TRADOC Historical Study Series

PREPARE THE ARMY FOR WAR

A Historical Overview of the Army Training and Doctrine Command 1973-1998

with an afterword
by General William W. Hartzog

TRADOC 25th Anniversary Commemoration

Military History Office
United States Army Training and Doctrine Command
Fort Monroe, Virginia

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A Historical Overview of the Army Training and Doctrine Command, 1973-1998

by

Anne W. Chapman, Carol J. Lilly
John L. Romjue and Susan Canedy

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To
General William E. DePuy
(1919 - 1992)

and

the soldiers and Army civilians
whose devotion to duty enabled TRADOC
to change an Army and serve the nation.

U.S. ARMY TRAINING AND DOCTRINE COMMAND

General William W. Hartzog	**Commander**
Major General James J. Cravens, Jr.	**Chief of Staff**
James T. Stensvaag, Ph.D.	**Chief Historian**

TRADOC HISTORICAL STUDY SERIES

James T. Stensvaag, General Editor

TRADOC Historical Studies are research reports published by the Military History Office, U.S. Army Training and Doctrine Command. These studies present documented summary accounts of training, doctrinal, and combat developments topics to provide ready reference information to support the Command's mission of preparing the Army for war and charting its future.

Table of Contents

Charts

Photographs

Photographs courtesy TRADOC Public Affairs Office and Greg Stewart, Laguna Beach, California

Cover Photo: Soldier wearing "Miles" gear and camouflage (DoD photo)

PREFACE TO THE REVISED EDITION

In 1993, The Office of the Command Historian (now the Military History Office) of the U.S. Army Training and Doctrine Command produced a history of the first twenty years of the command. The twenty-fifth anniversary offers the opportunity to update and supplement that work. The first edition of *Prepare the Army for War* contained a preface signed by my predecessor as chief historian, Henry O. Malone, Jr. That preface, with only minor editing to account for the passage of time and additional contributors, still serves as a thoughtful prelude to the overview which follows.

When we undertook a revision, we assumed (somewhat naively) that the passage of an additional five years would require minor tinkering with the text of the 1993 edition and some supplementation. In making that assumption, we ignored the only operative law in history, the law of unintended consequences. We also ignored the implications of the enormous changes in the processes of planning the Army's future and training both the Army of today and the Army of the future, and the complexity which grew with the processes. Consequently, this revision differs in substantial ways from the first edition, and I commend it to you as an improvement as well as an update.

The evolution of TRADOC through its first quarter century is, we believe, a success story. The tenor of this history is, in the main, celebratory. The Army is a hierarchical institution, and it should surprise no one that this history also celebrates leadership. The celebration of leadership in no way denigrates the labors of many thousands of soldiers and civilians who have served the command since 1973. Each of the leaders pictured in *Prepare the Army for War* would admit to having achieved success only because of the quality of Tradocians at every level. Although the primary dedication of the study still rightly remains with General William DePuy, this second edition hereby pays additional homage to all the unnamed individuals who labored to make his vision, and that of his successors, into reality.

Fort Monroe, Virginia
May, 1998

JAMES T. STENSVAAG
Chief Historian

PREFACE THE FIRST EDITION (With Minor Revisions)

The year 1998 marks the 25th anniversary of the Army's establishment of the Training and Doctrine Command (TRADOC), as the major innovation in its post-Vietnam War reorganization. Skeptics predicted that the new organization would not survive the test of time, but at 25, TRADOC has existed longer than any of its predecessors. The other major component of the 1973 reorganization of the Army in the United States, Forces Command, or FORSCOM, also observes its 25th anniversary in 1998. The formal observance of TRADOC's 25th anniversary provides the opportunity for the TRADOC Military History Office to produce a survey of the 1973 reorganization and the role TRADOC has played since in carrying out its assigned mission responsibilities as the instrument for change and development in the Army.

As noted on the dedicatory page, TRADOC offers this historical study in memory of General William E. DePuy, who can with ample justification be characterized as the founder of TRADOC. Born in Jamestown, North Dakota, on 1 October 1919, he graduated from South Dakota State College in 1941 and received his commission from Army ROTC as a second lieutenant of Infantry. After taking part in the 1941 Louisiana Maneuvers, he saw combat in Europe with the 90th Infantry Division, in which he commanded an infantry battalion at age 25 and ended the war as division operations officer. Later, he served almost three years in Vietnam where he commanded the 1st Infantry Division in 1966-67. In the early 1970s, as Assistant Vice Chief of Staff of the Army, he led a small planning group that developed the concept of revitalizing the Army by focusing the work of preparing the Army for war in a command dedicated solely to that task. DePuy came to Fort Monroe to establish the new command in 1973, and became its first commander. Over the next four years, he spearheaded what was perhaps the most dramatic single advance in tactics, equipment modernization, and training ever undertaken by the peacetime Army. After he retired in 1977, he continued to influence the direction of the Army and TRADOC as a military affairs writer, lecturer, and advisor. Recognized as one

of the great Army leaders of his time, he died at Arlington, Virginia in 1992. His legacy was the trained and ready Army that went to Panama in Operation Just Cause in 1989 and to the Persian Gulf in 1990 and 1991.

From its beginnings in 1973 and through its first 25 years, TRADOC and the Army faced a future conditioned by fundamental change. Within that framework, this study examines the origins of the command and takes note of the way it operated under nine different commanders. A series of thematic chapters deal with the major developments of the command's first quarter century, including the training revolution, a new generation of weapons, the focus on warfighting doctrine, design of the Army of the 1980s and the ongoing efforts of Force XXI looking to the Army of the 21st century, as well as TRADOC's involvement in joint service issues and work with Allied armies. The narrative surveys the command's organizational structure and how it evolved over the first 25 years, then describes how it responded to the strategic reorientation as the United States and its allies adjusted to a radical change in the threat, and provides a sketch of TRADOC's contributions to combat operations and peace operations since the command's establishment.

As the subtitle suggests, this is not a definitive history of TRADOC for the period 1973-1998, but rather an overview, focusing on the aspect of TRADOC's external mission and giving less attention to missions directed internally. The narrative is based primarily on periodic annual histories of the command, produced by the TRADOC Military History Office as a part of the Army Historical Program. Much information was also provided in John L. Romjue's unpublished manuscripts on doctrine and force design through 1996. Abbreviations and acronyms in both the text and in the footnotes can be identified by referring to the list in the back of the volume. An index provides assistance in locating subjects and individuals. Footnotes provide source citations for the narrative, but it may be necessary to go to the secondary source cited, e.g. an AHR (Annual Historical Review) or Annual Command History (ACH), to identify a specific document behind the narrative.

Primary editor/author Anne W. Chapman has based her work substantially on an earlier publication prepared by the Office of the Command Historian in 1993 on the occasion of TRADOC's 20th anniversary. That publication was entitled Prepare the Army for War: A Historical Overview of the Army Training and Doctrine Command, 1973-1993. Principal author and leader of the writing team for the 1993 edition was Mr. John L. Romjue, who then headed up the Historical Studies and Publication function in the Office. In the writing task, he was assisted by Dr. Susan Canedy and Dr. Chapman. Mr. Joseph H. Mason III, Archives Technician, collected and evaluated a large amount of data

to produce the key personnel appendices which helped to make the study a useful reference source for readers who wanted to know who was who, within TRADOC. Photographic illustrations, apart from those collected by Mr. Mason on key personnel, were located, selected, and captioned by Dr. Charles H. Cureton.

Dr. Chapman substantially revised the introduction, added a new chapter addressing TRADOC's role in combat and peace operations, and did updates to the remaining chapters. Mrs. Carol Lilly, Archives Technician, performed the task of editing and updating the key personnel appendices and assuming many other complex research and editing tasks. General William W. Hartzog, commander of TRADOC as it turns 25, generously agreed to allow use of the final chapter of his *American Military Heritage*, for which he served as primary author. Ms. Margaret Peoples of the TRADOC Public Affairs Office quickly and professionally transformed the manuscript into a camera ready product. All credit for this volume's worth accrues to these contributors.

Hampton, Virginia

May 1993 and May, 1998

Henry O. Malone, Jr.

Chief Historian (Retired)

CHAPTER I

INTRODUCTION

Charged with the major Army missions of individual training and combat developments, the Army Training and Doctrine Command, or TRADOC, was established as the U.S. Army's overall development command in July 1973. Coming into existence in the period of American defense policy reorientation from Vietnam to NATO Europe and the challenge of the Warsaw Pact buildup, TRADOC in the 1970s and 1980s carried through sustained programs of training reform; weapon, equipment, and force modernization; and doctrine revision. Those efforts fundamentally transformed the Army into a modernized, trained and ready force, a significant component of the successful political-military challenge against which Communist power shattered and the Cold War ended in the years 1989-1991. It was the highly trained, professional Army of Excellence whose combat units helped restore democratic government to Panama in Operation Just Cause of 1989-1990 and to expel the armies of Iraq from Kuwait in Operation Desert Storm in 1991. It was this same Army that increasingly provided peace operations and humanitarian relief in places such as Somalia, Bosnia-Herzegovina, Haiti, and Rwanda, and aid to disaster victims following natural disasters.[1]

The transformation of the American Army between the early 1970s and the early 1990s and TRADOC's role in that change was the general theme of the first edition of *Prepare the Army for War: A Historical Overview of the Army Training and Doctrine Command, 1973-1993*. The current volume brings the TRADOC story to the present as the command celebrates its twenty-fifth anniversary. During the last five years, the United States Army has continued the thoroughgoing modernization of its fighting units and the reforms in training and doctrine begun in the immediate post-Vietnam era. In mid-1998, TRADOC continued to serve, as it had since 1973, as the Army's development and requirements command that existed on an equal status and footing with the major troop commands.

1. For more information on the establishment and development of TRADOC see Paul H. Herbert, Deciding What Has To Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations (Leavenworth

Early in the 1970s the United States found itself in a new strategic situation in which a shift of power in favor of the political dynamic of revolutionary socialism was advancing worldwide. The United States' strategic reversal in Southeast Asia seemed to call into question the continued validity of its long and hard-contested policy of communist containment, with the bitter past and recent sacrifices of that historic effort. The gains of worldwide Communist revolution in the 1970s, funded and supplied by the Soviet Union, and, to a lesser degree, by communist China, were dramatic and alarming. Revolutionary power seizures and military coups in Africa, South and Southwest Asia, and Latin America went forward largely uncontested by American policy makers of the middle and late decade.

The stunning reversal and sudden termination of that revolutionary impulse in the world-changing events of 1989-1991 created a new strategic world. By the early 1990s, the collapse of communism and the disintegration of the Soviet Union had ushered in a new world of power. The United States remained as the single superpower in an international order in which it could newly act with greater freedom to support national independence and democratic and free-market institutions.

The imperatives of that situation seemed to dictate a smaller Army, and one whose readiness was assured by the transit of new technological thresholds. In the mid-1990s, TRADOC institutionalized these new directions as mid-future Army XXI. Army XXI included Force XXI, the TRADOC-led effort to determine future force structure based on digitally equipped forces. Even beyond the mid-future, an Army After Next project looked deeply into the Army's Future. The Army of the next century would also include revised doctrine and training programs. The advances in technology indicated an evolution to a battlefield on which time, distance, movement, and firepower existed in new relationships arising from the evidence of the extended reach and pinpoint accuracy of weapons brought to effect by near-real-time intelligence, detection, target acquisition, and communications technology.

This advent of a new strategic world and the emergence of a new higher level of technological warfare took place in the context of a U.S. military establishment sharply drawing down in the wake of the retrenchment of Soviet power.

(continued)

Paper No. 16) (Fort Leavenworth, Kan.: Combat Studies Institute, Command and General Staff College, 1988) which provides an outstanding and accessible account of the early role of TRADOC and its "founder." John L. Romjue, From Active Defense to AirLand Battle: The Development of Army Doctrine, 1973-1982 (Fort Monroe, Va.: Historical Office, HQ TRADOC, 1984) describes the debate of the Active Defense and the formulation of Army AirLand Battle doctrine. Anne W. Chapman, The Army's Training Revolution, 1973-1990: An Overview (Fort Monroe, Va.: Office of the Command Historian, HQ TRADOC, 1991) gives a summary of training innovations and programs. Romjue, *A History of Army 86*, Vol. I, *Division 86: The Development of the Heavy Division*, and Vol. II, *The Development of the Light Division, Corps, and Echelons Above Corps* Fort

power. Against this background of radically altered strategic assumptions, TRADOC reached the quarter-century mark challenged to lead the Army of the post-Cold War era through the intellectual change needed to transform it from a larger, forward-deployed force into a smaller, power projection force based primarily in the United States. The command continued to meet its twenty-five year old responsibility to the Department of the Army to prepare the Army for war and to act as the architect of the future Army. What follows is a concise historical overview of the TRADOC role and contribution to a significant era in U.S. Army institutional and developmental history.

AH-1 Cobras taking off for a mission represent the reinvigorated post Vietnam War Army created by better training, equipment, and doctrine.

(continued)

Monroe, Va.: Historical Office, HQ TRADOC, 1982) describes TRADOC's force design efforts through 1980. The same author's *The Army of Excellence: The Development of the 1980s Army* (Fort Monroe, Va.: Office of the Command Historian, HQ TRADOC, 1993) documents the force design and transition to the Army of Excellence through the close of the 1980s, together with the final phases of the Army 86 project preceding. See also TRADOC annual history volumes, continuous since FY 1974, for documented discussions of the several aspects of TRADOC's development work.

Chapter II

ORIGINS OF TRADOC

TRADOC was established by the Department of the Army on 1 July 1973 at Fort Monroe, Va. in the major STEADFAST Reorganization of the Army in the United States brought to completion that year. The reorganization functionally realigned the major Army commands in the continental United States. Headquarters U.S. Continental Army Command, or CONARC, situated at Fort Monroe, and Headquarters U.S. Army Combat Developments Command, or CDC, based at Fort Belvoir, Va., were discontinued, with TRADOC and the new U.S. Army Forces Command at Fort McPherson, Ga., assuming the realigned missions. TRADOC assumed the combat developments mission from CDC, took over the CONARC individual training mission, and assumed command from CONARC of the major Army installations in the United States housing Army training centers and Army branch schools. FORSCOM assumed CONARC's operational mission: the command and readiness of all divisions and corps in the continental United States and the installations where they were based.[1]

Predecessor Commands

Joined and focused under TRADOC, the individual training mission and the combat developments mission each had its own lineage. The individual training responsibility had descended to CONARC from Headquarters Army Ground Forces, or AGF, of World War II. The AGF had established replacement training centers (RTC) for the basic training of the great masses of trainees that that war required, prior to their assignment to divisions or other organi-

1. (1) For a documented account of Operation STEADFAST, see Jean R. Moenk, Operation STEADFAST HistoricalSummary: A History of the Reorganization of the U.S. Continental Army Command, 1972-1973 (Fort McPherson, Ga. and Fort Monroe, Va.: Historical Offices, HQ FORSCOM and HQTRADOC, 1974). (2)TRADOC Annual Report of Major Activities (ARMA), FY 1974, A History of TRADOC's First Year (Fort Monroe, Va.: Historical Office, HQ TRADOC, May 1975), pp. 140-89 presents a documented account of the reorganization of combat developments in Operations STEADFAST (CONARC) and HIGHROAD (CDC).

zations for unit training before shipment to the war theaters. In 1946 numbered Army areas were established in the United States under AGF command. Headquarters Army Ground Forces moved from Washington, D.C. to Fort Monroe the same year.

In March 1948, Army Ground Forces was replaced at Fort Monroe by a new Office, Chief of Army Field Forces, or OCAFF. To OCAFF was delegated the Army-wide general supervision, coordination, and inspection of all matters pertaining to individual and unit training, along with other AGF functions. OCAFF was not a command headquarters, however, and did not command the training establishment. That line of authority flowed from Headquarters Department of the Army directly through the numbered Armies to the corps, divisions, and Army Training Centers.

In February 1955, HQ Continental Army Command replaced OCAFF, assuming its missions along with transfer of the numbered Armies with their individual and unit training mission from Headquarters Department of the Army. Headquarters CONARC was redesignated U.S. Continental Army Command in January 1957.[2]

Combat developments had emerged as a formal Army mission in the early 1950s. It originated in the perception that, with the advent of nuclear arms and international delivery capability, a system was needed dedicated to the comprehensive and systematic peacetime development of Army weapons and equipment, war fighting doctrine, and tactical organization. OCAFF assumed this role in 1952, and an incipient network of offices and agencies was formed which CONARC took over upon its establishment in 1955. The activation of the Combat Developments Experimentation Center at Fort Ord, Calif. in 1956 led to further system development.

Following an early-1960s study of Department of the Army functions, organizations, and procedures, "Project 80," Headquarters U.S. Army Combat Developments Command was established in 1962 to bring disparate elements of the system together under one major Army command. The Fort Belvoir-based headquarters managed combat developments in the Army for the next eleven years.[3]

2. See Jean R. Moenk, A *History of Command and Control of Army Forces in the Continental United States, 1919-1972* (Fort Monroe, Va.: Historical Office, HQ CONARC, 1972), pp. 25-55, for a summary of major Army command missions from the close of World War II up to the 1973 STEADFAST Reorganization.

3. (1) Moenk, *A History of Command and Control*, pp. 32, 43-45. (2) Pamphlet, Historical Background of USCONARC Participation in Combat Developments and Materiel Development Activities (Fort Monroe, Va.: 1963).

STEADFAST Reorganization

The 1973 STEADFAST Reorganization had been directed by the Chief of Staff of the Army, General Creighton W. Abrams, in order to solve difficult command and control problems in the Army establishment evident in the early 1970s. The CONARC span of control through the headquarters of the numbered armies to the corps and divisions included most of the major Army installations in the United States. With such wide control span, together with responsibilities for both the training and education establishment and for unit readiness, many observers felt CONARC obligations were too broad for efficient focus.

At the same time, the Combat Developments Command, established along with the Army Materiel Command in 1962 to relieve CONARC of the growing combat developments mission, had not proved successful. CDC consisted of a network of three intermediate-level groups focused on developments in combat, combat support, and combat service support; combat developments agencies that were tenants at each CONARC school; several specialized institutes; and the Combat Developments Experimentation Command. In its short existence between 1962 and 1973, CDC had focused much of its effort on major, far-future plans of limited practical consequence or utility. A second problem was the institutional, bureaucratic separation of the combat developments agencies from the schools with which they were co-located. Agency priorities and school priorities were decided according to the divergent missions of the two major commands, CDC and CONARC. In addition, the Combat Developments Command may have been somewhat handicapped as a three-star command in its dealings with CONARC and the Army Materiel Command, both of which were headed by four-star commanders. But the crux of the problem was the bureaucratic separation existing between those responsible for combat developments and doctrine on the one hand — the combat developments agencies — and the centers of combat developments and doctrinal expertise on the other — the schools.

Carried through under General Abrams' Assistant Vice Chief of Staff and chief reorganization planner Lt. Gen. William E. DePuy, the 1973 reorganization drew together under TRADOC the closely related Army development activities by which troops and leaders were trained and instructed, their fighting doctrine was formulated, their tactical units were built, and their weapon requirements were defined. The STEADFAST Reorganization put combat developments back into the branch schools. After 1973, the formulation and the teaching of tactical doctrine was an organically united effort in each TRADOC

school. Beginning that year, the Army had a major four-star command focuse specifically and exclusively on training, teaching, and developing the Army.

From its headquarters, TRADOC carried out its assigned individual trainir and combat developments missions through command of subordinate elements ar installations throughout the continental United States. In brief, they included th Army's training centers for initial entry training; intermediate-level integrating cer ters to draw together developments in combined arms, logistics, and soldier su port; the Army's branch schools, specialist schools and military schools and co leges; Army ROTC; together with mission-related test, experimentation, and an lytical activities. The TRADOC organizations were mostly situated on the maj installations which the headquarters commanded. The remainder were tenanted c a dozen or more non-TRADOC installations.

The Tasks of TRADOC

As the architect of the STEADFAST Reorganization and the new Trainir and Doctrine Command, Lieutenant General DePuy was promoted to General ar appointed its first commander, assuming authority on the establishment date, 1 Jul 1973. Two tasks faced the new major Army command: making the new institutic work; and training, reforming, and modernizing the post-Vietnam Army.

What was new in the idea of a training and doctrine command was focus. Th TRADOC-FORSCOM arrangement solved the span-of-control problem, put con bat developments back into the schools, and focused the development of the Army tactical organizations, weapons and equipment, doctrine, and the training of so diers in that doctrine, in one command. Making the better alignment work was th first task facing TRADOC in 1973. The second task was to assist in the designin shaping, and training of a dispirited Army. Though retiring unbeaten from th field, the U.S. Army was returning in the early 1970s from a lost war. Facing it wa not only a situation of psychological and institutional uncertainty, but a dangerou and growing strategic threat to the North Atlantic Alliance. The situation was exa erbated by what military observers in the United States and Europe described as lost decade of weapon development by the U.S. Army, owing to its ten years c concentration on fighting and equipping for the Vietnam conflict.

Chapter III

HOW TRADOC OPERATED

In its first quarter century, the U.S. Army Training and Doctrine Command had nine commanders. Each led the command from a perspective based on personal and professional experience, the evolving international situation, national priorities, and the defense fiscal environment. Each impressed upon the organization his own style of management, within the framework of his commander's intent.

DePuy

In July 1973, the first commander, General DePuy, announced his conception of the headquarters mission and explained his system of management.[1] As TRADOC's mission was to get the Army ready to fight the next war, DePuy's primary concerns were improvements in individual training, better support for training in units, and new emphasis and direction for combat developments activities.

As defined by organizational charter, the TRADOC commander developed and managed training programs, developed training doctrine and provided training support for individual and collective training in units. As the Army's principal combat developer, he guided, coordinated, and integrated the total combat development effort of the Army.[2]

Many aspects of the Vietnam experience had contributed to a degradation of training within CONARC. Individual training needed to be revamped. The rush to provide replacements for the conflict had taxed training capability. With the end of the war, the numbers of troops being processed were significantly reduced, opening the opportunity to slow down the flow and consolidate training effort in the appropriate school to insure quality performance-oriented train-

1. See Preface for DePuy's background.

2. TRADOC ARMA, FY 75, p. 15. (CONFIDENTIAL – Info used is UNCLASSIFIED)

ing. A "back to basics" approach was taken: officer training courses were to prepare officers for their next assignment, the physical aspects of basic combat training were toughened, and advanced individual training was made more performance-oriented. Moreover, training literature was outdated, and training tests desperately needed improvement. Consequently, another of DePuy's major projects was the production of a "how-to-fight" series of manuals and films which set forth Army doctrine in simple, vivid language. In the area of training, new test documents were formulated. Those Army Training and Evaluation Programs were performance-oriented and differentiated between active and reserve components. That performance-oriented training was further exemplified by the skill qualification tests and the soldiers' manuals.

While seeking solutions to the problems noted during the war in Southeast Asia, DePuy and the TRADOC staff were heavily influenced by the Israeli War of 1973. Initially DePuy had defined his command's mission as training the Army to win on the modern battlefield of the next war. After the October War, the definition was refined to include winning the first battle of the next war.

Combat developments was a prime concern. It was clear that the combat developments approach needed to be harnessed to the present and near future. The October War had witnessed an increased lethality in tank warfare, antitank guided missiles, and artillery which represented a quantum leap over the weapons used in World War II. Because of the small size of the headquarters staff, the three functional centers and the schools undertook a major portion of the combat developments mission. The headquarters insured, through strict overwatch of the required operations capability document, that the developers indeed developed what they promised. Combat developments was addressed as well in the development of SCORES -- Scenario Oriented Recurring Evaluation System. Scenarios represented geographical areas, opposing forces, and events that embodied a hypothetical conflict. Moreover, the systems acquisition process was reformed with the function decentralized into the service school structure.

Management of the TRADOC structure was of special concern. The Commanding General of TRADOC commanded all installations and organizations as assigned by the Department of the Army. Through the installations, the commander provided administrative, logistical, and other support services to those agencies which were tenants of TRADOC installations. DePuy instituted the installation contract system as a major innovation for improving installation management; it was a document signed annually by the installation commander and the TRADOC commander or his representative which out-

lined the tasks to be performed by the installation and the resources and support to be provided in turn by the headquarters. There was provision for periodic renegotiation if circumstances changed. Careful coordination between the two signatories insured the success of the new system of management. Yet another important management tool was the TRADOC Programing System, designed to improve the management and distribution of resources. Documentation consisted of the program review memorandum and the TRADOC three-year program. The program review memorandum displayed the way TRADOC planned to allocate resources for its missions, while the three-year program portrayed the distribution of actual and projected resource and workload guidance furnished by the Department of the Army for the current, budget, and program years.[3]

Starry

When General Donn A. Starry assumed command of TRADOC in 1977 he began a pronounced decentralization of major command projects to the integrating centers and schools. Starry, who had been commandant of the Armor School and commander of V Corps in Germany, wanted all his subordinate commanders fully involved in TRADOC's major actions. In line with that approach was his decision to move the 3-star TRADOC deputy commander position from the headquarters to Fort Leavenworth. That move had an impact on the headquarters as well with the establishment of simpler, more direct staff relationships, resulting in freer and faster flows of communication and staff actions.[4]

Command emphasis focused on the development of a new tactical doctrine to harness the combat power of the oncoming generation of weapons and the modernization of training techniques, literature, and support. Starry's immediate goal was to "to analytically describe the 'Central Battle' -- the place where all the combat systems and combat support systems interact on the battlefield."[5] The corps battle, or "Central Battle" formed a conception of how the Army should fight, and it provided a dynamic frame to which TRADOC attuned its mission efforts.[6] Starry viewed the central battle as an indivisible air-ground concern. Concepts and procedures to coordinate the air-land battle were continued under Starry and expanded to the conceptual "integrated battlefield."[7]

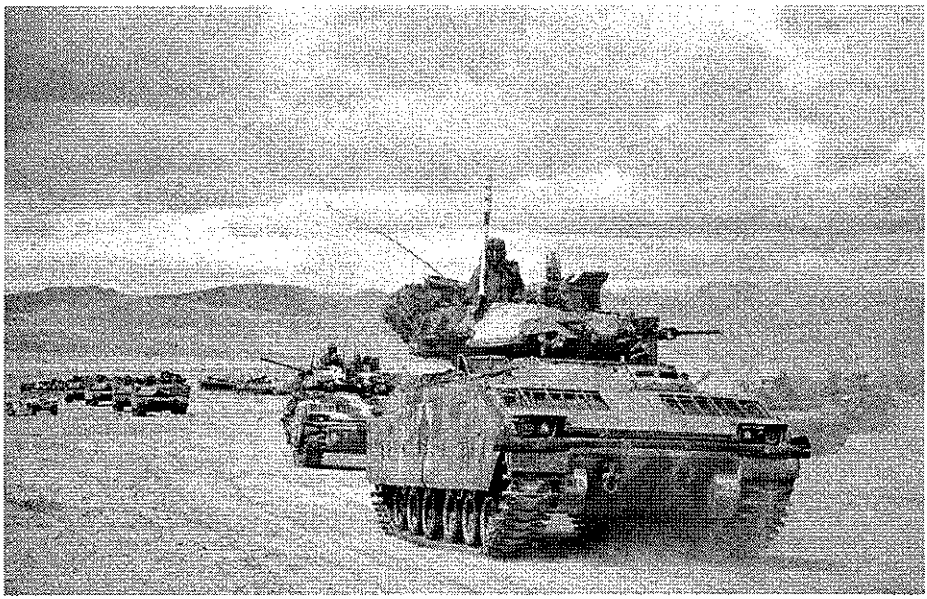
3. (1) TRADOC ARMA, FY 74, pp. 19-23. (SECRET -- Info used is UNCLASSIFIED) (2) Changing an Army: An Oral History of General William E. DePuy, USA Retired, conducted by Romie L. Brownlee and William J. Mullen III, USMHI and USACMH.

4. TRADOC AHR, FY 78, pp. 1-3. (CONFIDENTIAL -- Info used is UNCLASSIFIED)

5. TRADOC AHR, FY 77, p. 11. (CONFIDENTIAL -- Info used in UNCLASSIFIED)

6. Ibid.

7. TRADOC AHR, FY 80, p. 74. (CONFIDENTIAL -- Info used is UNCLASSIFIED)



When General Donn Starry assumed command of TRADOC in 1977 action focused on the development of new tactical doctrine to harness the combat power of the oncoming generation of weapons such as the Bradley Fighting Vehicle and M1 Abrams shown operating in the National Training Center.

The move into the far-future planning realm had its materiel side in a similarly future-oriented concept based materiel acquisition system. The concept based acquisition system, presented in January 1981, served as the mechanism to translate broad operational concepts into the necessary equipment requirements. Concepts would determine technology, resulting in less costly research, development, test and evaluation.[8]

Starry felt that operational concepts should emanate from the headquarters of the commander of TRADOC. Those concepts in turn would be used to drive the work done by the integrating centers and schools. That was evident in the revision of FM 100-5, Operations, which he oversaw during his tenure, and of the Army 86 Studies. Division 86, with its far-ranging concepts and implications, was presented to the Army Chief of Staff in August and September 1980. The Division 86 study was extended by the Chief of Staff of the Army into a fuller Army 86 Study, encompassing not only the heavy division but the regular infantry division, corps, and echelons above corps organizations of the future Army.[9]

During Starry's tenure, TRADOC headquarters established six goals to guide program development and aid management. These were to provide inte-

8. TRADOC AHR, FY 81, pp. 121-122. (CONFIDENTIAL -- Info used is UNCLASSIFIED)

9. (1) TRADOC AHR, FY 79, p. 370. (CONFIDENTIAL -- Info used is UNCLASSIFIED) (2) TRADOC AHR, FY 81, p. 3. (CONFIDENTIAL -- Info used is UNCLASSIFIED)

grated operational concepts; to develop organizational and force structure, weapon and equipment requirements, and training in accord with the operational concepts; to maintain an efficient training base expandable in event of mobilization; and to provide adequate installation support and maintenance. In the leader development arena, probably nothing was more significant than the consequences of Starry's conviction that it was necessary for officers to have an appreciation for and understanding of the history of their profession, characterizing such knowledge as an essential element of their technical competence.[10]

Otis

Upon assuming command in August 1981, General Glenn K. Otis, who came to TRADOC from the post of Deputy Chief of Staff for Operations and Plans on the Army Staff, expressed management goals internal to TRADOC as his three "Ms" -- mobilization planning, maintaining the force, and modernization of the force. Mobilization planning involved development of programs of instruction, training base expansion capacity, and equipment requirements. Maintenance of the force concentrated on training and maintaining the momentum of the previous command. General Otis faced two preeminent challenges in force modernization: the first was managing the period of time when both interim and new organizations would be phased in; the second was support packages for training, spare parts, maintenance, and field manuals. At the TRADOC Commanders' Conference in November 1981, he added to the three "M"s a fourth: military history, to signal his intent to continue to fund the military history department (Combat Studies Institute) at Leavenworth, founded under his predecessor.[11]

Over the course of 1982, TRADOC headquarters, at General Otis' behest, developed a set of command goals in line with the recently promulgated seven Army Goals. The purpose was to identify clearly each of the roles TRADOC would play in support of the Army goals. The seven Army goals addressed the areas of readiness, the human element, leadership, materiel, future development, strategic deployment, and management.[12] With TRADOC's declared purpose to prepare the Army for war, its attendant missions as stated were to develop doctrine, to conduct and guide Army combat developments, to develop and maintain the Army training system, and to command installations and organizations.[13] The development of a set of specific goals for TRADOC priori-

10.(1) Ibid. (2) Msg, CG TRADOC to Commanders/Commandants, 171738Z Jul 79, subj: Military History.

11. Oral history interview, General Glenn K. Otis, Commander U.S. Army Training and Doctrine Command, 22 December 1982, by Dr. H.O. Malone.

12. TRADOC AHR, FY 82, p. 358. (CONFIDENTIAL -- Info used is UNCLASSIFIED)

13. TRADOC ACH, FY 83, p. 540. (SECRET -- Info used is UNCLASSIFIED)

tized TRADOC's activities, served as a tool for the application of resources, became a touchstone for defining future roles of the command, served as a resource for the development of a formal document which would come out during his successor's tenure, and served as a measure for progress.

Many substantial initiatives came to the fore during Otis' year and a half term as commander of TRADOC. The recently revised FM 100-5, *Operations*, rewritten during Starry's time, was half of the Army 86 Studies. Training also captured a large part of General Otis' attention. Late in 1981, he determined that the time had come to step back and evaluate what had been accomplished in the area of training and plan for what would take place in the following decade. That initiative developed into the Army Training 1990 concept. One of TRADOC's missions was to produce a quality soldier, noncommissioned officer, and officer in its institutions and to support combat readiness in the units. Consequently, the TRADOC training policies for 1990 reflected the following principles: Reinforcement of the chain of command; efficient resource management; flexibility and simplicity of execution; centralized policy and production of support packages; accountability of product through the chain of command; emphasis on unit needs; mobilization to drive training development; and greater use of simulators and simulations. Significant also was the establishment, during this time, of the School for Advanced Military Studies, a postgraduate extension of the Command and General Staff College at Fort Leavenworth, Kansas, focusing on the operational level of war.[14]

Richardson

General William R. Richardson assumed command of TRADOC in 1983, also coming there from the post of Deputy Chief of Staff for Operations and Plans on the Army Staff. In accordance with Secretary of the Army Marsh's "Year of Excellence," he introduced the TRADOC watchword, "Excellence Starts Here." He reworked the aforementioned TRADOC Pamphlet 5-1, TRADOC Goals 1984, which formalized ten TRADOC goals: to provide concepts and doctrine that enhance the opportunity for success; to improve effectiveness on the integrated battlefield through analysis of current and projected capabilities and deficiencies; to develop and document force design and materiel requirements that ensure operational and technological superiority; to synchronize doctrinal training and organizational and materiel initiatives in tactical forces; to validate organizational and materiel system requirements and concepts; to develop an effective standardized Army training system; to pro-

14. TRADOC AHR, FY 82, pp. 194-197. (CONFIDENTIAL -- Info used is UNCLASSIFIED)

mote effective standardized training in forces; to provide quality training support for forces and institutions; to develop and provide quality institutional training; to command, support, and manage efficiently operations of TRADOC installations and activities. Within the first days of his assumption of command, he decided to require each TRADOC center with a professional development school to establish a command history office, staffed by a professionally trained historian who would teach military history in leader development courses, preserve the corporate memory of the centers and schools, and publish military history to support planning and decision making.[15]

Richardson set the command's priorities in four areas, aligned with TRADOC's four missions. Under the overall task of "Preparing the Army for War," training, doctrine, force integration, and mobilization were identified as the mission tasks. The command strengthened the schools by decentralizing branch proponency and moving doctrinal development and writing alongside the teaching function. Schools responded by placing increased emphasis on writing and teaching tactical doctrine.

Richardson was commander at the time when much of the work of his predecessors was coming to fruition across the Army. FM 100-5 had been written and promulgated, the derivative manuals were being written in the schools; the training program was solidly emplaced; the development of the organizational designs of the Army of Excellence was undertaken; and weapons systems were coming on line. Richardson applied his own leadership philosophy to TRADOC, stressing competence and confidence. A leader must be tactically and technically proficient; in its mission areas, TRADOC had to be also tactically and technically proficient. It must set high standards and ensure that those standards were understood and met. The second maxim involved confidence. One must attain a high measure of self-confidence and gain the confidence of those around him. One of the biggest challenges Richardson noted for TRADOC was the recruitment and retention of good people within TRADOC.[16]

Richardson was responsible for the establishment of several new agencies and departments at Fort Leavenworth. Believing that the heart of the Army was TRADOC, and the heart of TRADOC was Fort Leavenworth, he continued development of the School for Advanced Military Studies, created the School for Professional Development, the Center for Army Leadership, Combined Arms

15. TRADOC Hist R, 84-86, pp. 1-2. (SECRET -- Info used is UNCLASSIFIED) Later, Richardson was the first recipient of the Franklin Delano Roosevelt Award, given every three years by the Society for History in the Federal Government to the official who has done most to promote the use and preservation of history in the federal sector.

16. Oral history interview with General William R. Richardson, 27 August 1986, by Dr. H.O. Malone, Jr.

Training Activity, the Center for Army Lessons Learned, and the Combined Arm Operational Research Activity. A final significant reorganization was his idea t transform the Deputy Chief of Staff for ROTC into the ROTC Cadet Command as major subordinate command of TRADOC.

Vuono

General Carl E. Vuono, who had commanded the Combined Arms Center ar most recently served on the Army Staff as Deputy Chief of Staff for Operations ar Plans, assumed command of TRADOC in June 1986. He soon announced that h mission focus would have two aspects. Taking a somewhat less restricted view the concept of preparing the Army for war than had Richardson, Vuono stresse that TRADOC had to not only prepare the Army for war today, but it must loo farther ahead in time as the architect of the future.[17] He stressed that TRADO must consider the whole spectrum of war, and while addressing current challenge not neglect the design of the force ten to fifteen years out. He reoriented the te TRADOC goals into four major areas of responsibility: doctrine, force moderniz tion, leader development, and leading and caring. TRADOC's responsibility was insure understanding of what the Army must be to win on the future battlefiel That understanding would provide vision and direction for the Army.

Vuono understood that doctrine had to apply to the Army and had to be oper tive in the joint and combined arena. It was imperative that doctrinal publicatio from echelons above corps, through corps, division, all the way down to the brigad manual be in harmony with the overall doctrine. Vuono instituted guidelines f doctrinal development to assist in the evolution of the doctrine. In the trainin arena, Vuono developed the concept of the advanced collective training facilitie which led to the opening of the Joint Readiness Training Center at Fort Chaffe Arkansas, and the Combat Maneuver Training Center at Hohenfels, Germany, ar the initiation of the Battle Command Training Program at Fort Leavenworth. E forts in force modernization concentrated on improved application of the Conce Based Requirements System and a new emphasis on a systems of systems approac to equipment modernization to exploit opportunities for commonality. Leader d velopment was concentrated in the development of small group instruction and t invigoration of the noncommissioned officer education system. Leading and ca ing addressed excellence in the individuals and the installations of which they we a vital part.

Toward that end, the command instituted procedures for developing a lor range plan. The long range plan was designed to facilitate construction of the var

17. TRADOC Hist R, 84-86, p. 3. (SECRET -- Info used is UNCLASSIFIED)

ous programming documents. It was to be the vehicle through which the future would not only be addressed, but, significantly linked to the present. Vuono's emphasis on the immediate fifteen year future helped concentrate all the mission areas into a manageable, and foreseeable, time period. The longer-range projection was taken up in a further plan titled Army 21.[18]

Thurman

General Maxwell R. Thurman, having served previously as Vice Chief of Staff of the Army, continued General Vuono's work when he became TRADOC commander in June 1987. He reaffirmed Vuono's four primary mission elements but broke out the combat developments mission element into two components--force design and equipment requirements--and added mission support as a new element. He stressed the role of TRADOC as the key player in shaping the azimuth for the Army of the future.[19]

Thurman's stated objective was to serve the Army in the field. That would be accomplished by writing the doctrine by which it would fight; testing that doctrine for soundness; designing well-balanced and capable forces; articulating the equipment requirements of the commanders-in-chief in the field; providing combat-ready soldiers to units around the world; and developing future leaders.

General Thurman's vision was set forth in what came to be known as Vision 91, which encompassed six mission elements--characterized by Thurman as TRADOC's "domains" -- doctrine, force design, equipment requirements, leader development, training, and mission support. By anticipating changes in the strategic environment and in available technology, new concepts were developed. Those became the basis for evolutionary change in doctrine which drove developments in force design. Thurman stressed the importance of dialogue between the Army and industry to accurately articulate requirements, capitalize on feasible and available technology, and provide soldiers with the best equipment while reducing the time span of the development, acquisition, and production cycle.[20]

Vision 91 examined the central question of how the command should position itself to meet the challenges of 1991 and beyond. That period would be a time of substantial manpower and funding constraints. Vision 91 sought to address the evolution of doctrine, especially in the joint arena; a more focused force design; a system-of-systems approach to materiel development; full service leader develop-

18. Oral history interview with General Carl E. Vuono, Commanding General, U.S. Army Training and Doctrine Command, 14 February and 11 June 1987, by Dr. H.O. Malone, Jr.

19. TRADOC AHR, CY 87, pp. 2-3. (SECRET -- Info used is UNCLASSIFIED)

20. TRADOC AHR, CY 88, pp. 4-7. (FOR OFFICIAL USE ONLY -- Info is not protected)

ment; tough, realistic training; and well-developed mission support capability. Due to the bleak funding environment, specific areas of interest included an erosion of training, an inhibited combat developments program, and a heavily indebted base operations function.

While Vision 91 addressed the immediate period, Thurman developed a TRADOC planning vision for the coming thirty years titled TRADOC Long-Range Planning Vision which solicited the thoughts of the subordinate commanders toward the further development of a new TRADOC long-range plan. Significant points of interest included the concept of competitive strategies, the emerging Army missions of nation building, security assistance, and counterinsurgency, and the need to develop a flexible responsive force.

Foss

General John W. Foss, who had earlier headed the Infantry School and most recently served as Deputy Chief of Staff for Operations and Plans on the Army Staff, assumed the leadership of TRADOC in 1989 as the Army began a period of downsizing and strategic reorientation. A variety of factors, international, national, political, and economic, had combined to compel the Army to change into a more flexible, smaller force. Foss stressed that TRADOC had to avoid the false efficiencies of bureaucratic approaches. Leadership was to be focused on integrity, openness and trust, bold risks, and a clear view about which priorities took precedence.[21]

During Foss' tenure, the concept of the three TRADOC integrating centers, which had traditionally been part of the organization, changed. In 1990 the three centers, Combined Arms, Logistics, and Soldier Support, were replaced by two major subordinate commands: the Combined Arms Command and the Combined Arms Support Command. The new Combined Arms Command changed its role through absorption of some combat developments functions from the headquarters and through consolidation with the former Combined Arms Combat Developments Activity and Combined Arms Training Activity. The second aspect of the reorganization efforts merged the Logistics Center with the Soldier Support Center resulting in the creation of the Combined Arms Support Command headquartered at Fort Lee. Similar types of activity were studied in the Future TRADOC conceptualization which envisioned the establishment of warfighting centers, groupings of branches with related battlefield functions to provide a focus for common effort in developing

21. TRADOC ACH, CY 89, p. 13. (FOR OFFICIAL USE ONLY — Info used is not protected)

products relating to doctrine and equipment.[22] Also in October 1990, TRADOC eliminated the installation contract by which the TRADOC commanding generals had managed the outlays of the installations since the mid-1970s.

As the effects of geopolitical change were felt during the course of 1990, accelerated by the deployment of American troops from Germany to the Persian Gulf, the Army's forward deployed and forward-defense focus in Europe shifted to a concept of forward-deployed forward presence.[23] The primary focus of the Army began to shift to the projection of land combat power from the continental United States, as well as from forward-deployed forces where possible. That had implications across the force, from warfighting doctrine to organizational structure to equipment to training.

With the perception of a shifting threat, reductions in budgets, force structure, personnel, and modernization were to be expected. Reorganization and regionalization of function were themes explored. While preparing the Army for the challenges of the early and late 1990s, TRADOC was guided by the six imperatives of the Chief of Staff of the Army, General Vuono: to recruit and retain a quality force, to refine warfighting doctrine, to maintain the right force composition, to train the force, to continue to modernize, and to develop leaders. Notable was the congruence between the Army Chief of Staff's imperatives and the TRADOC mission.[24]

Foss addressed doctrinal challenges and changes through AirLand Battle-Future studies, doctrinal discussions, and map exercises, focusing on the nonlinear battlefield and the doctrine, organization, and logistics it would require. AirLand Battle-Future, later termed AirLand Operations, became the driving concept for TRADOC. Further, Foss directed the beginning of a revision of FM 100-5 to expand the doctrine into the strategic realm. In August of 1990, the United States launched Operation Desert Shield, and TRADOC shifted a great percentage of its time and effort to going to war, a topic covered later in this account.[25]

Franks

General Frederick M. Franks, Jr., who had earlier been Deputy Commandant of the Command and General Staff College, became the eighth TRADOC

22. TRADOC ACH, CY 90, pp. 14,22. (FOR OFFICIAL USE ONLY — Info used is not protected)

23. See Chapter XI, "Adjusting to Radical Change in the Threat."

24. TRADOC ACH, CY 90, p. 8. (FOR OFFICIAL USE ONLY — Info used is not protected)

25. Oral history interview with General John W. Foss, Commander U.S. Army Training and Doctrine Command, 25 July 1991, by Dr. H.O. Malone, Jr.

commander in August 1991. Concurrent with Foss' command of TRADOC, Franks had commanded VII Corps during Operation Desert Storm, and hence brought with him a distinctive background and experience as a senior commander in combat which would continue to influence his outlook and actions as TRADOC commander.[26]

The new TRADOC commander began anew the doctrinal revision of FM 100-5. Convinced that doctrine was the basis of change and had to be a centerpiece of TRADOC activity, revision of FM 100-5 became a top priority to lead the Army through the intellectual readjustment from the Cold War to the post Cold War Army. Franks stressed the need for maintaining the edge of excellence in doctrine, organization, training, materiel, leader development, and in the soldier system. Toward that end, he instituted battle laboratories as means to develop the capabilities for a force projection Army. The battle laboratories focused on the areas where the battle appeared to be changing and encouraged experimentation using simulations, prototypes, real soldiers, and real units to make the best use of technology and new requirements. Along with preparing the Army for war and designing its future architecture, Franks stressed that TRADOC needed to foster organizational excellence as an institution and maintain a winning team poised to take on the challenges of the future.[27]

Franks set those ideas down in five points of main effort: Lead the Army through intellectual change, sustain excellence and relevance in training and leader development, propose modernization alternatives to maintain the technological edge for soldiers on future battlefields, foster organizational excellence, and focus on soldiers. In his long-range planning guide for TRADOC, Franks interpreted TRADOC's missions specifically. They were to set training standards and run the Army Schoolhouse, provide modernization alternatives while representing the user in order to allow the Army to retain the battlefield edge, help the Army look to the future in warfighting, and foster organizational excellence. TRADOC's mission essential task list included joint and combined warfighting concepts and doctrine designed to achieve decisive victory with minimum casualties across the operational continuum; organizations structured and tailored to fight as combined arms teams and effectively accomplish joint and combined missions; modernized equipment developed from operationally focused requirements; mission focused and motivated soldiers trained in tough, realistic, tactically-competitive programs led by adaptive, creative, competent officers and noncommissioned officers developed through sequen-

26. Office Call with General Franks by TRADOC Chief Historian, 4 September 1991.

27.(1)TRADOC ACH, CY 91, pp.7-8.(2)Oral history interviewswith General Frederick M. Franks,Jr.,Commanding General of U.S. Army Training and Doctrine Command, 2 January 1992 and 7 January 1993, by Dr. H.O. Malone, Jr.

tial and progressive programs in Army institutions and units; and soldier and family support systems within a command climate that fosters excellence in training, sustaining, caring for, mobility, and deploying a force projection Army.[28]

Hartzog

General William W. Hartzog became the ninth commanding general of the Training and Doctrine command in October 1994. Prior to TRADOC command, he served as operations officer for the United States Southern Command during Operation JUST CAUSE in Panama and Deputy Commander of the United States Atlantic Command during Operation UPHOLD DEMOCRACY in Haiti. Thus, like his predecessor, Hartzog came to TRADOC with recent experience as a senior commander in operational settings. Also as with Franks, his efforts to meet the challenges of being TRADOC commander took place against a background of a new global reality in which the primary concern was no longer a classic European air and ground war, but rather the possibility of many small operations. Further, the dramatic downsizing of forces to levels not seen since the pre-World War II era also shaped Hartzog's and the command's thinking and policy. Another factor that he had to consider in shaping the force of the future was the Army's increasing involvement in peace operations, nation-building, and humanitarian relief.

Hartzog's thinking about the twenty-first century Army was set down in the Force XXI Operational Concept. The concept itself was the result of the integration of experimentation in the Army's new Battle Labs, experience, and open-ended conceptual thinking. The key to the developmental work on Force XXI was a digitized, experimental Task Force (EXFOR) that stood up at Fort Hood, Tex. in 1994. Central to the shape of future forces were a series of Advanced Warfighting Experiments (AWE) beginning in April 1994, prior to Hartzog's arrival at TRADOC, and continuing through March 1998. Looking even further into the future was an Army After Next project that sought to establish criteria for the Army by the year 2020.[29]

Hartzog's tenure through early 1998 also saw the publication of two versions of TRADOC Pam 525-5 based on the Force XXI concept and leading to the publication of a new FM 100-5, *Operations*, the first FM-100-5 for Army XXI. The concept also guided the development of tactics, techniques, and procedures (TTP) to be employed by the experimental force in executing the

28. TRADOC Plan FY 1994-2022, April 1993. For Franks' work in doctrine and combat developments arenas, see below, Chapter XIII.

29. General Hartzog outlined his ideas and efforts toward the future of the Army in *Force XXI: Land Combat in the21st Century* (Fort Monroe, Va.,: U.S. Army Training and Doctrine Command, 1996).

various AWEs. In turn, the TTPs supported further doctrine development for the execution of operations across the seven battlefield operating systems and at each echelon of operations. Concurrently, Hartzog provided guidance for Army Training XXI being developed simultaneously with operational capabilities.[30]

30. For a more detailed discussion of Army Training XXI see Chapter IX.

Chapter IV

FORCE DESIGN

Designing the "TOE Army," the division, corps, and theater designs and all the 1,200-odd various tables of organization and equipment for "type" units, platoon through corps and above that made up the Army in the field, was a central part of TRADOC's work. The design and adjustment of the organizations of the tactical Army was a continuous process, as new or upgraded weapons or equipment were introduced or when doctrine forced changes to tank platoons, mechanized infantry battalions, or cavalry troops. But doctrinal, weapon, and policy changes periodically created the necessity for larger division reorganizations. The Department of the Army implemented one such major reorganization of the tactical Army during the period, the first since the ROAD (Reorganization Objective, Army Divisions) changes of the early 1960s. The tables of organization and equipment of the Army of Excellence, or AOE, designed by TRADOC in 1983-1984 and implemented between 1984-1986, gave organizational structure to Air-Land Battle doctrine and to the new generation of weaponry introduced into the force in the late 1970s and the 1980s. The AOE rested in great part, however, on major reorganization studies that preceded it, the Army 86 Studies undertaken by TRADOC between 1978 and 1982.

Army 86

In September 1978, the TRADOC commander, General Starry, undertook the first of the major Army 86 reorganization studies, the Division 86 project. It focused on the Army's primary fighting unit — the heavy division, which existed in two types, armor and mechanized infantry. The major first part of what would become a four-year effort, Division 86 had been preceded two years earlier by a historically-based study of division design carried out by General Starry's predecessor, General DePuy, in 1976. This effort, known as

the Division Restructuring Study, or DRS, was conducted under the direction of Lt. Col. John Foss.[1]

The lessons of the 1973 Mideast War, noted earlier, that proved so consequential in training reform and doctrinal change, had had similar impact on thinking regarding Army tactical organization. Did the current ROAD divisions have the structural strength and the right design to meet the heavily armed modernized forces that had evolved by the early 1970s? The assumption of the 1976 study and the Army 86 inquiries that followed was that those organizations, despite strengthening over the years, could no longer efficiently harness the combat power of the weaponry they possessed. New systems in development and scheduled for production in the 1980s, such as the M1 tank, a new infantry combat vehicle, and an advanced attack helicopter, would present an even greater leap ahead in combat power.

DePuy's heavy division concept, set forth in the DRS and approved by the Chief of Staff of the Army in January 1977 for testing, advanced bold design ideas. They included smaller companies and smaller but more maneuver battalions — up to fifteen — to better manage increased firepower. Other innovations were smaller three-tank platoons, a new TOW[2] missile company in each maneuver battalion, 8-howitzer artillery batteries, and other changes. Evaluated during 1977-1978 in tests in the 1st Cavalry Division at Fort Hood, the Division Restructuring Study concept did not survive. The radical change it embodied in span of control, doubts about its test methodology, and other concerns led General Starry to undertake study of the heavy division anew in much greater analytical depth.

Starry's Division 86 Study focused on the heavy division as the element of the fighting Army critical to the prime strategic theater of central Europe. Starry approached analysis of the division problem by means of battlefield functions such as target servicing and reconstitution, grouped under his Central Battle concept and tied to the doctrinal notion of disrupting the enemy second-echelon forces. Within that framework, planners developed operational concepts to take advantage of the increased combat power of the new materiel systems coming on by 1986 and the organizations that would employ them.

The Division 86 design effort and most of the Army 86 Studies that followed were carried out by a TRADOC-wide force design network consisting of functional task forces at the centers and schools. The Combined Arms Center at Fort Leavenworth drew the effort together. Division 86 was an extensive effort, employing analyses and war gaming of alternative structures and side

1. This section is based, except where otherwise noted, on Romjue, *Army 86*, Vols I and II.

2. TOW: tube-launched, optically-tracked, wire-guided

studies. Its depth may have been unprecedented in Army tactical unit reorganization.

In brief, the Division 86 heavy division, much of the structure of which survived into the 1980s Army, numbered approximately 20,000 men. There were 6 tank battalions and 4 mechanized infantry battalions in its armor version, 5 and 5 in its mechanized infantry form. It added a significant new component in an air cavalry attack brigade, and it expanded the division artillery with batteries of 8 howitzers. It departed the World War II and ROAD triangular principle by strengthening each maneuver battalion from 3 line companies to 4 and adding TOW missile companies and other changes.

Work on other Army 86 elements began in the fall of 1979 in the Infantry Division 86, Corps 86, and Echelons Above Corps 86 Studies, completed in 1980. In August and September of that year, Army Chief of Staff General Meyer approved Division 86 for implementation, Corps 86 for planning as the base design for NATO deployment, and the echelons above corps structures for theater army force planning and design. Results of the Infantry Division 86 Study, focused on the nonmechanized or straight infantry division, were less satisfactory. The essential problem was that a strategically and numerically light design was sought while a heavy NATO reinforcement mission was imposed.

In August 1980, the Army 86 planners began further light force studies. Those efforts reflected a growing concern that, however serious was the challenge in NATO Europe, U.S. Army forces had to be equally prepared for rapid deployment to meet contingencies in the non-NATO world. Since the Vietnam withdrawal, and up to the very close of the 1970s, U.S. national and defense policies had paid little attention to the prospect of U.S. military action elsewhere in the world. For the Army, such policies meant an almost exclusive focus on the development of heavy forces. Indeed, it was only in 1979, with the Afghanistan and Iranian crises, that that tide was reversed and a search for lightness in Army force design began. During 1979-1980, national and defense leadership became increasingly alert to the need for flexible contingency forces including more rapidly deployable light divisions.

In 1980 the design dilemma of the infantry division moved the Chief of Staff of the Army to establish a "High Technology Test Bed" in the 9th Infantry Division at Fort Lewis, Wash. His idea was to test concepts toward development of a lighter "high technology light division." TRADOC and Army Materiel Command planners cooperated with the division's parent commands—I Corps and the Army Forces Command—in that effort. Though valuable ideas emerged from the test bed, such as new command post concepts and palletized

loading procedures, no high technology light division eventuated. In the midst of the major modernization and buildup of the 1980s, the significant funding requirements for the equipment needed to realize the basic concept proved unobtainable.

During 1981-1982, TRADOC pursued work in the other light portions of Army 86 — in the Contingency Corps 86 and Echelons Above Contingency Corps 86 Studies and in redesign plans for the airborne and air assault divisions. Decisions on those final Army 86 efforts, however, were deferred pending a solution to the light infantry division problem. The contingency corps and echelons above contingency corps studies ended as force design exercises only.[3]

The infantry division dilemma was part of the larger problem of the whole Army 86 design effort. The heaviness of its major structures, needed to meet the armored and mechanized infantry threat posed by the Warsaw Pact, ran aground on an inflexibly capped Active Army end strength prevailing in the early 1980s. Indeed, that end strength, at 780,000 personnel, was not subsequently raised. As the transition to Division 86 began in U.S. Army Europe and the Forces Command heavy divisions, there was not enough Active Army strength to accommodate it. That was true despite a large admixture of reserve component units at corps level and above, as well as well as reserve roundout brigades and battalions in several Forces Command divisions. Downward restructuring of the heavy division during 1982 did not materially affect the impasse.[4]

The Army of Excellence

The design dilemma which the Training and Doctrine Command faced in the straight infantry division was remedied in June 1983. That month, General John A. Wickham, Jr. became Army Chief of Staff and directed the TRADOC commander, General William R. Richardson, to design a new, strategically deployable light infantry division limited in strength to approximately 10,000 personnel, globally deployable in approximately 500 airlift sorties. In order to accommodate this essentially new division type to the rest of the Army force structure, Richardson got authority to review and redesign the entire TOE Army. The Army of Excellence effort, so styled,[5] proceeded through the late summer and fall of 1983, guided in part by the historical perspective gained through an

3. Romjue, *The Army of Excellence*, Chap. I

4. Ibid.

5. Secretary of the Army John O. Marsh had designated 1983 as the "Year of Excellence," in accordance with the practice of adopting a theme for each year.

examination of the deficiencies of the World War II experimental light divisions.[6]

Undertaken by the Combined Arms Center with support from the TRADOC branch schools, the AOE effort developed and put in place the force designs of the 1980s Army. Planners redesigned each of the five Active Army corps — the V and VII Corps in Germany, and the I, III, and XVIII Airborne Corps in the United States — against theater specific war plans. All elements of the tactical Army and all division types were reexamined. The Army of Excellence organizations resulting did not supplant, but modified the previous Army 86 designs, with the notable exception of the new light infantry division. Such Army 86 design features as 8-howitzer batteries, forward support battalions, and 4-company heavy-division maneuver battalions remained. In the effort, the participation of the major Army commanders was constantly registered. The Chief of Staff of the Army approved the basic AOE designs developed by TRADOC in decisions of October and November 1983.

The centerpiece of the reorganization, the light infantry division was a 3-brigade organization with 9 battalions of straight foot-infantry, with a strength eventually set at 10,800 men. Deployable in approximately 550 C-141 airlift sorties, it was oriented specifically to contingency actions worldwide where response in the first days of a crisis was critical. Lacking armor and heavy howitzers, the division was structured on shock tactics rather than sustained firepower. Based on the historical lessons of World War II, force designers incorporated "corps plug" augmentation forces into the scheme to make up for the lack of firepower and logistical capability. By concept, an early-arriving light division could buy time for heavier forces to follow. The light division had a secondary mission of reinforcement of heavy forces in scenarios and terrain where it could be more effective than those forces — in cities, forests, and mountain areas. Many light infantry division capabilities were austere. The division — contingency focused — was conceived and approved as a hard-hitting, highly trained, elite light force, with high esprit and cooperation essential to its success. The design went through a successful certification process in the 7th Infantry Division (Light) at Fort Ord, supported by the TRADOC test organizations, during 1984-1986.

Creation of the AOE light infantry division embodied a noteworthy turn in the history of Army tactical organization. With it, the Army fashioned a division for use primarily in the contingency world, with only a collateral mission for reinforcement of heavy forces and only then where terrain and circumstance called for it. Ordinarily it would fight in components as part of an inte-

6. See Romjue, *The Army of Excellence*, Chapters II and III for a detailed discussion of the AOE design effort.

A significant aspect of the Army of Excellence was the strengthening of Ranger and Special Forces units to meet the challenge of low intensity conflict. In April 1987, the Special Forces was established as a separate Army branch.

integrated heavy/light or light/heavy force. The light infantry division gave the Army a new and necessary flexibility. Force structure decisions followed which converted two nonmechanized infantry divisions to the new type and added two more in the Active Army and one in the reserve components for a total of five light infantry divisions. Army division totals in the AOE reorganization went from 16 Active Army and 8 Army National Guard to 18 and 10, respectively.[7]

In the newly designed Army of Excellence, TRADOC force designers reduced the heavy divisions to structures of approximately 17,000. The heavy divisions retained 10 maneuver battalions, but infantry squads and artillery crews went from 10 men to 9. Significant transfers from division to corps in field artillery, air defense artillery, and combat aviation left the divisions smaller with less organic combat power.

Though reduced in capability, the heavy divisions of the AOE were the constituents of a scaled-up heavy corps. The additions strengthened the corps, enabling it to fight the AirLand Battle with added power. The redesigned corps thus provided a more powerful fighting organization at the operational level of war. The AOE design of heavy divisions and corps moved Army tactical organization more fully into consonance with doctrine at the most significant level of organization.

7. For a documented account of the debate of the light infantry division, see ibid., Chap. VIII.

Significant for the Army of Excellence in addition was the strengthening of Army Ranger and Special Forces units to meet the challenges of low intensity conflict in the unstable third world. Those additions included a third Ranger battalion and the organization of a Ranger regiment, and the addition of a Special Forces group. In April 1987, the Special Forces was established as a separate Army branch. Strong Ranger components were channeled into the new light infantry divisions.

The force designs of the 1980 Army were not without controversy. Primary criticisms of the light infantry division were that it was too light, lacked tactical mobility, and that its likely adversaries in the increasingly heavily armed third world would out-gun, outmaneuver, and defeat it. But in the context of the more powerful corps to which it belonged, the AOE heavy division found general acceptance. There was recognition that the corps together with its divisions retained, as a unit, very strong combat power and that it constituted the right doctrinal answer.

Accompanying the debate of the light division was evolving support for the utility of heavy/light or light/heavy mixes of forces. Such mixes made good tactical sense where mission, enemy, terrain, troops, and time available — the "METT-T" considerations of doctrine — dictated the need and the wisdom of mixed forces.

Although to a degree open to criticism that it had overemphasized combat power at the expense of support units, the Army of Excellence met the twin challenges for which it was fashioned: the deterrent defense of NATO Europe in the final period and last challenge of the Cold War, and the provision of rapidly deployable light infantry forces for force packages needed to defend U.S. interests worldwide. Whatever the insufficiency in support units, the AOE that emerged was—in its training, advanced weaponry, war fighting doctrine, and organization —a professional Army of a high order attained by few armies in modern history.[8]

Force XXI

Not the current Army force but the mid-term force projected for the early 21st century was the focus of most force design activity in the mid-to-late 1990s. That design project, titled Force XXI, began on 8 March 1994 when Chief of Staff of the Army, General Gordon R. Sullivan, directed the start of the major campaign effort to lead to the future Army in the early years of the next century. Progressing toward incremental realization at the year 2000, the Force XXI

8. Ibid., Assessment.

redesign was the last of the major operational Army reorganizations of the 20th century and would supersede the Army of Excellence which had been implemented in the mid-1980s.[9]

The Force XXI project was a methodological departure from all previous such efforts in two revolutionary ways. It was the first force redesign effort in which a full panoply of newly-emergent, computer-driven constructive and virtual simulation methods, equipment, and software were joined to actual live field simulation to test and analyze new military unit designs. In addition, the multiyear Force XXI design effort was the first to invent and embody for those fighting units a linked, instantaneous, and common picture and awareness of the close and distant events of the unfolding battle of which they were part. "Digitization" was the rubric given this revolutionary emerging capability.

In 1993, TRADOC had written a new, more versatile, fundamental operational doctrine to fit the new strategic circumstances of a smaller, primarily U.S.-based force-projection Army.[10] The command had additionally developed—and in August 1994 published—a concept for the Army of the rapidly approaching 21st century. That was TRADOC Pamphlet 525-5, *Force XXI Operations*, a further conceptual evolution from the force-projection and full-dimensional operations ideas of the 1993 doctrine.[11] On the basis of the new post-Cold War doctrine, and with TRADOC's mid-future concept in formulation, Sullivan approved, on 12 April 1994, a "Joint Venture" mission which would be one of three multi-year axes of Force XXI. Led by TRADOC, Joint Venture was the project to redesign the operational Army on a new information-or-knowledge-basis. The second axis, led by Headquarters Department of the Army, was the redesign of the institutional Army. The third axis was guided by an Army Digitization Office. Guiding all three axes of the Force XXI campaign—at that time—was Sullivan's Louisiana Maneuvers Task Force established in March 1992.[12]

Army and TRADOC planners saw Force XXI—the Army to emerge between 2000 and 2010—as a distinct change from the current force. They saw it as a new departure, an Army with a flexible engagement strategy structured in 21st century technology, knowledge-based, and built on capability, not threat

9. For 1994 background on the start-up of the Force XXI project, see John L. Romjue, TRADOC ACH, CY 94, pp. 129-35. For developments of 1995 and 1996, see Romjue, "Force Design and Equipment Requirements," Draft, TRADOC Military History Office (MHO), 1997.

10. For a discussion of the revision of FM 100-5, see Chapter VI.

11. For a discussion of the conceptualization and writing of TRADOC Pam 525-5, see Chapter VI. See Romjue, *Doctrine for the Post-Cold War*, for a documented account of how and why the Army developed the new operational doctrine instituted by the FM 100-5 edition of June 1993.

12. For a documented history of the Louisiana Maneuvers effort, see James L. Yarrison, *The Modern Louisiana Maneuvers: Changing the Way We Change*, (Washington, D.C.: U.S. Army Center of Military History) forthcoming. The Louisiana Maneuvers organization was disestablished officially on 1 July 1996.