acquisition and weapons

lethality, it can provide a greater point defense capability to the Army XXI Division.

Logistics. To provide CSS to the division, the Force XXI DISCOM must have the following capabilities:

- Efficiently perform battlefield distribution by maintaining total asset visibility and providing effective velocity management for throughputting supplies.

- Be modular, tailorable and adaptable.
- Practice anticipatory logistics.
- Be self-sustainable for up to 30 hours.
- Support an expanded division AO: 120km frontage x 200km depth.

In response to these requirements, the DISCOM units were designed based on the following concepts:

Integrated logistics C² structure. The C² structure

Centralized logistics entail the merging of maneuver battalion and engineer battalion supply and maintenance assets with traditional FSB support assets into agile, more capable, streamlined organizations. The aim is to gain efficiency and remove much of the burden for logistic planning and execution from the combat commander.

for logistics is interconnected at every level of command from the forward support company (FSC) to the national base. The systems that will make this a reality are the Combat Service Support Control System (CSSCS), a sibling to the Maneuver Control System within the ABCS, and the Global Combat Service Support-Army (GCSS-A). CSSCS and GCSS-A provide the logistician with the situational understanding needed to anticipate and integrate logistics requirements at all levels.

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Distribution-based logistics. The creation of a distribution management center (DMC) under the DISCOM HHC support operations section provides the fusion center for distribution operations within the division. Enablers, such as the Palletized Load System (PLS), Load Handling Systems, the Container Roll in and out Pallet and the Container Handling Units, serve as the backbone of a distribution-

based CSS system.

Replace forward, fix rear. The high OPTEMPO of the Army XXI Division will require a maintenance response that can keep up with the accelerated pace. When fielded, the Forward Repair System-Heavy (FRS-H) supports a smaller team of multicapable mechanics who quickly diagnose equipment problems and provide the necessary repairs on site.

Combine organizational and DS maintenance into one level. This one-stop maintenance for armor, mechanized infantry and engineers reduces evacuation times and increases the likelihood that the responsible commander can maintain equipment custody while it is repaired. Applying this concept to the other arms within the division is currently under study.

Modular, agile units serve as building blocks. Modularity enables DISCOM units to expand and contract as necessary based on METT-T. The FSC's modular design and the Base Support Companies (BSCs) allow the logistician to "surge" or "mass" logistic assets at the decisive point.

DISCOM HHC. The DISCOM HHC was streamlined by moving the division materiel management center under support operations. The DMC implements the emerging "battlefield distribution" doctrine and serves as the fusion center for the management and movement of supplies. The division medical operations center and the command food service advisers were moved to the division HHC.

FSBs. Centralized logistics consolidated the maneuver battalions' support assets with the FSB's assets to create a new organization—the FSC. The FSC provides habitual CSS to a maneuver battalion such as one-level maintenance (organization and DS consolidated), food service, supply support, transportation and logistics management. Medical support continues to be organic to the maneuver battalions.

The maneuver battalion S4 staff continues to be the commander's principal planner for battalion logistics, while the FSC commander executes the logistics plans. Internal to the maneuver battalion, the redesign requires a "culture" change. The elimination of the battalion maintenance officer makes the FSC commander directly responsible to the maneuver battalion commander for the battalion's maintenance posture.

Another new organization within the FSB—the BSC—provides multifunctional DS (maintenance and supply support) to the units normally task-organized under the maneuver brigade and backup support to the FSCs.

The forward support medical company (FSMC) continues to provide level I and level II medical support to units within the brigade AO. The capabilities of the maneuver battalions' organic medical platoons

were optimized for medical evacuation. The FSMC treatment capability was enhanced to provide medical care as close to the point of injury as possible.

Division support battalion (DSB). The Division XXI design streamlines the main support battalion (MSB) and focuses it on support to the division-troop base. Consequently, the MSB becomes the division support battalion (DSB). Streamlining measures included removing redundant Authorized Stockage List items and combining two maintenance companies into one. While eliminating redundancy was a primary tool for achieving savings, the DSB does still maintain the backup (one day of supply) capability for fuel to the division as a whole.

The transportation motor transport company (TMT) was modernized by making the PLS its primary distribution system (33 PLS systems). The DISCOM will retain its current authorized 24 heavy equipment transport systems. Additionally, medical support to the division base and the division as a whole (for certain specialized areas) is provided by the division support medical company.

Division aviation support battalion. The division aviation support battalion (DASB) continues to provide DS support to the aviation brigade, including the Div Cav squadron. The DASB is the only battalion-size unit within the DISCOM that did not go through an organizational design overhaul. The DASB's AO has not changed (Division Support Area or DSA). However, the structure within the DASB follows the precept of seamless integration of the RC. Within the DASB, the Class III and V platoons within the headquarters and supply company are RC organizations, with the exception of aviation fuel laboratory technicians, who are AC soldiers. Within the aviation intermediate maintenance company, a small number of RC mechanics were included to support the additional workload of a third GS aviation company.

The Army's first step along the Force XXI path has been a significant one. The new division design and operational concept transition the Army from the Cold War, threat-based AOE to a capabilities-based force able to dominate throughout the spectrum of conflict and to effectively perform stability and support actions.

In other DISCOM units, RC soldiers provide an important role such as the third medic (en route care) in all track ambulances within the DISCOM and maneuver battalion medical platoons. Some functions that previously resided at division level, such as water production and certain communications and electronic maintenance services, migrated to the corps level.

The Army's first step along the Force XXI path has been a significant one. The new division design and operational concept transition the Army from the Cold War, threat-based AOE to a capabilities-based force able to dominate throughout the spectrum of conflict and to effectively perform stability and support actions. This new division truly harnesses the mental agility brought on by information superiority and situational understanding. Though this smaller, more deployable division provides a force capable of conducting distributed operations over broader and expanded areas with enhanced lethality, survivability, sustainability and OPTEMPO, it is not our final end state. The Army remains committed to the Force XXI process and the path toward AAN and beyond. **MR**

NOTES

1. *Conservative Heavy Division Operations and Organizational (O&O) Concept*, 23 January 1998, CADD, CGSC, Fort Leavenworth, Kansas, 1.
2. 1998 Final Draft US Army Field Manual (FM) 100-40, *Tactics*, (Washington, D.C.: Government Printing Office).
3. *Conservative Heavy Division O&O Concept*, 2.
4. *Ibid.*, 3.
5. *Ibid.*, 3-4.

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The C² Spine

Major Michael L. Boller, US Army, and
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THIS ARTICLE IS THE FIRST in a series about Army Battle Command Systems (ABCS) articles exploring the differences that digitization will make on acquiring and disseminating information on future battlefields. The authors discuss data's role in forming a common operating picture (COP) of the battlefield and applying cognitive reasoning to the COP to form the basis for decision making.

To provide a useful starting point, the following scenario depicts typical staff actions in a current combat operations center. Later, the article projects the same scenario to the year 2010, with the staff operating under the *C² Spine* concept.

SCENARIO 1998: The division commander takes his place in front of the briefing map at the division main command post (CP) for his morning update. His division has been on the offensive for the past 24 hours, and he knows he is rapidly nearing a decision point for which fragmentary order (FRAGO) to implement. Throughout the night, his staff has been working feverishly to get this briefing together. Most of the information they are presenting is already at least 2 hours old and cannot fully answer the commander's critical information requirements (CCIR). He knows the plan and what his options are. He expects a quick update to see how the situation has changed over the last few hours. Specifically, he wants a current situation report (SITREP) from 1st and 2d brigades and details on any movement by enemy second-echelon divisions.

The enemy situation quickly turns to the 2d Republican Guards Division status. The G2 informs him that the last time they had "eyes-on" this division was 12 hours ago. The G2 is 65-percent confident that the 2d Republican Guards are still in the same location. He also reports that no other imagery intelligence assets are currently available to update the enemy situation. He plans to include all this information in his next intelligence summary (INTSUM).

As the G2 presents his update, he reflects on the multiple problems in obtaining current information.

One problem is determining which unit is the 2d Republican Guards. He has information from numerous intelligence sources, but interpreting the data was difficult due to various problems:

- Joint signals intelligence (SIGINT) sensors, such as Guardrail and Rivetjoint, reported that 2d Republican Guards were using at least six different naming conventions—2d RGD, 2d RG, 2RG, and so forth. After comparing reports on all name variations, he determined that there was no change in their communication patterns, and nothing indicated they were moving.

- The G2 has received reports from J-STARS (Joint Surveillance Target Attack Radar System) on enemy vehicle movement in that area. He determined that there was considerable tracked and wheeled vehicle traffic throughout the area but could not identify unit affiliations.

- He also had U-2 photo imagery, but it was 12 hours old and inconclusive.

The G2 concluded his brief, and the G3 started briefing the friendly situation. He has been in contact with the 1st and 2d brigades' S3s in the past few hours, but they are having the same problem he has: the mountainous terrain is playing havoc with their radio communications. To further compound the problem, 1st Brigade outran the last mobile subscriber equipment (MSE) node 3 hours ago. It still has radio communication through a relay with 3d Brigade, which is still within the MSE net. Radio communications are possible, but passing SITREPs and LOGSTATs (logistic status reports) is now time-consuming and awkward. The Single-Channel Ground and Airborne Radio Subsystem (SINGARS) radio can transmit voice traffic up to 30 km, given the proper conditions. Digital data transmission through SINGARS is another matter—under good conditions, the data link range is normally less than 10 km. The bottom line is that the G3 cannot brief the 1st Brigade's current status.

The commander turns to his aide and says, "Get Colonel Smith on the phone." The aide starts running down his communication options. He passes the word through 3d Brigade for the 1st Brigade com-

mander to radio the commander at the main CP.

Following a frustrated G3, the G4 briefs the division's current and future logistics situation. One problem is an unanticipated bottleneck in the road network. A landslide on the main supply route (MSR) has backed up the resupply effort and made it much more difficult to get the proper materiel to the right place where it is needed. The G4 has worked this problem out, but there is no hope of catching up.

After about 39 minutes, Smith contacts the main CP through a satellite communications (SATCOM) relay patched into the main CP, and he updates 1st Brigade's situation, reporting that 1st Brigade has reached Phase Line BLUE. The commander instructs the G3 to pull out 1st Brigade's overlay. The G3 tries to post the overlay to the map board. The overlay uses 1:50,000 scale; the division CP uses 1:100,000 scale. However, this glitch is quickly rectified. Based on the briefing and his conversation with Smith, the commander implements FRAGO 6B.

FRAGO 6B calls for an Apache (AH-64D) attack battalion to destroy the 2d Guards' lead elements 36 hours from execution. There are at least three possible avenues of approach—using Route 3, Route 5, Route 6, or any combination of the three. The ingress and egress route for the attack battalion varies widely, based on the route the 2d Guards use. The commander knows that several tasks still need to be coordinated for this mission. He tasks the G3 to coordinate the AH-64 ingress and egress routes down to the maneuver battalions and to ensure that suppression of enemy air defense will be provided by multiple launch rocket systems (MLRS). Knowing that the MLRS will be firing Army Tactical Missile System Block I at identified air defense sites, he also directs the G3 to coordinate these firings through the US Air Force air component commander.

The Challenge

Carl von Clausewitz wrote about information's impact on commanders and staffs. He called the lack of decision-making information the "fog of war." This uncertainty makes it difficult to answer all CCIR. Most of these answers are known, but the information is "stovepiped" or compartmentalized and will be found only at the cost of diverting precious resources such as personnel, time and equipment.

Technology can be great and wondrous. It has made the ability to put "steel on target" much more effective, but we have not placed the same effort into our command and control (C²) systems. Unlike weapons technology, C² involves the art of command and poses much more of a challenge to the battle command technologist. C² automation tools must complement the commander's ability to orchestrate a complex array of dynamic battlefield re-

sources. This brings the surgical and focused lethality of modern weapon systems to bear on the opposing force. This is not a simple task, given that the synergy and force multipliers are locked in uniquely defined stovepipes.

We have exploited many of these stovepipes, but we are nowhere near realizing their full potential. In the scenario above, the G2 receives a wealth of information from each source, but no single source can

[Technology] has made the ability to put "steel on target" much more effective, but we have not placed the same effort into our C² systems. Unlike weapons technology, C² involves the art of command and poses much more of a challenge to the battle command technologist. C² automation tools must complement the commander's ability to orchestrate a complex array of dynamic battlefield resources. . . . This is not a simple task, given that the synergy and force multipliers are locked in uniquely defined stovepipes.

completely answer the CCIR. He has to use all of his available resources before he can make a reasonable assumption. Whenever possible, automation must complement the commander's ability to fuse and display information—in a format he wants—in near real time.

Naming conventions is just part of the bigger problem resulting from not sharing a common database. A common database is just as important to ABCS as a "Periodic Table of Atomic Elements" is to a chemist. It will give an atomic foundation of common data, leading to a much more efficient C² network. The common database initiative should also be extended to US joint and combined partners.

To better illustrate this point, years ago, I could do most of my car maintenance myself. I could change the spark plugs and wires, change the oil and do several other things that saved me money. Now when I look under the hood of my new car, it is often hard for me to identify anything, except the battery and where to put the oil.

My new car runs off a computer system. It works rather well until it has a problem. Then it is usually catastrophic and the car dies. Special diagnostic equipment—and someone trained to use it—is needed to get the car repaired. A car phone has a computer in it also. If there is a problem with the car, why not just have the car computer call the repair

facility and tell it what is wrong? The answer is that different companies independently designed the respective systems. To realize both systems' full potential, they need to be integrated. This lack of integration is exactly what we experience in ABCS.

We have several stovepipe systems that work very well. For example, AN/TSQ-37 Firefinder radar does very well in counterfire operations, but it is not

We still have many problems to overcome in C². The current system is manpower intensive. Any integration that occurs is usually done manually. This translates into information that is not always timely, does not consider all aspects of available information and does not provide the commander with a COP. What we need to accomplish this mission is to run these different command systems in series, rather than in parallel, analogous to the spine's vertebrae.

digitally linked to intelligence systems. Currently, counterfire operations are primarily accomplished by manual input to other systems. None of these stovepipes are "bad." They are fulfilling their intended purposes, but we can digitally use the information they generate in other areas if we can integrate the systems horizontally across the battlefield.

We have already started to change. The vertical stovepipes have already started this integration. There is some digital communication between the different systems, but it normally requires human interface to get the information from one system into the other. Without truly horizontal, digital integration among all battlefield operating systems (BOS), we will never achieve the interoperability required on future battlefields.

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The C² Spine

What we need to accomplish this mission is to run these different command systems in series, rather than in parallel, analogous to the spine's vertebrae. Each system would use a common language and feed information to a commonly defined database that could be used by every other system. With this relevant common picture (RCP) of the battlefield, generated through the ABCS central nervous sys-

tem, we will become a more efficient organization.

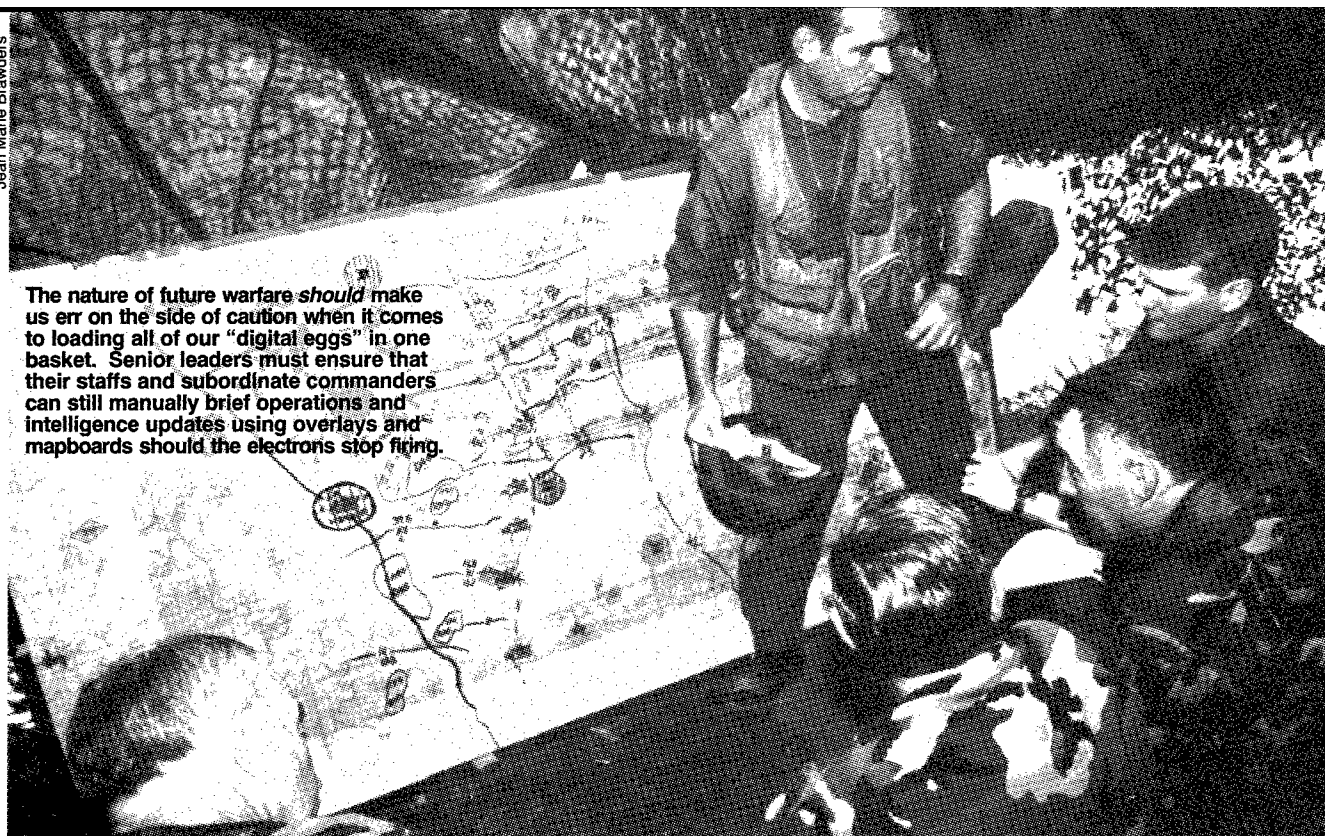
Aligning the disparate systems or "vertebrae" into the C² spine is a major ABCS goal. Stovepipes each provide functionality to a BOS, based on the technology available at the time of development. But evolving digital networks, expanding communications capacity and capability and the exponential growth of computer processing speed, memory and storage capacity enable new development. ABCS' ultimate goal is a "one-box" system.

Moore's Law states that computer chip size doubles every 18 to 24 months. First predicted in 1965, this theory still holds true. The 200 MHz computers of just last year have been replaced by 400 MHz computers this year, with 600 MHz computers expected in 1999 and 800 MHz computers sometime after the year 2000. Technology's growth and evolution have made possible a shift from stovepiped systems, which transmit specific types of data within a closed system, to a holistic system in which vital information can be rapidly shared via a common database.

Transitioning from the stovepipes to a C² spine is a difficult process. Initial efforts to weld the pipes together have produced something akin to the tin man from the *Wizard of Oz*. Moving information through seams of different data formats, communication protocols and translators necessary to make different elements compatible is rather slow and clunky. The more seams information has to flow through, the slower the process can be. The C² spine and central nervous system analogy makes it possible for current and future development of ABCS. From the welded stovepipes and limited movements of the tin man are evolving the more agile and flexible movements of "RoboCop."

Technical limitations also cause embedded problems in hardware and software. The impending year 2000 or "Y2K" problem stems from conservative past programming that sought to save memory and reduce the number of data bits transmitted at a time when memory was small and expensive and data rates were slow. Larger, cheaper memory and exponentially faster data transmission rates have opened possibilities that were difficult to foresee when many stovepipe systems were first developed.

ABCS' integration into C² spine can allow commanders to evolve warfighting abilities to focus the combat power of maneuver and fire support with the precision of a laser beam in a variety of current and future tactical situations and environments. The tin man can effectively wield an ax but lacks the versatility and flexibility of "RoboCop" to employ the more precise tools that the C² spine will make available to commanders.



The nature of future warfare *should* make us err on the side of caution when it comes to loading all of our "digital eggs" in one basket. Senior leaders must ensure that their staffs and subordinate commanders can still manually brief operations and intelligence updates using overlays and mapboards should the electronics stop firing.

Commanders must understand the impacts of [their] decisions, and their staffs must also have an awareness of the systems' strengths and weaknesses. Users must maintain digital and analog fallbacks and work-arounds to deal with the temporary setbacks of server crashes, loss of communication links and other potential problems. Modern commanders are faced with the double complexity of having to train both old analog and new digital tactics, techniques and procedures.

This potential depends on more than new hardware and software. These are, in many respects, simply new tools commanders will use to achieve military objectives. Commander and staff skills and abilities provide the essential "brainware" that is also a key enabling technology for ABCS.

Executing the ABCS Battle Plan

War's complexity and the volume and reliability of information can add to the fog of war. As ABCS matures, commanders could be overwhelmed with information. Having an RCP of what happened 15 minutes ago is not the same as having a common understanding of where we must be *15 minutes from now*.

ABCS is more than having a bigger radio. Through an integration of collaborative tools, integrated databases and high-speed digital communications, ABCS will allow commanders to develop knowledge (situational understanding) rather than just pass data. ABCS is a commanders' tool to mitigate the fog of war's effects. By integrating information capabilities in the C² spine, commanders will be better able to orchestrate and synchronize combat power.

To be effective, commanders and staffs must be able to visualize the battlefield. This will involve using more cognitive reasoning and not getting mired

in the details. Our digital systems will be engineered with expert agent "triggers," which assist the commander in achieving situational understanding. A key will be well-defined CCIR to focus staffs on what is important to the commander. The quality and quantity of information, and time required to discern the important from the inconsequential, have their greatest impact in the cybernetic domain. Automated, collaborative planning tools can streamline the analysis and decision process, thereby allowing commanders to act faster and use information that reflects more closely what is happening in real time.

Future Challenges

Interoperability is an ongoing effort. It involves enabling existing systems to take advantage of one another's capabilities while exploiting emerging technologies. While it would be too expensive to rebuild stovepiped systems from the ground up, they should be modified so that they are interoperable. New systems must also be engineered to be interoperable: effectively, efficiently and, most important, economically.

Perhaps our greatest challenge is to ensure that future systems continue to evolve and adapt to the broad spectrum of military missions the Army may

face. The C² spine provides a versatile toolbox for commanders. But these tools must provide support in both the desert and the jungle, in open terrain as well as mountainous or urban terrain. Not all systems can meet this standard today. Global Positioning System devices, for example, are degraded in canyon-like urban terrain or under triple-canopy jungle cover. Overcoming such problems involves

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research and development of new technical solutions. Evolving systems, such as *Grenadier Brat*, offer exciting promise to solve our "deep blue"—friendly force tracks outside the Enhanced Position Locating and Reporting line-of-sight umbrella—situational understanding challenges. The continuing efforts of our confederation of Battle Labs, the Army Research Laboratory, Advanced Concepts Technology Demonstration and Army After Next are vital in this technologically rich digital C² endeavor.

The spectrum of future operations includes not only new missions and terrain but different environments as well. Noncombatants, such as civilians and the news media, add to the increasing complexity of combat operations and operations other than war. Nongovernment organization coordination requirements may be as diverse as the International Red Cross and humanitarian relief groups. Joint and coalition operations will be the norm, not the exception. Our ABCS system must be interoperable across this broad spectrum of partners.

With the growing versatility and complexity in future operations, the C² spine must continue to focus on the needs of warfighters at all echelons. A viable and robust feedback loop from the field is still needed to identify shortcomings and improvements. Soldiers, when linked directly to combat developers via the same type of information networks the C² spine makes possible, will make improvements

more responsive to the needs of the field and ensure it stays relevant with warfighter requirements.

ABCS must be soldier sustainable and operable. Contractor support, particularly in-theater, must be minimized. Another challenge is competition with higher-paying civilian employers for a shrinking pool of young men and women with the aptitude to operate and maintain complex digital systems.

Training is a vital area and major challenge for the future. Unlike the principles of war and other topics that remain relatively stable, the changes in hardware and software require more frequent training. A new system of distance learning, embedded training support and perhaps user certification or qualification is needed to support the field in training and identifying soldiers with aptitude for these systems. Digital training strategies must include the evolution of simulations, which must drive exercises by "lighting up" ABCS systems in realistic ways. Realistic ABCS simulation is a significant technological and resource challenge.

Commanders and staffs must learn to view C² spine networks, databases, communications and capabilities as a resource *and* a combat multiplier. Bandwidth and communication capabilities will need to be task-organized like other assets. Additionally, a mix of terrestrial and satellite-based communications will be needed for different units in different environments.

Commanders must understand the impacts of these decisions, and their staffs must also have an awareness of the systems' strengths and weaknesses. Users must maintain digital and analog fallbacks and work-arounds to deal with the temporary setbacks of server crashes, loss of communication links and other potential problems. Modern commanders are faced with the double complexity of having to train both old analog and new digital tactics, techniques and procedures. Our digital battle captains will be very savvy operators, who understand how to "tune" the C² system to meet the commander's intent.

Security is an area that must be understood from both an operational and training perspective. The Germans used radios effectively in World War I for controlling both ground and naval forces, but they failed to consider the impact of electronically intercepted messages in determining both the mission and location of their forces. The Allies effectively used electronic warfare against the Germans on both land and sea. We must ensure that we do not become a target of information operations. Recent studies showing a number of attempts to penetrate both civilian and military networks provide a sobering perspective on our weaknesses in this area.¹ It will be a continuing challenge in the future.

To avoid potentially reduced quality and interoperability problems, there must be a continued balance between the economy of commercial-off-the-shelf hardware and software and that which is developed to address specific mission requirements.

SCENARIO 2010: The 2010 division commander takes his place in front of the briefing map at the division main CP for his morning update. His division has been on the offensive for the past 24 hours, and he knows that he is rapidly nearing a decision point for which FRAGO to implement.

The briefing is ready. The staff has built the information requirements into the system, specifically based on the CCIR. The enemy situation quickly turns to the 2d Republican Guards Division status. The G2 reports that correlated information places a 98-percent probability that this division has not moved in the past 24 hours. The division's tactical unmanned aerial vehicles verified this information less than an hour ago.

The G2 concludes his brief, and the G3 briefs the friendly situation, last updated 15 minutes ago. The G4 then briefs on the division's current and future logistics situation. One problem is an unanticipated bottleneck in the road network. A landslide on an MSR has backed up one resupply effort. Because the G4 has the ability to know in near-real time the convoys' status, he was able to minimize the disruption in resupplying the force by moving the necessary materiel to its proper destination using an alternate MSR. At the conclusion of the briefing, the commander decides to implement FRAGO 6B.

The commander turns to the G6 and says "get the commanders on the VTC." A few minutes later, the commander explains FRAGO 6B's intent, using a combination of the "collaborative white board" and a video teleconference. Using the synchronization-matrix, he details the times in which each subelement must accomplish its mission.

If Operation *Desert Storm* was the C² spine in its infancy, it is just entering adolescence today. There is still much room to grow and many changes yet to

come. Since *Desert Storm*, we have made significant progress understanding the challenges that face us. We have spent the last six years developing and learning how to integrate these systems. Part of this process has been accomplished through division advanced warfighting experiments and Task Force XXI. Both of these significant events took us out of the infancy stage and allowed us to see the next series of challenges.

Training will include not only keyboard skills, but cognitive ones as well. As this system continues to grow and evolve with rapid technological growth, users must also remain mentally flexible and adaptable to new development and growth. A revolution in decision theory is being spawned by digitization.

The C² spine, like other essential elements of the tactical and operational body that it supports, must be exercised to ensure it stays flexible and capable of fulfilling its potential. This training will require more than a few extra hours in basic and advance courses at branch schools. These skills must be exercised and used regularly. Embedded ABCS training support will help provide some levels of skill. Simulation and "stimulation" will address unique collective training needs. The C² spine does not work in isolation—it must be regularly exercised in concert with the entire system.

Fusing the C² spine will lead us from the linear, hierarchical, "plan-centric" world of the analog to the parallel, collaborative, "execution-centric" world of digitization. This should be a national priority.

The challenges for the future are daunting, but C² spine's digital potential to increase the speed, tempo, lethality and survivability of US forces makes this a center of gravity effort. Information superiority is where it's at. The C² spine is the central nervous system and key enabler for future information superiority. **MR**

NOTE

1. See John C. Coale, "Fighting Cybercrime," *Military Review* (March–April 1998), 77–82.

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Leadership

Lessons from the Past for the Future

"A good soldier, whether he leads a platoon or an army, is expected to look backward as well as forward; but he must think always forward."

General Douglas MacArthur

What an incredible legacy we have inherited from the soldiers and leaders who have gone before us. They established a reputation of professionalism, dedication and self-sacrifice that has made our Army legendary. This tradition of vigilance and ability to motivate, encourage, develop and guide others to achieve their full potential has been the key to US Army battlefield victory for the past 223 years. The leader's ability, knowledge, exertion, inspiration and capacity to function under stress enabled soldiers to perform far beyond the point where a less-inspired commander would have taken them. Such leadership takes place at the "point of the sword," where the fighting is the fiercest. It also takes place at operational levels of command, where the commander is very visible but is not necessarily wielding a rifle, machinegun or grenade launcher. Finally, it can be found at the strategic level of command, where senior officers' vision, direction and creativity often lead to spectacular results. Leadership lessons gleaned from the past will indeed be a hallmark for leadership success in the future.

To meet the expanding challenges of a world undergoing unprecedented and accelerating change, we must develop leaders who understand history's implications and can apply these lessons to exploit current doctrine's full potential. Doctrinal-based leadership will continue to provide a holistic base for the Army as we incorporate new ideas, technologies and organization designs. Because tomorrow's leaders must be skilled in operational art, and able to adjust rapidly to temporal and spatial battlespace variations and master the complexity and use of advanced technology, commitment to leader development will assure that the Army's enduring legacy of competent, confident and highly skilled officers and noncommissioned officers continues well into the next century.

As this section's authors suggest, diversity places unprecedented demands on commanders, yet many historical examples show how some—through intelligence and professional competence—rose to the challenge. In each instance, the leader's ability, exertion, inspiration or capacity to function under stress inspired soldiers to do their very best. It is this margin of effort that often makes the difference between battlefield victory and defeat.

The continuing US military presence in Bosnia, Korea and the Middle East is further testimony that the preservation of freedom is neither easy nor without cost—it reflects a commitment we are sworn to uphold. As General George S. Patton Jr. so eloquently stated, "Wars may be fought with weapons, but they are won by men. It is the spirit of the men who follow and of the man who leads that gains the victory." Hopefully, these articles will both instruct and inspire. Leadership is the key to battlefield victory.

Leadership for the New Millennium

Lieutenant General Paul E. Blackwell, US Army, Retired, and
Lieutenant Colonel Gregory J. Bozek, US Army

THE ARMY HAS UNDERGONE tremendous change over the past five years while simultaneously increasing the force's operations tempo (OPTEMPO) by about 300 percent. The Army will continue to change to adapt to warfare in the 21st century, and Force XXI is the process for that change. It is the Army's vision for transitioning from our current Continental United States-based force-projection Army — capable of conducting operations in Somalia, Haiti, Kuwait and Bosnia — to a capabilities- and knowledge-based Army for the 21st century. Force XXI is the Army's process to harness and incorporate information-age technological advances. The ongoing efforts associated with the Force XXI process are well documented. Among all this change, however, there are some constants. To be successful in war and operations other than war, units will continue to depend upon courageous soldiers, excellent training and quality leadership.¹ Therefore, rather than focus on what is changing in the Army, this article will address one constant of Force XXI and future warfare — quality leadership capable of executing 21st-century battle command. Because of the complex environments in which we will operate, and the wide range of missions our forces will execute, there is a greater need than ever for smart, tough, decisive commanders to lead our soldiers in war and other operations.

The Strategic Environment

The world changed dramatically after the former Soviet Union's collapse. As a result, the Army has changed and is continuing to change to deal with the new strategic environment. Our Cold War strategy of containment with large, forward-deployed forces has changed to a strategy of engagement and enlargement. Our National Military Strategy identifies three sets of tasks we must perform to achieve the military objectives of promoting stability and thwarting aggression: peacetime engagement; deterrence

After *Desert Storm*, [General Tilelli] discussed the commanders' role, saying "Commanders should show a command presence on the battlefield. Not for the sake of the commander, but for the sake of the soldiers, for the sake of information, for the sake of doing an oil check if you will, on the battalion commander to see how things are going from his perspective and, at the same time, setting an example where commanders should be, and that's up front in the battle."

and conflict prevention; and fighting and winning our nation's wars. From a joint perspective, our strategic concept for the foreseeable future will remain that of overseas presence and power projection, which defines the requirements for the Army.

As a strategic service, our Army — with a greater reliance on the Reserve Components than ever before — must be capable of providing forces that can quickly deploy worldwide to fight and win our nation's wars or to accomplish various other assigned missions. This demands a high readiness state and versatility to accomplish the wide range of possible missions and to operate under diverse conditions. The Army is prepared to deploy on short notice anywhere in the world to secure national interests. As we maintain our current readiness, we are working to shape the force to meet the next century's challenges.

What has changed. Throughout history we have seen how battlefield innovations have revolutionized warfare. For example, the inventions of gunpowder, the internal combustion engine and nuclear weapons each served as a primary force for revolutionary change in the conduct of warfare. We have typically seen "energy-based" inventions serve as the basis for change, providing better ways of harnessing energy

Will improved situational awareness allow senior commanders to direct every move on the battlefield, taking away the tactical decision-making responsibility of junior commanders and leaders? . . . Our doctrine recognizes two main components of battle command: decision making and leadership. Although information-age technology and the strategic environment will affect each aspect of battle command differently, both components will remain crucial to battlefield success.

to improve weapon lethality or enhance battlefield mobility. These improvements caused major changes in how armies organized, equipped and fought on the battlefield.

Today's revolution is different. Now we are in the midst of an information-based revolution. The microprocessor is revolutionizing how we organize, equip and fight by providing new and improved battlefield capabilities. Operations *Just Cause* and *Desert Storm* gave glimpses of some powerful new capabilities the information age can provide. The future battlefield will have newer and more improved capabilities — increased lethality through improved precision; improved ability to mass effects on the battlefield from forces in dispersed formations; and an enhanced ability to find enemy forces while making our forces difficult to detect. As a result of these new capabilities and the Force XXI process, the future Army will equip, organize, fight and train differently.

Force XXI battle command. Of the many enhancements the Army will gain through the Force XXI process, battle command and its integration capability are the most exciting and promising. The Force XXI capability to maintain battlespace awareness and to integrate all combat-power elements faster than the enemy is truly revolutionary.

Some people feel threatened by these prospects, fearing that Force XXI enhancements will reduce the authority of some commanders. Articles in professional journals and discussions with future commanders have highlighted concerns about the threat to a commander's authority brought about by increased situational awareness. Will improved situational awareness allow senior commanders to direct every move on the battlefield, taking away the tactical decision-making responsibility of junior commanders and leaders? Some see information-age technologies as providing a simple, foolproof decision-making capability. Given our strategic

environment and powerful information-age enhancements, the commander's role on the 21st-century battlefield and his battle command capability will be more critical than ever. However, through the Force XXI process, the Army is developing the capabilities to empower the commander to better execute the art of battle command in an environment that will place greater demands than ever on officer and noncommissioned Officer (NCO) leaders.

Decision Making

Our doctrine recognizes two main components of battle command: decision making and leadership.² Although information-age technology and the strategic environment will affect each aspect of battle command differently, both components will remain crucial to battlefield success.

Our experiences since the Cold War indicate that conflict now and into the 21st century will place great demands on battlefield leaders' decision-making abilities. Leaders are finding themselves operating in environments that are increasingly more complex, faster-paced and more lethal than ever before.

Increased complexity and greater ambiguity complicate the conditions in which our forces must operate. The threat to our national interests is no longer another world superpower. Our threats are more diverse and less defined than during the Cold War. They consist of regional instability, proliferation of weapons of mass destruction and economic threats. The nature of these threats and the environment in a disorderly, unpredictable world bring about complex and ambiguous factors our forces have to deal with: ill-defined enemy forces, unfamiliar climates and terrain, newly formed coalitions and task forces and a diverse set of tasks and missions. Tactical-level decisions can have operational or strategic consequences. A world media stands by to critique, to a worldwide audience, each operation. Mission requirements span the entire spectrum of war and other operations. Hurricane relief in Florida, peacekeeping operations in Bosnia, operations to restore democracy in Haiti, deterrence operations in Kuwait and Korea, and combat operations to compel adversaries in Southwest Asia and Panama are recent operations highlighting the wide range of missions our forces have performed. These factors and conditions, combined with the increased speed of operations, have placed greater demands on our leaders.

Our doctrine describes the requirement to act faster than the enemy as a "precondition" to gaining battlefield initiative. Improved information-age technologies are designed to aid decision makers, but they also support increased OPTEMPO, generating requirements for quicker decision cycles for leaders. This

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Hel Cooper, Boeing



creates a basic trade-off in decision making between the quality and timeliness of decisions. General George S. Patton Jr. believed timing was more important than the quality of a decision: "A good plan violently executed *now* is better than a perfect plan next week."³ In combat, timing is critical, and leaders need to decide, in a timely manner, how to sustain the high OPTEMPO and gain or sustain the initiative.

Increased battlefield lethality, combined with smaller organizations, raises the consequences of commander decisions. Our way of waging war has changed with the fielding of information-age capabilities. Previously we employed an attrition strategy based on building up combat power and wearing down enemy forces through direct pressure provided by industrial might and large forces. Now we have smaller units, and we are expected to be successful while being more efficient in protecting lives and saving resources — gaining quick, decisive victories with minimum casualties. This reduces the margin of error for leaders in decision making and force employment. Their decisions, at every level, tend to have greater consequences than ever before.

Increased complexity and ambiguity, high OPTEMPO and greater lethality have all increased the demands on battlefield leaders' decision making. Under these conditions, leaders can no longer develop their Cold War-era *General Defense Plan Battlebooks* and rehearse every possible contingency of an operation for years, nor can they rely on "checklist solutions" or "by-the-number responses." They have to understand the environment in which they are operating and be able to think on

their feet with timely and accurate decisions.

We tend to seek technological solutions to problems, and combat decision making is no exception. However, we have to realize that even with our improved information-age systems, uncertainty in combat operations continues to plague leaders. The fog, friction, chance and uncertainty that Carl von Clausewitz wrote about over 160 years ago still accurately describe the environments our forces are operating in today — and will continue to operate in for the foreseeable future. Technology will assist decision makers in gathering information and providing situational understanding, but given the environment and the nature of warfare, war and other operations will not be clean and precise, and decision making will not be simple or foolproof.

In his study of the evolution of command in war, Martin Van Creveld concludes that uncertainty has been a central fact throughout warfare; "From Plato to NATO, the history of command in war consists essentially of an endless quest for certainty."⁴ Systems designed to support a commander in his battle command functions include several components, with technological systems being a single component. They also include soldiers, organizations, communications, doctrine and standing operating procedures. All system components need to complement the entire system to support a commander's information needs. Commanders also must recognize that uncertainty exists, and they essentially have two options in dealing with it: increase their command system's information-processing capacity or develop their command system to deal with less than perfect

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information. Given warfare's nature and its demands on leaders, battlefield decision making remains more an art than a science and requires smart, decisive leaders with sound tactical judgment.

Recent examples remind us that decision making, even in the information age, remains fallible. "The commission of inquiry into the shooting down of an Iranian airliner in the Gulf War Zone by the USS *Vincennes* in 1988 concluded that the warship's Aegis missile system, capable of identifying and engaging numerous targets at great range, using large amounts of "artificial intelligence" had performed faultlessly. The data had, however, been 'misinterpreted' by the crew."⁵

More recently we heard about the fratricide incident in Northern Iraq. In that case, an Airborne Warning and Control System and fighter aircraft identified, then mistakenly engaged and destroyed, two friendly helicopters. These are two unfortunate examples of technology providing the right information, but being misinterpreted or misunderstood — leading to disaster. Just having the right information is not sufficient. Leaders have to use this information to support their decision making.

The strategic environment in which our forces will operate and warfare's very nature create conditions that are not clean and precise, and decision making is neither easy nor foolproof. Decision makers, operating in environments that place great demands on them, even with the best possible information available, still have to apply their best judgment to make a good decision in a timely manner. But decision making is only one element of battle command.

Leadership

Even with all the battlefield innovations and technology to aid decision making, battle command has a second critical component — leadership. War remains a very human endeavor. *People* are involved, and soldiers and leaders have to deal with the human emotions of fear and confusion in the face of

a determined enemy. As Maurice de Saxe wrote, "The courage of troops must be reborn daily." That is the role of leaders. The missions we conduct in war and other operations require soldiers on the ground, operating in harm's way. Author T.R. Fehrenbach described it well in his book *This Kind of War*: "You may fly over land forever; you may bomb it, atomize it, pulverize it and wipe it clean of life — but if you desire to defend it, protect it, and keep it for civilization, you must do it on the ground, the way the Roman Legions did, by putting your young men into the mud."⁶

Soldiers operate in hostile environments whether they are fighting in the streets of Mogadishu, building bridges over the Sava River, walking patrol in Port-au-Prince or keeping the peace in Tuzla. Leadership is important in motivating soldiers in these operations — perhaps it is the most important ingredient in battlefield success. General Frederick M. Franks Jr. stated, "Battlefield leadership at all levels is an element of combat power. It is difficult to measure, but nonetheless is present and a decisive contributor to victory in battle."⁷

Recent battlefield experiences serve as good reminders that there is a human element to battlefield decision making and leadership. History is replete with examples of leaders turning the tide of battle through their personal courage and leadership in the face of the enemy. And the information age has not changed the requirement for leaders to influence the course of battle through their personal leadership. Leaders have to motivate soldiers to overcome their fear and confusion to defeat the enemy.

In Vietnam, a major tactical command and control innovation was the helicopter. The helicopter provided first-generation situational awareness by giving the commander a "bird's eye" view of the battlefield and a great vantage point from which to observe and direct the fight. But in the heat of battle, situational awareness and the ability to direct the fight was not sufficient. Recognizing they had to lead and motivate their soldiers, commanders landed periodically to meet face-to-face with subordinate commanders to share hardships and get a better feel for the battle and the state of their soldiers in combat.

On 8 June 1966, Troop A, 1st Battalion, 4th Cavalry Regiment was caught in an ambush at Ap Tau O by the elite 9th Vietcong Division's 272d Regiment. Lieutenant Colonel Leonard LeWane, the squadron commander, supported the ambushed troops from his observation helicopter. He directed units to the right position, adjusted fires and called for close air support. But that was not enough: "On two occasions in the heat of battle, LTC LeWane landed his OH-13 inside the laager under heavy fire. He

101st Airborne Division
soldiers training at the Joint
Readiness Training Center,
Fort Polk, Louisiana.

US Army

War remains a very human endeavor. *People* are involved, and soldiers and leaders have to deal with the human emotions of fear and confusion in the face of a determined enemy. As Maurice de Saxe wrote, "The courage of troops must be reborn daily." That is the role of leaders. The missions we conduct in war and other operations require soldiers on the ground, operating in harm's way. Author T.R. Fehrenbach described it well in his book *This Kind of War*: "You may fly over land forever; you may bomb it, atomize it, pulverize it and wipe it clean of life — but if you desire to defend it, protect it, and keep it for civilization, you must do it on the ground, the way the Roman Legions did, by putting your young men into the mud."

wanted to eyeball his troops and determine the state of their ammunition. He walked from vehicle to vehicle and found the troops full of fight and with plenty to shoot. His presence in the thick of battle was just what the troopers expected of their commander."⁸

Brigadier General John C. Bahnsen learned a similar lesson when, as a major commanding 1st Battalion, 11th Armored Cavalry Regiment, he observed "Command from a helicopter gives better communications and usually better visibility and control, but does not normally outweigh the morale aspects of sharing ground troops' hazards under fire."⁹

The commanders recognized that situational awareness to aid their decision making and control of the battle was not sufficient. They met with subordinates to influence the situation by their physical presence on the battlefield and to share information that could not be effectively transmitted over a radio.

This idea is supported by commanders who fought in operations *Just Cause* and *Desert Storm*. Their positioning on the battlefield was critical — to personally see what was happening, to get a feel for the battle and to increase their soldiers' morale and spirit during the fight.

In *Desert Storm*, where a wide variety of communications systems were available, Franks said that "more than 50 percent of battle command in VII Corps was non-electronic."¹⁰ Commanders had the technical capability to communicate in several ways, but they met face-to-face and talked to one another to ensure they could effectively communicate with one another and get the feel for the battle.

General John H. Tilelli Jr. understands the positioning of the commander in battle and how it can support decision making and influence the battle. After *Desert Storm*, he discussed the commanders' role, saying "Commanders should show a command

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The lessons and emerging insights from advanced warfighting experiments (AWEs) over the past couple of years support these same lessons of leadership and decision making we have learned on the battlefield. Information-age technologies offer tremendous potential to improve how we operate by providing information to support decision making. Our experiments show that units tend to operate digitally in the planning and preparation phases. But during operations, and especially during combat, units use voice communications. The verbal communications and the face-to-face communications remain vital to provide the full picture of the situation. Soldiers need to see their leaders and to hear their calm, confident voice on the radio directing the fight. A battlefield commander's role is critical in exercising leadership and gaining a feel for the situation.

The Force XXI process has helped lead us through

this change in warfare and provide us the equipment and organizations to be successful on future battlefields—but our approach is not just about equipment and organizations. We recognize the *art* of battle command required in effective decision making and leadership, and our doctrine emphasizes its importance. It is reinforced at our combat training centers (CTCs) and with the Battle Command Training Program. The battalion, brigade and division commanders and command sergeants major of the 21st century are currently in our officer and NCO schools—and they are in our units participating in AWEs and CTC rotations and NCO and officer professional development programs. Their study and their experiences are crucial to developing leaders with the necessary knowledge, skills, tactical judgment and intuitive feel for battle they will need to meet future challenges.

Force XXI has reshaped our Army for the 21st century by providing the right tools to empower our soldiers and leaders to more effectively and efficiently accomplish whatever mission they are assigned. The hard work and intellectual energy the Army as an institution is putting into the Force XXI process will keep us trained and ready now and prepared to meet 21st-century challenges.

The environment our forces will operate in will be more complex and challenging than what we have known in the past. History and recent lessons learned point out that the human aspects of decision making and leadership are relevant now *and* for the foreseeable future. As we continue building the Army After Next, we will continue to need quality soldiers led by superb leaders as we deploy them to answer our nation's call. **MR**

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Applying the Principles of War

Nola M. Sleevei

ALTHOUGH CENTURIES and continents separated their lives, Sun Tzu, Napoleon Bonaparte and Thomas Jonathan "Stonewall" Jackson employed, to varying degrees, the same basic principles of war. All were ingenious military commanders. Histories of their lives detail the characteristics that enabled them to become successful leaders. This article will discuss their similarities and the tactics they employed: deception, celerity (speed/swiftness), shaping the enemy and exploiting victory.

Sun Tzu

Sun Tzu's Chen clan ancestors were extremely active and influential in Chinese politics. Tales of the wiles with which the clan overthrew the reigning Qing family no doubt inspired Sun Tzu as he developed his principles of war. Sun Tzu's father, Chen Shu, received the title "Sun" in recognition of his notable military attainments. Sun Tzu assimilated and developed many of his military theories as a result of his father's and paternal family's influence. Sun Tzu placed great value on studying the art of war. The constant political unrest in China compelled Chen clan members to always be on guard and to seek opportunities for military advancement. Resolutely facing a life without tranquillity, Sun Tzu honed his warrior skills.

Helu, King of Wu, an experienced military commander and expansionist, positively impacted Sun Tzu's career. Helu recognized and capitalized on Sun Tzu's military knowledge, appointing him troop disciplinarian and assistant to General Wu Zixu, commander of Wu forces. In his position as collaborator with Wu, Sun Tzu gained opportunity to fully employ his principles of war. His successes ultimately won him the rank of general.

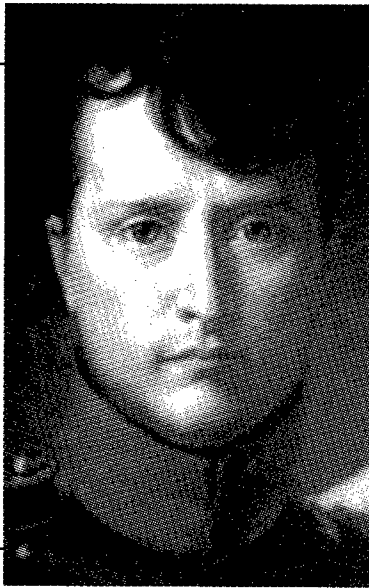
Napoleon

Napoleon exhibited signs of genius at an early age. Despite being young and deficient in most studies except mathematics, in 1783, Napoleon was selected

Their relentless pursuit of excellence through rigorous intellectual study of past military campaigns, terrain, tactics and the art of war prepared [Sun Tzu, Napoleon and Jackson] to fully exploit the principles of deception, celerity, shaping the enemy and exploitation of victory. Although each general had his own individual leadership style and stressed slightly different aspects of the principles of war, each agreed that warfare must be thoroughly studied and that prudent application of its basic principles to the fluid conditions of war ensures victory.

for transfer from the Brienne School to the Paris Royal Military Academy. Chevalier de Keralio, inspector and military tactics author, overruled suggestions that Napoleon should wait another year: "I perceive in him a spark of genius which cannot be too early fostered."¹ As further evidence of his mental superiority, in September 1785, at the age of 16, Napoleon was commissioned second lieutenant, royal corps of artillery. The average length of time required to "pass out" of the Royal Academy was from two to three years, but Napoleon "applied himself so assiduously" he received his commission after only one year.²

At 19, on his own initiative, Napoleon launched an intensive self-education period in which he consumed many books on military and political history. While attending the Paris Royal Military Academy, he had gained no formal knowledge of military history or tactics. His self-appointed course of study included 83 campaigns, foremost of which were the campaigns of Alexander the Great, Hannibal, Julius Caesar, Gustavus Adolphus, Henri de Turenne, Eugene of Savoy and Frederick the Great.³ Napoleon



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Napoleon Bonaparte circa the Italian Campaigns, 1796-1797

thoroughly read about these campaigns, convinced that only in this way could he master the secrets of the art of war.

Napoleon also consciously trained his memory and analytical powers by writing a concise summary of each book he read. When he received command of the Army of Italy in March 1796, his mind was trained and ready for his future as military commander and, eventually, emperor. "If I seem always ready to meet any difficulty, to face any emergency, it is because before undertaking any enterprise I have spent a long time thinking it out and seeing what might happen. It is not a guardian spirit that reveals to me suddenly and in secret what to say or to do in circumstances unexpected by others, it is my meditations, my thinking things out. . . ."⁴

As a youth, Napoleon lived in poverty. He was a *bousier*, or free pupil, at the schools he attended, and the "children of many noble and wealthy families" surrounding him were a constant reminder of his poverty.⁵ As the Army of Italy commander, Napoleon knew he could gain his soldiers' respect by procuring much-needed supplies for them. This motive does not appear his only one. His heart, not just his military mind, was touched by the appalling conditions under which they lived.⁶

"Stonewall" Jackson

Thomas Jonathan Jackson became constable of Lewis County, Virginia (West Virginia), at 18. His job "required both courage and determination, qualities that he soon showed that he possessed."⁷ A major portion of his duties involved collecting debts, and Constable Jackson became expert at outmaneuvering reluctant debtors. Once, Jackson grabbed the reins of the horse of a man who refused to pay up.

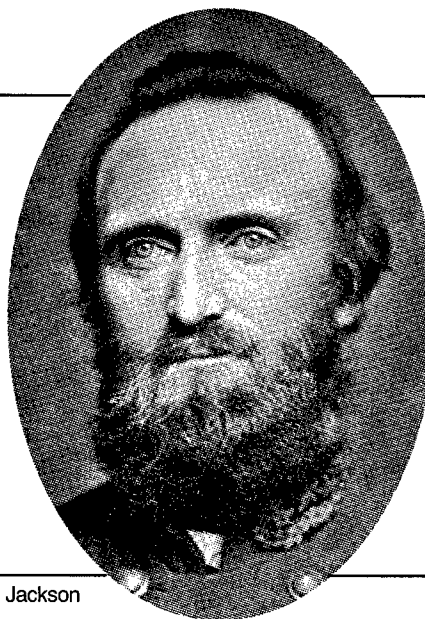
Jackson led the horse to a low stable door, forcing the man off his horse, enabling the county to take possession of the animal in lieu of cash.

Jackson possessed a steadfastness and determination reflected in one of his maxims: "You may be whatever you resolve to be."⁸ When accepted to West Point in 1842, Jackson's education was found deficient. A family friend inquired whether he could succeed and Jackson replied, "I am very ignorant, but I can make it up in study. I know I have the energy and I think I have the intellect."⁹ True to his word, "he made up in industry what . . . he had lacked in opportunity."¹⁰ Resolve and hard work enabled Jackson to finish his first year ranked 17th out of 59. In General Robert E. Lee's letter of recommendation for Jackson's promotion to lieutenant general in October 1862, he commented that Jackson "spares no exertion to accomplish his object."¹¹

Weak eyes forced Jackson to develop unique study and reading habits. While he was a professor of natural and experimental philosophy and artillery tactics at the Virginia Military Institute (VMI), he read the next day's lesson by daylight, then mentally rehashed it in the evening. This extreme mental discipline prepared Jackson for the American Civil War during which he methodically and meticulously plotted maneuvers to mislead and mystify his enemies.

Jackson was not easily excitable. A VMI cadet related the calmness of artillery tactics instructor Major Jackson under "fire." During drill, mischievous cadets sometimes threw bricks or other objects onto the arsenal's roof. The objects often rolled accurately toward the professor. Although Jackson was often nicked by the falling missiles, "never a notice, a sign or the slightest regard was visible in his face or his actions."¹² Many instances are related about his

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Lieutenant General Thomas Jonathan "Stonewall" Jackson

self-control during battle. For example, he could frequently be spotted writing orders atop his mount, Little Sorrel, oblivious to flying bullets. One such time, a cannon ball splintered a tree directly above him. Jackson did not react to the disturbance, remaining engrossed in writing a dispatch.¹³

Deception

Sun Tzu believed "All warfare is based on deception."¹⁴ Through deception, the intended place of battle remains questionable, thereby weakening and confusing the enemy. Uncertainty forces the opponent into psychological disadvantage, causing him to exert wider effort in battle preparation. The attacker can engage fewer troops when the foe is extended. "If he does not know where I intend to give battle, he must prepare in a great many places. And when he prepares everywhere, he will be weak everywhere."¹⁵

Sun Tzu perceived deception as a powerful catalyst for creating change, reasoning that the most successful deceptive measures are usually simple and inconspicuous and that the commander with superior deceptive skills has a substantial advantage. "Subtle and insubstantial, the expert leaves no trace; divinely mysterious, he is inaudible. Thus he is master of his enemy's fate."¹⁶

During the Jena Campaign, Napoleon sent cavalry commander Armand de Caulaincourt on a mission to detect Prussian intentions to fight. Caulaincourt used the ruse of a hunting trip to Compiègne as his cover. In another deceptive move to gain information, Napoleon sent engineer Colonel Blein, in full uniform, across Prussian lines. Blein was mistaken for a Saxon officer and allowed unmolested passage to "purchase maps" at the Leipzig Fair. After locating the general headquarters of the King of Prussia and the

Duke of Brunswick, Blein returned to Napoleon with dispositions of enemy forces.

A favorite Napoleonic deception tactic was to advance his army in divided columns. In the May 1800 Marengo Campaign, Napoleon's troops crossed the Alps in five columns, two of which contained the majority of soldiers. The total front was approximately 115 miles, reaching from the Var River to St. Gothard Pass. This divided approach into Italy successfully deceived General Baron Michael Friedrich von Melas concerning Napoleon's objective. Melas wrote reassuringly to a female friend in Pavia that she was safe from the French and need not evacuate her home. Within 12 hours, Napoleon and his main army were in town.

Deception was vital in Jackson's Shenandoah Valley Campaign during the Civil War. Union troops were numerically superior and were distributed such that Jackson's force was often between them. He found deception useful in economizing time to outmaneuver converging enemy armies. To Jackson, "mystery was the key to success."¹⁷ Jackson frequently used circuitous marches to produce uncertainty in the enemy's mind. Confederate General Richard Taylor remarked, "I began to think that Jackson was an unconscious poet, and, as an ardent lover of nature, desired to give strangers an opportunity to admire the beauties of his valley."¹⁸

The meandering before the McDowell, West Virginia, engagement was typical. Jackson's destination was west. He marched east. Confusion regarding Jackson's position and destination is evident in official correspondence. On 9 May 1862, Secretary of War Edwin M. Stanton directed General Nathaniel P. Banks to determine enemy strength and positions, saying, "Opinions from Gen. [Irwin] McDowell and

Napoleon would "pursue the beaten foe without mercy after securing victory." . . . For example, initial success against the Austrians was followed by aggressive pursuit, leading to victory at Lodi, Italy. After the battle at Castiglione, Italy, Napoleon's "ruthless pursuit of a beaten enemy" led to a victory at Bassano. Subsequent battles proved Napoleon's tactics and exploitation of victory were sound as he continued to achieve spectacular successes.

Gen. [John C.] Fremont are contrary with respect to Jackson."¹⁹ On the same day, Major General E.A. Hitchcock reported, "The movements of Jackson are uncertain."²⁰ Union reconnaissance showed "the departure of Jackson, but not his destination."²¹

Maintaining extreme secrecy toward his own staff, generals and troops was characteristic of Jackson. Others were not convinced of the validity of Jackson's extreme reticence. For example, his staff concluded after the Romney, West Virginia, expedition that "If Gen. Jackson had been killed no one would have known what was to be done."²² When informed that this practice was unacceptable to his generals, Jackson replied, "If I can deceive my own friends I can make certain of deceiving the enemy."²³ Jackson realized that the least tidbit of information might give the enemy an advantage in a war in which there was a high rate of desertion, where friend and foe shared a common language, thus making it harder for spies to be easily detected.

Celerity

Sun Tzu, Napoleon and Jackson each relied on celerity to compensate for numerical inferiority. They also found it instrumental in promoting surprise and giving morale advantage to the attacker. For instance, Sun Tzu believed, "Speed is the essence of war," recognizing speed as essential in achieving surprise. "Take advantage of the enemy's unpreparedness; travel by unexpected routes and strike him where he has taken no precautions."²⁴ Likewise, Napoleon highly valued time and believed the loss of it "irreparable in war."²⁵ He used celerity to gain the advantage of surprise. For example, a rapid flanking march toppled much of the allied forces' command structure at Ulm [Germany], in October 1805. Austrian commander General Karl Mack, completely surprised by Napoleon's arrival, "had never imagined that the French could envelop his right flank so swiftly."²⁶ Napoleon's sudden appearance threw General Karl

von Schwarzenberg and others off balance to such an extent they deserted Austrian forces. Mack was one of the few to regain composure and "try to buy time for other allied armies."²⁷

To Jackson, celerity was an indispensable element in many marches in order to soundly defeat enemy detachments and escape before reinforcements could arrive. Jackson's Shenandoah Valley Campaign has "rarely been equaled for boldness of initiative and celerity of movement."²⁸

Jackson's swift movement at Kernstown, Virginia, created a misapprehension of his strength that struck fear into Union troops. Although the advantage gained was initially psychological, celerity secured a Southern strategic victory and produced fear for the safety of Washington in President Abraham Lincoln's and Stanton's minds. They greatly overestimated Jackson's strength and were certain of imminent attack. Jackson fostered this illusion by "the swift and deceptive dashes of his foot cavalry."²⁹

Jackson's use of celerity in the May 1863 flank march at Chancellorsville, Virginia, produced complete surprise resulting in Confederate victory. Jackson selected the route, ordering the cavalry to screen the march. Stragglers could expect to feel the bayonet of provost marshals. There would be no allowance for delay, although Jackson did enforce his usual order that the troops rest 10 minutes each hour. Jackson's exhortation to "Press on, press on" was issued repeatedly throughout the 8-hour march.³⁰ The element of surprise, bought by the exertion of celerity and deception, was intact when Jackson's corps attacked Brigadier General Joseph Hooker's rear forces.

Shaping the Enemy

Sun Tzu, Napoleon and Jackson each shaped the enemy to conform to their timing and conditions of battle. Each commander was careful not to allow the enemy to shape him. Shaping has both offensive and defensive characteristics. The offensive aspect of shaping centers on "attacking the enemy's strategy."³¹ Defensively, the object is, through troop disposition, to appear to be "without ascertainable shape."³²

Sun Tzu believed a wise commander refrained from solidifying plans until he has satisfactorily shaped his enemy. His tactics should be directed toward conforming the opposition's shape to his own plans. He believed the most effective methods of shaping the foe in each campaign are determined only through meticulous probing and observation, using close enemy contact, spies and agents and reconnaissance as essential shaping elements.³³ Sun Tzu perceived morale as another important factor in shaping the enemy, understanding that a commander who can capitalize on or create discouragement can

make the enemy more pliable.

Napoleon also excelled at shaping the enemy. One of the best examples is seen at the December 1805 battle of Austerlitz. Before the campaign, Napoleon had carefully studied the terrain. His reconnaissance was thorough and incessant. Several days before the battle, when enemy troops changed positions, dangerously intermixing their lines, Napoleon watched, adjusting his strategy as needed.

Napoleon also used psychological shaping tactics to weaken his enemy and prepare him for the decisive thrust. During the 1796 battle of Arcole, Austria, especially during the second and third days of battle, Napoleon consciously and systematically wore down his enemy, while waiting for the battle to become "ripe."³⁴ He knew "success in war depends on . . . sensing the psychological moment in battle."³⁵ Some fighting occurred on dikes 11 yards wide and 3 feet above the marshes of the Adige and Alpone rivers. On the second day, Napoleon "detected a slowness and hesitancy in [Austrian General Josef] Alvintzy's maneuvers."³⁶ He later discerned the Austrian army's low morale and its many raw recruits' exhaustion. He then detached a small flanking force of 25 guides and four trumpeters, and, with "great reinforcement of shouts and trumpet calls," they routed the opposition.³⁷

Jackson believed a commander's ability to shape his enemy depended largely on a thorough knowledge of his surroundings. Jackson valued knowledge of the theater's terrain as well as that in the areas where he expected to fight. Geographical familiarity enabled him to foresee and influence enemy maneuvers and strategies. Major Jedediah Hotchkiss wrote, "[I]n the preparations [Jackson] made for securing success . . . he was very particular in securing maps, and in acquiring topographical information. . . . I do not think he had an accurate knowledge of the Valley before the war."³⁸ Yet, his men said of Jackson, "He knew every hole and corner of the Valley as if he made it himself."³⁹

Hotchkiss, who after Jackson's death, served under generals A.P. Hill, R.S. Ewell and J.A. Early, recognized Jackson's outstanding ability to shape his enemy, saying that Jackson possessed "an unrivaled eye for terrain" and was "an expert at reconnaissance. . . . I was in no great battle subsequent to Jackson's death in which I did not see the opportunity which, in my opinion, he would have seized and have routed our opponents."⁴⁰

Jackson also had the ability to discern the enemy's morale, keenly using it to shape his enemy even when circumstances refracted other officers' judgment. The 1862 Battle of Malvern Hill, Virginia, one of the Seven Day's Battles fought to repulse North-

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ern troops from the Richmond vicinity, was hard-fought with many losses on both sides. Reports to Jackson after the battle were filled with discouragement. Ewell, the last to report, stated he expected an attack by Major General George B. McClellan in the morning, adding bluntly that the demoralized Confederate troops could not face him successfully. Jackson, recognizing that by refusing to withdraw would effectively intimidate the Federals, shaped their already wounded morale into fear and hopelessness. Jackson assured his officers, "McClellan will clear out in the morning."⁴¹ Daybreak affirmed his assessment. McClellan had withdrawn to the banks of the James River. Major R. Dabney credited Jackson's "quick eye" with an ability to estimate "aright the discouragement of the enemy and strike the hesitating foe at the decisive moment."⁴²

Exploiting Victory

Exploiting victory was an integral principle of the art of war to Sun Tzu, Napoleon and Jackson. None was content to merely gain victories. They capitalized on resultant enemy demoralization and chaos. In fact, Sun Tzu stressed further action than just winning the battle. After winning battles and taking objectives, he said, failing "to exploit these achievements is ominous and may be described as 'wasteful delay.'"⁴³ The low morale and broken ranks of a defeated foe may be easily used to the victor's advantage, as momentum is already on his side. "Thus a victorious army is as a hundredweight balanced against a grain, a defeated army as a grain balanced against a hundredweight."⁴⁴

Napoleon would "pursue the beaten foe without mercy after securing victory."⁴⁵ General Francois Joseph Lefebvre referred to this trait as the "most original of Napoleonic warfare."⁴⁶ The first Italian Campaign exemplified Napoleon's views on exploiting victory. He relentlessly pursued the enemy, wringing everything possible from his victories. For example, initial success against the Austrians was followed by aggressive pursuit, leading to victory at Lodi, Italy, in May 1796. After the battle

at Castiglione, Italy, Napoleon's "ruthless pursuit of a beaten enemy" led to a victory at Bassano.⁴⁷ Subsequent battles proved Napoleon's tactics and exploitation of victory were sound as he continued to achieve spectacular successes.

Likewise, Jackson believed that "To move swiftly, strike vigorously and secure all the fruits of victory is the secret of successful war."⁴⁸ He exploited victory to reap both intangible and concrete benefits. As a result of Jackson's relentless exploitation and pursuit, the opposition greatly overestimated Southern strength. This misconception caused Northern troops to stay in the Valley after they had been ordered to reinforce McClellan at Richmond. As Jackson capitalized upon the momentum of victory, confidence and fearlessness permeated Southern morale.

One of Jackson's most famous exploits was the 38-mile overland engine relocation his forces conducted in exploitation of action that began at Martinsburg, West Virginia. Jackson formed a special unit to reinforce bridges, smooth roadbeds, assemble the strongest available horses and strip the 50-ton, coal-carrying locomotives of expendable weight. His force transported 14 engines from Martinsburg to Strasburg behind 40 horses and, at times, 200 soldiers.⁴⁹ On average, three days were required for each relocation. Admiring Virginians lined the route daily.⁵⁰ Jackson recognized that pursuit and securing the spoils of war required effort, skill and persistence.

Jackson had occasion to both laud and lament his cavalry in efforts "to carry out the pursuit" and exploit victories.⁵¹ Jackson ordered Colonel Flournoy of Ashby's cavalry to sweep forward after the victory at Front Royal, Virginia, to continue the Confederate momentum. The result was that 250 Virginian cavalymen captured 600 Federal horsemen.⁵² Jackson declared "he had never, in all his experience of warfare, seen so gallant and effective a charge of cavalry."⁵³ However, later the same day, the same cavalymen virtually stopped the Confederate momentum when they interrupted their pursuit to stop to plunder. Jackson then lamented, "Never have I seen an opportunity when it was in the power of cavalry to reap a richer harvest of the fruits of victory. Had the cavalry played its part in the pursuit, but a small portion of Bank's army would have made its escape to the Potomac."⁵⁴

Sun Tzu, Napoleon and Jackson each possessed unique characteristics that prepared them for leadership roles and battlefield command. Their relentless pursuit of excellence through rigorous intellectual study of past military campaigns, terrain, tactics and the art of war prepared them to fully exploit the principles of deception, celerity, shaping the enemy and exploitation of victory. Although each general had his own individual leadership style and stressed slightly different aspects of the principles of war, each agreed that warfare must be thoroughly studied and that prudent application of its basic principles to the fluid conditions of war ensures victory. **MR**

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Looking for Sam Damon

Colonel Sean J. Byrne, US Army

SAM DAMON IS ARGUABLY the greatest officer that “never lived.” Since introduced in 1968 as the principal character of Anton Myrer’s novel *Once an Eagle*, he has been the standard by which a generation of officers has measured all others.¹ A proven combat leader, he understood the human costs and terrible price of battle. Dedication and selfless service, along with a unique grasp of the battlefield and a compassion for his soldiers, were the benchmarks of his life. Although a firm and charismatic leader, he was not afraid to challenge the “establishment” when necessary.

Damon’s fictional career spanned enlisted service in the years just before World War I, to service as a general officer during the first years of US involvement in Southeast Asia in the 1960s. The “Damon” character appears to be the composite of a number of officers who served during the years between World Wars I and II. During this period, most officers had similar career patterns and were faced with many of the challenges confronting the Armed Forces today—downsizing, decreasing budgets and support from a government increasingly focused on domestic situations. Officers were faced with career stagnation and had few opportunities for realistic training. Attendance at military schools was key for officers with potential because there “they learned to deal with large-scale administrative and organizational problems while serving as school secretaries, executive officers, quartermasters and the like.”²

From this background came World War II’s leaders and “great captains.” Names such as Eisenhower, Bradley and Patton are familiar to even those who have little interest in the military or history. However, in researching this article, I did not look to officers at that level because they have become so familiar and well known over the years that readers generally have preconceived notions about their character and attributes. Rather, I examined the careers and char-

During the evenings *Once an Eagle* was shown, all activities that could be controlled were halted on Fort Bragg. . . . The following morning all the junior officers gathered for breakfast in their mess halls after physical training to discuss the previous evening’s show, scene by scene. . . . While he was not perfect and we could pick out his flaws, we saw in him what we wanted to be and, more important, what we could possibly be as officers.

acteristics of many officers from the period who, although not as familiar as the war’s great captains, exhibited many of the same qualities as Damon. During my research, I found an officer, Clarence Huebner, who not only had a similar career pattern as Damon, but also had a similar background and possessed many of Damon’s characteristics. This article provides career summaries of both officers and compares them using the Army’s Core Values and the traits identified in the US Army War College’s (AWC’s) “A Ride With Some Captains” course as its criteria.

Sam Damon

Sam Damon was born in 1898, a Nebraska farmer’s son. His father died when Sam was just a boy, leaving him to help his mother support the family. Although recognized as the top student and athlete in his high school, he had to work as a hotel night clerk during his school years. While still a teenager, Damon believed his destiny was to enter the Army and that he would be called on to do great things for his country in its time of need. He initially felt his calling was to attend West Point and was the local congressman’s alternate appointee to attend the US Military Academy (USMA) after graduation. However,

[D]amon] attended the USAIS when Lieutenant Colonel George C. Marshall was the assistant commandant. Marshall stressed the theories of war less than his predecessors. His emphasis was on methods and principles of command, and he looked for leaders who could react to fluid, changing situations and not necessarily textbook solutions. Marshall understood the need for simplicity in techniques, and theory took a backseat to practical application. Damon thrived in this environment.

even though he had a "guarantee" that he would be the nominee the following year, he enlisted in the Army in 1916 based on family financial concerns. He was initially assigned to a cavalry unit on the Southwest US border. Smart and athletic, he was soon recognized by his chain of command as a young man with a future. During this period, his unit deployed to Mexico as part of a US show of force against Mexican rebels who had violated US border integrity and wreaked havoc on several US border towns. Although he did not see actual combat, he saw firsthand its effects and the pain and suffering it brought.

Barely a year later, as a young sergeant, he deployed to France to fight in World War I. Only 19 years old, he was already a proven "old timer" and responsible for a platoon of new recruits as they prepared to go into battle. Because he had shown his mettle in both garrison and training environments, his men trusted him and had great confidence in his abilities.

During one of their initial actions, Damon, after his company chain of command had been killed, led an attack against a key German-held road intersection. In capturing the building overlooking the crossroads, he single-handedly killed all the German occupants before they could notify their higher headquarters. Although deep in enemy territory, he held the crossroads, and as the battle wore on, his small force of six soldiers captured numerous Germans and allowed American soldiers to pass through the area. His actions turned the battle and saved the lives of a battalion's soldiers who would have been massacred had the building remained in German hands. Although his platoon had performed remarkably well, his battalion had been decimated. His battalion commander, Major Caldwell, recognized his actions and recommended him for the Medal of Honor. He subsequently received the award from General John J. Pershing, who singled Damon out as "one of my nine names in my own Pantheon of heroes . . . one of nine."³ Praise such as this made Damon a man to be watched in the future.

Caldwell saw significant potential in young Damon and, due to the loss of so many leaders, awarded

him with a battlefield commission. Their careers would cross numerous times over the years, with Caldwell not only becoming Damon's role model and mentor, but also his father-in-law.

Damon saw much more action during the war. As a company commander, he led his unit from the front during a number of major battles. He was severely wounded but able to return to the front. By war's end, he had been promoted to major and would have been a lieutenant colonel had hostilities gone on longer. At war's end he considered leaving the service. However, Caldwell convinced him that hostilities would arise again and that he would be needed. Damon stayed in the Army and faced the tough interwar years.

After recovering from his war wounds, Damon returned to the states and reverted to his permanent rank of first lieutenant. For the most part, he spent the interwar years in remote outposts. Although he did not attend senior-level schools, he was self-motivated and fortunate in that he spent these years in troop-related assignments where he learned the skills he would need for the struggles ahead.

Damon was often viewed as a renegade with a number of strikes against him. First, he was a "mustang," an officer up from the ranks that many "old Army" officers would not accept into their community. In his dealings with many of these officers, Damon's concerns for the well being of the enlisted soldiers were often viewed as a carryover from his past and being too close to the soldiers. Second, many were jealous of his World War I record and the awards he had received. Some felt that he had been too close to his battalion commander and that his awards were inflated. Others were jealous because they either had not made it to Europe during the war or, if they had, had not received similar recognition. A third strike against him was that some perceived his marriage to Caldwell's daughter as a vehicle to better himself, not for what it was, a marriage for love.

A fourth strike that would follow Damon throughout his career was his attitude. He was outspoken and saw little or no gray area in anything he did or said. In today's environment, he would have had

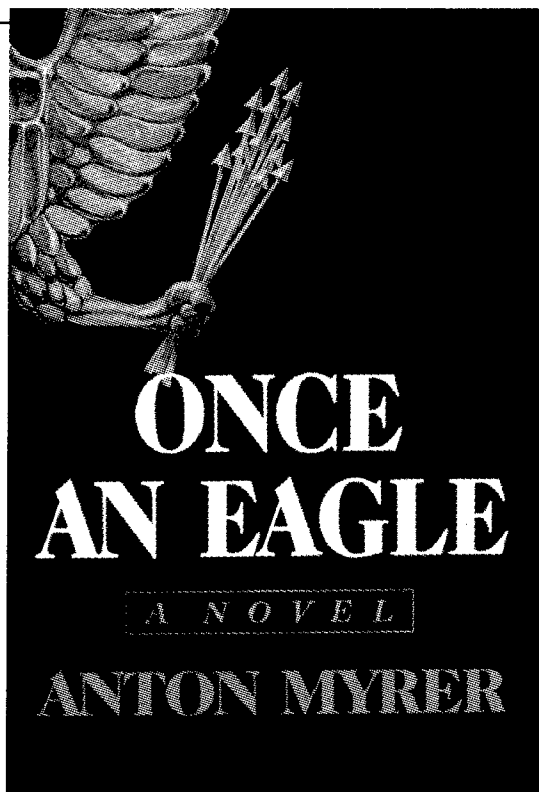
Over the years Damon has often served as my example when counseling junior officers and during formal officer professional development sessions. I have given copies of *Once an Eagle* as gifts so many times, that I find myself looking for paperback copies every time I go into a used book store.

great difficulty understanding the concept of being "politically correct." His saving grace in this area was that when he chose the battle to fight, he could back up his words with action. However, his self-righteous attitude did influence evaluations, duty assignments and school selections. Similar to General George S. Patton Jr., high-level staff positions during the interwar years could have been his undoing because of his lack of political correctness.

He was fortunate during the interwar years to spend virtually all of his time with troops. Although he had commanded a company and been in line for battalion command during World War I, reverting back to first lieutenant gave him the opportunity to further develop his leadership skills and to command again at the company level, allowing him to master the technical and doctrinal side of his profession.

During this period, he also attended the US Army Infantry School (USAIS) when Lieutenant Colonel George C. Marshall was the assistant commandant. Marshall stressed the theories of war less than his predecessors. His emphasis was on methods and principles of command, and he looked for leaders who could react to fluid, changing situations and not necessarily textbook solutions. Marshall understood the need for simplicity in techniques, and theory took a backseat to practical application. Damon thrived in this environment.

During the mid-1930s, as war with Germany and Japan was pending, Damon was assigned as a military observer with the Chinese guerrilla forces as they fought the Japanese. For two years, Damon had a firsthand view of the Japanese in battle and of the Chinese as they fought a guerrilla action against



the Japanese aggressors. He learned the theory and nature of war from the oriental perspective and through practical application. Regrettably, when he returned he was again seen as a nonconformist, and his views were discounted and his reports ignored.

When the Japanese attacked Pearl Harbor, Damon was an infantry battalion commander stationed in California. He spent the early days of World War II training soldiers and then, as his command became proficient and ready for combat, he saw it split to form the nucleus of other units. As the fighting in the Pacific intensified, he was again called to lead in battle.

He initially assumed regimental command in the Pacific Theater during the fighting in New Guinea. During intense combat, the brigade commander was returned to the states for medical reasons and Damon replaced him. Damon subsequently became the assistant division commander and later assumed division command. His promotions and duty assignments were based on his duty performance and leadership abilities—not politics. In fact, after his initial successes as a regimental and brigade commander, he was summoned for an office call with General Douglas MacArthur that went really bad. After Damon told MacArthur he should not have left Bataan, but rather should have stayed with his men, Damon thought he was going to be relieved of command. However, because Damon was such a successful combat commander, he remained in command—but the moment he failed in any action, many people, waiting in the wings, would ensure he was removed in disgrace as fast as possible.

Damon was as successful in combat during World

[Damon] was not only a combat leader but also an extraordinary operator and planner. He visualized the ongoing battle *and* the enemy's reactions to his plans at both the tactical and strategic levels. He was able to develop branches and sequels in his mind while others were still trying to comprehend the basic plans. Damon also had the ability, in both peacetime and combat environments, to lead and motivate his soldiers to accomplish things they did not even want to attempt.

War II, as he had been in World War I, because he was not only a combat leader but also an extraordinary operator and planner. He visualized the ongoing battle *and* the enemy's reactions to his plans at both the tactical and strategic levels. He was able to develop branches and sequels in his mind while others were still trying to comprehend the basic plans.

Damon also had the ability, in both peacetime and combat environments, to lead and motivate his soldiers to accomplish things they did not even want to attempt. Damon galvanized them into action and was with them every step of the way. They knew that what he wanted was the right thing to do. He was an incredibly forceful personality but did not lead through intimidation; rather, he inspired his subordinates. It was clear that although he maintained the highest standards, he was close to his soldiers and subordinate leaders. They knew he was not out for glory; he just wanted to get the job done as fast and successfully as possible while sustaining the fewest casualties possible.

Throughout his career, from the days in France during World War I until the end of his career in Southeast Asia in 1963, Damon was continually confronted by his nemesis—Courtney Massengale. Massengale was everything that Damon was not and did not want to be. He was polished, had served in all the right places (usually at the headquarters level, not with troops) but epitomized the ticket-punching careerist who failed to understand the meaning of selfless service and was willing to sacrifice almost anything to better his career.

Throughout the novel, as their careers continually cross, Massengale is always the senior and attempts to use his position and rank to co-opt Damon, and therein lies the novel's thrust. Massengale considers war a game for abstract strategy rather than for human involvement. He feels he must dominate Damon or, if failing at that, destroy him. Their personal confrontations provide insight into the novel's key personalities and also shed light on the internal workings of the interwar military and how politics and mentoring affected its leaders.

Clarence Ralph Huebner

Clarence Ralph Huebner was born in Bushton, Kansas, on 24 November 1888. He graduated from Grand Island, Nebraska, Business College in 1909 and enlisted in the Army, serving in the 18th Infantry Division (ID) from 1910 to 1916. After commissioning in the infantry in 1916, he served with the 1st ID, American Expeditionary Forces in World War I. He was wounded in the Beaumont sector in April 1918 and again during the Aisne-Marne offensive in July 1918. After the war, he was an instructor at USAIS from 1920 to 1922, and graduated from the US Army Command and General Staff School in 1925. He returned as an instructor at USAIS from 1925 to 1928, and graduated from AWC in 1929. He was an instructor at the US Army Command and General Staff College (CGSC) from 1929 to 1933, a USAIS board member from 1933 to 1934 and worked with the chief, USAIS from 1934 to 1938. He served with the 19th ID in Hawaii from August 1938 to July 1940 and was War Department General Staff Training Branch chief from 1940 to 1942. He was promoted to brigadier general in February 1942 and was Army Field Forces Training director from 1942 to 1943.

In March 1943 Huebner was promoted to major general and assigned as 1st ID commanding general from August 1943 to December 1944. He was commanding general of V Corps from January 1945 to September 1945. Assignments after the war included chief of staff, US Forces in the European Theater of Operations from 1946 to 1947 and deputy commander in chief of US European Command from 1947 to 1950. He retired in November 1950. During his prestigious career, he was awarded two Distinguished Service Crosses, three Distinguished Service Medals, the Silver Star, the Legion of Merit, Bronze Star and two Purple Hearts. Huebner died 23 August 1972.⁴

Like Damon, Huebner was a product of a middle class upbringing in the Midwest. After graduation from high school, he attended business school, where he became an expert accountant, stenographer and typist. These skills enabled him to become a

In March 1918, [Huebner] was wounded and initially reported as killed.

A month later he returned to head his company, and when his battalion commander was killed in the ensuing battle, Huebner took command of the unit and performed the actions that brought him the Distinguished Service Cross: "For three days . . . he withstood German assaults under intense bombardment, heroically exposing himself to fire constantly in order to command his battalion effectively, and although his command lost half its officers and 30 percent of its men, he held the position and prevented a break in the line at that point."

court reporter and, at age 22, a moderately successful young man. Then in 1910, he did the unthinkable—he enlisted in the peacetime US Army.

His background made him unique, much as he would be in today's Army. After he completed basic training, he was assigned to the 18th ID, Fort Laramie, Wyoming. Fortunately, he remained with the unit for the next six years as it moved from Wyoming to various locations throughout the southwestern United States. He came into his own as he learned to soldier and "served as company clerk, mess sergeant and supply sergeant. He was one of the regiment's most efficient soldiers, best rifle shot and most neatly dressed. His devotion to duty soon attracted the attention of his officers, and he was asked whether he wanted to take the examination for a commission."⁵ Concerned that his background had not adequately prepared him, regiment officers coached him and he passed the tests and was commissioned a second lieutenant in 1916. He then went to Fort Leavenworth, Kansas, to the USAIS and completed the course in April 1917, just as the United States entered the war against Germany. A month later he was on the way to France, in command of a 1st ID rifle company.

In France, Huebner trained his company of raw recruits for a few months before they moved up the line. In March 1918, his company moved into the Beaumont sector north of Toul, where he was wounded and initially reported as killed. A month later he returned to head his company, and when his battalion commander was killed in the ensuing battle, Huebner took command of the unit and performed the actions that brought him the Distinguished Service Cross: "For three days . . . he withstood German assaults under intense bombardment, heroically exposing himself to fire constantly in order to command his battalion effectively, and although his command lost half its officers and 30 percent of its men, he held the position and prevented a break in the line at that point."⁶

A mere three months later, in June 1918, he was

promoted to major, wounded again and awarded an Oak Leaf Cluster to his Distinguished Service Cross. Returning to command in time for battle near Saizeriais, action around Beaumont, the St. Mihiel attack and the Meuse-Argonne offensive, he was promoted to lieutenant colonel in October 1918 and assumed command of the 28th Infantry Regiment. Several regimental majors had been captains before the war, when he had been a sergeant.⁷

"His gallantry, proficiency in command and his rapid rise in grade made him one to remember, one who had passed the test of courage. He was noticed by Pershing, who later sent him to Leavenworth somewhat ahead of his time—he was honor graduate there—by Brigadier General Charles P. Summerall, who pushed him toward the AWC, and by General John Hines, who, as the Army chief of staff, befriended Huebner."⁸ He also came to the attention of Marshall, who would lead the Army as its chief of staff during World War II.

After a year of occupation duty in Germany, Huebner returned to the United States, where he reverted to his permanent grade of captain and spent the better part of the ensuing 20 years in regimental duties, attending the Infantry Advanced Course, CGSC and AWC. He also had three tours of duty as an instructor at service schools. This career path was not unusual during the interwar years. However, it put him in good stead for increased responsibilities when World War II began.

When the war started, he was a brigadier general serving as the Army Field Forces director of training. He remained in that position until March 1943, when he was reassigned to North Africa as the theater G3. However, after barely a month in the position, he was reassigned as the deputy chief of staff for the combined 21st Army Group Headquarters, under the command of General Sir Harold Alexander. He joined the staff at a critical time. US forces had been defeated at the battle of Kasserine Pass, and "Alexander, like many British officers, missed few opportunities to disparage the fighting ability of the



US Army

Generals Clarence R. Huebner (*left*) and Terry de la Mesa Allen of the 1st Infantry Division (ID) at Huebner's assumption of command, Sicily, 8 August 1943. The following year in northwest Europe, Huebner met Allen again when Allen's 104th ID took over the 1st ID's part of the line at Aachen near the German-Dutch border.

[Huebner] replaced Major General Terry Allen, who although successful in combat and extremely popular with his subordinates, was being relieved because General Omar Bradley, the corps commander, believed Allen had allowed the discipline to sag. . . . Huebner's arrival was a traumatic event for the division. Huebner and Allen "were the complete opposite in personality, attitude towards discipline and manner of operation. Allen enjoyed a first name, backslapping informal relationship with his officers and men and was loved by them. Huebner, on the other hand, was stiff and formal in his relationships with subordinates, but earned their respect."

"Suddenly, with Huebner himself on [Omaha Beach], things began to improve. How can one explain the way a single man's presence will galvanize a large-scale movement into successful activity? This is the intangible quality of leadership at work, what the soldier's entire life points toward, and seldom has it been displayed to clearer advantage. For his work that day Huebner later received the Oak Leaf Cluster to his Distinguished Service Medal with the statement: 'The success of the greatest amphibious operation in history against a strongly fortified and almost impregnable coastal barrier was in large measure due to the organizing ability, indomitable determination and inspiring leadership of General Huebner.'

American troops in North Africa."⁹ Alexander was loath to give the Americans significant missions, which was causing considerable problems. At Eisenhower's direction, Huebner joined Alexander's staff to prevent further favoritism based on nationality and to provide a genuinely Allied outlook.¹⁰ After a particularly nasty incident involving Alexander and Huebner over Alexander's continued favoritism toward British units in the Sicily Campaign, Huebner was reassigned, without prejudice. Huebner had "done the right thing" in standing up for US forces, and the situation had become untenable. Huebner was then reassigned to command the 1st ID.

Huebner could not have come into command at a more difficult time. He replaced Major General Terry Allen, who although successful in combat and extremely popular with his subordinates, was being relieved because General Omar Bradley, the corps commander, believed Allen had allowed the discipline to sag to a level where the division was not capable of performing its mission. This was a critical issue because the 1st ID was scheduled to be a spearhead unit in the invasion of Europe at Normandy. Huebner's arrival was a traumatic event for the division. Huebner and Allen "were the complete opposite in personality, attitude towards discipline and manner of operation. Allen enjoyed a first name, backslapping informal relationship with his officers and men and was loved by them. Huebner, on the other hand, was stiff and formal in his relationships with subordinates, but earned their respect."¹¹

Although Huebner had previously served in the division during World War I, from lieutenant to colonel and was a charter member of the division, he was seen as an outsider.¹² He "quickly abolished the informality of his predecessors and within a brief time, however, Huebner had overcome this handicap, won the affection of his troops and placed his own stamp on them. They were shaped once again into a cohesive, top notch and highly disciplined unit."¹³ But this is not to say the process was easy. Bradley said

that "a more sensitive man might have cracked under the strain, for it was not until after the Normandy invasion, one year later, that the last resentful adherents to Terry Allen conceded Huebner the right to wear the Big Red One."¹⁴

Like Patton before him, when Huebner took command he put his own mark on the division. He not only initiated a marksmanship program for the division, he was the primary instructor. So successful was Huebner in putting his mark on the division and raising standards that, in addition to his own 1st ID, he was given two regiments from the 29th ID for the assault on Omaha Beach on D-Day—where the landings were the hardest and the German resistance was the strongest.

"Allied intelligence had discovered, too late to change the invasion plans, that the strong German 352d Division had moved into the Omaha Beach area. The resistance of these troops almost prevented the Americans from getting a foothold. On D-Day Huebner's men were along a single strip of sand and shingle, pinned down by severe enemy fire when he decided to go ashore himself. It was already 1600, and it looked as though the Omaha landings were about to be a complete failure. . . . He later said this was the most critical moment of his life. Unless his men could get off the beach and into the interior, Omaha would be a tragic disaster.

"Somehow his appearance on the beach worked magic. His assistant division commanders, Willard G. Wyman and Norman G. Cota, and all the regimental commanders had been trying to get their men forward. Suddenly, with Huebner himself on the scene, things began to improve. How can one explain the way a single man's presence will galvanize a large-scale movement into successful activity? This is the intangible quality of leadership at work, what the soldier's entire life points toward, and seldom has it been displayed to clearer advantage. For his work that day Huebner later received the Oak Leaf Cluster to his Distinguished Service Medal with

Military education played an important role during the interwar years. "Even though the interwar Army had few battalion-size and larger units, severely limiting an officer's ability to apply the command and staff lessons learned at the schools, the Army compensated by assigning the most promising of those officers to serve on the faculties of the schools or with regiments assigned to the schools."

the statement: "The success of the greatest amphibious operation in history against a strongly fortified and almost impregnable coastal barrier was in large measure due to the organizing ability, indomitable determination and inspiring leadership of General Huebner."¹⁵

After expanding the beachhead, the division took part in Operation *Cobra*, took the strategic town of Mortain, sped across Belgium and fought in the Aachen and Huertgen Forest battles. In January 1945, Huebner assumed V Corps command and led his forces in taking the Roer dams and crossing the Rhine into Germany.

He returned to the United States with his corps headquarters immediately upon hostilities ending in Europe to prepare for deployment to the Pacific. When the war in the Pacific ended, he became the Army Ground Forces G3 before returning to Europe for occupation duties.

"In his last few years of service in Germany, Huebner found that the administrative skills he had learned so long ago were still of value. He eliminated the dangerously slack postwar discipline, instituted a model training program, abolished segregated Negro units and integrated black troops into all formations, improved the education offerings of the Army's schools in Europe and took effective action against the black market. He retired in 1950, one of the best-loved officers ever to wear the uniform of the US Army."¹⁶

In Huebner, I believe I have found a Sam Damon. His background, traits, characteristics, training expertise, grasp of the battlefield and concern for his soldiers are uncannily Damon-like. He was a unique soldier in an Army filled with unique soldiers. "Of all the great American soldiers of the 20th century, including many far better known to the public, none better exemplifies the fundamental strength of a citizen army in a democratic society—the career open to talent."¹⁷

Comparisons

In researching this article, it became abundantly clear that there may have been a number of "Sam Damons" that author Anton Myrer could have used

as his model. At the outset, this project appeared relatively simple when initially conceived—review the Army's World War II general officers and identify some good candidates. The project soon became overwhelming when its true magnitude became clear—the Army had over 1,275 general officers during the war.¹⁸ There were clearly too many good candidates, most of whom are little remembered, and few, except the most famous, have either been written about or have left memoirs. It became obvious almost from the start that it would not be possible to thoroughly review every candidate.

I had always thought Damon's career was somewhat unique. However, I was soon to learn that while Damon, and subsequently Huebner, were unique individuals, their careers were very similar to those of many of their contemporaries. The only difference may have been the opportunity to shine and to have the level of exposure where they were recognized and their talents further utilized. Napoleon reportedly said that every officer has a field marshal's baton in his knapsack—however, only a chosen few have the opportunity to use it. Damon, in fiction, and Huebner in real life not only had the talents but seized the opportunity.

In his book *Twentieth Century Warrior: The Life and Service of Major General Edwin D. Patrick*, Wilson A. Heefner provides a good analysis of the Army officer corps during the interwar years and of the 140 men who commanded infantry, armor and airborne divisions in World War II combat.¹⁹ After review, it is clear that Damon and Huebner may have actually been more the norm rather than exception.

- Thirty-three percent were from the Midwest.
- Thirty-seven percent were USMA graduates. Fifty-one percent of division commanders were not academy graduates. Neither Damon nor Huebner was an academy grad.
- Ninety-five percent of division commanders attended CGSC. Huebner did, Damon did not.
- Ten percent of CGSC graduates attended senior service college, and of those, 50 percent became general officers. Additionally, 70 percent of the combat division commanders were senior service college graduates. Huebner was, Damon was not.

• Seventy-five percent of combat division commanders had service on the general staff. Huebner did, Damon apparently did not.

• The median age of those assuming division command was 50. Damon was 45 and Huebner, 54.

Military education played an important role during the interwar years. "Even though the interwar Army had few battalion-size and larger units, severely limiting an officer's ability to apply the command and staff lessons learned at the schools, the Army compensated by assigning the most promising of those officers to serve on the faculties of the schools or with regiments assigned to the schools."²⁰ The most famous of those schools was the USAIS from 1927 to 1932, when Marshall served as the school's assistant commandant. The school was indeed "the cradle of many of World War II's greatest field commanders," among them Collins, Bradley, Stilwell and Van Fleet.²¹ Damon was a student during this period and Huebner served on the faculty.

Damon's interwar career was unique only in that he did not attend either CGSC or AWC and probably did not serve on a high-level staff or have service school instructor duty. While Damon was slightly younger than the median age for division commanders, this was not that unusual. A number of general officers, including James Gavin of the 82d Airborne Division, moved from regimental to division command as vacancies occurred and commanded divisions before they were 45. In analyzing the ages of US Army World War II generals, their ages ranged from roughly 34 to 77.²² If charted on a bell curve diagram, both

Damon's and Huebner's ages would be within the center quadrant and not statistical anomalies.

Analyzing these two officers also involves considerable conjecture. *Once an Eagle* involves a fictional character, and the author provides an excellent overview of episodes in Damon's "life." However, there are considerable gaps in the story. It is unclear, for instance, whether or not Damon served on a high-level staff or as a service school instructor. Additionally, because much of the book concerns the character and attributes of Damon, it is easy to draw conclusions in those areas about him. However, it is not so easy to make the same conclusions concerning Huebner. His career is relatively easy to outline. However, little has been written about him specifically besides a chapter in *Masters of the Art of Command* by Martin Blumenson and James Stokesbury, and a master's thesis written by Robert J. Rogers while attending CGSC in 1965.²³ He is also referenced in a number of other books, but generally he is little more than a footnote. Rogers' thesis is significant because he was able to interview not only Huebner, but also a number of officers who served with him in the 1st ID.

Clearly there are more similarities than dissimilarities in the careers of these two officers. The figure below is a comparison of their career patterns.

Traits of the Great Captains

During the AWC course "A Ride With Some Great Captains," a number of traits were found to have been common among Hannibal, Alexander the

Career Patterns	Sam Damon	Clarence Huebner
Date of Birth	1898	1888
Entered Service	1916	1910
Enlisted Service	Yes	Yes
Mexican Expedition	Yes	No
Source of Commission	Battlefield (WW I)	Appointment from enlisted ranks
Date of Commission	1918	1916
WW I Service	Yes	Yes
Highest WW I Rank	Major	Lieutenant Colonel
Highest WW I Position	Company Commander	Regimental Commander
Instructor Duty	Unclear, however he later served as Infantry Center Commander	Infantry School CGSC (twice)
Highest Award	Medal of Honor Distinguished Service Cross (2) Silver Star (3)	Distinguished Service Cross (2) Silver Star Bronze Star
Staff College	No	1925 (Distinguished Graduate)
US Army War College	No	1929
WW II Service Highest Position Held	Division Commander (Pacific)	Corps Commander (Europe)
Highest Rank Attained	Lieutenant General	Lieutenant General
Retirement Date	Killed in Action-1963	1950
Died	1963	1972

Great, Gustavus Adolphus, Frederick the Great and Napoleon. This section discusses Damon and Huebner in light of those traits.

Robust body and mind. Physically, both exhibited this trait. It is recorded that both were top-notch athletes as youths and maintained top physical fitness condition throughout their careers. Damon is cited for his physical fitness on numerous occasions and was specifically noted for his abilities in field marches and combat. Huebner is similarly noted, especially in leading extensive training programs. He was visible at the lowest level and participated in every physically demanding activity he required his lowest-ranking soldiers to perform, even when he was a division commander—leading by example.

It appears both were exceptionally intelligent. Huebner was the distinguished graduate of his CGSC class. Damon, although short on formal education, is cited as having been the top student in his high school class and having excelled at the Infantry Officer's Course. The novel further details Damon's individual program for self-improvement, which devoted most of his free time to reading and studying military, strategic, tactical and historical writings. *Once an Eagle* further details Damon's battlefield grasp and ability to visualize and identify operational branches and sequels.

Administrative ability. This is a key skill because quite often a major factor of battlefield success is the administrative and logistic support and planning that preceded the battle. Huebner's business school experiences as a young man before he entered the Army clearly helped make him a successful non-commissioned officer. Additionally, his skills in this area are specifically cited in the book *Masters of the Art of Command* as being a key to his success in post-World War II duties in Europe.²⁴ Little is mentioned of Damon's skills in this area. However, he is cited for his knowledge of regulations and doctrine.

Physical courage. Although awards do not always tell the entire story, both were highly decorated for their personal courage and actions during both world wars. Clearly they had individual courage. Neither is cited as being reckless, and both are noted for their concern about their soldiers' safety and efforts to minimize casualties. While physical courage may have been less essential in modern times because leaders were usually more distanced from the front lines than in earlier days, moral courage was necessary. Both Damon and Huebner had the courage to make the tough decisions in the midst of battle or to challenge the powers that be when necessary.

Health. Both suffered serious wounds during World War I. However, it does not appear there were

any severe long-term effects from these wounds. Both are noted throughout their careers for their robust health and high-level physical fitness.

Youth. Although youth may not have been necessary at the most senior levels, as evidenced by Marshall and MacArthur during World War II, it was essential at the division and corps levels. Both Damon and Huebner were roughly the same age as their contemporary division commanders.

Character. Character is the ability to know what is possible, to know what one wants and then to have the courage and determination to get it. Both men exemplified this characteristic. As young men in World War I, they took charge and assumed command when their chain of command was decimated. Throughout their careers, they stood up for what was right and when necessary stuck their necks out.

Possess a fighting spirit. Throughout their careers, both fought and led from the front. Their stories are filled with incidents where their leadership on the battlefield inspired their subordinates to accomplish the task regardless of the situation.

Army Core Values

The seven characteristics described below are the values that guide today's Army. These are the traits we strive for and expect from our soldiers. As detailed above, both Damon and Huebner exemplified these traits.

Loyalty. Establishes the correct ordering of our obligations and commitments, starting with the Constitution, then the US Army, the unit, family/friends and finally self. Unswerving allegiance to the Constitution and the lawful government prevents us from misplacing our loyalties.

Duty. Delineates the sum total of all laws, rules, and so forth, that make up our organizational, civic and moral obligations. Our values originate with duty because we expect individuals to, as a minimum, fulfill their obligations. We often expect individuals to exceed their duty, especially in ethical matters. The nation's highest award, the Medal of Honor, imparts the notion of an individual acting above and beyond the call of duty.

Respect. Denotes the regard and recognition of the absolute dignity that every human possesses. Specifically, respect indicates compassion and consideration of others, including sensitivity to and regard for the feelings and needs of others.

Selfless service. Service before self signifies the proper ordering of priorities. The welfare of the nation and the organization come before the individual's. While the focus is on service to the nation, the idea also requires that the servicemember

properly take care of family and self.

Honor. Circumscribes the complex of all the values that make up the public code for the Army or for any organization. These values include: loyalty, duty, respect, selfless service, honor, integrity and personal courage. Significantly, honor provides the motive for the action and demands adherence to a public moral code, not protection of a reputation.

Integrity. Encompasses the sum total of a person's set of values—his private moral code. A breach of any of these values will damage the individual's integrity. Integrity, closely related to the word *integer*, really refers to a notion of completeness, wholeness and uniqueness.

Personal courage. Depicts the premier military virtue that enables us to persevere despite fear, danger or adversity, no matter what the context happens to be—physical or moral. Personal courage includes the notion of taking responsibility for decisions and actions. Additionally, it involves the ability to perform critical self-assessment, to confront new ideas and to change.

In the last paragraph of the chapter in *Masters of the Art of Command* concerning Huebner, the authors provide their final critique. With minimal changes, their comments could have been written to describe the fictional combat leader Damon, because both were "among the finest young combat officers of World War I . . . grew to become one of the outstanding division . . . commanders of World War II. He combined decisiveness and aggressiveness with a sure tactical touch. He demonstrated unsurpassed leadership in training and in battle; he probably brought up—trained, educated and developed to maturity—more young officers who themselves became general officers than any other commander.

He was, in the highest sense of the term and in the genuine tradition of the United States Army, a leader of men."²⁵

On a more personal note, I first became acquainted with Sam Damon while serving as a second lieutenant at Fort Bragg, North Carolina, during the late 1970s. Television miniseries were then in vogue, and *Once an Eagle* was serialized by NBC. During the evenings *Once an Eagle* was shown, all activities that could be controlled were halted on Fort Bragg so we could run home and watch Damon's trials and tribulations. The following morning all the junior officers gathered for breakfast in their mess halls after physical training to discuss the previous evening's show, scene by scene. Damon became our mentor. While he was not perfect and we could pick out his flaws, we saw in him what we wanted to be and, more important, what we could possibly be as officers. He motivated us to raise both our expectations and standards. In his nemesis, Courtney Masengale, we saw the worst of the officer corps—and what we would do our best to fight against throughout our careers.

Over the years Damon has often served as my example when counseling junior officers and during formal officer professional development sessions. I have given copies of *Once an Eagle* as gifts so many times, that I find myself looking for paperback copies every time I go into a used book store. I have been a proponent of, and advocate for, Damon for nearly 20 years. Researching this article provided me with another role model—Clarence Huebner. It also reinforced the fact that our Army is, and always has been, made up of exceptional individuals who, though not readily recognizable to the general public, stand ready to answer the nation's call to duty. **MR**

NOTES

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13. Blumenson, 170.
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15. Blumenson, 170–71.
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18. Ancell and Miller, 674–75.
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22. Ancell and Miller, 674–75.
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24. Blumenson, 172.
25. *Ibid.*

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Knowing and Doing

Major Michael E. Bigelow, US Army

DURING WORLD WAR I, Major General Hunter Liggett served as a division, corps and army commander in the American Expeditionary Forces (AEF). When he assumed command of the US First Army in autumn 1918, he had already served in the Army for more than 39 years. Before the war, he held a wide variety of operational assignments, including battalion and brigade command. More important, he actively and continuously studied to prepare for *future* war. This preparation for “the next war” served Liggett well in the severe test amid the trenches of France.

Liggett’s ceaseless preparation allowed him to break free of the stereotypical, unimaginative generalship that too often characterized World War I commanders. His study and reflection of nearly four decades allowed him to rise above his personal assignments and develop practical solutions to modern war’s complexities. This was nowhere more apparent than in Liggett’s establishment of a modern, effective command environment. His personal preparation also reflected itself in the great care he took in preparing his units for operations. Throughout his career, Liggett’s leadership remained firmly balanced upon the twin pillars of taking care of soldiers and his own admirable character.

Early Career

After graduating from the US Military Academy in 1879, Lieutenant Liggett joined the Fifth Infantry on the Montana frontier. For most of the next two decades, he served with the same regiment in the West. Despite his long frontier service, Liggett was never involved in any major Indian campaigns, although he did earn the Indian Campaign Badge. In one small skirmish, Liggett’s regimental commander commended his leadership. In 1892, Liggett left the West with his regiment when it was posted to Florida.¹

Historian Edward M. Coffman noted that early 20th-century US Army officers prepared for war

through operational experience, institutional schooling and training maneuvers.² Liggett, to one degree or another, used all three means. Although he missed combat in Cuba, he served there briefly during active operations. Then from 1899 to 1902, he served in command and staff positions in the Philippines during the insurrection. Returning to the United States, he became the Department of the Lakes adjutant general in Chicago. In 1907, he assumed infantry battalion command in the 13th Infantry, stationed at Fort Leavenworth, Kansas.

While at Fort Leavenworth, then Lieutenant Colonel Liggett began his education in the newly founded Army education system. “Though not detailed as a student,” Liggett later wrote, “I managed to assimilate most of what the School of the Lines and the School of the Staff had to offer.”³ He did this through association with instructor, then Lieutenant George C. Marshall. As Marshall described it, he “would give [Liggett] the problem after the class got it. Then I would go over his work, correct his work, after I had the approved solution.”⁴ Through this covert approach, Liggett gained an appreciation for regimental and divisional tactics.

As a 1910 Army War College (AWC) class member, Liggett built on the foundation of his Leavenworth “course.” At the AWC, he prepared for duty on the general staff and learned the tasks of commanders and staffs of larger troop formations. These two schools were particularly important to Liggett and his colleagues. Serving only in small units of a relatively small army, US Army officers relied on the theoretical school instruction to learn the methods of large-scale modern war. However, equally important to Liggett were the associations he made at the schools: Malin Craig, an AWC classmate, later served as Liggett’s World War I chief of staff, and Marshall served as Liggett’s chief of operations.⁵

Upon graduation, Liggett became the AWC director, and later, its president. As the AWC director, he

was instrumental in reshaping its curriculum along the lines of the Leavenworth schools, adding instruction in military history, operational planning and general staff duties. Concurrently, he served as the chief of the primary planning agency on the general staff. In this position, Liggett prepared plans for interventions into Mexico, and he considered ways to improve Philippine defenses.⁶ While serving on the general staff, Liggett also participated in peacetime training maneuvers—in particular, the 1912 Connecticut Maneuvers, which were noted for their use of “after-action reviews.”⁷

From 1907 to 1913, Liggett studied the supply, organization and command of higher units, planning their use through war plans. From 1913 to 1921, he exercised the knowledge he had gained through a variety of active commands ranging from brigade through field army.

After commanding the administrative Department of the Lakes, Brigadier General Liggett assumed command of the Fourth Brigade (Infantry) in 1914. Stationed along the Mexican border as part of the 2d Division, Liggett experienced “actually handling a brigade in the field.” Convinced that a conflict with Mexico was inevitable, Liggett made every effort “to instruct the officers and soldiers [so] that they would be able to take care of themselves, no matter what preponderance force in numbers we might encounter in Mexico.”⁸ To do this, Liggett designed a series of training problems based on actual contingency plans. As part of the training, he had his men construct trench lines and strongpoints. He then used those obstacles as objectives for night attacks. In all of his training, Liggett emphasized the combination of arms—he used artillery, engineers and signal troops to support his infantrymen. One of Liggett’s regimental commanders, Colonel Robert L. Bullard, who later became a fellow corps and army commander in the AEF, thought the training exercises were the most realistic and useful training that he had seen in the Army.⁹ At Fourth Brigade, Liggett demonstrated the innovation and practical preparation that would mark his future commands.

In 1915, he arrived in the Philippines to take command of the 1st Infantry Brigade (Provisional). There he continued to stress training and preparation for war. Together with his aide, Captain George C. Marshall, Liggett conducted tactical instruction and exercises. In particular, he used staff rides to familiarize commanders with the tactical possibilities in defending the island, and he found “the study and practical working out of the problems of defense were most instructive.”¹⁰ In April 1916, Liggett assumed command of the entire Philippines Department, the Army’s largest overseas command. A month before

In autumn 1917, Liggett wrote, “A general officer has nothing to learn in the front lines. . . . [T]he nearer one gets to the first line, the less one sees. The perspective is smothered in the close-up.” Ironically, Liggett spent much of his time visiting the front . . . [and his] frequent visits forward allowed him to remain in touch with the actual situation and conduct his operations accordingly. Consequently, his operations were marked by a flexibility uncommon among AEF commanders.

America entered World War I, he was promoted to major general, one of only seven in the Army.¹¹

After the US declaration of war in April 1917, Liggett returned to the United States to command the Western Department, and in September, he assumed command of the 41st Division.

Corps Command

Before he had been in command for a month, Liggett was ordered to France to tour the Western Front to, as Liggett put it, “inform ourselves at first hand what was in store for us.” He inspected both the British and French methods of trench warfare and watched the planning and execution of a British attack against Passchendale Ridge, making mental notes on tactics, organization, training, methods of supply and even morale. The group of 15 major generals and their chiefs of staff also visited the AEF headquarters at Chaumont.¹²

General John J. Pershing, the demanding AEF commander, conducted a medical survey and character analysis at Chaumont. Normally, he found the generals too old or inactive, or otherwise not up to the rigorous demands of the Western Front and quickly sent them back to the United States. Liggett could have easily been dismissed on those grounds himself, since he was 60 years old. Yet Pershing must have seen something in Liggett and decided to keep him in France. Liggett recognized that his weight might have been a concern with Pershing and later commented, “I never have inquired, and the reports continue to be only hearsay to me, but unquestionably there is such a thing not only as being too old to fight but too fat. That disqualification is the more serious if the fat is above the collar.”¹³

Initially, Pershing recommended Liggett as the American military representative on the Supreme War Council, the Western Allies’ political and military forum. When Secretary of War Newton Baker

Convinced that a conflict with Mexico was inevitable, Liggett . . . designed a series of training problems based on actual contingency plans. As part of the training, he had his men construct trench lines and strongpoints. He then used those obstacles as objectives for night attacks. In all of his training, Liggett emphasized the combination of arms—he used artillery, engineers and signal troops to support his infantrymen.

selected General Tasker Bliss for that position, Pershing named Liggett US I Corps commander in January 1918. When he took command of the corps, he assumed *administrative* control of four US divisions, only one of which was on the front lines. Consequently, over the ensuing months, Liggett and his staff supervised the divisions' training, equipping and supplying, making frequent inspections and tours. Although the French retained *tactical* control of his divisions, Liggett often acted on his division commanders' behalf and argued to make tactical adjustments, if necessary. More important, he used this time to prepare his corps for war. He and his staff studied the military situation, especially in the southern portion of the line, which would later become the American sector. "The time from January 20th to June 1918," Liggett noted, "was well utilized in bringing the Corps Staff up to the state of efficiency which later distinguished it in all work."¹⁴

For the first six months of 1918, a growing number of US divisions took over active sectors on the line, but I Corps did not. Before the German offensives of March and April 1918, Pershing had planned for the corps to take over the quiet Toul sector. A series of German offensives forced Pershing to use American troops to bolster the Allied fronts. The result was that the US divisions, although still administratively controlled by Liggett, fought under the tactical control of French or British commanders. Liggett waited patiently. As Coffman, the best AEF historian, remarked, Liggett "was no prima donna, however; he could wait for opportunity with equanimity."¹⁵ The waiting ended in July 1918.

Early Battles: July to September 1918

On 4 July 1918, over a year after American troops had first landed in France, Liggett's I Corps took over an active sector northwest of Chateau-Thierry. The sector was at the apex of a bulge in the Allied lines left from the Germans' recent spring and early summer



Hunter Liggett, circa 1914.

offensives. Two weeks after assuming the position, I Corps counterattacked, as part of the French Sixth Army, toward the Vesle River. Despite their inexperience and fierce German counterattacks, Liggett and his corps were more successful than the flanking French corps. "From the very beginning of the fighting," Liggett later wrote, "all commanders were warned about the futility of making the front lines too heavy, and all were enjoined to attack machine guns by envelopment and never directly."¹⁶

By 5 August, I Corps, now flanked by fellow US III Corps, reached the Vesle. For the next six weeks, I Corps remained on the defensive as the Allies prepared for a general offensive against the Germans.¹⁷

Before this offensive was undertaken, the newly formed US First Army, under Pershing's direct command, would launch an attack to erase the four-year-old St. Mihiel salient. The operations order called for Liggett's corps and Major General Joseph Dickman's IV Corps to attack northward to link up with Major General George Cameron's V Corps advancing from the south. A French corps would conduct holding attacks against the nose of the salient.¹⁸

A few days before the battle, Liggett called his division commanders together, and "every detail of the approaching battle [was] carefully explained." Liggett and his commanders thoroughly reviewed the written order to ensure that each subordinate commander fully understood not only his mission, but those of the divisions to the right and left. This was particularly important, since he told his commanders to press their units forward without checking alignment with flanking divisions, as long as their flanks were unduly exposed. For I Corps, Liggett later wrote, "the advance was to be continued until stopped by the enemy." He clearly pointed out what he saw as the decisive point of the battle—the ground north of Thiaumont. Liggett also stressed the need to keep the front-echelon attack relatively weak, with a strong reserve out of German artillery range.¹⁹

In 1915, he arrived in the Philippines to take command of the 1st Infantry Brigade (Provisional). There he continued to stress training and preparation for war. Together with his aide, Captain George C. Marshall, Liggett conducted tactical instruction and exercises. In particular, he used staff rides to familiarize commanders with the tactical possibilities in defending the island. . . . In April 1916, Liggett assumed command of the entire Philippines Department, the Army's largest overseas command.

With three divisions in the lead and one in reserve, Liggett's corps attacked on 12 September. With his commanders fully informed of his desires, Liggett's attacking columns moved quicker than anticipated. In less than four days, I Corps had reached its final objectives and, in the process, captured almost 5,000 prisoners and over 130 guns, with minimal casualties. Within 10 days, Liggett and his corps would begin a more serious test, against a more determined enemy.²⁰

Meuse-Argonne: 26 September to 14 October 1918

As part of the general Allied offensive to drive Germany out of France, US forces were to attack into the heavily defended Meuse-Argonne region. The American objective was the German lines of communication running through Sedan and Metz. To reach this, Pershing and his First Army staff planned for three corps, consisting of 12 divisions, to rapidly advance on line, seeking to overrun the German main defenses before they could be reinforced. Cameron's V Corps was to attack in the center to seize the key terrain of Montfaucon Hill, while Bullard's III Corps and Liggett's I Corps would drive deep on a flank and force the enemy to withdraw. The attack was scheduled for 26 September.²¹

Pershing assigned Liggett the western sector anchoring First Army's flank. Unfortunately for Liggett and his troops, their sector included the forbidding Argonne Forest. "The region," Liggett later noted, "was a natural fortress while the Virginia Wilderness in which Grant and Lee fought was just a park."²² Moreover, because the St. Mihiel operation had concluded only 10 days earlier, the Americans were unable to use the veteran divisions from that battle for the Meuse-Argonne's opening stages, resulting in unfamiliar command arrangements. Of I Corps' four divisions, none had served under Liggett before late September.²³

Despite these problems, I Corps made reasonably good initial progress. Using his characteristic encircling attacks rather than direct frontal assaults, Liggett circumvented the most formidable defenses and drove nearly 4 miles up the Aire River valley on the first day. Army orders to stop along an objective line, however, stalled I Corps' momentum. That delay

and German reinforcements slowed the American advance over the next several days. Faced with the strongest German lines, Pershing had to suspend forward movement on 30 September.²⁴

The US First Army resumed its advance on 4 October with an attack aimed at the German defenses along the Cunel and Romagne Heights. The attack made little headway against the well-organized German machinegun and artillery defenses. As David Trask, former Army chief historian, points out, "Only the I Corps made a useful advance, positioning itself to penetrate the Argonne." Pershing ordered more attacks 7 October and again 14 October. They made only limited advances against stiff German resistance, formidable terrain and increasing logistic and tactical difficulties.²⁵

In the midst of these weeks of frustrating attrition so typical of the war's trench warfare, Liggett showed his characteristic tactical sense with a bold and innovative attack that cleared the Argonne Forest. Throughout early October, Liggett's troops had advanced far enough to enable a blow against the Argonne's northwest flank, rather than more frontal assaults. Thus, Liggett proposed a division attack to move past the German defenses. The attack was risky—it moved perpendicular to the rest of the American advance and was subject to converging fires and having its northern flank exposed. So bold was this plan that the French liaison officers and most of Liggett's own staff opposed it. Only Colonel Craig, his chief of staff, supported him. Yet against this opposition, Liggett proposed it to Pershing's chief of staff, Major General James McAndrew, who authorized it. On 7 October, Liggett launched the attack and succeeded in forcing the Germans out of their Argonne defenses.²⁶

With mounting pressure from Allied leadership and increasing logistics problems, Pershing decided to relinquish First Army command. In early October, Pershing had intimated that he would turn over command to Liggett; nine days later, he called Liggett to First Army headquarters to take command immediately. There, Liggett learned of the planned 14 October offensive. Rather than take charge in the midst of a major operation, Liggett asked if he could assume command after the planned operation had

Using his characteristic encircling attacks rather than direct frontal assaults, Liggett circumvented the most formidable defenses and drove nearly 4 miles up the Aire River valley on the first day. Army orders to stop along an objective line, however, stalled I Corps' momentum. That delay and German reinforcements slowed the American advance over the next several days.

been completed. Furthermore, it would give him a chance to learn the condition of the army.²⁷

Remodeling an Army: 16 October to 1 November 1918

As the Americans attacked, Liggett visited the corps and division headquarters to learn the "conditions on the line, the temper of the troops, and their commanders." Liggett was "acquainted with everything of this kind on the First Corps front, and now needed the same knowledge as to the entire line." After he assumed command on 16 October, Liggett and his staff continued these visits for two more weeks. Not only were they looking for ways to "tighten up," they made "every effort to profit [from] past mistakes and encourage the fighting spirit of the army for the impending attack."²⁸

What Liggett and his staff found as they visited the First Army was not good. One American staff officer called it "a disorganized and wrecked army." All of the divisions were tired and depleted from the weeks of bitter fighting. Several divisions were combat-ineffective, with less than 25 percent of their authorized strength. Liggett estimated that there were over 100,000 stragglers, draining the army's strength. A lack of draft animals immobilized the army's artillery. The army needed to rest and refit, so for the next two weeks, Liggett allowed it to do just that and resisted pressure to do otherwise.²⁹

More important, however, Liggett retooled and remodeled First Army. Starting within his headquarters, he strengthened his staff with officers such as Colonel George C. Marshall, his G3, and then met with his staff daily. To prepare First Army for the impending attack against German defenses, Liggett retrained his infantry and artillery. Some infantry received special training in techniques for attacking strongpoints, while the rest were trained to bypass these defenses. Artillery batteries laid out supporting plans to use interdicting fires to isolate infantry objectives and to conduct counterbattery fires against German artillery. Perhaps the key factor was that commanders were indoctrinated in maximizing supporting fires and using gas to suppress enemy defenses.³⁰

As Liggett prepared his three corps for future operations, he was under constant pressure from Pershing to resume the offensive. Liggett resisted the pres-

sure and told the AEF commander that First Army was too exhausted for any major assault. Finally, after Pershing persisted in hanging around the First Army headquarters at Souilly, Liggett had to tell him to go away and forget First Army's problems.³¹

Although Liggett did not want to launch a major attack until he had remodeled his army, he believed that "further local advances were essential to secure the best possible line from which to launch [First Army's] general attack." All three corps launched local attacks to clear forests, seize hills and otherwise secure favorable positions. The bloodiest of these local operations was I Corps' 10-day battle to capture Grandpré on 27 October.³²

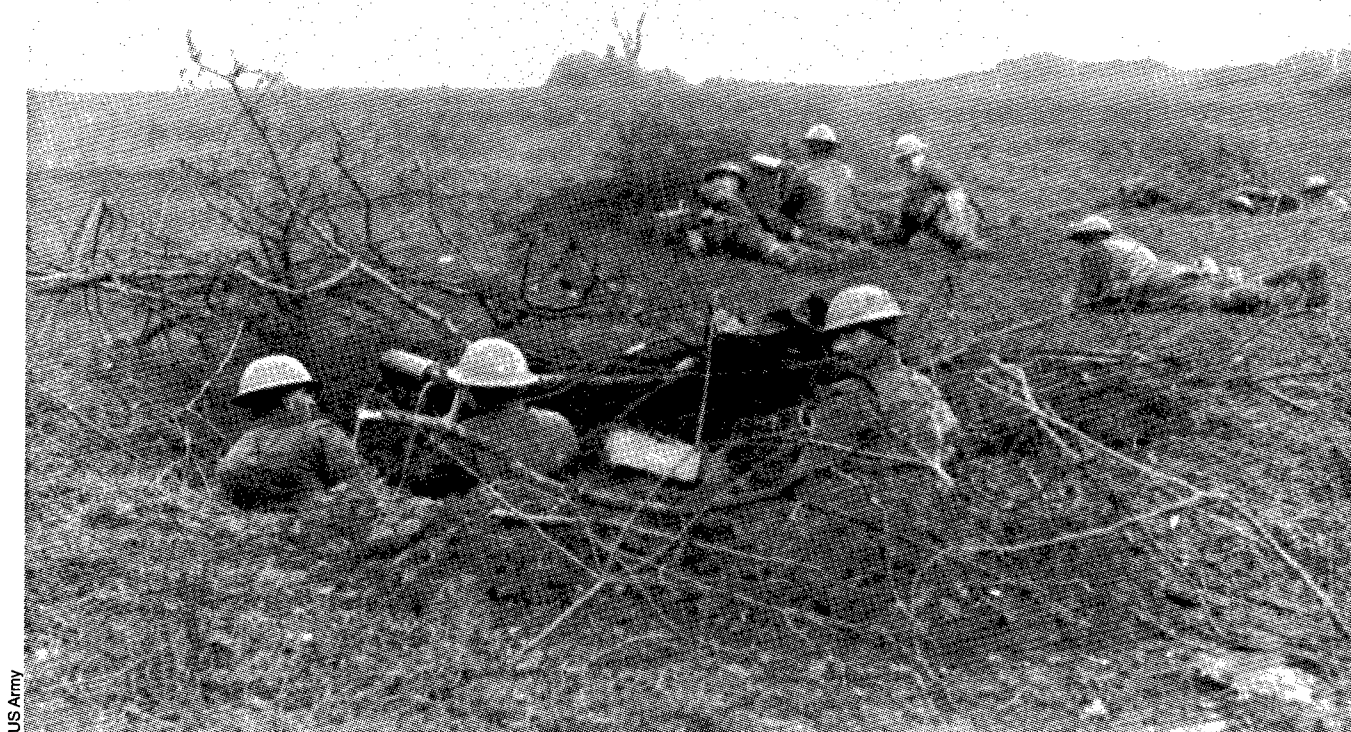
As the battle for Grandpré raged, Liggett met with General Henri Gourand, the French Fourth Army commander. The American told the French general that he would be ready to attack on 28 October, but Gourand said he could not attack until 2 November. The Allies finally agreed on 1 November, a delay of four days. Liggett wisely used the delay to "have everything in complete readiness."³³

In the four days before opening the offensive, First Army readied itself for the upcoming attack. In the rear, service troops stockpiled supplies and repaired roads. Artillery placed fires on suspected and known enemy artillery and reserve positions. In the front lines, units made their combat checks and final preparations.³⁴ Meanwhile, Liggett, as was his habit, called in his subordinate commanders and coordinated their plans. With the corps commanders and their chiefs of staff, Liggett went over every detail of the plan. He also made his commander's intent clear: reach the ridgelines on the first day to preclude the possibility of a counterattack. As a result of Liggett's painstaking preparations, confidence permeated the First Army, and Liggett recalled "nobody had any doubt about the success of the coming drive."³⁵

Into Battle: 1 to 11 November 1918

On 1 November, Liggett's First Army attacked northward toward the Meuse River. Liggett's main objective was the Barricourt Ridge in the center, a realistic advance of 5 miles. Then he would thrust west to outflank the Bougogne Forest, turn northeast and drive to the river. To accomplish this mission, Liggett had a powerful instrument in First

First Army machine gunners beyond Giberoy, France, 12 November 1918.



US Army

Liggett's troops had advanced far enough to enable a blow against the Argonne's northwest flank, rather than more frontal assaults. Thus, Liggett proposed a division attack to move past the German defenses. The attack was risky—it moved perpendicular to the rest of the American advance and was subject to converging fires and having its northern flank exposed. So bold was this plan that the French liaison officers and most of Liggett's own staff opposed it. . . . Yet against this opposition, Liggett proposed it to Pershing's chief of staff, Major General James McAndrew, who authorized it. On 7 October, Liggett launched the attack and succeeded in forcing the Germans out of their Argonne defenses.

Army—with a strength of one million men supported by over 4,000 artillery pieces. Every corps had solid leaders and experienced staffs, and all of Liggett's divisions were seasoned veterans.³⁶

On the first day, V Corps in the center easily gained control of the Barricourt Heights, while III Corps, in the east, kept pace and advanced to the Meuse River. Only I Corps, in the west, failed to make much progress. When Pershing expressed concern about I Corps' lack of success, Liggett remarked that "there would be no enemy in front of the corps the next day."³⁷ Liggett was right, and the next day, I Corps succeeded in outflanking the Bougogne Forest and clearing the French Fourth Army's flank. Over the next several days, Liggett's army continued to advance as fast as it could displace its artillery and supplies forward. At one point, the advance was so rapid that it ran off the AEF headquarters' maps. By 4 November, Liggett had elements along the heights overlooking the Meuse.³⁸

Liggett's preparations paid off. Infantry and artil-

lery coordination was superb. Troops pushed through and around German strongpoints, while special assault troops reduced them. Improved staff work and coordination afforded First Army the flexibility to bypass German defenses. "In contrast to former attacks," commented Pershing biographer Donald J. Smythe, "in which a fairly good first-day advance was followed by increasingly smaller ones, this attack was different. The third day's gain *exceeded* those of the first. The Army not only had an initial punch; it reached the point where it could keep going."³⁹

A week after Liggett's forces reached the Meuse, the Armistice was called. Under Liggett's tutelage, the American units had finally developed into a well-trained, well-organized fighting force.

A Professor of War and Human Nature

Throughout his career, Liggett succeeded because, as his AEF colleague Bullard noted, "He knew how to do it." This knowledge came from Liggett's con-



George C. Marshall
and Hunter Liggett
in France, 1918.

George C. Marshall Foundation

Liggett retooled and remodeled First Army. Starting within his headquarters, he strengthened his staff with officers such as Colonel Marshall, his G3, and then met with his staff daily. . . . Some infantry received special training in techniques for attacking strongpoints, while the rest were trained to bypass these defenses. Artillery batteries laid out supporting plans to use interdicting fires to isolate infantry objectives and to conduct counterbattery fires against German artillery. Perhaps the key factor was that commanders were indoctrinated in maximizing supporting fires and using gas to suppress enemy defenses.

tinuous and thorough preparation for war. As Liggett himself wrote, "It behooves all officers of whatever grade to fit themselves, by unceasing thought and study, for the exercise of command. No one knows how soon his services may be urgently required in

defense of his country. Much can be learned from an intelligent study of military history, and no one can be too well prepared for the great responsibilities of war."⁴⁰

This unceasing study of war was especially important for Liggett, since it allowed him to break free from the stagnation of the small, frontier army that he entered in 1879. Although he spent the first 20 years of his career in an army where the largest tactical unit was a regiment that only rarely got together for training and employment, he was able to successfully command a division, corps and army during World War I. When he served with the Fifth Infantry, he fought with horse cavalry and single-shot Springfield rifles, yet in 1918, he was able to integrate heavy artillery, machineguns and tanks. As British military theorist and historian B.H. Liddell Hart noted, "Liggett had preserved himself from stagnation by his interest in reading."⁴¹

Liggett's personal preparation for war took two forms: schools and reading. After 1907, he took advantage of the growing Army officer educational system. Although he never "attended" the Leavenworth schools, through his friend, George Marshall, he was able to gain an appreciation for the doctrinal approach to regimental and divisional tactics. Then he attended the AWC, where he learned about the operations of larger units. The thread that provided Liggett with continuity in his military education, however, was not the schools, but his own reading and study program. He examined the campaigns of Napoleon and Helmuth von Moltke the Elder. More important, he studied the American Civil War, arguably the first modern war.⁴² Yet unlike some of his peers, Liggett's theoretical preparation for war took a decidedly practical form in the field.

When Liggett commanded a unit, he took great care in preparing it for battle. In both prewar brigades he commanded, he used realistic training exercises, staff rides and wargames to ready them for war. When he assumed I Corps command in January 1918 and waited six months for an active sector, he used the time to train his corps staff. He also established corps schools for specialized training programs. His remodeling and retraining of First Army in October 1918, however, remains the greatest illustration of his painstaking preparation of units for battle. It also showed the results of both his personal and unit preparation: a well-orchestrated and successful operation in November 1918.

Liggett's personal preparation also resulted in an effective, modern command environment that combined his effective use of staffs, a personal awareness of the current situation and his subordinates' clear understanding of the operational plan.

When he took command of the corps, he assumed *administrative* control of four US divisions, only one of which was on the front lines. Consequently, over the ensuing months, Liggett and his staff supervised the divisions' training, equipping and supplying, making frequent inspections and tours. Although the French retained *tactical* control of his divisions, Liggett often acted on his division commanders' behalf and argued to make tactical adjustments, if necessary. More important, he used this time to prepare his corps for war.

During the war, Liggett placed great importance on having an effective staff. He believed that for "a staff to be effective [it] must possess ability, loyalty and military character, and, to produce the best results, it must be harmonious. To secure the loyalty of his military subordinates, a commander must set the example of perfect loyalty to his superiors. There is no place in the military profession for envy and jealousy." While valuing teamwork, Liggett also demanded that his staff relieve him of the required detailed planning and management, so he could concentrate on the commander's duties. By empowering his staff to deal with the minor matters, he could concentrate on commanding, coordinating and training his men.⁴³ Yet, while he relied heavily on his staff, Liggett—unlike many AEF commanders—was never overshadowed or overpowered by them, as demonstrated by his decision for the flanking attack against the Argonne Forest in October 1918.

By relying on his staff to run the daily routine business, Liggett could stay in touch with the current situation on the front. Of his visit to the British front in autumn 1917, Liggett wrote, "The first thing I determined to my own satisfaction at the Front was that a general officer has nothing to learn in the front lines. . . [T]he nearer one gets to the first line, the less one sees. The perspective is smothered in the close-up." Ironically, Liggett spent much of his time visiting the front. In one case, through his personal observation during the St. Mihiel operation, he became convinced that a forested area was hiding an enemy strongpoint, and he directed troops to outflank the forest rather than assault it directly. More often than not, however, Liggett visited his subordinate commanders at their advance headquarters. As a corps commander, he kept his advance headquarters practically abreast of the division headquarters so he could properly control the battle. Whether he was visiting the front lines or his subordinate commanders, Liggett's frequent visits forward allowed him to remain in touch with the actual situation and conduct his operations accordingly. Consequently, his operations were marked by a flexibility uncommon among AEF commanders.⁴⁴

Throughout his World War I operations, Liggett

worked hard to make sure that his subordinates clearly understood the operational plan and their role in it. "It is always possible," Liggett noted, "to misinterpret a written order, either as to what is expected of you or of your neighbor." Before every major operation, he would assemble his subordinate commanders, often with their chiefs of staff, and review the plan, explain their roles and his intent. At these conferences, he often offered tactical guidance to his commanders, especially in methods to prevent the useless loss of life.⁴⁵

Although developed by his preparation for war, and exercised through his effective command environment, Liggett built his generalship upon the twin pillars of taking care of his soldiers and his own character. Liggett clearly recognized that soldiers stood at the center of all military operations. "No matter how much the machinery of war may be developed," he noted, "in the final analysis it is the *man* we must understand. Man, with all his strengths and all his weaknesses, always has been and always will be the basic element." To take care of that basic element, Liggett tried to ensure that his soldiers were properly supplied. Moreover, Liggett paid close attention to safeguarding and protecting his soldiers. He exhorted his commanders to keep their front lines relatively weak to prevent useless exposure to enemy artillery and machinegun fires, and to attack strongpoints indirectly rather than frontally. Furthermore, he used any and all measures to support his advancing riflemen. Once, he even authorized the use of skunk gas, because he thought it would force the Germans into gas masks, allowing our troops to attack unimpeded. Normally, however, he emphasized the more traditional supporting arms—artillery, tanks and airplanes—to enhance his firepower.⁴⁶

Compassion for his troops was only one aspect of Liggett's truly admirable character. Retired Major General Frank D. Baldwin, a winner of two medals of honor, said that Liggett "has no equal in professional ability or noble character among our American generals." He was loyal to subordinates and superiors alike. Tactful and good-humored, he was able to appreciate another man's point of view, yet

Although he never "attended" the Leavenworth schools, through his friend, George Marshall, he was able to gain an appreciation for the doctrinal approach to regimental and divisional tactics. Then he attended the AWC, where he learned about the operations of larger units. The thread that provided Liggett with continuity in his military education, however, was not the schools, but his own reading and study program. . . . Yet unlike some of his peers, Liggett's theoretical preparation for war took a decidedly practical form in the field.

remain firm in his own convictions. Fellow army commander Bullard remarked that Liggett "had the valuable faculty of seeing what was important and what not." Yet, above all, Liggett lacked self-centeredness. Instead of concentrating on his own aggrandizement and position, he usually just went about the task at hand, which invariably revolved around preparing for war.⁴⁷

Liggett offers the modern officer a singular perspective on leadership. Although he displayed attributes common to most prominent generals—tactical competence, personal leadership and boldness in battle—his most outstanding feature was the great effort he took to prepare himself for future war. Although he received some assistance from a newly

formed Army education system, most of this preparation came through his own study and reading program. Through his ceaseless study and reflection on war, Liggett was able to transcend personal experience, constrained resources and contemporary technology to grasp military art's essentials. Consequently, instead of reacting to change in an unimaginative way, he could readily adapt to those changes and produce innovative methods. He applied his personal attitude of preparation to his units in practical, realistic training and careful planning. While the example of Liggett's command environment will serve modern officers well, perhaps more valuable is the model of his unceasing thought and study to prepare for war. **MR**

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Fifth-Century Advice for 21st-Century Leaders

Major John Mark Mattox, US Army

THE US ARMY'S preparations for entering the 21st century have been both deliberate and extensive. The futuristic Army XXI initiatives include, among other things, a thorough revision of doctrine and landmark initiatives in technological research, acquisition and logistics, force structure and personnel management. Any highly successful corporation must consider such things to secure its share of the emerging market and enhance the future bottom line.

But the Army is not a corporation spending the majority of its waking hours working to produce goods or services. To say that the Army seeks to secure a "market share," or worse, that it seeks to "corner" a market, would be merely to attempt a crass and superficial analogy that utterly misses the point of the Army's existence. Most important, the Army does not have a "bottom line" that even remotely resembles bottom lines in the corporate world. That is why budget-conscious government officials sometimes find it difficult to ascertain whether the Army is achieving its goals when it is not actually engaged in combat.

Fortunately, some who understand the US defense establishment's unique character have recognized that for the Army to successfully meet 21st-century challenges, good business techniques alone will not suffice. Future Army leaders will require, more than ever before, a commitment to those moral values that are the source of enduring strength in a free society.

However, we must be very clear that the Army cannot force an "updating" of morals in the same way that it can—and must—force an updating of its doctrinal, managerial and technological systems. These latter systems must keep pace with current technology. If they do not, they will be left behind as the rest of the world progresses. Moral values, on the other hand, are by their very nature immune to updating.

Indeed, any institution that seeks to "update" its moral values succeeds in doing nothing more than pulling up anchor and floating—often quite aim-

Any institution that seeks to "update" its moral values succeeds in doing nothing more than pulling up anchor and floating—often quite aimlessly and, perhaps, even perilously. To where does it float? Elsewhere. That is because a redefinition—which, in the case of morals, is what updating really amounts to—changes the institution's nature, character and direction. Whatever it was becomes something different.

lessly and, perhaps, even perilously. To where does it float? Elsewhere. That is because a redefinition—which, in the case of morals, is what updating really amounts to—changes the institution's nature, character and direction. Whatever it was becomes something different.

Moreover, moral values, unlike technologies, are in an important sense "backward looking," not forward looking. That is why leadership manuals, unlike technical manuals, invoke images of moral heroes from the past, such as General George Washington at Valley Forge or Colonel Joshua Chamberlain at Gettysburg. Indeed, moral values tie us to ideas deeply rooted in the past. Although looking to the past for answers on important matters is hardly a popular idea, it has served military leaders of character well throughout the ages. This is so because moral truths do not change with time, nor do they appear as generational creations. For example, even if a generation or a whole society collectively pronounces a practice as "moral"—such as slavery in the antebellum South—the mere pronouncement does not make it so. The passage of time always bears out this point. Rather, morals are better described as the "fixed furniture" of the universe. They are discovered, not invented. It is precisely for this

The moral “rules of engagement” cannot be reduced to an algorithm; they require thoughtful application in both war and peace. . . . Augustine used the analogy of a famous physician who prescribed a remedy to a sick man. The treatment worked; so when, on a future occasion, the man became sick again, he attempted a self-diagnosis and prescribed for himself the remedy that the doctor had given him previously. However, this time the man only became sicker. When he went to the physician for an explanation of why the cure did not work the second time, the physician said that although the symptoms may have appeared to be the same, the difference in the man’s present circumstances dictated an altogether different treatment.

reason that it was wrong a thousand years ago for a soldier to lie, cheat or steal, it is still wrong today, and it will be wrong a thousand years hence.

Accordingly, it should come as no surprise that thoughtful, introspective past military leaders have made some discoveries concerning moral truths that could greatly benefit the US Army — a values-based institution — as it seeks to promote peace and stability in a world that sometimes pays only lip service to moral values.

Where to Look

There are, of course, many places from the past where one could look to gain insights into what constitute the enduring moral leadership values upon which truly successful armies are built. However, the fifth century A.D. holds some particularly valuable lessons in moral virtue for military leaders preparing to step into the 21st century.

Although temporally distant from the present, the fifth century, in certain important respects, was remarkably like our own day. Consider the parallels: the fifth century was a time of tremendous international political and military transformation. Rome, the Western world’s only superpower, found itself engaged, or threatened with engagement, in numerous small-scale regional conflicts. Some of them were conventional wars, but the majority were military operations other than war. Nomadic, pastoral tribes from central Asia, such as the Huns, undertook troublesome insurgent operations that stretched the resources of a once-great Roman Imperial Army, so much so that the army found itself under increasingly stringent budgetary constraints and increasingly reliant upon the Roman equivalent of the national guard to “take up the slack.” As if the Huns were not enough, Rome found the Vandals, a Germanic tribe from the north, an even less malleable adversary as Rome sought to shape its foreign policy. The Vandals overran Gaul and Spain and then sallied into North Africa.

It was in North Africa, however, that the Vandals encountered the influence of Augustine of Hippo,

one of the greatest Romans of the time and by far the most important philosopher Africa has ever produced. Several of his more than 100 books are recognized universally as belonging among the world’s greatest literary treasures. Moreover, for a thousand years following his death, Augustine’s pronouncement on virtually any issue on which he took a position was considered the authoritative “last word” among European intellectuals.

Augustine was a Catholic bishop who was posthumously canonized as a saint. Membership in the profession of arms would have been incongruous with the demands of his priestly pursuits. Nevertheless, from among over 200 of his surviving letters, some of which were written to soldiers fighting in North Africa, modern military leaders can find some of the most profound expressions that can be found anywhere, from any period of history, of what it means to be a morally virtuous military leader.¹

Marcellinus:

Translating Moral Theory into Practice

One of Augustine’s correspondents, Marcellinus, was a Roman officer. He was given an assignment not unlike one a 21st-century military leader might expect to receive. He was commissioned by Emperor Honorarius to convene a conference in North Africa to resolve a contentious dispute, known in history as the “Donatist Controversy,” which had erupted repeatedly into violence short of general war. Marcellinus found himself in the position of having to undertake a protracted peace-enforcing operation. Although he was unable to achieve a solution that pleased everyone, his letters to Augustine and Augustine’s replies clearly indicate that he was a leader intent on doing the *right* thing, even at great personal sacrifice.

Augustine recognized Marcellinus as a military leader of character. Hence, Augustine was able to teach him some important leadership principles that probably would have eluded one less sensitive to the need to do the right thing for the right reason.

A leader of character will, by analogy, look beyond the letter of the moral rule to assess how to apply it to the nuances of a different set of circumstances.

For example, the moral military leader who truly cares for the welfare of his subordinates may be willing to risk criticism for administering different punishments to two soldiers for the same offense when he judges that individualized treatment will best serve the long-term interests of them both. Marcellinus' mentor was by no means advocating some sort of "situational ethics" for soldiers. He simply wanted Marcellinus to understand that true virtue includes not only a knowledge of moral principles but also how to *apply* them in diverse circumstances.

Augustine pointed out to his willing pupil that the popular view of ethics was nothing more than a set of behavioral rules that truly constituted an impoverished view of what it means to live and to lead morally. The moral "rules of engagement" cannot be reduced to an algorithm; they require thoughtful application in both war and peace.

To solidify his point, Augustine used the analogy of a famous physician who prescribed a remedy to a sick man. The treatment worked; so when, on a future occasion, the man became sick again, he attempted a self-diagnosis and prescribed for himself the remedy that the doctor had given him previously. However, this time the man only became sicker. When he went to the physician for an explanation of why the cure did not work the second time, the physician said that although the symptoms may have appeared to be the same, the difference in the man's present circumstances dictated an altogether different treatment.²

Continuing his explanation to Marcellinus, Augustine pointed out that a leader of character will, by analogy, look beyond the letter of the moral rule to assess how to apply it to the nuances of a different set of circumstances. For example, the moral military leader who truly cares for the welfare of his subordinates may be willing to risk criticism for administering different punishments to two soldiers for the same offense when he judges that individualized treatment will best serve the long-term interests of them both. Marcellinus' mentor was by no means advocating some sort of "situational ethics" for soldiers. He simply wanted Marcellinus to understand that true virtue includes not only a knowledge of moral principles but also how to *apply* them in diverse circumstances.

Future military leaders will have to cope with a staggeringly broad spectrum of moral circumstances. Almost certainly they will find themselves operating among peoples who do not embrace their values. In fact, they might find themselves among

peoples whose moral sensitivities have been dulled by protracted civil war in which indiscriminate killing has become the norm. Such settings will require military leaders of character who can correctly judge—on tactical grounds and also on moral ones—when to take life and when to preserve it.

The difference between wartime and peacetime is great. Nevertheless, war does not license the jettisoning of moral values. War is not an amoral condition. Rather, if ever there is a time when one stands in need of the restraining influence of moral values, it is during war, and Augustine understood that. Our future leaders must never forget this. In the information-age wars, every pull of the trigger and every civilian casualty will be subject to public scrutiny. Military leaders will be expected to ensure that every shot fired is both tactically *and* morally appropriate. Americans simply will not accept another My Lai.

As Augustine informed Marcellinus, he saw no necessary conflict between military and moral imperatives. Whatever conflict one might perceive to exist between the two was resolvable by applying unchanging moral principles to both concerns. Augustine described conduct in war for Marcellinus this way: leaders of character will fight wars not only with a military aim, but also with a *moral* aim. "Wars might be waged by the good," said Augustine, "in order that those vices might be abolished which ought, under a just government, to be either extirpated or suppressed."³

From this perspective, the soldier is not merely the executioner hired by the state to do its most unsavory work. Rather, the soldier's work, properly understood, is to defend the defenseless, guarantee justice and restore moral virtue. The military leader is vested with the charge to help soldiers understand their high calling's true nature, and ensure the proper use of the special trust that is placed in them. For the military leader, this implies that moral leadership sometimes requires both the leader and the led to

Augustine appears to be one of the first to argue for the efficacy of what we now call the “surgical strike.” As he elsewhere pointed out, “he whose aim is to kill is not careful how he wounds, but he whose aim is to cure is cautious with his lancet; for the one seeks to destroy what is sound, the other that which is decaying.”

bear burdens in the name of self-sacrifice that cold, hard justice alone would not require them to bear. Thus, while a 21st-century repeat of Sherman’s march to the sea might pass the Clausewitzian test for strategic adequacy, it could also leave in its wake such gratuitous suffering that the world might view the US Army as having ceded the moral high ground merely in the name of continuing politics by other means.⁴

Another valuable lesson Augustine taught Marcellinus was that revenge is *never* a good motive for military action. Even if the policy motivations that underlie the order for military action are founded on revenge, true soldierly integrity demands that the executors of that action must purge themselves of all desire for mere revenge. The military leader bent on vengeance loses

perspective and stops focusing on the moral imperative to allow no more violence than is necessary to accomplish the military mission and starts focusing on giving the enemy his or her due. The long moral tradition of which Augustine is a part points out, and history at large attests, that retaliation and reprisal, if they serve any moral purpose at all, serve it only as measures of last resort. That is why General Ulysses S. Grant is still remembered for being devoid of a spirit of vengeance and retribution as he accepted General Robert E. Lee’s surrender at Appomattox. Conversely, the international community clearly and unhappily agrees that the continuing bloodshed in Bosnia and the Middle East is a classic example of a cycle of vengeance.

Of course, the military leader must be willing to execute such measures of violence as are necessary to accomplish the assigned mission. He also must maintain the strict discipline of subordinates. In-

deed, the enemy’s aims often cannot be countered without a display of what Augustine called “benevolent severity.”⁵ For instance, if the military leader merely seeks the destruction of his enemies, he might

only at the risk of losing personal virtue—a thing that is very difficult to recover. Hence, Augustine warned that leaders “must be on [their] guard, lest, through desire for revenge, [they] lose patience itself—a virtue which is of more value than all which an enemy can, in spite of resistance, take away from [them].”⁶

Military leaders might, Augustine opined, sometimes find themselves the personal objects of injustices inflicted by malevolent subordinates, peers or superiors. Indeed, as long as human nature remains what it is, ill-intentioned people will be found, and an army is not exempt

from their interference. Even in these cases, however, Augustine argued that a military leader of character will tend to forgive and forbear. As pertaining to such matters, Augustine said, “Why should we prolong the debate, and not rather begin by inquiring for ourselves how it was possible that the Republic of Rome was governed and aggrandized from insignificance and poverty to greatness and opulence by men who, when they had suffered wrong, would rather pardon than punish the offender; or how Cicero, addressing Caesar, the greatest statesman of his time, said, in praising his character, that he has wont to forget nothing but the wrongs which were done to him?”⁷ Indeed, “nothing is more serviceable to the State,” said Augustine, than the leader who patiently bears the inconvenience of personal injustice; for such a leader thereby sets an example of the kind of behavior calculated to lead to a mending of the offender’s ways.⁸



St. Augustine of Hippo from an illustration produced in 1584.

Future military leaders will have to cope with a staggeringly broad spectrum of moral circumstances. Almost certainly they will find themselves operating among peoples who do not embrace their values. In fact, they might find themselves among peoples whose moral sensitivities have been dulled by protracted civil war in which indiscriminate killing has become the norm. Such settings will require military leaders of character who can correctly judge — on tactical grounds and also on moral ones — when to take life and when to preserve it.

Some contemporary leaders will find this emphasis on patience and forbearance discomfiting, to say the least. Some find it altogether ridiculous — a mere impediment to “getting the job done.” Yet others will sigh and begrudgingly accept it as an unfortunate trapping of political correctness. For Augustine, however, the matter was not superficial at all. Rather, it was a matter that cut right to the ethical enterprise’s core: the consideration, not merely of how one *acts* on the outside, but of how one *is* on the inside. Morality was for Augustine a highly intimate matter of the heart. If Augustine were alive today, surely he would advise the military leader to weigh his actions not only according to the immediate effects of those actions on the battlefield, but also according to how comfortably he could reflect upon those actions a week, a month, or as Augustine might say, an eternity later. Certainly the 21st-century military leader will not have the luxury of making choices that affect only a secluded locale for an isolated moment. The world will be far too interconnected for that.

In addition to the philosophical, there is also a practical dimension to Augustine’s counsels. Wars are to be carried out with “the benevolent design that, after the resisting nations have been conquered, provision may be more easily made for enjoying in peace the mutual bond of piety and justice.”⁹ Just as important as winning the war, Augustine recognized, is winning the subsequent peace. Losing the peace will merely breed more war in time, as wars in this century, to include World War I and, unfortunately, the Gulf War, attest.

Boniface: Standards of Personal Conduct

Another Augustine military correspondent, Boniface, served as the Roman province of Africa governor. He, like Marcellinus, was one whom Augustine affectionately called a distinguished “son.”¹⁰ He was a controversial figure, however, because, at critical junctures, he selfishly manipulated Roman foreign policy pertaining to the Vandals. As a result, he ended up with a military crisis of his own making.

His task was forcefully expelling the Vandals, who had entered Africa at his own ill-advised invitation.

When, at one point, Boniface considered leaving his military command to become a monk, Augustine vigorously urged him to retain his generalship and to fight valiantly for the survival of Roman Africa. As high a calling as Augustine regarded the monastic life to be, he considered Boniface’s soldierly calling to be important too.¹¹ Augustine also upbraided Boniface for immoral behavior he deemed to be beneath the dignity of a great military leader. “Let the manner of your life be adorned by chastity, sobriety and moderation.”¹² As Augustine observed, it is nothing less than disgraceful that a military leader who can subdue others on the battlefield should be unable to subdue his own self-destructive moral vices.¹³ As recent events at Aberdeen Proving Ground, Maryland, and elsewhere attest, no success as a soldier — no number of Good Conduct Medals — can compensate adequately for a military leader’s failure to subdue selfish passions at his soldiers’ expense.

While unbecoming conduct is surely a reflection of one’s most deeply held values (or lack of them); the influence of one’s conduct extends far beyond the individual. As is well known, for better or for worse, subordinates tend to follow the leader’s example; and example is a most infectious thing. As Augustine informed Marcellinus, and would have been well justified in reminding Boniface, a “most illustrious Roman historian declares plainly the time when the army of the Roman people began to be wanton and drunken; to set a high value on statues, paintings and embossed vases; to take these by violence both from individuals and from the State; to rob temples and pollute everything, sacred and profane. When therefore the avarice and grasping violence of the corrupt and abandoned manners of the time spared neither men nor those whom they esteemed as gods, the famous honour and safety of the [Roman] commonwealth began to decline.”¹⁴

However, Augustine’s greatest hope was not that Boniface would act virtuously; he also wanted Boniface to *be* virtuous. “Here is counsel,” said

By every measure a realist when it came to his appraisal of human nature, Augustine was under no illusion that, as long as the present order of human life remains, there would ever be a total cessation of the shedding of blood in war. However, he also understood . . . [that] morality demands that soldiers accomplish their mission with minimum loss of life. . . . As he said to Boniface, "Let necessity, therefore, and not your will, slay the enemy who fights against you. As violence is used toward him who rebels and resists, so mercy is due to the vanquished or the captive."

Augustine. "Show that you are a brave man. . . . [O]vercome your inward and invisible enemies, that is to say, your passions themselves."¹⁵ Augustine knew that a truly virtuous military leader would be, first and foremost, the master of self.

By every measure a realist when it came to his appraisal of human nature, Augustine was under no illusion that, as long as the present order of human life remains, there would ever be a total cessation of the shedding of blood in war. However, he also understood a lesson that eludes some military leaders: morality demands that soldiers accomplish their mission with minimum loss of life, not only to friendly forces, but to the enemy as well. As he said to Boniface, "Let necessity, therefore, and not your will, slay the enemy who fights against you. As violence is used toward him who rebels and resists, so mercy is due to the vanquished or the captive, especially in the case in which future troubling of the peace is not to be feared."¹⁶ If Augustine were alive today, one of his aims surely would be to educate military leaders on the importance of understanding that we do not minimize the loss that we visit upon the enemy simply to save bullets; we minimize the loss because it is the right thing to do — because morality demands it. Leaders intent on conveying this kind of perspective to their troops will act differently than those who do not.

Augustine understood that the military leader who seeks to minimize death and destruction simply because doing so meshes well with the traditional "economy of force" principle could, by that same logic, feel at liberty to kill excessively when the logistic trains are well established and supplies are constantly flowing. Indeed, Augustine appears to be one of the first to argue for the efficacy of what we now call the "surgical strike." As he elsewhere pointed out, "he whose aim is to kill is not careful how he wounds, but he whose aim is to cure is cautious with his lancet; for the one seeks to destroy what is sound, the other that which is decaying."¹⁷

Although most people probably associate surgical strikes with the employment of "smart" munitions from afar, the discretion that the metaphor suggests

applies equally well to close combat situations. After all, close combat was the only kind of combat known to Augustine, who understood that the ultimate measure of success in military operations lies not merely in the accomplishment of the operational objective, but in the realization of lasting peace and justice that war is used instrumentally to establish. President Abraham Lincoln implied as much at Gettysburg and in his second inaugural address, when he suggested that the key to ensuring that the Union dead had not died in vain lay in the realization of a just and lasting peace.

Throughout his correspondence with Boniface, Augustine's advice is not as nuanced as is his advice to Marcellinus, but then again, how could it be? No military leader can expect to fathom the depths of what ideas such as morality and character really mean unless he is striving personally to practice the same — something Boniface evidently did not always do. With increased practice comes increased ability to recognize what counts as truly virtuous leadership. Perhaps more important, practice enables one to come ever closer to the aim of *internalizing* the lofty ideals associated with having a virtuous character. As one internalizes these ideals, one no longer views them merely as behavioral constraints imposed by some external law. Rather, one recognizes the ideals as one's own, and this identification with virtuous principles serves to identify the possessor of these principles as a military leader of character — a truly virtuous person.

Augustine knew that if Boniface was to have any chance whatsoever to succeed at his formidable task of ridding North Africa of the Vandals — particularly since Boniface was himself the cause of their destructive presence there — he could do it only if he commanded his troops' genuine respect, and that respect would not result merely from telling his subordinates, "I am virtuous." It would result from his ability to say, "Follow me, and do as I do." We have every reason to believe that 21st-century soldiers will be as well known for their ability to spot a phony as soldiers are today. Boniface needed true moral virtue, because virtue cannot be faked.

Some contemporary leaders will find this emphasis on patience and forbearance discomfiting, to say the least. Some find it altogether ridiculous — a mere impediment to “getting the job done.” Yet others will sigh and begrudgingly accept it as an unfortunate trapping of political correctness. For Augustine, however, the matter was not superficial at all. Rather, it was a matter that cut right to the ethical enterprise’s core: the consideration, not merely of how one *acts* on the outside, but of how one *is* on the inside.

Darius: “Traditional” Soldierly Virtues

Exactly what virtues did Boniface need? He needed the same virtues for successful military leadership in the fifth century that successful 21st-century military leaders will need. The core of the Army’s emerging Leadership Doctrine XXI features a list of virtues that would surprise no one intent on being a model military leader, whether in the fifth century or at present:

- Loyalty
- Duty
- Respect
- Selfless service
- Honor
- Integrity
- Personal courage¹⁸

Augustine, too, understood the importance of soldiers’ exhibiting the traits suggested by these virtues. The leader who does not seek to possess these virtues is, in commensurate measure, less a leader than he should be. Augustine also knew that the possession of virtue implies much more than the ability to recite a list of words. Each of these words stands for something profound. Augustine clearly established this point in an epistle to Darius, a distinguished Roman army officer sent to North Africa by the Empress Placidia on a peacemaking mission to reconcile Boniface and the imperial court. Darius succeeded at his peacemaking mission with Boniface and skillfully negotiated a truce with the Vandals, who originally had come to Africa at Boniface’s invitation.

After congratulating Darius on the success of his mission, Augustine commended Darius’ soldiers for their moral virtue — surely a reflection, by Augustine’s estimation, of Darius’ own character.¹⁹ In doing so, he drew right from the US Army Leadership Doctrine XXI list of virtues: he commended them, first, for their competent performance of duty (a thing worthy, he said, of singular honor); second, for their bravery; and third, for their loyalty — a thing worthy of even higher praise. Next, however, he provided a remarkable insight into that virtue which

our current list denominates as “respect.”²⁰

Augustine thus enjoined Darius to understand that *respect* alone is not enough. He also needed to internalize a genuine appreciation for the sanctity of human life so that he and his soldiers could sense the gravity of their moral duty to preserve life wherever possible and to destroy life only when unavoidable. This higher perspective concerning the correct moral aim for which wars are (or ought to be) fought is the perspective that moral military leaders must maintain if they are to fill the measure of their high calling as defenders of the defenseless and guardians of peace and justice. In essence, “it is a higher glory still to stay war itself with a word, than to slay men with the sword, and to procure or maintain peace by peace, not by war. For those who fight, if they are good men, doubtless seek for peace; nevertheless it is through blood. Your mission, however, is to prevent the shedding of blood. Yours, therefore, is the privilege of averting that calamity which others are under the necessity of producing.”²¹

While understanding respect on that level is necessary, Augustine’s insight illustrates that it is clearly insufficient. It illustrates that respect is a virtue that entails far more than merely refraining from racial or gender slurs. Augustine would want Darius to understand that a similar point could be made about all of the virtues found on the Army’s list.

Augustine lived during a watershed of history; so do we. Moreover, that watershed was replete with extraordinary challenges for the military leader—not just the routine, albeit important questions of technical and tactical competence, but also perennial questions such as “What kind of military leader should I be?” That same question faces us today.

Of course, it is altogether proper that the Army should keep pace with the times. The attitude that advocates clinging to a manual typewriter rather than embracing computerized word processing, for example, is hardly what the Army needs in its 21st-century leaders. On the other hand, one should seriously and thoughtfully question what, indeed, it would mean for a leader to update his moral values. Some invention yet unconceived will one day

"It is a higher glory still to stay war itself with a word, than to slay men with the sword, and to procure or maintain peace by peace, not by war. For those who fight, if they are good men, doubtless seek for peace; nevertheless it is through blood. Your mission, however, is to prevent the shedding of blood. Yours, therefore, is the privilege of averting that calamity which others are under the necessity of producing."

replace the word processor and make it seem as antiquated as the manual typewriter now is. However, there is no reason to believe that the demands of morality will ever change. An appreciation of war's true purpose—to right wrongs and restore peace; a sense of justice tempered with the appropriate measure of mercy and forbearance; the ability to apply ethical principles to concrete situations without embracing situational ethics—these commitments and many others like them will still define proper human conduct long after the last word processor has found its way into an archeological museum. Such a claim is strong medicine in a social and, regrettably, political environment, in which the military is publicly castigated for being out of step with American culture at large because it embraces what some regard as outmoded moral values.

The same accusers argue that a military whose values do not reflect those embraced by large segments of a democratic society suffers from a diminished capacity to defend that society and perhaps should be considered an extremist organization rather than the nation's protector. To such critics, the words of Augustine come thundering down through the ages: if society at large, to include subjects, hus-

bands, wives, parents and even taxpayers and tax gatherers truly would embrace moral virtue of the kind he exhorted soldiers to embrace, then the critics would find those virtues to be anything but incompatible with the state's well being. Rather, they would find, said Augustine, that "such virtue, if it were embraced, would be the salvation of the commonwealth."²²

The sweeping and multitudinous changes in technology that distinguish the dawn of the 21st-century from the fifth century may obscure the reality that not everything has changed. The principles of moral military leadership are the same today as they were then. The virtues that those principles embody are not merely catchy little words in a list that sergeants need to know when they go before a promotion board or noncommissioned officer of the quarter board. They are not merely words for officers to spout off in academic requirements for military schools. They are ideals to live by and use as the measuring rods for every decision the military leader makes. But they are not ideals alone. They are ideals that must find their expression in the deeds of military leaders who seek to make a positive difference in the emerging world of tumult and change. **MR**

NOTES

1. All references to Augustine are based on his collected works as they appear in *The Nicene and Post-Nicene Fathers*, trans. J.G. Cunningham, ed. Philip Schaff, First Series, vol. 1 (Grand Rapids, MI: Eerdmans Publishing Co., 1956), especially Epistles XCIII, CXXXIII, CXXXVIII, CXXXIX, CLXXXIX, CCXX, CCXXII and CCXXIX. In some instances, the language of Augustine has been adapted to appeal to a broader military audience so that those with or without any particular disposition on theological matters might equally well sense and appreciate the modern-day relevance of his advice to military leaders.

2. Epistle CXXXVIII 1.3.

3. Ibid. 2.14.

4. Carl von Clausewitz, *On War*, trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 87.

5. Epistle CXXXVIII 2.14.

6. Ibid. 2.12.

7. Ibid. 2.9.

8. Ibid. 2.11.

9. Ibid. 2.14.

10. Epistle XLXXXIX, written to Boniface; and Epistle CXXXIX, written to Marcellinus.

11. Epistle CLXXXIX 4.5.

12. Ibid. 7.

13. Ibid.

14. Epistle CXXXVIII 2.16.

15. Epistle CCXX 9, 10.

16. Epistle CLXXXIX 6.

17. Epistle XCIII 3.8.

18. US Army Field Manual 22-100, initial draft, *Army Leadership* (Washington, DC: US Government Printing Office, 31 July 1990), 4-5 and 4-6.

19. Epistle CCXXII.

20. Epistle CCXXXIX 2.

21. Ibid.

22. Epistle CXXXVIII 2.15.

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Operationalizing *Joint Vision 2010*

By General Henry H. Shelton, US Army

This article is adapted from remarks by Chairman of the Joint Chief of Staff General Henry H. Shelton at the General Graves B. Erskine Distinguished Lecture Series, Marine Corps University, Quantico, Virginia, 10 February 1998.

One of our key challenges as we approach the new century will be to transform America's Armed Forces into a future joint force, tailored to a new security environment and capable of employing revolutionary new systems and operational concepts to achieve decisive success. The foundation of this effort is *Joint Vision 2010 (JV 2010)*, our conceptual template for future joint warfighting. In the past few years, we have made dramatic progress in charting a course to the future. Now we must begin to translate that vision into concrete reality.

When contemplating the future, my thoughts often wander back to the last century. How did my predecessors see the future, as the Victorian Age drew to a close and the 20th century came into view? Did they foresee that in less than a single generation, the greatest war in history would break out? Did they anticipate that in less than a single short career, they would see the emergence of the airplane, tank, submarine and wireless radio—systems that would transform forever the field of human conflict? Or did they extol the virtues of horse cavalry, observation balloons and the bayonet?

Much of World War I's tragedy stemmed from military leaders' inability to grasp the implications of change. Their vision of the future doomed an entire generation and led directly to a second, even more destructive, global war. How high was the price of that failure? The true numbers of dead may never be known; certainly they numbered in the tens of millions. One example of the enormous cost of misjudging the future is described in Barbara Tuchman's classic work *The Guns of August*. After World War I, a memorial was erected at St. Cyr, the French Military Academy, bearing a simple but

tragic inscription that read "to the Class of 1914." Every member of that class was killed in the Great War. And to compound the tragedy, the memorial itself was destroyed during World War II. The American people would never forgive unpreparedness today, nor should they. It is our responsibility—each and every one of us—to do all in our power to see that we are ready for tomorrow, and that we never allow complacency to take hold.

What will the future look like for military leaders who will lead us into the next century? Almost certainly we will not face a hostile superpower in the near term, but let me be very clear—the world will remain a dangerous place. There will be many who do not share our values, many who will challenge our interests and many who will threaten our friends and allies.

Some of these threats will look familiar. The nation-state, after all, will be with us for a long time to come, and so will armies, navies and air forces much as we know them today. But the 21st century will also see the non-state actor come of age. Fanned by the ancient flames of ethnic, religious, cultural and economic rivalry, many groups will challenge us at home and abroad. However, unlike past eras, terrorist groups and other non-state actors will have access to state-of-the-art technology. They will also have secure communications and access to global positioning satellites, highly advanced computer technology and, most frightening of all, weapons of mass destruction.

The proliferation of advanced technology with military applications has been so rapid and so pervasive that our future enemies will have capabilities they could only dream about in this century. And whether those enemies are nation-states or rogue organizations pursuing their own agendas, they will have learned to challenge us asymmetrically—not where we are strong, but where they think we are vulnerable. Thus, preparing to respond to the full

range of asymmetric threats should increasingly occupy our attention—now, when we have a window of opportunity unchallenged by a strategic rival that could threaten our existence as a nation.

JV 2010, our conceptual template for future joint operations, contains our best thinking about how we should fight in the 21st century. Most of you are probably familiar with *JV 2010*, at least in its broad outlines. *JV 2010*'s four pillars are its key operational concepts—dominant maneuver, precision engagement, focused logistics and full-dimensional protection—and two "enablers"—technological innovation and information superiority. Each of these is very powerful individually, but they are not ends in themselves. The ultimate goal for future joint warfighting is decisive operations—the ability to win quickly and overwhelmingly across the entire range of operations. In other words, full-spectrum dominance.

More than ever before, achieving a rapid decision on the battlefield and in operations other than war will be the hallmark of joint operations in the next century. But, in thinking about the future, there is a key error we must avoid. We must never fall into the trap of thinking that simply by fielding new and better systems we will maintain our lead. History has repeatedly demonstrated that technology alone is not the answer. The quality of our people, caliber of our leaders and operational concepts and doctrine we use to employ technology on the battlefield are the decisive factors.

World War II provides a sobering example of this point. In the 1930s the Allied powers were hard at work developing new airplanes, tanks, aircraft carriers, radar and other advanced systems. As war broke out, the Allies had, across the board, better technology than the Germans—and more of it. When the Germans invaded France in May 1940, they had fewer men, fewer artillery tubes and fewer tanks than the Allies—and the tanks they did have were inferior.

But, they had revolutionary operational concepts for employing their systems to achieve battlefield effects far greater than the sum of the parts. The next year they stood before the gates of Moscow, having conquered all of Europe from the Arctic Circle to the shores of Greece, from the coast of France to within sight of the Kremlin. In time, the Allies learned the hard lesson that *how* you employ technology is even more important than the technology itself. But these lessons came at a fearful cost.

If we are to avoid repeating this century's military tragedies, and if we are serious about bringing joint warfighting into the next one, we must go beyond conceptualizing. We must *operationalize* our vision. That means translating ideas into steel on target, in a way that captures the best of what each service brings to the fight, while eliminating the inefficiencies that sometimes accompany interservice operations.

We have already come a long way since we published *JV 2010* in July 1996 and its companion piece, the *Concept for Future Joint Operations*, a year later. The next milestone is the *JV 2010 Implementation Master Plan*, scheduled for release this year. The *Implementation Master Plan* is our road map for assessing and evaluating joint concepts for future warfighting.

Our starting point is joint doctrine. Because doctrine undergirds everything we do, it is the logical beginning for our efforts to translate our vision of joint warfighting into reality. Joint doctrine is indispensable because it provides the overarching framework for conducting joint operations. We have found that when we "stand up" joint task forces on short notice and give them challenging missions, as we did in Operation *Just Cause* in Panama or *Uphold Democracy* in Haiti, joint doctrine provides the glue that holds everything together. As inherently complex and difficult as joint operations are, we have a sound body of joint doctrine out there—some 108 joint doctrinal publications so far—providing joint commanders a strong foundation on which to build.

As new systems come on line and new operational concepts emerge, our joint doctrine will evolve as well. To turn joint doctrine into reality, we plan to conduct an extensive series of joint warfighting experiments (JWEs). Joint warfighting experimentation will be an ongoing process that pulls together many different threads to help us test

new systems and concepts. More than ever, great things are going on in each service to aggressively prepare for the future. The Marine Corps' *Sea Dragon* experiments, the Army's Force XXI initiatives, the Air Force's battle labs and the Navy's fleet battle experiments are all plowing fertile ground for advanced experimentation.

We are working very hard to integrate service efforts to help us learn how to meld service expertise, service systems and service networks more efficiently into the world of joint warfighting. JWEs will complement service experiments by focusing on major areas where forces and weapons from different services overlap. And that is where we will realize our most revolutionary breakthroughs.

What do I mean by a real breakthrough? If a joint commander and his staff from 1998 were somehow put into deep freeze and brought back in 2010, they would have a difficult time coping with 21st-century warfare. The tempo of operations, the interplay of forces and the operational concepts would be so advanced that today's commanders could scarcely recognize them, much less control them.

For example, the 72-hour air tasking cycle we now use is great for executing prolonged air operations supporting a theater campaign plan. But it cannot react quickly to battlefield changes measured in hours or minutes. The same is true on the ground, in the sense that there is a delay in bringing major ground systems to bear on high-value targets, even when they are within range. But if we can give battlefield commanders a real-time picture of threats and opportunities, we can mass weapons effects on the target literally in seconds. That means we could get much more punch out of our weapons and do it much faster than our opponents can react. That is what we mean by exploiting information superiority to dominate the battlefield.

Can we do this in the chaos and confusion of future hi-tech battlefields? That is what we intend to find out with the JWEs. This concept calls for much more than just a few joint exercises. We will begin by defining the operational capabilities we think we will need, test and evaluate them, then align and integrate the systems and doctrine that will give us those capabilities. Next, we will hand this effort off to our warfighters—the commanders in chief (CINCs) and joint commanders in the

field—for more hands-on evaluation and testing to make sure we are getting it right.

We envision a series of war games and simulations, headquarters experiments, command post exercises and field training exercises (FTXs), each progressively more advanced. This will culminate in a "super bowl" event in 2004 called *Global Challenge*, a massive joint FTX where we plan to test all of our *JV 2010* concepts at every level. The year 2004 is important, because what we learn will help guide the *Quadrennial Defense Review* the following year, and it will show us what we need to fund, develop and field to have the optimum joint force for 2010.

This year, US Atlantic Command (ACOM) will take over responsibility for monitoring CINC and service experiments and battle labs. We will put both the Joint Battle Center and the Joint Warfighting Center under ACOM, which already operates the Joint Training Analysis Simulation Center, our joint activity for training joint operational headquarters. These different agencies already play leading roles in developing *JV 2010*, and ACOM is, therefore, a natural choice to assume the day-to-day responsibilities of operationalizing our vision for future joint warfighting.

Our initial experiments will focus on building operational architectures to achieve the joint command and control capabilities required to realize our vision. Simultaneously, we will initiate information superiority experiments to better understand what is possible—and what is not—in the realm of information warfare. Then we will progress to joint warfighting experiments, testing *JV 2010*'s key operational concepts, leading to *Global Challenge*.

In addition to refining joint doctrine, we will apply the lessons we learn to our joint organizations, training and education, leadership, materiel—even the kind of people we recruit and where we place them in the force. That is essential, because unless we make timely changes in these areas to keep pace with emerging technology we will fail to realize its full potential.

What is exciting about all of this is that we are going beyond traditional methods to reach out and grab the future. For example, instead of putting all our units in one place, we are thinking about using distributed networks, linking participating forces and headquar-

ters electronically without collocating them. In fact, we will be doing a lot of "out-of-the-box" thinking, hooking up different systems, trying out seemingly incompatible hardware and software and harmonizing different processes and procedures.

In the early stages, this process has been centered at the Pentagon. Now it is time to get it out into the field and work it—in the mud, snow and salt water, up at 30,000 feet and in space too. We will put everything under the microscope, not just operational concepts and doctrine but also operational architecture, emerging technologies and techniques borrowed from the private sector.

Clearly we face many challenges on the road to operationalizing *JV 2010*. Perhaps the biggest is finding the resources we will need to modernize the joint force, based on what we learn from all our joint experimentation. Where will the funding, people, equipment and time come from to transform ourselves from where we are now to where we need to be?

That is a tough question, given our high level of activity and how constrained our budgets are. Current funding will not be enough to fully modernize the force in the next decade. The bottom line is we will need help from the Department of Defense (DOD) and continuing support from forward-thinking congressional leaders to close or realign facilities we no longer

need. We must also save money by becoming more efficient in how we do business within DOD. And we will need to be sensitive to the heavy commitments borne by the services and CINCs. But we must not allow ourselves to be deterred by these obstacles, because the future will not wait. In the year 2010, our forces will be much smaller than they were in the Cold War, but if we do this right, they will be much better—and smaller is not necessarily better—better is better!

How good will we be? In the 2010 joint force, we will be able to detect the launch of a ballistic missile; identify, target and attack the launch platform; alert all units in the impact area; and attack and destroy the incoming missile all in a matter of a few seconds. The ability to transfer information fast, across service and even national boundaries, in the fog and friction of war, using joint language that we all understand, will be nothing less than revolutionary. No military in history ever thought harder about its future than we are doing right now. And we will get there, because that is our commitment to the American people. They expect the best military on the planet. That is what they have today—and that is what we must give them tomorrow.

Our goal is to field a military of unmatched capability and versatility. But translating our vision into reality will take the talents, energies, inspiration and hard work of the entire joint force.

We cannot succeed without the active involvement of all our leaders, young and old, from every service and command. I challenge all of you to participate in this vitally important process. In our professional journals, in our joint and service schools, in the field and in the fleet, we need—and must have—a strong and vigorous exchange of ideas to move forward. With your help, we will build a joint force that will ensure a safe and prosperous America for many, many years to come. And that will be a legacy we can all be proud of. **MR**

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Army Leadership: Doctrine and the New FM 22-100

By Major Jonathan J. Smidt

The foundation of leadership is character.

—General Alexander M. Patch

Within a unit, leaders are responsible for the cohesion and disciplined proficiency that enable soldiers to effectively train for, fight and win the nation's wars. But more fundamentally, Army leaders at every level have a solemn duty to embrace values. As Heroclitus said millennia ago, "A man's character is his fate," and the destiny of the led is bound to the leader. Those soldiers whom sergeants train, captains maneuver and generals commit are first America's sons and daughters. Given the great responsibility leaders have to the nation and to its people, the Army is committed to values-based leader-

ship that reaches for excellence every day.

This fall the Army will release the new Field Manual (FM) 22-100, *Army Leadership*. From a humble start as a 1948 pamphlet titled *Leadership*, the doctrine has evolved into a comprehensive electronic treatise published on the World Wide Web. The 1990 edition has served our Army well, but the 1998 manual takes a qualitative step forward by:

- Thoroughly discussing character-based leadership.
- Clarifying values.
- Establishing attributes as part of character.
- Focusing on improving people and organizations for the long term.
- Outlining three levels of leader-

ship—direct, organizational and strategic.

- Identifying four skill domains that apply at all levels.
- Specifying leadership actions for each level.

More than 60 vignettes and stories illustrate historical and contemporary examples of leaders who made a difference. The manual captures many of our shared experiences, ideas gleaned from combat, training, mentoring, scholarship and personal reflection. The Center for Army Leadership (CAL), US Army Command and General Staff College (CGSC), Fort Leavenworth, Kansas, recruited novelist and former infantryman Ed Ruggero to help turn this manual into a story about leadership. Ruggero's marching orders were

direct—"I want this manual to read so that a young sergeant or lieutenant who gets to the bottom of page 10 is curious about what's on page 11," stated CAL Director Colonel John P. Lewis. Feedback from soldiers—sergeants through generals—has been resoundingly positive: "Inspirational;" "Lively, interesting;" "I thoroughly enjoyed reading this manual—which says a lot for a field manual."

The familiar concept "be, know, do" remains at the 1998 manual's heart. By comparison, the 1990 manual loosely connected principles, factors, ethics, competencies and styles to define leadership. Today, FM 22-100 provides a specific framework with 23 dimensions to describe a leader of character and competence, the same features found on the front side of officer evaluation forms. For the first time, the Army directly links doctrine and formal leadership performance evaluation.

The manual comprehensively discusses how leaders from sergeant to general officer lead by influencing, operating and improving their people and soldiers. Everything in the manual flows from this axiom: *Leaders of character and competence act to achieve excellence.* After describing leadership's common facets, the manual then explores what is different at higher levels. The framework applies to leaders at any level, in any situation, just as Army Values apply at all times to all soldiers.

Be: Values and Attributes

Leaders of character—this phrase echoes across time and throughout the ranks. Character describes who a person is inside, and at the core of Army leaders are Army Values. The Army has published, promoted and explained the seven values extensively and nowhere more powerfully than in the lives of our leaders. Those values—loyalty, duty, respect, selfless service, honor, integrity and personal courage (LDR-SHIP)—capture the professional military ethos and describe the nature of our soldiers. Our common values help us understand the purpose of our missions and devise appropriate methods to accomplish them.

To understand leaders you have to know more than what they hold dear—you must understand their individual attributes. FM 22-100 outlines mental, physical and emotional attributes to describe more completely Army leaders' nature. Moving from

Army Values' guiding principles into the careful practice of Army leadership involves exercising will, initiative, self-discipline, intelligent judgment and cultural awareness. These mental attributes, combined with the physical—military and professional bearing, physical and health fitness—and emotional—self-control, balance and stability—components, join with values to flesh out the essence of a leader's character. We have long emphasized leaders of character and competence, so the notion is not new, but the doctrine now clearly marks values as the foundation of all that we are and do.

Know: Skills

Being a principled, dedicated leader is just the beginning. Leaders develop skills in a variety of areas grouped under four headings. Leaders must possess *interpersonal skills* and know their people and how to work with them as individuals and teams. Knowing, understanding and applying job-related ideas constitute *conceptual skills*. Knowing how to use equipment and being proficient with things are *technical skills*. Those who combine the skills with people, concepts and equipment to fulfill military missions have the *tactical skills* necessary for Army leadership. Army leaders have a continuing responsibility to develop new skills, whether for new jobs, equipment, tactics or different people. Although the robust Army school system gives conceptual and procedural basics for many leader skills, the experience and proficiency really grow in a unit. Even so, the challenge to improve as a leader always remains with the individual. The institution resources officer, warrant officer, managerial and noncommissioned officer education systems. Organizations track assignments for the good of the Army and the individual leader's personal growth. However, no one knows the relevant areas worthy of study and practice like the leaders themselves. They determine what they need to know for the job, for the future, and they go after it. As leaders become more senior, there are fewer institutional schools and organizational opportunities available to them and the more important self-development becomes.

Do: Leadership Actions

While the Army is a values-based organization, this new definition of leadership focuses on what we can see and evaluate—*behavior*. Influencing, operating and improving are root lead-

ership actions. Whether through orders, personal example or cooperative efforts, leaders get others to work together for collective goals. That requires giving reasons and challenges, not just tasks. The doctrine explores three ways that leaders demonstrate influence: communicating, decision making and motivating. At the direct level, leaders can influence face-to-face with instructions, encouragement and recognition. Higher levels require more indirect techniques and a clearly understood intent.

A leader's influence obviously applies in the day-to-day business of operating—accomplishing missions. As part of operating, a leader is responsible for detailed, suitable planning; careful, proficient executing; and continual assessing and adjusting. Assessing change is essential to improving an organization. This new doctrinal emphasis means that a leader's influence today involves preparing for tomorrow. Improving the organization is not itself a new concept, for good leaders get their people ready for contingencies and strive to leave the unit better than they find it. FM 22-100 now codifies the ideal. Just pushing troops to meet immediate demands never has been enough. Leaders must also provide for their future. They are also responsible for developing individual subordinates, building teams and fostering learning in the organization. These actions help prepare units for their leaders' absence, an ironic but profound measurement of leadership effectiveness.

The Payoff: Excellence

We can measure leadership by assessing whether the organization performed its tasks, fulfilled its obligations and accomplished its missions. Another way is to assess whether the organization has improved and is capable of even more in the future. However, the ultimate measure of leadership success is excellence. That level of performance is a goal, not a standard, and that is the difference between creating high-performing, fully empowered units and creating a zero-defects atmosphere. Rather than be preoccupied with perfection, great leaders work to build a climate that encourages prudent risk taking and creativity; exercises command that tolerates honest mistakes; promotes learning; and develops leaders who know how to help individual soldiers become the best they can be. The figure on page 93 explains how the

core leadership dimensions fit together with other doctrinal concepts.

Army Leadership Framework

The Army leadership framework establishes what a leader must be, know and do. FM 22-100's first section describes leaders of character and competence. In addition to discussing the leadership framework—values, attributes, skills and actions—in chapters one and two, chapter three explores the human dimension and the essence of leadership. Effective leaders understand the stresses of training, combat and inevitable change, and care for soldiers as they accomplish their missions under pressure. In a supportive, ethical climate, leaders demand the best from their soldiers—and teach and mentor them so that they constantly improve.

The three levels of Army leadership describe the different skills and actions necessary for handling increasing complexity at higher levels. *Direct leadership* is the work of first-line supervisors, whether they are corporals, captains or colonels. It is about face-to-face communication, so it clearly applies at the tactical level in teams, squads, sections, platoons and batteries—even in battalions and squadrons. But the skills and actions also apply at higher levels, when leaders supervise, counsel and mentor their immediate subordinates.

Chapter four outlines the skills required at the direct level. Beyond long-required competence in communicating, team building, supervising and counseling, our doctrine now highlights critical reasoning and creative thinking as essential conceptual skills. Leaders think analytically and creatively, considering multiple perspectives and their decisions' intended and unintended consequences. Just as we train to hone technical and tactical proficiency in direct leaders, we develop them intellectually to improve their ability to handle ideas, thoughts and concepts.

Organizational leadership occurs at levels from battalion through corps within the military; at directorate through installation level for military and civilian leaders; and at assistant through undersecretary levels. From a warfighting perspective, leaders operate at the tactical level, but their influence is much broader when they operate increasingly through staffs. It may be helpful to think of brigade as the lowest level that is squarely in the organizational realm, for this level's leaders

have staffs that coordinate with both higher and lower staffs. In a large organization such as a brigade, it is also impossible to know everyone in the unit or speak personally to all assigned soldiers.

Because of increased unit size and complexity, organizational leaders influence, operate and improve their outfits through programs, policies and systems. They must concern themselves with the higher organization's needs, as well as those of their subordinate units and leaders. Additionally, in concert with their staffs, they must synchronize and empower the extended command and control mechanism.

Several additional skills apply at the organizational level. Here, leaders use "systems thinking," focusing more on patterns than discrete situations since successes and problems at this level often point to systemic strengths and flaws rather than individual human achievement or failure. To assess these systems' effectiveness, the leader must be adept at filtering information, deciding how best to gather, analyze and evaluate information. With limited opportunities to observe and communicate in person, organizational leaders must ensure that their intent is clear and widely disseminated.

Strategic leadership occurs at the highest civilian and military levels, whether in institutional settings state-side or operational contexts around the world. Regardless of the specific environment—Army staff, joint, combined, political or diplomatic—strategic leaders face uncertainty, ambiguity and volatility. They must think in multiple time domains simultaneously as they deal with urgent crises worldwide, yet still continually provide for the future 15, 20, even 25 years out.

Looking forward, the strategic leader provides the vision to direct the force. From that flow the goals, plans and benchmarks that let people know they are moving forward. In the information age, strategic leaders look increasingly at leveraging technology to maximize combat readiness and effectiveness while minimizing risk. All along the way, strategic Army leaders are responsible for translating political goals into military objectives. Because they rely on others to support their vision, these strategic leaders tell the Army story over and over, reinforcing core messages about the Army to our political leaders, soldiers and even enemies.

One of the important strategic leader skills is the ability to achieve consensus and sustain coalitions. Working with so many agencies over whom he has no direct control, the strategic leader must negotiate shrewdly to reach mutually agreeable solutions. The payoffs can be enormous. For example, General Dwight D. Eisenhower's skill at welding people together was critical to Allied success during World War II.

The bottom line for strategic leaders is always readiness for a variety of contingencies, so they continually assess the environment, the force and themselves to prepare appropriately. They choose directions even when the destination is unclear, and commit resources to make their plans succeed. By systematically developing leaders and personally leading change, they shape the culture in the Army and position the force for powerful service to the nation. Throughout FM 22-100, one theme resounds: Army leaders of character and competence use their influence to operate and improve their organizations. At all levels of the Army—direct, organizational and strategic—they produce a quality force prepared to fight and win the nation's wars and to serve the common defense. Training soldiers, accomplishing missions and winning wars are Army trademarks. Those collective successes were produced by teams with high morale, disciplined proficiency and esprit de corps. With FM 22-100, the Army leaders who produce the "team of teams" have a sharpened tool to assist them in their noble and complex duty.

By identifying the skill categories that apply at all levels and specifying the changes at higher levels, the manual offers leaders a clear idea of what they

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must learn to serve at whatever level they find themselves. The discussion on actions outlines for each level what leaders do—what turns character into leadership. But above all, the new FM 22-100 anchors our leaders of character and competence in moral bedrock—our Army Values.

Leadership is the process of influ-

encing people by providing purpose, direction and motivation while operating to accomplish the mission and improve the organization.

Editor's Note: Author and novelist Ed Ruggero contributed to this article. He served on active duty with the US Army from 1980 to 1991. His first novel, 38 North

Yankee, parallels his service at Schofield Barracks, Hawaii, and in Korea. His fifth and most recent novel, The Academy, is set at the US Military Academy, West Point, New York. His first nonfiction book, Inside West Point: Making American Leaders, will be published by HarperCollins in 2000. Besides writing, Ruggero gives keynote speeches on leadership to business audiences.

MR Almanac

Marshal Suchet in Aragon

By Major David J. Lemelin Jr., US Army

The nature of the campaign was a divergence from what we had come to expect. There was no experience upon which to plan a campaign. . . . The armed and disciplined enemy army sustained with steady constancy a national struggle against French armies on fields of battle and especially in besieged towns. But the greater part of the population, sometimes without any distinction of age or sex, embarked in that active and obstinate species of contest which brought enemies upon us in all directions and exhausted us far more than regular engagements.¹

—Louis-Gabriel Suchet,
Marshal of France

A conventional force is committed far from home in a hostile country. It quickly finds itself having to accomplish nontraditional missions ranging from counterterrorism activities to public administration. Meanwhile, this force must simultaneously faces fighting an unconventional counterinsurgency campaign and a conventional military campaign. The operation's success depends on the correct linkage between the strategic and operational levels of war and the commander's imagination, agility and versatility.

This scenario is becoming all too familiar to modern US Army leaders who must face such diverse and complex situations. However, this scenario is not a modern phenomenon; it would be equally familiar to early 19th-century French commanders leading forces into Spain in what has become known as a *guerrilla* or "little war"—the first recorded unconventional war fought by conventional Western forces.

However, unlike French Marshal

Louis-Gabriel Suchet, who conducted just such a war during Napoleon Bonaparte's Spanish Campaign between 1807 and 1813, modern commanders have considerable historical precedent on which to base their thinking and planning for nontraditional or unconventional campaigns, collectively known in modern parlance as operations other than war (OOTW).

Napoleon's Spanish Campaign, although ultimately a failure, illustrates the juxtaposition of conventional and unconventional operations. During this difficult and unprecedented situation, most of his subordinates' overall performances at the operational level were poor. Suchet, however, stands out because of his success, albeit temporary, and his "enlightened" assessment of and solutions to the problems he faced in Aragon and the Ebro Valley. For his able leadership, Suchet was the only one of Napoleon's 26 marshals to receive a *baton* for his actions in Spain.²

Suchet joined the French Revolutionary Army in 1792 and served with distinction in the 1793 siege of Toulon, France, coming to Napoleon's attention in his first campaign. In 1799, as a result of Suchet's demonstrated tactical skill during the Italian Campaign and the battles of Rivoli and Novi, he rose to the rank of *general de division*. In the great German campaigns of Ulm, Austerlitz and Jena from 1804 to 1806, Suchet served brilliantly as a division commander in the corps commanded by Marshals Nicolas Jean de Dieu Soult and Jean Lannes.

In 1807, during his division's occupation of Warsaw and its environs, Suchet received his first taste of uncon-

ventional warfare. According to David G. Chandler in *The Eylau Campaign*, as Polish patriots harried the French in the cities and difficult terrain, Suchet "demonstrated not only exceptional tactical acumen, but a unique ability to perform well while operating independently."³

Suchet in Spain

In December 1808, Suchet joined Marshal Edouard Mortier's corps during the siege of Saragossa, Spain. Suchet's division was responsible for securing lines of communication to Madrid, which gave them an unpleasant taste of the brutal nature of partisan war in which there was a pattern of pillage, ambush and reprisal between French forces and the Spanish people. Suchet saw the futility of such actions and desired to rectify the situation if given the opportunity.

In April 1809, Suchet assumed command of the III Corps' mediocre divisions—later designated the Army of Aragon. Suchet's tasks were to consolidate and pacify the province for the new "Spanish" king, Joseph Bonaparte, Napoleon's brother. After being defeated at Alcaniz, Suchet focused his considerable abilities on training, equipping, paying and, above all, instilling discipline into his troops. This period of rebuilding was followed by stunning victories over regular Spanish forces at the battles of Belchite and Maria that all but eliminated the conventional threat in Aragon. Suchet then concentrated on consolidating his gains and pacifying the province of which he had also become military governor.

Suchet understood that to be successful he needed to apply other than military means. His administration of

Aragon from 1809 to 1813 reflected his belief that long-term strategic success could only come from the Spanish people themselves. Therefore, he allowed native authorities and nobility to run the province under French oversight. He felt observing local customs, mores and administration was the best way to reduce unrest. Also, unlike his fellow military governors, Suchet kept strict account of his government's income and expenditures. He used local law enforcement and selective military action by French troops to restore law and order.

In 1810, Napoleon, who was well removed from the scene and whose attention was focused elsewhere, ordered Suchet to subdue and occupy the adjacent provinces of Valencia and Catalonia. The two provinces were hotbeds of insurgent activity and, as coastal areas, much more vulnerable to British influence than landlocked Aragon.

Napoleon's fateful order came from Paris unaccompanied by additional resources with which to aid in its execution. Undaunted, Suchet fought a series of conventional battles that decisively defeated Spanish regular forces in both provinces. Suchet's feat is all the more remarkable considering that he had to fight the battles of Tortosa, Lerida and Tarragona using the same forces who had to maintain hold on Aragon.

The situation was further complicated by the increasingly schizophrenic guidance Suchet received from Napoleon in Paris and Joseph in Madrid. Napoleon's focus was clearly toward the east; Joseph was clearly out of touch with the situation in the provinces, although he was the ostensible ruler of Spain. Joseph could not control his subordinates' activities, often because of Napoleon's interference from Paris, but mostly because of his own lack of leadership ability.

As French forces became thinner in northeastern Spain, guerrilla activity increased. Before Suchet's arrival, Valencia and Catalonia had been ineffectually administered by French bureaucrats, which allowed insurgents to actively consolidate, recruit and train under British tutelage there. Not surprisingly, as Suchet's 20,000-man force in Aragon was reduced to 5,000 in order to have manpower to fight elsewhere, guerrilla activity in Suchet's base and along his lines of communication increased dramatically.

Since Suchet received few additional

resources from France or Madrid, his battlefield successes were as much due to his fiscal acumen as to his tactical skill. By the end of 1811, he had accomplished what no other French leader in Spain had been able to do. He had effectively eliminated Anglo-Spanish regular forces from his provinces, built a model administration in Aragon and was attempting the same in Valencia and Catalonia. He had reduced insurgent activity directly through military action and indirectly through a fair and



Louis-Gabriel Suchet, Marshal of France

just administration. In July 1811, Napoleon made Suchet a Marshal of France as reward for his efforts.

But, to paraphrase Carl von Clausewitz, behind the facade all was milled. In January 1812, after Suchet's great victory at Valencia, Napoleon named Suchet *Duc d'Albufera*. This was the high point of Suchet's campaign and, ironically, the turning point of his fortunes in Aragon. British General Sir Arthur Wellington's victories elsewhere in Spain, especially in Salamanca in July 1812, were unraveling the French strategic situation in Spain. In September, Joseph, driven out of Madrid, took refuge in Aragon, as did the French Army of Andalusia under Soult. In July 1813, Suchet evacuated Catalonia and Valencia.

Wellington's decisive victory at Victoria restored the Spanish monarchy and signaled the end of French hopes in Spain. Growing insurgent activity and the total loss of local support in Aragon, whose inhabitants anticipated King Ferdinand VII's return, forced the beginning of Suchet's withdrawal. Rear-guard action would continue until he was out of Aragon entirely.

OOTW Principles

The US Army's keystone Field Manual (FM) 100-5, *Operations*, defines OOTW's six principles.⁴ Intended to supplement the accepted principles of war or tailor certain of them to nontraditional or unconventional operations, the OOTW principles include the following: objective, unity of effort, legitimacy, perseverance, restraint and security.

A note of caution is in order here about the principles of war in general. Echoing Clausewitz, FM 100-5 states, "[They are] not immutable, they serve as guides for action."⁵ The principles do not provide for success, they provide a means to educate the commander's judgment.

Interestingly, current OOTW principles are not original. They are a synthesis of years of Army experience and doctrine in unconventional or nontraditional military operations. They are derived from the "Imperatives of Low-Intensity Conflict," as outlined in the 1990 FM 100-20, *Military Operations in Low-Intensity Conflict*.⁶ They, in turn, are derivatives of the "Principles of Counter-Insurgency Warfare" in the 1981 version of FM 100-20.⁷ Given their development, and the nature of Suchet's experience in Spain, these principles are well suited to this campaign analysis.

Objective. *Direct every military operation toward a clearly defined, decisive and attainable objective.*⁸ This fundamental principle of war applies equally well to OOTW. In unconventional operations, this principle applies to both political and military goals. The political objective must be clear and well disseminated to all civilian and military campaign participants. Further, military objectives must be unambiguous and support the political goal. If the political objective shifts or changes, the military one must be redefined as well. Most important, the military objective must be attainable by military forces, given their inherent limitations *vis à vis* activities other than combat.

Notwithstanding the reasons Napoleon directly involved French forces in Spain in the first place, his political objective soon became an *idée fixe*. The strategic and political objective was to deny the British access to European trade, forcing Spain and Portugal to become vassal states to Imperial France. By the time Suchet was charged with Aragon's governorship, it was clear military force was the only way to attain

this objective.

French military objectives, designed to support the political goal, were to defeat Anglo/Spanish military forces on the peninsula, defeat partisan elements and restore law and order and occupy key military locations and facilities to ensure French control. These objectives, given enough resources, time and dedication, were probably attainable. If nothing else, there was a clear connection between the political and military objectives, although the political objective may have been unattainable in the long run.

In Aragon, Suchet was faced with the additional tasks associated with administering a large territory, including everything from law enforcement and taxation to civic works. Suchet had at his disposal only military forces, which are traditionally ill-suited to such tasks. Unlike his contemporaries, however, Suchet's *coup d'oeil* made him recognize the disparity between the suitability of his assets and the goal to be attained.

His solution—"out of the box" for his era—was to allow the Spanish bureaucracy and local nobility to govern and administer themselves with French oversight. In Suchet's view, this would free the army to concentrate on its traditional military objectives and be more cost-effective in the long term. Recognizing the limited capability of military forces to accomplish long-term, non-traditional tasks is a clear lesson for today.

Unity of Effort. *Seek unity of effort toward every objective.*⁹ This OOTW principle, which may be the most important of them all, goes beyond the

fundamental principle of "unity of command." By its nature, OOTW requires the combined efforts of political, diplomatic and economic agencies as well as military forces. It is essential that these collective efforts be coordinated and united toward attaining strategic and political objectives. All subordinate objectives of these elements must be "nested" and continually reevaluated to ensure unity of purpose and mutual support. The French strategy's failure overall was largely because of failure to appreciate this principle.

Briefly, between mid-1808 and January 1809, when Napoleon was personally directing operations in Spain, all political and military activities were in concert, with predictable results. As long as Napoleon the political strategist and Napoleon the operational commander were united, the Spanish and British armies fared poorly. However, for the bulk of Suchet's time in Spain, the various marshals and provincial administrators operated with little direction from either Napoleon or Joseph.

When Suchet did receive guidance, it was usually from Napoleon or Joseph separately and was often contradictory. Joseph was often too out of touch to provide coherent guidance, and could not unify the efforts of the Imperial marshals, who recognized only Napoleon as their superior. By early 1809, Napoleon was clearly focused on events elsewhere in Europe, and his orders to subordinates in Spain rarely took into account actual conditions on the peninsula.

By contrast, in his domain in Aragon, Suchet combined in his person civil, political and military authority. Hence, all actions were coordinated. For example, during the siege of Tarragona, Suchet ensured that his diplomatic and economic overtures to surrounding Spanish governors coincided with French attacks, thus cutting off the Anglo-Spanish garrison from much of its outside support. However, out of parochialism or, more likely, from an understanding of the chaos that existed outside of Aragon because of his peers' unenlightened approach to the situation, Suchet was hesitant to cooperate with his fellow marshals in military or civil actions. Only reluctantly did he allow retreating French armies to billet in his province, fearing their undisciplined actions would upset the delicate balance he had established in Aragon.

Nor was Suchet particularly amenable to cooperative actions between his

forces and those of his peers or other agents of the emperor. When Napoleon sent someone to assist in the fiscal side of Suchet's administration, Suchet took great umbrage. Not only did he see this official as a spy, he thought the man was totally unaware of the situation and conditions in the province. Suchet had established a working political and military system in Aragon, and he did not want interference from outsiders.

Legitimacy. *Sustain the willing acceptance by the people of the right of the government to govern or of a group or agency to make and carry out decisions.*¹⁰ OOTW's ultimate success, in any way that involves a foreign nation's populace, especially in counterinsurgency and peace operations, demands the fulfillment of the principle of legitimacy. In the end, to attain any long-term political objectives, such operations require the population's willing support.

French strategy in Spain was doomed to failure because few, if any, attempts were made to establish the legitimacy of French involvement in Spanish affairs. The conceited attempt to impose Napoleon's brother as king in lieu of the ancient Hapsburg monarchy, coupled with the violent demonstration in May 1808 of the French determination to coerce the Spanish people into acquiescence, enraged the Spanish into resistance. The French practice of usurping all civic authority in occupied provinces exacerbated the already volatile situation.

In Aragon, however, things were different. While Suchet's methods could not succeed in isolation for the long run, given the total lack of French legitimacy overall, they nonetheless created a model, albeit parochial, of success. Suchet's consistent military victories over Anglo-Spanish forces created a certain legitimacy of their own. Suchet effectively demonstrated the new regime's power through battlefield success and, simultaneously, benevolent and enlightened provincial administration. On his own, Suchet could not have convinced the Aragonese of Joseph's legitimacy as the new king. However, he could show that the revolutionary attitude of French government could be a preferred method of administration. Still, as the overall situation in Spain deteriorated, outside pressures from the guerrillas and the British would have more decisively influenced the Aragonese, no matter how satisfied they were with the status quo.

Perseverance. *Prepare for the mea-*

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sured, protracted application of military capability in support of strategic aims.¹¹ OOTW missions often have at their core conflicts that are ancient in origin. These problems are not easily or quickly resolved. Military leaders and forces, as well as political leaders and their constituency, must be prepared to commit energy and resources, sometimes for years, to achieve lasting effects.

Napoleon left forces in Spain after his departure, but after 1809 he sent few reinforcements in troops or resources across the Pyrenees Mountains to his embattled subordinates. Napoleon was not willing to sacrifice effort or commitment in Europe to bolster the situation in Spain, which he considered a "sideshow." As we have seen in our own times, if political leaders are not willing to stay the course, operational commanders have little hope of achieving long-term success.

The French commanders were always spread too thin—between confronting regular enemy forces and protecting their lines of communication and strongholds against guerrillas—to be truly effective. Suchet was the exception. He created a system in Aragon that made his corps essentially self-sustaining for several years. The lack of support from France would eventually show, but through judicious use of taxes and investment, coupled with disciplined logistics, Suchet kept his army in the "black" far longer than did his contemporaries.

Restraint. *Apply appropriate military capability prudently.*¹² Often, if not always, unbridled use of force in OOTW is counterproductive to achieving political aims. The implicit threat of using military force is often preferable, as it is usually more effective than the improper or excessive use of violence and coercion. History shows that people attribute more strength to a military force that controls its power than to one that uses violence indiscriminately.

Suchet was unique in his time—as he would be today—for his conscious restraint in using military force, especially while occupying foreign territory. From his governorship's beginning, he prevented French soldiers from aggravating an already difficult civil situation. French troops in Aragon did not use Spanish homes or towns as billets. Rather, they built their own cantonments outside civilian areas. Suchet prohibited looting and was ruthless in punishing offenders. For a time, until

the guerrilla movement in Aragon increased following the French defeat at Vitoria, and unlike anywhere else in Spain, French soldiers and Spanish people lived in a state, if not of cooperation, at least in mutual tolerance.

Initially, Suchet refused to conduct indiscriminate reprisals for guerrilla attacks. Rather, he used local law enforcement to apprehend culprits, then allowed the local *junta* to pass judgment. However, as the French situation deteriorated and partisan activity increased, Suchet resorted to more heavy-handed means. This shift was due in part to impatience and exasperation on Suchet's part and also on the lack of time and resources that, when present, would foster patience and prudence. Not surprisingly, as the violence of the French response to guerrilla activity increased, so did the activity itself—all in a downward spiral that eventually drove the French from Aragon.

Suchet demonstrated the importance of restraint in the political arena as well. While he imposed French government on the province, he refrained from forcing French customs and methods on the Aragonese. Local government was maintained, as were religion and customs. Suchet held his administration accountable to the local *junta* for his use of tax money to support the army and instituted a forum for paying the local people reparations when justified.

Security. *Never permit hostile forces to acquire an unexpected advantage.*¹³ Military forces in hostile lands must be protected and husbanded for their use in future operations. As an OOTW principle, security includes that notion as well as a more subtle meaning. Not only are military forces tactical targets in OOTW scenarios, they become political targets for hostile or insurgent elements. These elements, through sniping and ambush, can establish their own strengths as perceived by the population and, through that perception and consequent propaganda, gain their primary goal—legitimacy.

Suchet took care to separate his forces from the people, not only out of a sense of restraint, but to keep his forces away from the sources of insurgent activity. As Suchet campaigned farther away from his Aragon base, his supply lines grew in length and vulnerability. Simultaneously, guerrilla activity increased, eventually forcing his withdrawal from Valencia and lower

Catalonia.

Suchet's emphasis on security was a prime factor in his relative self-sufficiency throughout the campaign. For most of the period, he maintained hold on his supplies and their sources. Consequently, his soldiers' morale remained high, even at the height of guerrilla interference. Unlike most other French forces, Suchet's army maintained cohesion. Even at the end, they fought a dogged withdrawal into France, blocking an invasion through Aragon from the south.

Suchet's Lessons Learned

"When he took charge of affairs in Aragon and Valencia, [Suchet] had everything against him, sullen troops, shortage of supplies and a population that [was] ready to massacre French soldiers who turned their backs on them, but Suchet changed all this."¹⁴ Suchet was fond of quoting Napoleon's remark that if he had had two Suchets, he would have been victorious in Spain.¹⁵ While this is a simplistic view of why the French ultimately failed in the peninsula, it is, nonetheless, an appropriate tribute to a remarkable commander.

Suchet should have been a model for his peers and should also serve as a model for current commanders engaged in OOTW. Suchet's mental agility and *coup d'oeil* allowed him to quickly recognize the circumstances within which he would have to operate. He also found innovative solutions for unprecedented problems. More significantly, he was able to successfully transition himself and his army between the mundane and unsoldierly tasks associated with OOTW into full-blown combat with enemy regulars. While the Aragon Campaign had flaws and ultimately failed in the end, that does not diminish Suchet's unprecedented accomplishments.

"Three principles guided Suchet's command: First, discipline was the foundation of a strong army. Second, discipline depended on good administration (regular pay, adequate provisions, etc.). And last, officers must display integrity."¹⁶

In OOTW, troop discipline may be the most significant factor in maintaining security and observing restraint and, through those two factors, establishing legitimacy. Some of Suchet's first actions were to forge his army into a disciplined, cohesive force that could not only win on the battlefield but also cope

with OOTW's more insidious and unpredictable dangers. When many other French armies in Spain were disintegrating morally and physically, the Army of Aragon remained a coherent force that in 1814 performed admirably as III Corps of the *Grande Armée* during France's defense.

Suchet's primary lesson learned is simply that no amount of political or military acumen on the part of tactical commanders can make up for strategic misdirection and political errors. Chandler, in *Campaigns of Napoleon*, states that in Spain, "Napoleon the statesman had set Napoleon the soldier an impossible task. . . . The lesson was there: military conquest in itself cannot bring about a political victory."¹⁷ By usurping the Spanish throne, Imperial France could not hope to establish any political legitimacy. Lacking this absolute re-

quirement for long-term success in OOTW, the French could only rely on military occupation to impose their will.

Even with sufficient resources or the will to maintain occupation indefinitely, the French probably would not have succeeded. Soldiers in harm's way in Aragon lacked overall political legitimacy and coherent strategic direction. In the end, despite superb leadership and discipline, they were only able to control "the ground in the shadow of their bayonets."¹⁸

NOTES

1. Louis-Gabriel Suchet, *Memoirs of the War in Spain* (London: Henry Colburn, 1829), 52.
2. Biographical information and specifics about the campaign in Spain and Aragon in particular, come from five sources. David G. Chandler's *The Campaigns of Napoleon* (New York: MacMillan Publishing Company, 1966), provides an overview of the Spanish campaign's first years through the end of Napoleon's personal involvement. Jeanne A. Ojala's "Suchet: The Peninsular Marshal," *Napoleon's Marshals*, David G. Chandler, ed. (New York: MacMillan Publishing Co., 1987), and Richard

Humble's *Napoleon's Peninsular Marshals* (New York: Tappinger Publishing Co., 1973), provide thorough background on Suchet's life and campaigns. The most exhaustive work on counterinsurgency policy in Aragon and the most meticulously detailed chronology of events is in Don W. Alexander's *Rod of Iron* (Wilmington, DE: Scholarly Resources Inc., 1985). Ojala and Humble show Suchet in a justifiably favorable light, while Alexander is much more critical, although he admits that Suchet was the best of the French commanders and administrators. Suchet's *Memoirs* provides excellent firsthand accounts of battlefield events. While not self-aggrandizing, Suchet always shows the actions of his subordinates in the best light possible.

3. David G. Chandler, *The Eylau Campaign* (New York: MacMillan Publishing Co., 1962), 220.
4. US Army Field Manual (FM) 100-5, *Operations* (Washington, DC: US Government Printing Office [GPO], 1993), 13-3.
5. Ibid.
6. FM 100-20, *Military Operations in Low-Intensity Conflict* (Washington, DC: GPO, 1990).
7. FM 100-20, *Military Operations in Low-Intensity Conflict* (Washington, DC: GPO, 1981).
8. FM 100-5, 13-3.
9. Ibid., 13-4.
10. Ibid.
11. Ibid.
12. Ibid.
13. R.F. Delderfeld, *Napoleon's Marshals* (New York: Stein and Day, 1962), 145.
14. Suchet, 1:xliv.
15. Jean A. Ojala, "Suchet," *Napoleon's Marshals*, David G. Chandler, ed. (New York: Stein and Day, 1962), 489.
16. Chandler, *The Campaigns of Napoleon* (New York: MacMillan Publishing Co., 1966), 660.
17. Ojala, 492.

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Notes

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case studies. Students apply the emerging leadership doctrine framework consisting of the seven Army core values, leadership attributes, skills and actions as their primary analytical tools to the case studies. Case study analysis increases the leader's awareness of Army values, which include loyalty, duty, respect, selfless service, honor, integrity and personal courage. Along with the required mental, physical and emotional attributes and interpersonal, conceptual, technical and tactical skills, leaders can positively influence and improve their units and the Army as they strive to achieve excellence. C700 students should leave the course feeling more confident and competent in themselves as leaders, as they continue their transition from leadership at the direct to organizational level.

CAL's **Civilian Leadership Training Division (CLTD)** is piloting a program that may allow Department of Defense, federal, state and local government agency employees to attend the Organizational Leadership for Executives (OLE) course on a cost-reimbursement basis. This pilot program will study the feasibility of expanding the course's target audience. This experiential leadership course's goal—which until now has been open only to Army personnel—is to provide

leaders increased self-awareness and tools with which to visualize, communicate and forge their organization's future. Course topics include: organizations as systems, organizational climate, influential communications, team development, team building, values, leadership self-assessment, strategic planning and change management. For more information, contact Frank Loeffler at (913) 758-3556, DSN 585-3556 or E-mail <loefflef@leav-emh1.army.mil>.

Additionally, CAL has revised the final draft of FM 22-100, *Army Leadership*, and released it for staffing. The new FM 22-100 framework of values, attributes, skills and actions describes effective leaders—whether they are sergeants, civilian directors or four-star generals. The manual demonstrates that as leaders emphasize Army values through their personal example and high standards, they positively influence their soldiers, operate successfully to accomplish the mission and improve the overall organization.

The draft FM brings the leadership framework to life with historical vignettes and examples to illustrate skills needed as a leader moves from the direct level, through the organizational level to the strategic level. For more in-

formation, contact Major Jon Smidt at DSN 585-3562 or commercial (913) 758-3562, or Major Donald Craig at DSN 585-3529 or commercial (913) 758-3529.

Combat Studies Institute (CSI).

The CSI faculty has been busy this summer participating in a variety of military history seminars and fact-finding efforts around the world. In June, CSI Director Colonel Jerry D. Morelock conducted a briefing to Army Center for Land Warfare members in Washington, D.C. The address recounted senior US Army commanders' leadership during the Battle of the Bulge. Concurrently, Dr. Robert Baumann participated in a seminar on Central Asia and the Caucasus conducted by the Center of Political and Strategic Studies in Washington, the results of which were briefed to Congress. Following these two events, Morelock and Baumann spent 10 days in Russia conducting comparative research on the frontier military experiences of the United States and Russia with the faculty of Bashkir State University in Ufa.

Also in June, Lieutenant Colonel Sylvia Rivera Cabassa and Dr. Lewis Bernstein spent four days at Schofield Barracks, Hawaii, conducting oral history interviews and seminars with members of the famed 442d Infantry

Regiment, a Japanese-American World War II infantry unit that fought with great distinction in Europe. The CSI instructors also conducted an officer professional development seminar on the regiment's activities with officers from the 25th Infantry Division (Light). Finally, Dr. Gary Bjorge visited China in late August. He was joined by Chief of Military History Brigadier General John W. Mountcastle in a joint seminar to present proposals to Chinese officials for developing a military history exchange program between the US and Chinese armies.

Center for Army Tactics. The future has arrived at the US Army Command and General Staff Officer Course (CGSOC). A portion of the 1998-99 CGSOC class will receive C300, *Fundamentals of Warfighting*, core tactics instruction using the Force XXI Maneuver Control System (MCS) in lieu of traditional maps and overlays. This full digital integration of C300 took several years to accomplish.

Four years ago, CGSOC began offering A308, *Advanced Warfighting*, an elective that included hands-on training on Army Battle Command Systems (ABCS), including MCS. This course became the vehicle for learning how to integrate digital systems into the CGSOC curriculum.

The next step was to introduce MCS into the core tactics curriculum. After the 1996-97 school year, the MCS project manager fielded CGSC with 57 systems. In fall 1997, students in eight staff groups became the first to use MCS in the core curriculum.

The Core Curriculum Pilot Program (C2P2) was a success. In a seven-day lesson, without any dedicated MCS training, the students used the military decision-making process to plan division offensive operations and produce operations plans and orders. They met all learning objectives for the lesson while learning to operate MCS in the process. After seeing the results of C2P2, the college began to fully integrate MCS into the core curriculum.

This fall, eight staff groups, more than 12 percent of the student body, will receive all core tactics instruction via MCS. The college will also follow this model to fully integrate ABCS into its warfighting curriculum.

Directorate of Academic Operations (DAO). A functional area (FA) 30 information operations (IO) personnel proponent office (PPO) has been established. Created as a division of

DAO, the office is establishing the IO functional area within the new Officer Personnel Management System (OPMS) XXI IO career field. FA 30 helps respond to the battlespace challenges and opportunities of accelerating growth in information and information dissemination capabilities supported by emerging information system technologies. IO officers will integrate efforts to protect friendly command, control, communications, computers, intelligence, surveillance and reconnaissance (C⁴ISR) and other IO capabilities; attack adversary C⁴ISR; and respond to potentially hostile C⁴ISR. IO officers will coordinate, plan and integrate the execution of offensive and defensive IO to gain information dominance to support the commander's concept of the operation.

The FA 30 PPO engineers and administers the eight life-cycle management functions—structure, acquire, compensate, distribute, deploy, sustain, develop and separate—for the TRADOC IO proponent, the Combined Arms Center commander at Fort Leavenworth, Kansas. The office has the lead in defining FA 30 developmental needs, refining requirements in the field and providing assistance to improve all aspects of Army personnel management.

In July, PPO completed Chapter 38, "Information Operations," of DA Pam 600-3, *Commissioned Officer Development and Career Management*. The chapter provides FA 30 details, including features; work functions; requisite skills, knowledge and attributes; developmental assignments; and key life cycle initiatives unique to the IO officer career path. July also marked the publication of a dedicated FA 30 homepage on the World Wide Web at <<http://www-cgsc.army.mil/dao/fa30>>. Frequent homepage updates will keep officers abreast of FA 30 and OPMS XXI developments that impact their careers, and provide links to other Internet sites of potential interest to IO officers. The homepage will also provide means to communicate directly with PPO and individual staff members.

Additionally, the PPO is developing an education and training program plan for FA 30 officers. The plan will include an outline for an IO transition course, fully funded advanced civilian schooling and cooperative advanced degree programs and training with industry.

For additional information, visit the FA 30 homepage or call Lieutenant

Colonel Ronald Garner at DSN 552-3094 or commercial (913) 684-3094; or Major Tommy Thomas at DSN 552-7375 or commercial (913) 684-7375; or send E-mail to <garner@leav-emh1.army.mil> or <thmast2@leav-emh1.army.mil>.

Military Review (MR) Attends Annual Ibero-American Editors Conference. MR personnel attended the Eleventh Conference of Editors of Ibero-American Military Publications 18 to 24 July 1998 in Santa Fe, Bogota, Colombia. Representatives from 19 nations, including Portugal, Spain and the United States, exchanged ideas and impressions of one another's military journals and magazines.

The Colombian army hosted the conference and ensured that participants left with a better understanding of Colombia's unique cultural experience in Latin America and the multi-ethnic Colombian army's key contributions to national security. Representatives had an opportunity to visit Escuela Militar de Cadetes, the Colombian army military academy, and sense the great spirit of elan and high standards of professionalism inculcated in its officer corps.

Plenary sessions were held in the Colombian armed forces Military Club in Bogota. Presentations centered on the conference theme: "Role of Military Publications in Transmitting Moral and Ethical Values." Substantive discussions revealed that represented armies are grappling with similar issues we face, or have faced, in the United States. In many cases, armies are simultaneously confronting the twin challenge of shrinking defense budgets and the end of conscription.

Several delegates discussed the use of military publications to teach values to their respective nations' youth. Further discussion on reaching external audiences indicated a desire to reach the youth at large for recruiting. MR Editor in Chief Colonel Lee J. Hockman provided insights about how the US Army sends such messages in a circumscribed legal framework. "How Military Publications Will Face the New Challenges Confronting the Armed Forces" was selected as next year's conference theme.

Delegation representatives had the opportunity to meet and converse with the Honorable Gilberto Echeverri Mejia, Colombian minister of defense, as well as the Colombian Army and Air Force chief's of staff, along with several other high-level commanders and staff

representatives. The exchanges with all representatives were frank and open and the conference was deemed a success as the delegates left with a renewed spirit of military-to-military cooperation.

School for Command Preparation (SCP) Adds Commander's Reaction Course. After the Gulf War, General Frederick M. Franks Jr. postulated the future of battle command. His staff listened and recorded his thoughts. The thesis was simple: "Battle command is more than the existing, worn out command and control engine we refer to from our Cold War days. In combat, it's seeing what is now, visualizing the future state or what needs to be done to accomplish the mission. It's knowing

how to get your organization from one state to the other at least cost, against a given enemy on a given piece of terrain."¹ That statement provided the impetus for the Battle Command Development Course's (BCDC's) focus. Recently, SCP revised the course to provide more opportunities to actually practice those skills needed for successful execution in war. This was done by adding a Commander's Reaction Course (CRC) into the program of instruction.

CRC seeks to maximize battle command opportunities for student commanders while minimizing time required for planning and preparation. CRC addresses BCDC's four core terminal learning objectives (TLOs)—in-

formation assimilation, visualization, conceptualization and decision making—to encompass those traits that have been historically validated on battlefields throughout the ages.

The CRC student is presented with four separate, autonomous tactical situations, then given very limited time to execute the provided plans. This forces the student to quickly adapt to an evolving current tactical situation. The BCDC focus remains the development and training of our future combat leaders—*trained leaders are our credentials!*

NOTES

1. GEN Frederick M. Franks Jr., "Battle Command: A Commander's Perspective," *Military Review* (May-June 1996), 13.

MR Digest

Consideration of Others: Lessons Learned

by Captain Malcolm B. Frost, US Army

This article shares a company commander's lessons learned from implementing the *Consideration of Others* (CO2) program with the 3d US Infantry (The Old Guard), Fort Myer, Virginia, and to provide recommendations on how to successfully implement the program elsewhere.

Leaders should not view CO2 only as an equal opportunity (EO) issue. That is the wrong approach to CO2 and will cause both leaders and soldiers—who may be skeptical and fearful of EO initiatives—to distrust the program. CO2 is not about EO. The program's goal is for every soldier and civilian to treat each other with dignity and respect no matter what the situation—using the golden rule: Treat others as you would want them to treat you.

This broad civility naturally encompasses people of different races, genders, colors, creeds, religions and upbringing or experience. Leaders who approach CO2 in this way will find that soldiers will be more open to the program (no EO stigma attached). Over time, soldiers and civilians will naturally address issues that fall under the EO spectrum. This approach will

save much time and leader heartache during the program's start-up and implementation.

Believe in the Program

Leaders cannot expect miracles and tangible results overnight. This is a reflection of society and the values soldiers embraced as youths. Skepticism is natural, but if acted on, it can become a leadership cop-out. Measurable results are difficult to attain, but through hard work and program ownership at all leadership levels, leaders will soon see anecdotal evidence that the program is working. At first it can be a frustrating program to implement, but if leaders dig in and believe in it, over time they can solidify it. It may take six months, but leaders will see results that will pay dividends for themselves, other individuals and the Army.

The best way to measure results is through "anecdotes of effectiveness," which are snapshots of lessons learned that participants bring out during small-group discussions. They generally fall into two categories—policy and procedure and interpersonal. These lessons learned drive positive changes in policy for the organization or group and display respect and dignity issues learned at the individual level. Although it might be difficult to measure the amount of progress made, leaders will find this is an effective way to track trends and progress toward CO2 goals.

Skepticism might occur at the ser-

geant first class and senior staff sergeant levels. The leader can combat skepticism by sending the skeptic to a facilitator training course, then using him as a small-group discussion facilitator. It will be amazing to see how his perspective will change. If feasible, the leader can request a mobile training team from the Defense Equal Opportunity Management Institute to train senior leaders down to company or platoon level. This proved beneficial in the Military District of Washington and gave commanders and senior leaders a broad perspective about EO, civility and the impact respect and dignity can have on an organization and individuals.

Promote the Program

Although proper perspective and guidance by leaders at company and higher levels is vital to the program's success, the program will surely fail if noncommissioned officers at platoon, squad and section levels do not understand, accept and promote the program. Equally important is the training of small-group discussion facilitators. It is recommended that facilitators hold a rank of sergeant to sergeant first class, understand and believe in the program and be capable of facilitating healthy discussions. The facilitator must also prevent gripe sessions, involve individuals participating and focus on the commander's goals. Facilitators should be articulate, open-minded and approachable. Facilitators and commanders

must maintain constant dialogue to ensure the program is progressing and properly implemented. In general, a 130-soldier unit should have a minimum of seven facilitators (under 20 to 1 ratio) to maintain a healthy, continuous program.

Enforce the Program

Education via lecture, tape and small-group discussions is not enough. A leader can talk all day, every day, about the program, but for results, he must enforce it. Enforcement is when the ball really starts rolling and when soldiers buy into the program. This all sounds like rhetoric until leaders take action via necessary counseling, administrative and other legal means demonstrating their commitment and belief in the program. Consistency and equity from leaders who display program ownership are essential when dealing with CO2 violations.

A leader earns his money in the small-group discussions. They are where dialogue takes place that allows individuals in the group to realize differences which are not obvious. Vignettes can highlight background, interpretations, upbringing, geography and other facets that make each of us individuals. Soldiers can learn that theirs is not the only perspective and that respect of others' opinions and views is important.

To optimize participation, time and overall session effectiveness, small groups should not exceed 25 soldiers and civilians. All leaders must participate in several sessions from beginning to end. They should not just "pop in

and out." Leaders must participate on a nonattribution basis during the small-group discussions. Otherwise, leaders will violate the established group norms and will address issues without understanding previous dialogue. As a result, soldiers will "clam up" and not participate, thus stifling the learning process. If, while observing and participating in discussions, leaders believe their presence stifles conversation and interaction, this may indicate a deeper communication problem up and down the chain of command.

Tailor the Program

Every program will be unique and must be tailored by the leader to best fit the unit's and individuals' needs. Programs within combat, combat support and combat service support units are different based on the mission and makeup of individuals and issues to address because of the diversity within the organization.

Headquarters companies will find different issues to address because of their varied military occupation specialties. These differences should drive small-group discussion topics and are important to each unit's unique mission and mix of individuals. There is no "cookie cutter" approach to this program, just hard work and complete commitment.

Editor's Note: This article is based on a memorandum distributed to participating general officers at the US Army Training and Doctrine Command Commandants and Division Commanders Conference on 7 and 8 April 1998 at Fort Leavenworth.

"That Tomorrow May Better Know Our Times"

As the George C. Marshall Foundation watchword, this phrase superbly captures the essence of this 45-year-old institution. *Military Review* has enjoyed a long-term working relationship with the George C. Marshall Library, Archives and Research Center. Over the years, the center has provided *Military Review* archival photographs and background research material for use in the journal. This issue of *Military Review* is no exception.

To preserve, disseminate and facilitate the use of General Marshall's papers, the Marshall Foundation supports the research and publication of *The Papers of George Catlett Marshall*. The oldest, and one of the most prestigious university presses in the United States—Johns Hopkins University Press—joins the Marshall Foundation as publisher and distributor of these important scholarly volumes. Four volumes in the series of seven are complete. For more information on *The Marshall Papers Project*, call (540) 463-7103, ext. 232 or 233. For information on educational programs, write to the: George C. Marshall Foundation Education Director, P.O. Drawer 1600, Lexington, Virginia 24450; or call (540) 463-7103, ext. 229 or facsimile (540) 464-5229. You can also access the Foundation's education programs at their web site: <<http://www.gcmarshallfdn.org>>.

The Core Dimensions of Leadership

The leader of character and competence . . .

acts to achieve excellence by providing purpose, direction and motivation.

Values "Be"	Attributes "Be"	Skills "Know"	Actions "Do"		
L Loyalty D Duty R Respect S Selfless Service H Honor I Integrity P Personal Courage	Emotional Mental Physical	Tactical Technical Interpersonal Conceptual	Influencing Communicating Decision Making Motivating	Operating Planning Executing Assessing	Improving Developing Building Learning

1. The emotional attributes are self-control, balance and stability.

2. The mental attributes are will, self-discipline, initiative, judgment, confidence, intelligence and cultural awareness.

3. The physical attributes are health fitness, physical fitness, military bearing and professional bearing.

4. The required interpersonal, conceptual, technical skills and resulting tactical skill are different for the junior, senior and strategic leader.

A detailed account of these skills can be found in the skills chapters of FM 22-100, *Army Leadership* (1998 Draft), for the different levels of leadership.

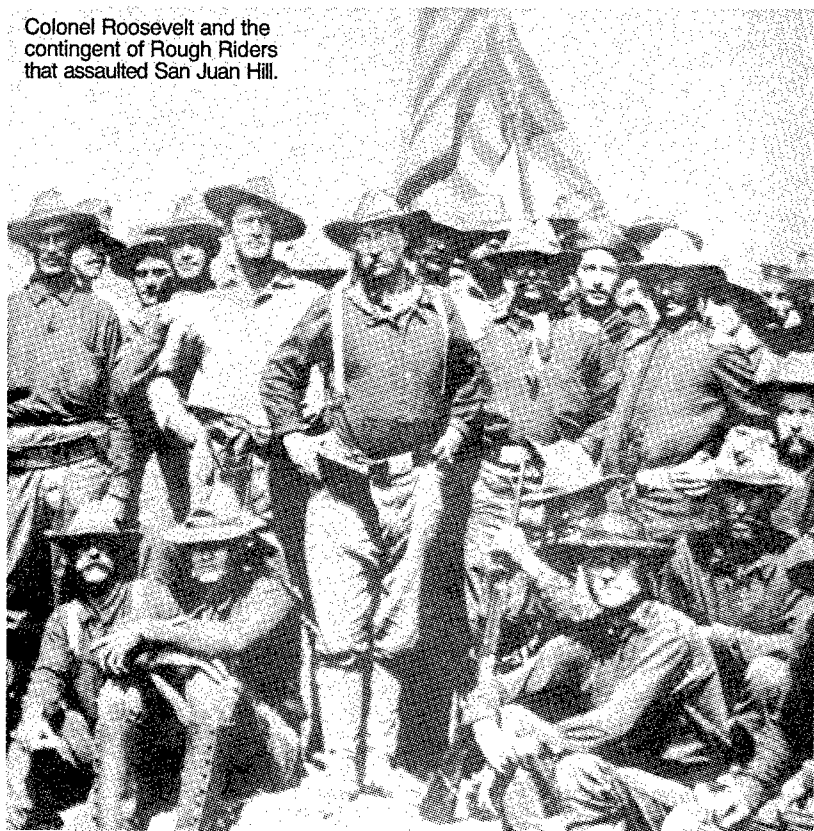
“Colonel Teddy” Historians Examine the Spanish–American War’s Most Famous “Rough Rider”

By Colonel Jerry D. Morelock, US Army

“The instant I received the order,” wrote Theodore Roosevelt in *The Rough Riders* (New York: Da Capo Press Inc., 1990), his own account of his military service in Cuba during the brief Spanish–American War in the summer of 1898, “I sprang on my horse and then my ‘crowded hour’ began . . . at the same time waving my hat, and giving the order to charge the hill on our right front.” By the time that “crowded hour” reached its inevitable, bloody conclusion, the assistant secretary of the Navy, and lately lieutenant colonel (eventually colonel) of the First United States Volunteer Cavalry Regiment—nicknamed the Rough Riders—had made himself, his unit and the hill outside Santiago de Cuba household words to an American public desperately eager to be thrilled by newspaper stories of heroes and brave deeds.

The image of “Colonel Teddy” and the Rough Riders charging gallantly up San Juan Hill to rout the Spanish defenders and win America’s “Splendid Little War” became the quintessential one emerging from the brief conflict that put the United States on the world stage and moved us into the ranks of the imperialist nations. No matter that until just shortly before the famous charge began, Roosevelt was only second in command of the regiment, serving under a regular’s, Colonel Leonard Wood’s, leadership. No matter, also, that the Rough Riders were only one of several units making that charge, which included other volunteer and regular units, including the 9th and 10th Cavalry regiments’ African–American troopers. And, no matter that the public even got the hill wrong. The Rough Riders’ charge actually captured Kettle Hill, although they eventually assisted other units in overcoming the spirited Spanish defense of the neighboring San Juan Heights. None of that mattered, be-

Colonel Roosevelt and the contingent of Rough Riders that assaulted San Juan Hill.



Theodore Roosevelt collection. Harvard College Library

cause newspapermen such as William Randolph Hearst, single-mindedly turning an insurgent-led rebellion against the failing efforts of the rickety Spanish government to hang onto its collapsing empire into a full-blown war, created the popular image that was eagerly embraced by the American public. Only Admiral George Dewey, victor in the Battle of Manila Bay, winning the Philippines in an afternoon (sent there, incidentally, on Assistant Secretary of War Roosevelt’s orders), was arguably a more famous Spanish–American War hero. But Roosevelt— young, energetic and romantic—

became the chosen darling of that era’s media, and, although it was an assassin’s bullet that launched him into President William McKinley’s position in the White House in 1901, it was the “Rough Rider/San Juan Hill” image that helped him secure that job on his own in the 1904 presidential election. Years later, Roosevelt wrote that the hot, July day in 1898 had been “the great day of my life.”

One historian agreeing with Roosevelt is H. Paul Jeffers, whose *Colonel Roosevelt: Theodore Roosevelt Goes to War, 1897–1898* (New York: John Wiley & Sons, 1996), examines in de-

tail the most famous Rough Rider's 133-day career in the volunteer cavalry. Jeffers, who has also documented Roosevelt's career as New York City police commissioner in *Commissioner Roosevelt: The Story of Theodore Roosevelt and the New York City Police, 1895-1897* (New York: John Wiley & Sons, 1994), has produced one of the most recent and best works focusing exclusively on Roosevelt's military service. He uses many of the standard biographical works on Roosevelt's life, including David McCullough's *Mornings on Horseback* (New York: Simon & Schuster, 1981) and Nathan Miller's *Theodore Roosevelt: A Life* (New York: William Morrow, 1992), but relies primarily on Roosevelt's own account. Comparing Jeffers' book with Roosevelt's exposes the strong influence the dashing young colonel's narrative exerted on Jeffers. He admiringly writes that Roosevelt's memoir "is the touchstone of the regiment's saga and a treasure of insights into him." Nevertheless, *Colonel Roosevelt* points out some less-admirable traits in its subject's character, notably his racial stereotyping of African-American troopers. Jeffers sadly admits, "Colonel Roosevelt of the Rough Riders remained at heart a social Darwinist." Other recommended works focusing on Roosevelt's military service are Peggy and Harold Samuels' *Teddy Roosevelt at San Juan: The Making of a President* (College Station, TX: Texas A&M University Press, 1997), which criticizes Roosevelt for his militarism, patriotism and non-1990s values; and Dale L. Walker's *The Boys of '98: Theodore Roosevelt and the Rough Riders* (New York: St. Martin's Press, 1998).

Several Roosevelt biographies include well-written sections examining Roosevelt's Cuban adventures. Among the best are McCullough's and Miller's works and that of H. W. Brands' *TR: The Last Romantic* (New

York: BasicBooks, 1997). In any analysis of Roosevelt's complex character, it is tempting to include John Milton Cooper Jr.'s *The Warrior and the Priest: Woodrow Wilson and Theodore Roosevelt* (Cambridge, MA: Harvard University Press, 1983). However, this otherwise outstanding comparative biography of the two presidents lacks any in-depth account of Roosevelt's military service. These general biographies are especially valuable in understanding exactly who Roosevelt was, discovering what the major influences on his life were and explaining how his character developed and matured over the years. Roosevelt was much more than a near-sighted, toothy, walrus-mustached, jingoistic bullyboy. McCullough's, Miller's and Brands' works provide the essential context within which Roosevelt's military career can be best examined, analyzed and understood. I highly recommend all of these books.

Of the general works on the Spanish-American War recently published to coincide with the war's centenary, Ivan Musicant's excellent *Empire by Default: The Spanish-American War and the Dawn of the American Century* (New York: Henry Holt, 1998) relates Roosevelt's intense involvement in both the war's initiation and the land campaign at Santiago de Cuba. *Empire by Default* is the most recent—and probably the best—candidate to challenge David F. Trask's *The War With Spain in 1898* (New York: MacMillan, 1981) as the standard history of the war. Another recommended general work with good coverage of Roosevelt is Albert A. Nofi's *The Spanish-American War, 1898* (Conshohocken, PA: Combined Books, 1996). Of course, those who want to move beyond the study of Roosevelt by placing the Spanish War within the larger context of the American military experience will always

profit by consulting two watershed works—Peter Maslowski and Allan R. Millett's *For the Common Defense: A Military History of the United States of America* (New York: MacMillan, 1994), and Russell F. Weigley's *History of the United States Army* (New York: MacMillan, 1974).

These works show that Roosevelt was a unique individual who had a singular impact on the Spanish-American War. Flagrantly using his influence and position as assistant secretary of the Navy, Roosevelt was instrumental in turning a diplomatic crisis into a shooting war. As second in command, then commander of the war's most famous military unit, he participated in that short conflict's defining moment. His "crowded hour" not only provided the Spanish-American War's quintessential image, it assured posterity that the Rough Riders' spiritual creator received the opportunity to lead this nation into what historians have aptly named "the American Century." **MR**

Colonel Jerry D. Morelock is the director, Combat Studies Institute, US Army Command and General Staff College (CGSC), Fort Leavenworth, Kansas. He received a B.S. from the US Military Academy, an M.S. from Purdue University and an M.M.A.S. from CGSC and was a National Defense University Research Fellow at the Industrial College of the Armed Forces. He has served in a variety of command and staff positions in the Continental United States, Europe and Vietnam, including branch chief, Russia and Republics Branch, and politico-military planner, NATO Branch, Director for Strategic Plans and Policy, J5, the Joint Staff, Washington, D.C.; staff group leader, Combined Arms and Services Staff School, CGSC, Fort Leavenworth; commander, 570th US Army Artillery Group, Münster, Germany; and branch chief and personnel staff officer, Leadership Division, Department of the Army, Washington, D.C. His last review essay, "An Army Manual for Civilian Business" appeared in the March-April 1997 edition of Military Review.

Letters

continued from page 3

to assign this mission to than the cost-effective ARNG?

Based on risk and probability, would it not be appropriate to weight the preponderance of the second, lower-risk MTW mission with ARNG divisions and enhanced brigades, integrated with selected AC forces under the umbrella

of a designated corps available to any commander in chief (CINC)? This is the type of mission for which ARNG is well suited. The ARNG and USAR could still provide needed combat and combat support units, such as field artillery, air defense and so on, to support the primary MTW. This plan would

free up the AC force structure to engage in OOTW at much less OPTEMPO and PERSTEMPO. Designated AC units could be organized specifically for these types of common and on-going missions without having to wear two hats—maintaining readiness for conventional combat and current higher-

priority OOTW missions. This would be a versatile use of all Army resources. The ARNG would be focused on an appropriate mission in support of the NMS and could direct resources to ensure readiness for its proven traditional military and state missions without the stress and cost of participating in OOTW, for which the AC is far better suited. Integration should not mean using the ARNG for "filler" jobs, for

which it is ill-suited. Instead, integration and versatility should be incorporated strategically among components, not just at small-unit level. This would demonstrate real innovation and leadership.

The Army needs to look no further than the ARNG for solutions to many of its problems. The ARNG is a willing and able Army team member. The harmonious cooperation and proper al-

location of missions within the Army family would produce a synergy that would propel the Army to the top in public and congressional esteem. Moreover, the Army's duty to most efficiently support the NMS would be accomplished.

Colonel Herman G. Kirven Jr., USA,
South Carolina Army National Guard,
Simpsonville, South Carolina

MR Book Reviews

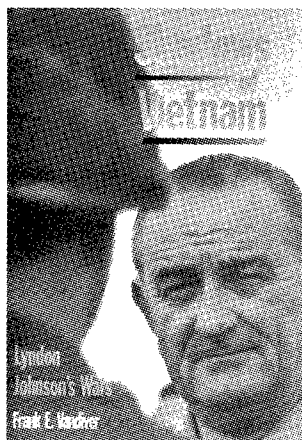
SHADOWS OF VIETNAM: Lyndon Johnson's Wars by Frank E. Vandiver. 396 pages. Texas A&M Press, College Station, TX. 1997. \$29.95.

Beginning with David Halberstam's *The Best and the Brightest* (1972), few topics have been the subject of more serious books than Lyndon Johnson's presidency and the Vietnam War. Frank Vandiver, an accomplished and experienced historian, has written one of the best of the lot. Particularly revealing in *Shadows of Vietnam* are Vandiver's comments on civil-military relations, especially Johnson's dealings with Generals William C. Westmoreland, commander of Military Assistance Command, Vietnam, and Earle G. Wheeler, chairman of the Joint Chiefs of Staff.

Johnson, whose own credibility was suspect, had Westmoreland return to the United States in 1967 to assure what Johnson called "the absolutely vital political base in the country"—that there was progress in the war. Westmoreland's private statements to the president ("this war could go on indefinitely") were more circumspect than his statements to Congress and the press. Furthermore, Westmoreland felt military men should not perform domestic political functions. Nonetheless, he did—and got egg on his face later during the 1968 Tet offensive—because it was an opportunity to lobby for attacking enemy sanctuaries and against military restrictions. In New York on 24 April 1967, Westmoreland said the war "is going to be a question of putting maximum pressure on the enemy anywhere and everywhere we can." The statement was too subtle to engender public pressure against the president, who never approved Westmoreland's

plans to attack Cambodia and Laos.

Months later, after the Tet offensive, Wheeler also tried to nudge Johnson toward decisive action. Knowing the president had escalated the war to avoid defeat—not to win the war—Wheeler portrayed Tet as a near disaster rather than the tactical success it really was. Johnson, severely shaken, chose not to run for reelection. He neither mobilized



the reserves nor allowed an attack on the sanctuaries, which had been Wheeler's real objectives.

No serious student of Johnson's presidency will be surprised at these incidents. Other authors have written about them, but few have done it as well as Vandiver. The book confirms what we already know: Johnson was committed to war because he feared displaying weakness to an aggressor would encourage future aggression, perhaps leading to World War III. However, he was committed to a *limited* war because he feared that Vietnam, like Korea, could escalate and bring in a major communist power such as China.

Dwight Eisenhower once described Lyndon Johnson, as a war leader, as "a man at war with himself." Vandiver's book adds compelling colors to Johnson's usual portrait.

Michael Pearlman, Combat Studies Institute, Fort Leavenworth, Kansas

SHARING THE SECRETS: Open Source Intelligence and the War on Drugs by J.F. Holden-Rhodes. 272 pages. Praeger Publishers, Westport, CT. 1996. \$55.00.

Sharing the Secrets, by J.F. Holden-Rhodes, lay dormant on my cluttered desk for five weeks. It had the look of another one of those petty, tortured self-justifications by a former "somebody-or-other" from that tangled realm known as the "intelligence community." In 1781, Archbishop Hieronymus of Salzburg fired Wolfgang Amadeus Mozart, never admitting, in this world at least, that he had foolishly sacked the musician whose music most nearly approached Heaven's. In the same manner, I confess I nearly proclaimed trivial this magnum opus concerning the 1990s' Andean Drug War.

Holden-Rhodes justifies his book in the context of understanding the Andean Drug War from the human-impact point of view—his straw man being the apparent objectivity and scientific validity of the distilled view offered by the intelligence community. He then launches into a presentation and critical analysis of US national drug control strategy. He describes the threat, country by country, and the progressive militarization that has occurred in response to that threat. He gives the drug war's strategic dimensions on the US-Mexican border, the first truly strategic treatment of this topic. And, he

presents his conclusions, showing that the drug war is not hopeless, but that it must be accurately perceived if there is to be an effective US and hemispheric drug-fighting strategy.

The book's bibliography is comprehensive. Books and articles about the Andean Drug War and the US role in it tend to pivot around several fulcrums. In my Fall 1995 *Parameters* article, "Reading Up on the Drug War," I discuss three:

- The neo-Marxist versus the national security world view.
- The supply-siders versus the demand-siders.
- The participants who have an ax to grind or a tale to share.

In my essay and following article "Analysis of the U.S.-Mexican Border: A Strategic Literature Yet to Come" (*Parameters*, Fall 1997), I lament the absence of serious strategic literature about the drug war.

Holden-Rhodes' book is a serious look at US policy and strategy in the Andean Drug War and should become the text on its topic in war colleges and staff colleges, international studies centers, senior law enforcement academies and drug-war policy centers. Its complete coverage, its fairness toward contentious persons and agencies and its penetrating analysis should not mask the fact that this is the first work prescribing how to build successes into America's troubled anti-drug war strategy. Holden-Rhodes' music on the drug war may never touch Heaven, but hopefully, the archbishop will listen to this musician while there is still time.

Russell W. Ramsey, Ph.D.,
US Army School of the Americas,
Fort Benning, Georgia

SEE NAPLES & DIE: A World War II Memoir of a United States Army Ski Trooper in the Mountains of Italy by Robert B. Ellis, 255 pages. McFarland & Company, Publishers, Jefferson, North Carolina. 1996. \$29.50.

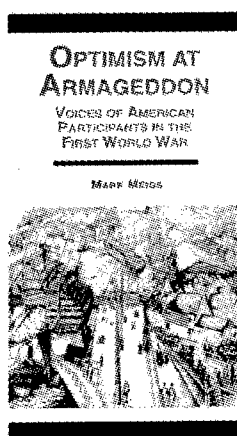
Robert B. Ellis, son of Presbyterian missionaries who staved off the revolutionary massacres in Persia, volunteered in the early 1940s to become an elite US Army ski trooper of the 85th Regiment, 10th Mountain Division. Ellis was stationed at Camp Hale, Colorado, and Camp Swift, Texas, for training; the University of Nebraska, as part of the Army Specialized Training Program (ASTP); then went into combat on the Italian Peninsula, along the defensive line near Mounte Della Spe and

Mounte Della Castellana.

Ellis kept a detailed battle diary and conducted extensive wartime correspondence, which developed into *See Naples & Die*—a riveting account of his experiences in the largest army the United States has ever mustered.

What makes Ellis' memoir unique is its thorough, firsthand examination of the 10th Mountain Division early in its development and train-up at Camp Hale, the 10th's unofficial birth place. This book is well worth reading.

MAJ Dominic J. Carracillo, USA,
101st Airborne (Air Assault), Fort
Campbell, Kentucky



OPTIMISM AT ARMAGEDDON: Voices of American Participants in the First World War by Mark Meigs. 269 pages. New York University Press, New York. 1996. \$40.00.

Recently, social history has dominated historical writings. Researching and writing about the lives of common folk—their families, their occupations and their communities—has become the focus of modern historiography. Military history is both victim and beneficiary of this emphasis. For instance, the study of military history suffers when college history departments emphasize social history to the exclusion of all other disciplines. Yet, the social historian's interests and methods open new areas of study in military history. For example, the history of World War I has been enlarged by such books as *Death's Men*, by Denis Winter, and *Between Mutiny and Obedience*, by Leonard Smith, in which the authors use social history methods to examine the private soldier's experience. In the process, Winter and Smith tell us something important and new about the war on the Western Front.

Mark Meigs uses a similar approach in *Optimism at Armageddon*. His topic is the experience of doughboys, nurses and others who served in the American Expeditionary Forces (AEF) in France from 1917 to 1919. Meigs examines the meaning the participants gave to the "war to end all wars" and, in doing so, explores their experience of combat and their contact with French culture, both sentimental and sexual.

The author juxtaposes official and private attitudes and pronouncements as he attempts a "snapshot" of America on the verge of becoming a mass culture. He uses as his chief sources both contemporary letters and journals, as well as the 1970 Military History Institute's survey of World War I veterans. The result is a book that is both informative and frustrating.

One perhaps should not be surprised that Meigs' analysis is weakest on purely military topics. His narrative on combat experience contains this revelation: "[T]hough the death dealt out in modern war takes no heed of individual identity, any one man's possible death was an intensely individual experience for him." Meigs also tells us that General Dwight D. Eisenhower recognized the new, passive nature of battlefield courage on the Western Front, ignoring the fact the World War II leader never deployed overseas in World War I. And, without documentation, Meigs suggests a racist conspiracy behind the lack of recognition African Americans received for their work in graves registration. The author is far more convincing in his treatment of the doughboys' responses to the foreign culture and sexual mores of France. Perhaps Meigs should have limited the focus of his book to that area.

Early in the book, Meigs compares his volume to Gerald Linderman's famous book on Civil War soldiers, *Embattled Courage*. The comparison is an unfortunate one, for Meigs' book is not of the same standard. Nevertheless, Meigs does have some interesting things to tell us. The war experience enhanced national consciousness and the doughboy's belief that America was the best place on earth. These and other insights allow one to recommend the book to that relatively narrow audience deeply interested either in the AEF experience or the development of American self-awareness.

LTC Scott Stephenson, USA, Combat Studies Institute, Fort Leavenworth, Kansas

A VOICE OF THUNDER: The Civil War Letters of George E. Stephens, edited by Donald Yacovone. 350 pages. University of Illinois Press, Urbana. 1997. \$26.95.

Until the success of the movie *Glory*, black soldiers' roles in the American Civil War were largely ignored. Many diaries and compilations of letters from white soldiers and civilians have been published, but there are few firsthand accounts from blacks. Donald Yacovone fills this gap with George E. Stephens' correspondence. Stephens was a *Weekly Anglo-African* correspondent and 54th Massachusetts Infantry soldier.

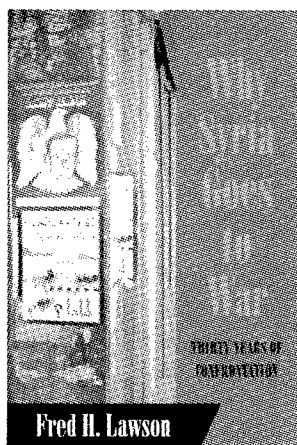
Stephens' most striking contribution is his depiction of the extreme degree of racism among Northern citizens and Union soldiers. Northern blacks' intense disappointment in Abraham Lincoln was manifest at Lincoln's first election. Stephens wrote that the election represented only another in a "series of pro-slavery administrations." At the outbreak of war, Stephens' opinion hardened when Lincoln would not allow blacks into the Union Army. Blacks were later allowed into the Army but were organized into separate units with white officers and less pay than white soldiers. Stephens verbalized the bitterness this policy caused when blacks were shot for mutiny when they protested. The Emancipation Proclamation changed blacks' opinions toward Lincoln very little. Stephens and others recognized the proclamation had little practical effect, because it freed slaves in areas over which Lincoln and the Union Army had no control.

Stephens also recounts instances of white Union soldiers threatening to kill black Union soldiers who shot white Confederates. Northern newspapers' racist attitudes were also evident. They concluded that blacks might make good soldiers because they were accustomed to "obedience" and had a "ready ear for music, or for 'time.'" Stephens wrote that after the 54th Massachusetts was formed, Boston street gangs attacked the regiment as it marched to the wharves to head south.

Although the regiment's assault on Fort Wagner, South Carolina, gained the unit fame and changed many Northerners' attitudes toward black soldiers, it was a pyrrhic victory. The regiment suffered such severe casualties it never returned to its former effectiveness. Stephens recounts how the 54th and other black regiments were usually relegated to fatigue duty.

Yacovone's work is invaluable for adding to the understanding of Northern views toward blacks in general and black soldiers in particular. It dispels any myth that blacks were welcomed as equal partners with Northern whites in the struggle against the South. It also casts light on an aspect of Lincoln's administration rarely revealed—that of racism and an unwillingness to grant blacks equal rights with whites. *A Voice of Thunder* is well worth reading.

LTC Richard L. Kiper, USA, Retired,
Leavenworth, Kansas



WHY SYRIA GOES TO WAR:

Thirty Years of Confrontation by Fred H. Lawson. 222 pages. Cornell University Press, Ithaca, New York. 1996. \$29.95.

In *Why Syria Goes to War*, author Fred H. Lawson argues that there is an "intimate connection" between Syria's foreign policy and its domestic political and economic problems. Lawson even suggests that domestic concerns are more important than external aspects in determining the state's reaction to a crisis. In particular, Lawson emphasizes how "accumulation crises"—when investments in the economy decline for various reasons—increased domestic opposition to the regime and spurred Damascus into "expansionist foreign policies," which helped unify members of the dominant elite behind the government.

The author, a Fulbright lecturer at the College of Economics at the University of Aleppo, Syria, writes from the perspective of a social scientist. He exploits data from Syria's Central Bureau of Statistics, although he admits that the information is far from complete, and given the secretiveness of President Hafez al-Asad's regime, Lawson is unable to detail Syria's actual decision-making

process. His argument is based on a comparison of domestic political and economic conditions and simultaneous Syrian foreign policy initiatives. Although Lawson provides a comprehensive analysis of domestic conditions, he does not present specific evidence that government responses to external crises were primarily determined by a need to address internal threats.

Lawson examines Syria's actions before the 1967 Six-Day War, its limited role in Jordan in 1970, al-Asad's major intervention in Lebanon in 1976, Syria's efforts to reduce conflict with Iraq in 1982 and the reconciliation efforts with Turkey over Kurd rebels in 1994. According to Lawson, the different degrees of aggressiveness noted in these crises directly results from varying domestic political and economic conditions in Syria. Lawson argues that in 1967 and 1976, serious internal disputes in the ruling coalition led the government to engage in aggressive external actions to reduce internal tensions. In the other cases, less-threatening domestic problems precluded severe escalation by Syria.

Lawson's work is useful in identifying domestic considerations in Syria's actions. Although his book may assign too much importance to "accumulation crises," he correctly points out that a state usually considers diplomatic and strategic aspects of an external problem as well as how actions taken to address the problem will affect domestic politics.

LTC Michael K. Connell, USA, US
Military Academy, West Point, New York

WHY DIDN'T YOU GET ME OUT? The Story of One of the Few Survivors of the Viet Cong Death Camps

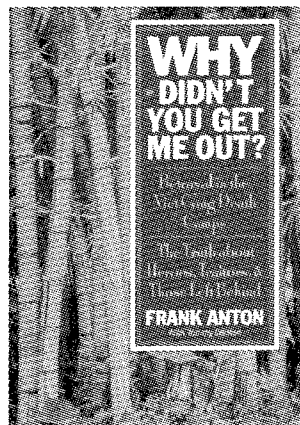
by Frank Anton with Tommy Denton. 196 pages. The Summit Publishing Group, Arlington, TX. 1997. \$22.99.

This slim volume purports to inform us of "Betrayal in the Viet Cong Death Camps—The Truth about Heroes, Traitors, and Those Left Behind." Retired Chief Warrant Officer Frank Anton does address those topics, as he tells of his capture and imprisonment in South Vietnam, his subsequent removal to North Vietnam and his experience after repatriation. However, I am not sure I would have liked the soldier Anton was before his capture.

Anton tells of disobeying orders and engaging in unauthorized killing under the stress of war, which may be under-

standable but was, and is, not justifiable. The narrative alternates between whining and understated heroics. Which is Anton? Which is Denton? I wonder? The book portrays an anxious young man trying to live up to the demands of a trade in which facing death is commonplace.

Despite his tendency to gripe, Anton's story grabs your attention. There is something reminiscent of the Korean



prisoner experience on a smaller, but no less horrific, scale. The Vietnamese used many techniques also practiced by the North Koreans and Chinese. The suppression of the US chain of command, political indoctrination and the pressure to collaborate are all familiar, but the setting is far more primitive. These are guerrilla prison camps woefully short of facilities, potable water, food, sanitation, medical treatment and shelter. All they offer is boredom, disease, fatigue, hunger, despondency and death. Yet, there are heroes—black soldiers, who are the toughest, most motivated group; the doctor, laboring to do his best under the most extreme conditions; even Anton, in his own way, as he overcomes the deadly lethargy so common under such conditions to resist his captors.

In the jungle camps there was—as in Korea—an American turncoat. Bobby Garwood, the Marine convicted, after a long-delayed return to the United States, of collaborating with the enemy, figures prominently in the book. Anton was a witness to many of these misdeeds and was a prosecution witness in Garwood's court-martial. Anton clearly depicts Garwood's conduct as well as his own disappointment caused by the public support for a man who directly contributed to his fellow Americans' misery.

Anton dedicates 20 pages to the men left behind. In those pages, Anton raises troubling evidence that many more prisoners were held by the North Vietnamese government than have been accounted for. Although he offers some compelling evidence, Anton's failure to use foot- or endnotes makes corroboration difficult. Nonetheless, his allegations are disturbing. He has certainly piqued my interest to the point that I will try to follow up his leads. If I could not like the boy who went into the jungle camps, I can like and respect the man who came out.

COL Horace L. Hunter Jr., USA,
Retired, Williamsburg, Virginia

A-TRAIN: Memoirs of a Tuskegee Airman by Charles W. Dryden. 421 pages. University of Alabama Press, Tuscaloosa. 1997. \$29.95.

In *A-Train: Memoirs of a Tuskegee Airman*, written by an original Tuskegee Airman, Lieutenant Colonel Charles W. Dryden, the reader catches glimpses of two wars, three continents and 20 years of military service. From the first "Dismissed," Dryden shares a lifetime of experiences in a balanced and honest portrayal that enlightens young and old, civilian and military, historian and layman, and will surely inspire future generations.

Dryden grabs the readers' attention with anecdotes of universal wisdom, solid advice and inviting storytelling. Locations such as Tuskegee Army Air Field, Alabama; Godman Field, Kentucky; Walterboro Army Air Base, South Carolina; and Lockbourne Army Air Base, Ohio, come alive. Dryden also includes a few lesser-known facts, from the controversial Freeman Field incident to the real "top guns" of 1949—winners of the first aerial gunnery meet at the future Nellis Air Force Base, Nevada. The book's subdued drama allows the reader to experience the context and events involving Dryden.

This is a retelling of a "real" story. Readers will smile as Aviation Cadet Dryden retells the shenanigans of cadet life, then as a lieutenant thinking that "with malice aforethought and intent to kill" a German pilot was shooting at his aircraft. However, Dryden does not just focus on the skies over the battlefields. He weaves his personal account within a broader context. He introduces the reader to "Jim Crow," as America comes to grips with a changing racial

and social context and a military undergoing growing pains.

Despite the controversies, Dryden stresses that he and the other Tuskegee airmen were there to prove they could fly and that they were willing to serve their country. This retelling of how ordinary men persevered and overcame obstacles will inspire the reader with the desire to succeed.

MAJ Yolande M. Wood, USAF,
Grand Forks, North Dakota

CIVIL MILITARY OPERATIONS IN THE NEW WORLD by John T. Fishel. 269 pages. Westport, CT. 1997. \$65.00.

Civil-military operations (CMO) planning is a skill at which the US military as an institution has only recently acquired a level of competency. John Fishel's efforts and experience contribute greatly to this competency. He was the chief CMO planner at the US Southern Command (SOUTHCOM) before and during Operation *Just Cause*. He is truly one of the Army's leading experts on CMO and transition-operations planning.

In *Civil-Military Operations in the New World*, Fishel discusses CMO planning during recent US military operations, using his in-depth knowledge of the Panama intervention to detail the unique intricacies of CMO planning, task organization and Reserve Component (RC) involvement during Operation *Just Cause*. This US intervention in Panama was the first time since World War II the US military planned and executed civil assistance. Therefore, Fishel spends time carefully reconstructing political and military events leading up to the December 1989 decision by President George Bush to intervene by force.

Fishel shows how timing of events and locations of planning headquarters isolated some of the planning functions while allowing others to be completed in concert. He then shows the interrelationship of events taking place in Panama with American popular opinion and awareness and how this relationship enhanced or reduced the level of planning effort.

Planning for a US intervention became more urgent as tensions heightened in early 1989. Fishel uses this sequence of events to describe how a new set of planners revising a previously developed plan often repeated or exacerbated erroneous assumptions and other disconnects, which became a problem

further magnified by geographical separation of the staff elements and headquarters conducting the planning.

Fishel also shows how changes in commanders and senior staff officers at SOUTHCOM and US Army Forces Southern Command (USARSO) resulted in personality-oriented changes in the plan's focus. Another issue, he succinctly points out, is the impact security classification has on a plan's development, especially on functions requiring coordination. Classification complicated planning even more when using rotating teams of reservists, who could not receive advance briefings or discuss the plan while in transition at the reserve center. The author also covers some methods units use to overcome these planning challenges.

Fishel reviews interagency participation, or lack thereof, in the operation's planning phases. The plan was classi-

fied and had no preexisting interagency planning organization between the Department of Defense (DOD), State Department or any other agency. These major deficiencies made it difficult for DOD planners to involve critical elements from other agencies in the process, regardless of their expected level of participation on the ground.

Chain of command issues, particularly relating to CMO issues, elements and responsibilities, surfaced once the operation began. Fishel analyzes these and other issues still being contested today: Who is responsible for CMO planning and execution? Should we mobilize US Army Reserve civil affairs units? If so, how many units and for whom should they work? Fishel explains the establishment of the CMO task force (CMOTF), its relationship to the civil affairs team (CAT)—successfully defining the CA role in CMO—

and who is really in charge.

After thoroughly analyzing Operations *Just Cause* and *Promote Liberty*, Fishel continues the CMO planning discussion by examining Gulf War operations. He perceives Kuwait's occupation as a classic postconflict scenario. The discussion focuses on having the right people in critical jobs early in the planning process, thereby greatly enhancing successful transition operations. The book compares Operations *Just Cause* and *Desert Storm* showing the application of lessons learned.

Fishel then discusses Operation *Provide Comfort* in northern Iraq, the various Somalia operations and Operation *Uphold Democracy* in Haiti. While examining each operation, he applies lessons learned from CMO planning for previous operations, bringing all the discussions to a common point by examining CMO's strategic impact.

PASS IN REVIEW

WILD BILL AND INTREPID: *Donovan, Stephenson and the Origin of CIA* by Thomas F. Troy. 259 pages. Yale University Press, New Haven, CT. 1996. \$32.50

Wild Bill and Intrepid is an excellent follow-up to Thomas F. Troy's *Donovan and the CIA*, which recounts events leading up to the creation of US strategic intelligence organizations. Because of the book's historical background, it is especially useful to military and intelligence historians. The book's main focus is on Britain's MI-6 contributions, specifically the efforts of William Stephenson of Intrepid fame, toward establishing what is now the Central Intelligence Agency. The book's endnotes are an excellent source of information for further research.—LTC Kerry L. Kimble, *USAR, US Space Command, Peterson Air Force Base, Colorado*

ACE IN THE HOLE: *Why the United States Did Not Use Nuclear Weapons in the Cold War 1945-1965* by Timothy J. Botti. Greenwood Publishing Group, Inc., Westport, CT. 1996. \$59.95.

Timothy J. Botti's analysis of US foreign affairs is simplistic, his conclusions on nuclear policy are unsubstantiated and his use of primary sources is superficial. However, he does provide an overview of American nuclear plans and policy in the context of US foreign policy from post-World War II to Vietnam. Though his analysis and conclusions are questionable, he provides a useful summary of the evolution of US strategic nuclear war plans.—LTC James J. Carafano, *USA, Department of the Army Headquarters, Chief of Staff, Washington, D.C.*

FIGHT OR FLIGHT: *An Inspiring History of Courage Under Fire* by Geoffrey Regan. 277 pages. Avon Books, New York. 1996. \$12.50.

Geoffrey Regan examines how armed forces can maximize morale while controlling fear and its effects. His "Heroes and Villains" section provides examples of exceptional combat performances, good and bad. In "A Soldier's Morale," he reviews the factors influencing the fighting spirit. Finally, in "Fight or Flight," he collects vignettes from 1099 through World War II in which men confront fear on the battlefield. Though of some value to those developing lessons on leadership or soldier behavior, *Fight or Flight* offers little that is new.—LTC Russell W. Glenn, *USA, Retired, Moorpark, California.*

AGAINST THE PANZERS: *United States Infantry versus German Tanks, 1944-1945* by Allyn R. Vannoy and Jay Karamales. 352 pages. McFarland & Co. Inc., Jefferson, North Carolina. 1996. \$42.50.

Against the Panzers, a history of eight battles told through diaries, unit histories and interviews, succeeds in illustrating combat at individual and small-unit levels. The battles, between August 1944 and January 1945, highlight the failures and successes of combined arms operations in the later stages of World War II. What sets this book apart from other World War II books is that the stories quickly boil down to the infantryman's point of view. The authors are meticulous in vividly re-creating how individual soldiers impact the battles. I recommend this dramatic and forceful account of combat to soldiers and civilians alike.—CPT Edwin R. Laphorn, *1st Brigade, 1st Infantry Division (Mechanized), Fort Riley, Kansas*

Fishel ties together a number of critical issues and describes how they affect the strategic CMO planning process, succinctly exploring the issues: well-defined end states; task-organizing CMO assets; establishing and commanding and controlling a CMOTF; and analyzing the relationship between CMO and the achievement of national policy objectives.

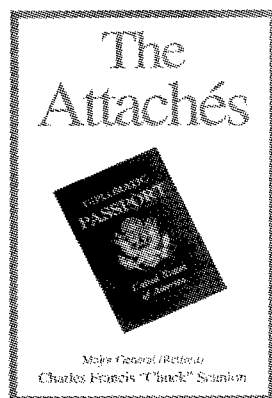
Any officer assigned to or anticipating a role in civil-military planning or transition planning will definitely benefit from reading Fishel's book.

LTC George Pogge, USARNG, Retired, Leavenworth, Kansas

THE ATTACHÉS by Charles F. Scanlon. 391 pages. IM Press, Inc., Fairfax Station, VA. 1997. \$24.95.

The Attachés by retired Army Major General Charles Scanlon provides an autobiographical, but fictional, insight

into an otherwise little-known military fraternity — military attaches. The book is replete with personal references



that only Scanlon, as the director of attaches and operations at the Defense Intelligence Agency (DIA), could have

gained by firsthand experience. Scanlon provides a multitude of fictitious characters based closely on real personalities who served during the 1980s.

In the story, Major General Bart Lowe, a former infantry division commander, becomes the Defense Attache Service commander. While discovering the vagaries of military service in the world's far reaches, Lowe becomes embroiled in his attempt to unravel the mystery of a possible Soviet mole inside the CIA.

The first portion of the book is a detailed and lengthy description of DIA's attache organization and missions. An example of the extensive and revealing nature of this information is Scanlon's liberties in describing elements of a fictionalized attache training course, which was labeled sensitive, if not officially classified, when I attended the real one in the 1980s.

KOREAN VIGNETTES: Faces of War by Arthur W. Wilson and Norman L. Strickbine. 468 pages. Artwork Publications, Portland, OR. 1996. \$29.96.

Korean Vignettes: Faces of War contains many individual accounts of and original poetry about the 1950 to 1953 Korean War. Contributors range from lieutenant generals to privates. Their stories, philosophy and sheer patriotism shine from every page. Today, soldiers still face the possibility of conflict with North Korea—but not these men. They have paid their debt. This book is a tribute to their courage and sacrifice. —**MAJ James W. Kerr, USA, Retired, Troy, Alabama**

DON'T KNOW MUCH ABOUT® THE CIVIL WAR: Everything You Need to Know About America's Greatest Conflict but Never Learned by Kenneth C. Davis. 518 pages. William Morrow & Co., Inc., New York. 1996. \$25.00.

Undemanding readers with short attention spans may enjoy this beginner's American Civil War history. It is made up of brief essays—"What Happened at Antietam?"—quotations, songs and lists of key events and dates. The book emphasizes colorful anecdotes at the expense of meaningful interpretation and neglects the less well-known campaigns and leaders. For a good one-volume introduction to the Civil War, read one by Bruce Catton or James M. McPherson instead.—**LTC Fred Christensen, USAR, Retired, Urbana, Illinois**

CRUCIBLE OF BELIEFS: Learning, Alliances and World Wars by Dan Reiter. 232 pages. Cornell University Press, Ithaca, NY. 1996. \$35.00.

Using a well-documented and meticulously explained methodology, Dan Reiter empirically tests "small" powers' international relations learning. He compares and contrasts learning versus realism theories, applying quantitative and case study techniques to small powers' choices of alliance versus neutrality during peacetime. Using 127 small power observations, he correctly predicts the learning proposition in 87 percent of the cases. This is an interesting, thought-provoking, scholarly book of particular interest to the serious international-relations student.—**COL Ruth Cheney, USA, Retired, Tacoma, Washington**

JAPAN'S GREATEST VICTORY—BRITAIN'S WORST DEFEAT by Masanobu Tsuji. 320 pages. Sarpedon Publishers, New York. 1996 reprint. \$14.95 paperback.

Not particularly well known in the United States, the Malayan Campaign had a significant strategic and political impact on the course of World War II and the shaping of the postwar world. Author Masanobu Tsuji was a staff officer in the Japanese 25th Army that routed a force twice its size and seized the "impregnable" fortress of Singapore in about 70 days. Of particular interest are Tsuji's descriptions of Japanese preparations and the early battles in northern Malaya. At the book's rear there is a translation of Tsuji's jungle warfare book, which was published and distributed to Japanese troops before the campaign began. I highly recommend *Japan's Greatest Victory* to those who have read the Allied account of the Malayan Campaign and want to read the Japanese perspective.—**LCDR John O'Donnell, USN, Honolulu, Hawaii**

Under the guise of a series of staff briefs and orientation tours for Lowe, the author swiftly transports the reader to many of the world's capitals and nations to impart an appreciation of the attache offices' environments, housing and vehicle maintenance standards. However, the emphasis on menus and meals and the travelogue descriptions caused me to anxiously anticipate the occasional episodes of plot.

The protagonist's immoral liaison with an ambassadorial-level State Department foreign service officer obliges an apparent mandatory requirement to meet the reader's prurient interests. Unfortunately, this can only contribute to the popular perception of morality run amok in the military at a time when the opposite is needed. For literary purposes, this interlude does little to move the plot forward.

For the prospective attache, either an officer desiring to become a foreign area officer and an accredited attache or a noncommissioned officer who wants to be a support staff member of, this is an excellent primer on what to expect. For the layman, it provides, in a readable format, an enjoyable and informative appreciation for the mission of America's military representatives overseas.

LTC Karl Prinslow, USA,
Foreign Military Studies Office,
Fort Leavenworth, Kansas

SLAVERY AND THE AMERICAN WEST: The Eclipse of Manifest Destiny and the Coming of the Civil War by Michael A. Morrison. 396 pages. University of North Carolina Press, Chapel Hill. 1997. \$49.95.

Michael A. Morrison posits that, from as early as the American Revolution, Northerners and Southerners held differing views of what the Revolution meant in terms of freedom, independence and self-government. The differences manifested themselves in the slavery question—especially so as Americans began to move west. Would slavery be restricted in the newly opened territories or would it be permitted? That single question led to the growth of sectionalism; tore apart the Whig Party, then the Democratic Party; gave rise to the Republican Party, which the South defined as abolitionist; and finally, led to secession and war.

Morrison does not deny slavery was the central issue leading to the Civil War. However, he expands the issue to encompass other historians' arguments

as to what it was about slavery that led to war. Did free and slave states differ over the issue's moral question? Was slavery really an economic issue? Was expansion an integral part of the problem or was it peripheral? Did Congress have the constitutional authority to intervene in a territory's decision as to whether it would enter the Union as either a slave or free state?

Morrison contends that while morality, economics and political questions were central to the Union's breakup, westward expansion was the catalyst that brought sectional differences to the fore. Simply put, Southerners believed that if slavery were not extended into the territories, they would be relegated to the same position the colonists had been in before the revolution—a minority governed by a majority intending to impose its will on a people who believed in local government.

This book is not for the casual reader. It is an in-depth analysis of the intricate relationships of westward expansion, slavery, the legacy of the American Revolution, political party crises, economics and constitutional rights. To understand Morrison's argument, the reader must be familiar with issues surrounding Texas' admission to the Union, the Mexican cession of territory, the Wilmot Proviso, the Missouri Compromise, the Dred Scott decision and the Kansas-Nebraska Act. Serious historians will find Morrison's book well worth reading. It captures the key events that led to civil war while superimposing them on a framework of western expansion.

LTC Richard L. Kiper, USA,
Retired, Leavenworth, Kansas

SO MANY, SO MUCH, SO FAR, SO FAST by James K. Matthews and Cora J. Holt. 318 pages. Joint History Office, Office of the Chairman of the Joint Chiefs of Staff and Research Center, United States Transportation Command, Government Printing Office, Washington, DC. 1996. \$21.00.

General John M. Shalikashvili, Chairman of the Joint Chiefs of Staff remarked, "In my mind, as far as I can see, the single most important enhancement the nation needs to meet our two-MRC [major regional contingency] strategy is strategic lift." Therefore, it is not surprising that in the foreword, Shalikashvili commends this book "to military planners, operators and logisticians, as well as to readers interested in joint and combined operations." This

book, the first major history the Joint History Office has published, tells how the US Defense Transportation System produced and supplied the United States and its allies the strategic mobility for assembling the force needed to liberate Kuwait in 1990-1991.

Logistics stories are not easy to tell. They revolve around details of tonnage, sorties, ships, planes, trucks, containers and the like. As a result, authors can easily get bogged down in details, thereby losing the reader. That does not happen in this book. James K. Matthews and Cora J. Holt masterfully move the reader through mounds of logistics facts and figures pertaining to strategic movements during the Gulf War, yet by separating much of the detail from the story itself, they prevent the story from bogging down. They make reference to only what is important and provide scores of tables, charts, appendixes and maps. Consequently, the reader does not need to wade through the details to understand the story and its significance. However, readers who take time to contemplate the details will be impressed all the more by the war's strategic mobility complexity and what that entails for future wars.

In the first two chapters, the authors provide background information regarding deployment exercises in the 1980s, the US Transportation Command's formation and organization, the Defense Transportation System and how it works and the deliberate and execution planning process for strategic deployment. The authors then devote the bulk of the book to analyzing the transportation puzzle's major pieces that enabled success—airlift, sealift, overland transportation, containerization and operational support—telling what happened and why. The book covers all aspects of deployment from the United States and from Europe. Matthews and Holt focus on the challenges and lessons learned in moving hundreds of thousands of personnel and tons of materiel to support the war. Those lessons are sobering—if not embarrassing in some instances.

Soon after the war, Congress mandated a comprehensive review of the US ability to deploy forces worldwide. Programs were emplaced with remarkable speed to improve this capability across the board. As a result, the United States is now postured for quicker, more reliable response than ever, which

is essential because the need to rapidly move anywhere in the world has never been so critical to our national military strategy. And, like everything else affecting war, the US ability to move quickly relies on everyone concerned understanding what has to be done to prepare as much as possible before such an event occurs. That is exactly what makes this book—unarguably the best account to date of strategic mobility during the Gulf War—so important for military leaders.

BG Kenneth L. Privratsky, USA,
Defense Logistics Agency,
Washington, D.C.

SURVIVING THE DAY: An American POW in Japan by Frank J. Grady and Rebecca Dickson. 275 pages. Naval Institute Press, Annapolis, MD. 1997. \$32.95.

Frank Grady describes himself as a Corregidor "tunnel rat." Grady, a professional soldier commissioned in 1940, was promoted to captain at the beginning of World War II. Later, while visiting Bataan, an old friend, still a second lieutenant, challenged him: "How in the . . . world did you become a captain? I'm over here taking bombs while you're in the tunnel taking messages." Grady writes, "He was right. But I could not make him a captain, much as he deserved it." This objectivity and honesty runs throughout Grady's account of his 40 months as a Japanese prisoner of war (POW), raising it well above the level of most POW stories.

Grady also describes the Japanese he encountered as human beings—not monsters with ape faces. Some of his captors were cruel and abusive—after the war Grady testified at the Tokyo War Crimes Tribunal against them, two of whom were executed. But 50 years later, Grady also remembers and honors the Japanese who treated him with humanity and kindness.

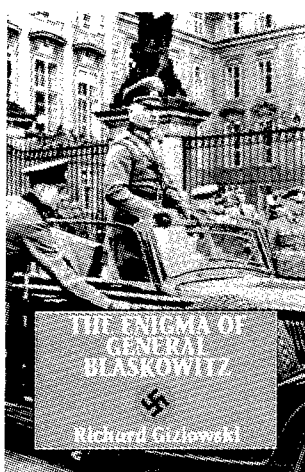
Although much of Grady's experience was similar to that of other prisoners, he was far luckier than most. Although captured on Corregidor, he was not subjected to the Bataan Death March and internment at the "charnel house" at Camp O'Donnell, where thousands of Filipinos and Americans died. Further, by an extraordinary piece of good fortune, in January 1943 he was transferred to Japan—not on a prison ship, but on a troop transport where he shared accommodations with Japanese sergeants.

Grady's account does not describe

the worst horrors that many, probably a majority, of US prisoners endured. But within the limits of Grady's personal experience, his is the factual memoir of a truthful and honest man. Summing up his years as a POW, he writes: "I am fully aware of the lethal potential of the human race, but more deeply entrenched in my mind is the human capacity for great good. . . . I learned in the bleak and tormented world of several prisoner of war camps that human life is worth preserving."

Grady remained in the service after the war, retiring in 1961 from the US Air Force. He died in 1991 before finishing the book. Rebecca Dickson, who teaches writing at the University of Colorado, Boulder, put the manuscript in final form and saw it through to completion.

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THE ENIGMA OF GENERAL BLASKOWITZ by Richard Gizowski. 400 pages. Hippocrene Books, New York. 1996. \$27.50.

Recently, a traveling museum presentation has aroused a storm of controversy in Germany. The exhibit portrays the leaders of the *Wehrmacht*, the German army of World War II, as being not only aware of the atrocities committed by Adolf Hitler's regime but, in many cases, being willing accomplices. The exhibit has provoked an angry response from German veterans' groups and others who support the idea that the Holocaust was the work of a fairly limited segment of German society. *Wehrmacht* defenders argue that the SS and *Gestapo* were overwhelmingly responsible for the Third Reich's shameful crimes—not the combat forces who did their duty in honorable fashion.

In this controversy's wake, Richard Gizowski's biography of General Johannes Blaskowitz seems especially timely. Among the *Wehrmacht*'s senior generals, Blaskowitz was one of the few to protest Nazi wartime atrocities. Thus, Blaskowitz's case can tell much about the *Wehrmacht*'s role in the Holocaust. It also offers a compelling case study on the ethical dilemmas senior commanders faced.

Blaskowitz's biographer, Gizowski traces his subject's moral and professional development. Blaskowitz was an officer of the old Prussian school, a *nur-soldat*, a soldier exclusively. Despite his middle-class origins, Blaskowitz was educated in the best schools of the kaiser's army. He embraced the army's concepts of duty and discipline, uniting them with a devout faith inherited from his father, a Protestant preacher whose sermons earned him the nickname "thundering Blaskowitz." Thus armed, Blaskowitz distinguished himself in World War I in the postwar *Reichswehr* and as an army commander in the Polish Campaign of 1939.

After Warsaw's fall, Blaskowitz was assigned to command occupation troops in Poland. As the SS and *Gestapo* imposed a reign of terror on the Poles, he was forced to confront the regime's horrible reality. He could not ignore the evidence of organized atrocity. Late in 1939, Blaskowitz sent an outraged protest to Walther von Brauchitsch, the *Wehrmacht* commander in chief. The protest earned Blaskowitz relief from command and Hitler's and Heinrich Himmler's lasting enmity. Despite this, Blaskowitz was given difficult assignments throughout the war, the most notably being the extrication of German Army Group G from southern France after the Allies' Operation *Anvil-Dragoon*.

Blaskowitz's honorable war record did not prevent him from having to defend himself before a war crimes tribunal after the war. He died while in Allied custody in 1948 under mysterious circumstances. Officially, his death was reported as a suicide. Many suspected the SS silenced him.

Blaskowitz's death is just one of the many enigmas of his career such as how a moral man could continue to serve an immoral regime. Still another is Hitler's tolerance of the general's dissent. How then should we judge Blaskowitz? Gizowski tends to portray Blaskowitz

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From this book, the reader can glean a greater understanding of these subjects as well as of five broader areas. The debate surrounding Eisenhower's decision to pursue a broad-front strategy illustrates that history is often never fully evaluated, regardless of the time that has passed. Murray bases his "conclusions" on many factors—participants' personal perspectives, "hidden

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CGSC

Notes



Digital Leader Development Center

(DLDC). The DLDC trains and educates Army XXI leaders in the art of command and control (C²) through a focus on command, control, communications, computers and intelligence (C⁴I). It consists of two operational annexes—the Warlab and Army Tactical Command and Control System (ATCCS)—and two proposed annexes—Decisive Action and the Futures facilities—as well as numerous systems. The DLDC is implementing the US Army Command and General Staff College Digital Leader Reaction Course (DLRC) initiative. The DLRC is a three-phase initiative to build a system that teaches leaders how to visualize the battlespace and make tactical decisions in a time-constrained, digitized environment as a proof of principle. Phase 1 uses the Warlab's Immersive Classroom as a backdrop and a no-overhead personal computer simulation called *Decisive Action* as the C² driver. Corps and division commands must respond to external stimuli and make four or five major tactical decisions per hour during each operation. Phase 2 uses an existing Command and Control Vehicle (C²V) mockup employing real-world C² systems such as Maneuver Control System. The user encounters normal operating environment elements such as radio traffic, telephones, a relevant common operating picture and the ability to “see the fight” in virtual space. Phase 3 extends the C²V concept by including multiple locations and echelons and expanding the user's ability to monitor battlefield operating systems by incorporating all ATCCS platforms.

Army Experiment 5 (AE 5) is a continuing series of Army chief of staff (CSA)—directed experiments. This year's theme is to “Train Army XXI Leaders to Exploit Situational Awareness.” Fort Leavenworth hosted a Digital Training Experiment (DTE) from 22 June to 17 July 1998. The DTE focused on training the brigade commander and his austere staff to exploit situational understanding via a three-step training methodology. Step 1, “Learn the Basics,” includes a doctrinal refresher using *Decisive Action*, detailed instruction on the Military Decision Making Process (MDMP) and an assessment to validate leaders on their respective positions. Step 2 introduces leaders to their ATCCS platforms and then “crawls-walks” through tactical scenarios for movement to contact, hasty defense and deliberate attack missions. Step 3 repeats these missions and incorporates after-action review (AAR) technologies. AE 5 will yield insights into training leaders in a digitized environment, developing critical leader execution tasks, evaluating AAR techniques and technologies and telling the Army story at the annual Association of the United States Army convention in October 1998.

The Center for Army Leadership (CAL) recently launched a new web site that offers an excellent leader development resource for officers, warrant officers, noncommissioned officers and civilian leaders across the Army. Individuals can now read about emerging leadership initiatives as they occur. Site leadership topics addressed include:

- Army Leadership Doctrine, US Army Field Manual (FM) 22-100.

- Army Values initiatives, including posters and a video.
- New Developmental Counseling Record.
- Army Leader Campaign Plan.
- Leader development updates to the CSA.
- 360-Degree Assessment.
- *Stability in Command* study.
- Organizational leadership for executives.
- New developments in captains' professional military education (PME).
- Human resources/leadership, integration strategy and leadership

integration at the Combat Training Centers (CTCs).

- US Army Training and Doctrine Command's (TRADOC's) common core.
- Character Development XXI.
- New CGSC C700 Leadership course.
- Current developments in Army Regulation (AR) 600-100, *Army Leadership*, and Department of the Army Pamphlet (DA PAM) 600-3, *Commissioned Officer Development and Career Management*, revisions.

Users can also join the Army's *Leader XXI* Listserv and the *Enlisted Leader Development Network* through CAL's web site at: <<http://www-cgsc.army.mil/cal/index.htm>>.

In other CAL news, the C700 Leadership course has been revised for the second time in two years. The course now focuses on leadership at the organizational level to help officers broaden their understanding of the many leadership concepts and skills that apply at that level. The course prepares officers to lead and fight units at higher levels by possessing and communicating an organizational-level perspective of leadership, training, public affairs (PA) and military law. Instructors challenge leaders to think critically and creatively as they explore what it means to be leaders of character and competence in a values-based organization.

Central to accomplishing these goals are the CSA's three fundamental, yet timeless leadership principles:

- Do what is right legally and morally every day.
- Create an environment where people can “be all they can be.”
- Treat others as you want them to treat you.

These ideas are the foundation for the course, which will prepare future leaders to lead their units in combat. There are six course themes that underscore the importance of organizational-level leadership:

- Do the right thing.
- Build disciplined and cohesive units.
- Develop future leaders.
- Develop battle-focused units.
- Integrate PA in military operations.
- Apply principles of military law.

Through the use of more than 15 historical and contemporary case studies, the course builds on leaders' previous knowledge and experience at the direct level to develop and broaden organizational-level leadership perspectives. Learning objectives are attained through small group interaction, dialogue and cooperation centered on the insights discovered from the (Continued on page 90 ...)