US ARMY COMMAND AND GENERAL STAFF COLLEGE
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F100: Force Management

F106: Fielding and Integrating Capabilities
F106RC3: The Decade of Modernization and Reform

Author's Preface[1]

Any major Army tactical reorganization is implicitly a complex subject of inquiry. The symbolized and numbered structure of lines and boxes that is the traditional representation of an organization of tactical units is deceptively simplistic. Such a chart, depicting a major fighting unit, provides no more than a glimpse of its power capability, its control and communications mechanisms, its individuated and specialized fighting elements, or its logistics infrastructure. Yet it is this vastly complex and diversified formation that unifies the composite of the tactically trained men and equipment it contains to furnish the basic tool of warfare. Organization is the ordering factor in the dynamic of battle and the chaos of war.

This study focuses on the origins and execution of one such major reorganization by the U.S. Army of its tactical units- the Army of Excellence, or AOE. That effort of 1983 culminated in the approved organizations of the Army of the 1980s, the Army with which the United States conducted combat operations in Panama in 1989-1990 (Operation Just Cause) and in the Persian Gulf in 1990-1991 (Operations Desert Shield and Desert Storm). No major institutional event evades controversy. The Army of Excellence was an Army built upon dilemmas rooted in the political and strategic currents of the early 1980s. Those omnipresent realities- a powerful and dangerous Soviet adversary, a global defense mission, an ongoing major cycle of weapon modernization, and an inflexibly capped Army end strength too small for the force needed- were factors forcing Army leaders to a compromise of balanced heavy and light organizational designs. These designs were unavoidably imperfect yet remarkably sufficient for the historically unprecedented strategic challenge and responsibility faced and borne by the United States in the world-changing decade of the 1980s.

1 am greatly indebted to the chief architect of the Army of Excellence, General John A. Wickham, Jr., for opening his papers to the documentation of this project and for the interview he granted me on the origins of the AOE. I am also in the debt of General Donn Starry, General Glenn Otis, and General William Richardson for the invaluable perspectives on the force design dilemmas the Army faced, which each of those major players in the development of the 1980s Army provided me in frank and informative interviews. The discussion of the principal design activity of the summer and early fall of 1983 is indebted in no small part to the enterprise of Dr. John W. Partin, former Combined Arms Center historian, whose interviews with principal AOE designers at Fort Leavenworth during 1984 provide a close inside look at the details of that event.

….. [paragraphs omitted]

Fort Monroe, Va. JOHN L. ROMJUE
April1993

[1]United States Army, United States Army Training and Doctrine Command, Office of the Command Historian, "The Decade of Modernization and Reform," *Army of Excellence; the Development of the 1980s Army,* TRADOC Historical Monograph Series. By John L. Romjue. Washington, DC: CMH, 1997, xiii-xiv. NOTE: The document's original footnotes have been converted to endnotes.

Introduction[2]

The design and development of the Army of Excellence in the 1980s was a critical event in the post-Vietnam period of modernization and reform in the United States Army. In light of subsequent events, future historians will study carefully the Army of the 1980s and the strategic and planning basis out of which it came. The world-changing strategic-political events that began in 1989 — the collapse of the communist regimes of Eastern Europe and the dismantling of the Warsaw Pact, together with the accelerating recession of communist party authority and the socialist planned economy in the Soviet Union that led to that superpower's collapse and self-dismemberment in 1991 — signaled the end of the Cold War world.

How and why the fundamental shift in the strategic picture occurred can only be summarized here. The breakup of communism took place in a general sense against the more convincing alternatives of national independence, the free market, and democratic institutions as communicated through closed borders and jammed airwaves by the new technology of the information revolution. In a stricter sense, Western policies of containment and deterrence, and adherence to the values of human liberty implemented and defended by the Western democracies across more than forty years of Cold War were the forces, institutional and human, against which the socialist organization of economic life and society shattered so abruptly in 1989.

The more immediate causes of the breakup lay in the foreign and domestic initiatives launched by Soviet President Mikhail Gorbachev that went under the rubrics, glasnost ("opening") and perestroika ("restructuring"). Those policies were themselves a reaction to the military, economic, and political realities in the grip of which the Soviet Union found itself in the mid-1980s.

Of those realities, it would be difficult to deny that the U.S. defense buildup of the 1980s, of which the modernization of the Army was a principal part, was a major cause of change in the strategic world picture. In addition, the launching in March 1983 of the Strategic Defense Initiative, introduced the prospect of a formidable challenge to the defense resources and hence, the foreign policy, of the Soviet Union. Of indisputable importance was the deepening crisis in the economy of the USSR, an open secret evident to observers by the 1970s. Foreshadowing the political upheaval was the advent in 1980 of the free Solidarity union movement in the Soviets' Polish satellite, which demonstrated mass popular support and which that state's communist government succeeded in driving underground only for a time.

In the final months of 1989, as communist regimes were overthrown throughout Eastern Europe, observers the world over were aware of an enormous historical process under way. Of first order significance, the Revolution of 1989, to be followed two years later by the dismantlement of the Soviet Union itself, signaled the displacement of the dominant political fact of the 20th century world: the birth and global expansion of communism. That powerful historical impulse, contained in one country until World War Il but thereafter in expansion worldwide, was the power factor to which every nation, at the minimum, had had to construct its foreign policy or, at the maximum, to oppose in war. One witnessed in 1989 the moral and physical collapse of one of the major political movements and creeds of the modern era. The momentous implosion occurred in ironic coincidence two centuries to the year from the French Revolution of 1789, the cradle and model not only of democratic institutions but of future revolutionary upheavals, party dictatorships, and terror regimes.

[2]Ibid., 1-2.

The forceful commitment to the defense of the West that marked American foreign policy in the 1980s rested in its military ground component upon the U.S. Army and the significant reform and modernization efforts it had undertaken in the late 1970s and the 1980s, to which we will turn.

The Decade of Modernization and Reform[3]

The design and development of the Army of Excellence, popularly termed the AOE, was a major component of the Army's decade of modernization and reform. That period, lasting from the mid-1970s to the late 1980s, saw significant physical and intellectual change to the tactical Army-in materiel, organization, and doctrine.

The antecedent causes of the historic developments of the period in the U.S. Army are well known: the developmental neglect in new weaponry during the ten years of the preceding "Vietnam decade;" and the concomitant buildup of Soviet forces during and following America's Vietnam diversion, a buildup that was reaching dangerously threatening levels in central Europe by the mid-1970s. Another major factor was the impact of the 1973 Mideast War and its lessons of the greatly increased battle tempo and materiel lethality of modern war upon the leadership of the Army and TRADOC. Of central importance was the personal push and stamp given to the Army's structural modernization and reform by Army Chiefs of Staff of the era, in particular General Edward C. Meyer (1979-1983) and General John A. Wickham, Jr. (1983-1987), as well as by the early TRADOC commanders, General William E. DePuy (1973-1977), Donn A. Starry (1977-1981), Glenn K. Otis (1981-1983), and William R. Richardson (1983-1986).[4]

What were the timelines of the modernization and reform actions? Army doctrine, always in evolution in detail, saw a major recasting in the Active Defense doctrine of 1976, followed by a period of critique and sharp revision that produced the AirLand Battle doctrine issued in 1982 and revised and further issued in 1986.[2] Based on intensive weapon development programs through the 1970s, delivery to the field of virtually an entire new generation of modern weaponry began in 1978, reaching a so called "bow wave" in 1983 cresting in 1985 and continuing through the end of the decade.[3] In 1976, tactical organization also came under examination in the Headquarters TRADOC Division Restructuring Study of that year, followed in 1978 by the multi-year Army 86 reorganization studies which were the direct ancestor of the 1983 AOE design.[4] Through the 1970s and 1980s, reformed training methods were in addition instituted. They included "hands on" training techniques, skill qualification tests for soldiers to prescribed standards, the ingraining of leadership principles, and training packages for "export" to units for collective training. In the early 1980s, battalions began to travel to the new Army Combat Training Centers to train in simulated force-on-force engagements.[5] All those reforms together owed much to General William DePuy, TRADOC's first commander. DePuy presented a conception of how all the elements of change that were sorely needed after Vietnam went together: weapons, training, leader development, tactics and doctrine, and organization. Looking back on the period, DePuy's co-planner and successor at TRADOC, General Donn Starry, believed that, "for the first time in history, the Army reformed itself from within."[6]

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By the late 1980s, the modernized initiative-oriented AirLand Battle doctrine was well embedded in doctrinal and training literature. The 1980s Army fielded fighting units restructured from the 1960s

[1]Ibid., 2-4..

ROAD forms to accommodate powerful new weaponry and to implement the principles of corps-directed battle and rapidly deployable light infantry. A new generation of weaponry and equipment was standard in the majority of fighting units - systems the most prominent of which were the Abrams tank, Bradley Fighting Vehicle, the Black Hawk and Apache helicopters, the Multiple Launch Rocket System, and the shoulder-fired Stinger air defense missile and Patriot air defense system. Observers viewed a fighting force at the end of the 1980s transformed in all its essentials from the Army of the immediate post-Vietnam years.

U.S. Army Tactical Organizations Through ROAD[5]

Rooted in the divisional organization of the Army since the early twentieth century, the Army of Excellence drew on long-range organizational trends. Evolving in World War I as the basic ground unit in the U.S. Army capable of sustained independent action, the division was thereafter the focus of tactical organization in the Army.[7] The division structures in every period of reorganization in peacetime and war from World War I to the Army Excellence of the 1980s resulted from the perception that the old organizations did not or would not meet the new perceived conditions of battle. Between the organization of the divisions of the Allied Expeditionary Forces in 1917 and the AOE inclusive, eight major infantry divisional reorganizations occurred. In each case, Army planners sought to match the development to the new or anticipated conditions.

This succession of structures included the 28,000-man "square" division of World War I with its two brigades of two regiments each, followed by a square postwar version reduced to an only slightly more nimble organization of 22,000. A triangular division was approved in principle in 1935. Dropping the brigade headquarters, it fielded three infantry regiments. The triangular division was further developed and tested during the late 1930s, and it provided, at just over 14,000 men, the basic American fighting unit of World War II. In the tables of 1948, this nine-battalion infantry structure was reorganized and augmented by a tank battalion and an antiaircraft battalion and other elements and, at 18,800 strength, it provided the standard infantry division of the Korean War. In the late 1950s, the so called "pentomic" divisions, of 13,700 men in the infantry version, replaced the regimental structure with five "battle groups," a design concept intended to provide the maximum dispersal perceived as imperative on a battlefield expected to be dominated by tactical nuclear weapons. Following organizational studies during the late 1950s and early 1960s, the major ROAD (for Reorganization Objective, Army Divisions) reorganization implemented between 1962 and 1964 brought in a 15,500-man infantry division structure with neither line regiments nor battle groups but employing instead brigade structures modelled on the combat commands of the armored division introduced in World War II as the intermediate level of command between division and battalion. There followed in 1978 the Army 86 reorganization effort which, with its " Division 86" heavy divisions already in partial conversion in 1983, gave way to the AOE reorganization initiated in that year.[8]

Major revisions or additions to division structures, short of formal reorganization of the full complement of the tactical Army's tables of organization and equipment, occurred in the interim periods. In addition, the onset of World War II saw the first proliferation of division types, so that together with the standard infantry division, the Army formed and fielded armored, cavalry, airborne, motorized, and mountain divisions during World War II. Other new type divisions followed in the postwar and Cold War years, notably the airmobile; infantry, mechanized; and TRICAP divisions and, with the AOE, the light infantry division. Not all those types survived their establishment for long, including the World War II motorized and mountain divisions and the Army's "tri-capability" divisional experiment combining armor, airmobile infantry, and air cavalry brigades.

[5]Ibid., 4-6.

As suggested earlier, each newly reorganized division resulted from a perception of obsolescent structure. That was true of both world war designs, when the new conditions of combat were evident before those divisions saw action. It was also true for the peacetime divisions, for which future battle conditions could only be surmised. Of the latter designs, the pentomic divisions of the late 1950s were based upon a perception of a future "atomic-non-atomic battlefield." That fortunately unrealized apprehension of things to come gave way by the early 1960s to a conventional battlefield view implicit in the ROAD organizations. Preserving the tactical nuclear option, but placing less emphasis on it, the ROAD set of divisions featured a common division base and three maneuver brigade headquarters to which maneuver battalions- infantry, armored, mechanized infantry, airborne, or airmobile - were flexibly attached. The type and number of battalions added to the division base determined the corresponding ROAD division type. The new battlefield view of the early 1960s had changed, however, from pre-pentomic days, with the advent of the new developments noted in mechanized infantry and air mobility.

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Common to all the 20th century designs was a progressively increasing application of technology to the division. This was an absolute trend - a circumstance that could not be otherwise for a major power whose political and military leadership watched vigilantly and feared similar developments in the armies of hostile nations elsewhere in the world. The trend, which would accelerate after the ROAD era, had two fundamental aspects: the increasing mechanization of the fighting force (including the mechanization of the division's airspace), and a widening and deepening extension of technology into virtually all the division's functions, combat and support.

Several important design trends and changes in division organization since World War II were of special note. (All these trends exclude the short-lived pentomic oddity). Between the onset of World War II and the design of the Army 86 structures, division size increased steadily – from the 14,000-man World War II division to the 16,000 of the initial ROAD structures, to the 20,000 strong of Division 86. At the same time, maneuver battalion count varied little, from 9 in World War II to 10- 11 in the ROAD divisions and to 10 in the heavy divisions of Army 86. Intermediate maneuver headquarters, as we have seen, saw notable change, with World War II infantry division regiments and armor division combat commands giving way to the brigades of ROAD and Army 86 - brigades which could flexibly attach the needed battalion types. A further significant development was the evolution of aviation units, most particularly in the infantry divisions from the early 1960s on.

The design of Army tactical organization, which had resided with Headquarters Army Ground Forces, or AGF, since its establishment in March 1942, remained with that command when it moved from Washington, D.C. to Fort Monroe, Va. in October 1946 and upon its re-designation and reorganization as the Office, Chief of Army Field Forces, or OCAFF, in March 1948. When OCAFF was re-designated Headquarters, Continental Army Command in February 1955, the force design responsibility passed to that headquarters - United States Continental Army Command as retired in January 1957. In 1952, the development of the Army's tactical organizations became one portion of a new, larger OCAFF mission and, later, CONARC mission: combat developments. That new Army mission was based on a major new development philosophy. The development of new doctrine, organization, and materiel and their integration into the Army were seen as part of an interrelated system having a single goal of providing optimal combat effectiveness. The design of organizations and forces passed to the new U.S. Army Combat Developments Command at Fort Belvoir, Va. when, in July 1962, the Department of the Army removed the combat developments mission from CONARC and

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established a new major Army command focused solely on it. Dividing combat developments and its constituents - materiel requirements, organization, and doctrine - from Army training, however, proved to be an unsuccessful management experiment. In July 1973, the new Army Training and Doctrine Command was established to carry out the Army missions of individual training and combat developments, including the design responsibility for Army forces and organizations.[9]

Chapter I

ARMY 86- HEAVY AND LIGHT[6]

The Strength Impasse[7]

The attempt by Army planners during 1981-1982 to deal with the strength implications of the Army 86 organizations, in particular the Division 86 heavy division, were not successful, as we have seen. The crux of the problem was the force design impasse of a continuing 780,000 Active Army end-strength ceiling with which the designers of Division 86 had had to contend. An expansion of the Army's end-strength levels by the mid- and latel980s was a reasonable expectation.[40] That expectation of higher troop strength was consonant with the modernization of the Army that had been set in motion to counter the historic buildup since the early 1970s of the Soviet military forces facing NATO. The design philosophy of Division 86 had been to design to the full strength needed to meet the powerful armored and mechanized forces of the Warsaw Pact, regardless of then current end strength totals. At the same time, Division 86 was seen by its designers as an interim design. Smaller divisional organizations based on emerging weapon capabilities were a planning possibility in the next redesign cycle.[41]

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Repeated attempts by the Army's senior leaders in the early 1980s to raise the manpower ceiling by 5,000 to 15,000 men in the annual budget document, the Program Objective Memorandum, in order to accommodate the projected Army 86 increases did not succeed at the Department of Defense and congressional levels. General Meyer accepted the reality of the 780,000 ceiling for the foreseeable future and put his primary effort into the ongoing equipment modernization of the divisions.[42] Such were the major requirements of the U.S. strategic, naval, air, and ground force buildup implemented in the 1980s to repair the neglected national defenses that the higher end strengths to accommodate larger Army heavy divisions did not gain the needed support in the Office of the Secretary of Defense or in the Congress. In October 1979, the Division 86 planners had estimated the manpower increase necessary to man the heavy division force at over 21,000 additional personnel.43 TRADOC estimated, in 1983, that in order to fulfill all the Army 86 designs, Active Army force structure all told would need to increase to 836,000.[44]

In the meantime, the modernization of the force was proceeding apace. M60A3 tanks which had been fielded in Europe in 1979, were followed by new M I Abrams tanks, the first of which arrived in Germany in July 1981. USAREUR received and fielded its first UH-60A Black Hawk helicopters in July 1982. The first Multiple Launch Rocket Systems were delivered in August 1983, and the following month fielding of the Bradley Fighting Vehicle began in Europe. Modernization of the FORSCOM units proceeded simultaneously, the first M1s being received in 1982, with the Bradley vehicles reaching the FORSCOM divisions in early 1983.[45]

[I]bid., 20.
[7]Ibid.

Chapter II

THE DEVELOPMENT OF THE ARMY OF EXCELLENCE[8]

During 1982-1983 the first of the Army heavy divisions began transition from ROAD division tables of organization and equipment, first implemented in their original form some twenty years earlier, to the division TOEs of Army 86. Although some of the new weapons and equipment that the new Army 86 organizations were designed around had already begun delivery to the field, the year 1983 saw the onset of what Army planners called the "bow wave" of the historic modernization. During that year, the design and planning stages of Army 86 were giving way to a quickening implementation phase, as the M1 tank, the M2 and M3 Bradley Fighting Vehicles, the Multiple Launch Rocket System, and other new weapons and equipment were fielded in the divisions of U.S. Army Europe and the Forces Command. In the midst of the transition, the Army leadership directed a major new design and structuring approach to the Army's tactical units under the rubric, the Army of Excellence.[1]

Focused on development of a new light infantry division greatly reduced in size and revised in concept from current and proposed designs to a level of only 10,000 men, the 1983 organizational initiative encompassed a larger reexamination and design modification of almost the whole of the fighting Army. Signaled in early 1983 by the nominee Army Chief of Staff John A. Wickham, Jr. shortly before he assumed direction of the Army, the planning initiative was set in motion in August. It effectively superseded the Army 86 design and modernization effort. Carried through rapidly by TRADOC through its force design element at the Combined Arms Center, the Army of Excellence designs were presented to the Fall 1983 Army Commanders' Conference in October, where they were approved in their basic essentials.

The accession of General Wickham to the post of Chief of Staff of the Army in June 1983 was the immediate impelling cause for the Army of Excellence - light infantry division effort. General Wickham's actions responded to the deeper underlying cause we have earlier noted: the design impasse presented by the 780,000 Active Army end-strength ceiling. The Army Chief of Staff’s initiative was the biting of the bullet with respect to that budgetary reality.

The Wickham initiative, which would set the organizational course of the tactical Army into the 1990s, began in the weeks before he assumed his new office on 23 June. It had a striking parallel in an action of his predecessor, General Edward C. Meyer, exactly four years earlier. In June 1979, just prior to assuming his new post, General Meyer had prompted the revision action that led to the development and publication during his tenure of the doctrine of AirLand Battle.[2] Like Meyer's action, the Wickham initiative to create the 10,000-man light division and the Army of Excellence had far reaching effects.

The Summer 1983 Army Commanders' Conference[9]

On 16-17 August 1983, TRADOC headquarters presented its estimate of "the proper force for the 1980s" to the Chief of Staff of the Army, the Army Staff, and the commanders of the major Army commands at the Summer Army Commanders' Conference.[26] Within the manning ceiling of 780.000 personnel that was foreseen through 1989, TRADOC offered its initial suggestions for organizing a balance of light and heavy, modern, sustainable, ready divisions with capabilities across the spectrum, from antiterrorism through unconventional and minor and major conventional warfare to theater nuclear and strategic nuclear war. The most apparent problems the design of those forces faced were those of flexibility, timely response to NATO and distant contingencies, adequacy of the total force, the combat-to-support balance,

[1] bid., 23-42.
[9] Ibid., 31-35.

the national ability to man the force, the "hollowness" of the force, as well as problems of personnel turnover.

The hypothetical options TRADOC posed at the August 1983 meeting were: first, a risky and politically difficult reduction of the force in Europe; second, reorganizing either the Active Army or reserve component divisions from heavy to light; third, changing the Active Army heavy divisions to reserve component divisions and increasing the Active Army light forces; or finally, building smaller, 10,000-man light divisions.

TRADOC made the following assumptions about the 10,000-man option. The heavy divisions would keep the Division 86 design, and at an "ALO 2" authorized level of organization, just under full manning, ALO I. The 10,000-man division, also at ALO 2, would be a balanced division with consequent minimal impact on corps support. The Army's one air assault division would be kept substantially without change. Under the 780,000 ceiling, and if all the assumptions held, the establishment of 10,000-man light infantry divisions would free 25,000 personnel spaces in the Active Army, and as corresponding changes were made in the reserve components, 30,000 reserve spaces as well. The spaces would be usable either to form more divisions, or to reduce the current dependence of some divisions on reserve roundout brigades, or to fill the nondivision combat and tactical support increments of the division force equivalent.

TRADOC's August conclusions were that, for the foreseeable future, the requirement for heavy forces would be undiminished and could therefore not be further reduced. Adjustment of the light forces offered the best route toward solving the force structure dilemma. Small light divisions could yield both active and reserve component spaces for support forces. Retaining the sixteen active divisions kept the total force strong.

….. [paragraphs omitted]

What adjustments should be made to the heavy structures to reach the 780,000 ceiling and accommodate new 10,000-man divisions? TRADOC posed the issues as these: Should the heavy division be made lighter, faster, and more flexible? Could more support components be moved from the heavy division to corps and EAC? What additional reductions needed to be made for affordability? Could TOE reductions be compensated for by technological advances?

The light infantry division was the linchpin of the 1983 design effort, but it would be only one part of a diverse light forces Army structure. The question here was: what amount of standardization was necessary? Besides the existing infantry divisions and brigades serving as general purpose infantry in attack and defense, there were theater defense brigades defending specific places - such as Panama and Alaska. There were additionally the airborne division, structured for vertical assault and seizing lodgements; the air assault division for airmobile infantry operations; the high technology light division still in design, to defeat armor and deploy rapidly; and the special operations forces for low intensity conflict and deep operations. TRADOC recommended the continuing study of the light units' missions, against the threat, in order to determine the need for continuing such specialization, as well as the consideration of a light infantry division with application across a wide spectrum of conflict.

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The 10,000-man light infantry division concept that TRADOC presented in August and proposed to develop in the ensuing weeks would respond to a broad spectrum of combat operations and a wide array

of contingencies. By concept, it would operate as part of a corps or joint task force and would require local air superiority. Fighting on mixed or open terrain, it could attack or defend to destroy enemy light forces. In close terrain, it could attack or defend to destroy enemy heavy as well as light forces, could seize and hold terrain, and could conduct rear area combat operations and military operations on urban terrain. The 10,000-man division could deploy by air or sea to a contingency area or to reinforce deployed forces. It would be constituted mainly of fighting strength, with limited organic combat support and combat service support. It required decentralization of command, a high state of discipline, and initiative at all levels. TRADOC presented at this time three initial 10,000-man designs based on infantry brigades of eight 675-man battalions with varying options for maximum infantry strength, some degree of battlefield air mobility, and different levels of combat support and logistics (Charts 15, 16, and 17).

[paragraphs omitted]

What all these considerations boiled down to in summary, in TRADOC's view in August 1983, were the following light force issues: Should there be greater standardization of light divisions? Should a 10,000-man light infantry division be standard, or just another unique division? Should the airborne and air assault divisions be reduced? Was the 9th Infantry Division to become an HTLD in 1986 or remain a test bed? How was the Army to develop mixed light heavy corps?

TRADOC recommended the following courses of action: Force planning should continue based on the limited active component end strength of 780,000 through the end of the decade. Active Army divisions should be maintained at sixteen, even with infantry divisions reduced in size. The Army should study whether the divisional and tactical support increments of the division force equivalent could be reduced. Further planning to transition the HTLD should be held up till the major light division issue was settled. The Army should continue its planned increases in special operations forces. Finally, TRADOC at this juncture recommended consideration of converting one heavy division to light, with reserve component units picking up the division's heavy reinforcement mission.

TRADOC tentative recommendations at the 1983 summer conference for specific force design actions were the following: TRADOC should determine whether greater standardization of the light divisions was necessary. A light infantry division no larger than 10,000 personnel should be designed based on the TRADOC concept. The air assault and airborne divisions should be reviewed with an eye to reduction to 15,000 and 10,000, respectively. The HTLD concept and technology innovations should be used to improve the other light divisions as well as the total force where appropriate. Special operations forces organizations should be developed to accommodate the new doctrine. The scheduled transition to Division 86 and Corps 86 should continue, with design adjustments made in the heavy forces as necessary and as dictated by field evaluation, technological advances, and considerations of affordability.[29]

General Wickham's August Decisions[10]

The Chief of Staff of the Army made significant decisions bearing on the Army of Excellence effort at the August 1983 conference. His directive to the MACOM commanders confirming those decisions followed on 1 September.

General Wickham saw his decisions in the framework of an "Army of Excellence" that met worldwide missions within money and manpower constraints but at the highest possible levels of organization across the total Army. The key to creating that Army of Excellence was to find the right balance of structure, modernization, sustainability, and readiness. Wickham affirmed that 780,000 personnel would be the Active Army ceiling achievable through 1990.

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Several of the decisions of the Chief of Staff of the Army in August affected the total AOE design. Because light forces could be expected to play an increasing role in what had again become for the U.S. Army during the early 1980s, a global focus, the Army would consider the feasibility of activating a seventeenth Active Army division. It would be a light infantry division and would be followed by an additional reserve component division. General Wickham believed that unrealistic requirements for early deployment and full readiness should not be placed on the reserve components. Therefore, sufficient Active Army combat forces needed to be retained, supported by austere combat support and combat service support in order to permit essential rapid contingency deployment. Reserve forces might pick up a larger share of the later-deploying task, emphasizing heavy forces. In addition, Wickham directed that the division force equivalent methodology should be thoroughly reexamined. His decision in August on the high technology light division was to direct that preparations begin toward fielding a prototype organization of 10,000-15,000 personnel. The experimental division would meanwhile continue its provision of innovative ideas and equipment for both heavy and light force use. Wickham deferred a decision on the role, number, and size of HTLDs to the Fall 1983 Army Commanders' Conference.

….. [paragraphs omitted]

For the light division, General Wickham directed TRADOC to continue work on a 10,000-man structure with a high infantry component-50 percent- oriented primarily to contingencies in the Pacific, Latin America, and Africa. The division would be oriented only secondarily for use in NATO Europe and Southwest Asia, when augmented and used in terrain suited to its light capabilities such as urban and forested areas. The division would also be designed for preventing escalation of low intensity conflicts, and for supplementing heavy forces. General Wickham's 1 September 1983 directive to TRADOC was to create design options that would "form the nucleus of a hard-hitting, high esprit, elite light force serving as the cornerstone of global flexible response in conjunction with air assault and airborne forces." He further specified capitalizing where possible on HTLD capabilities, basing the design variations on nine maneuver battalions, and deployability of the division by approximately 400-500 C-141 sorties.

Wickham's emphasis on the primacy of strategic lightness in the design of the light division enjoyed the support of the Secretary of the Army, John O. Marsh, Jr. In a letter to Wickham on 8 September 1983, Marsh urged on the light division initiative. Noting the Army's deployment inadequacies, Secretary Marsh declared: "Why modernize it if you can't move it? Let's put together a division that can get there." Secretary Marsh was a strong supporter of the AOE redesign and made that support known in the Army.[30]

[10] Ibid., 35-37.

Regarding the other light forces, General Wickham directed TRADOC to carry through with its examination of standardization. He also told TRADOC to follow upon on its recommendation to review the air assault and airborne divisions with an eye to reductions to 15,000 and 10,000. Wickham directed continuing the Army's planned increase in Special Forces structure, and development of revised special operations forces designs in accordance with new doctrine and tailorable by region and specific threat. He stressed that the manpower saved by reducing the current infantry divisions to 10,000 men would go to expand the light combat force structure; that savings would not be used to support heavy-force needs.

The total force design was to consider fully the factors of supportability, deployability, threat, and manpower ceiling.

General Wickham told TRADOC on 1 September 1983 to have all its recommendations for the AOE ready for presentation to the Army Commanders' Conference of October 1983. At that forum, be wanted a proposed design for the totality of the Army's required forces: divisions, corps, echelons above corps - arrayed by theater of operations and considering the balance of light to heavy and active to reserve. The total force design was to consider fully the factors of supportability, deployability, threat, and manpower ceiling. Wickham wanted ready by October proposed designs for the 10,000 - man light infantry division, design modifications to Division 86, a status report on special operations forces organizational proposals, and recommendations for a new approach to the division force equivalent methodology. TRADOC would work hand in hand with the Department of the Army Office of the DCS for Operations and Plans, whom General Wickham directed to analyze the emerging designs in terms of risk, readiness, and ability to afford, sustain, and deploy.[31]

TRADOC formally passed the AOE design assignment to the Combined Arms Center on 30 August 1983. TRADOC urged the CAC force designers to develop a redesign that would exploit technology, thoroughly examine the heavy-light-SOF relationship, recognize the light forces' increasing role, and rigorously revise logistics planning factors. TRADOC gave the Logistics Center the responsibility, under CAC direction, for combat service support organizational revisions, as well as revision of logistics factors. Those factors included allocation rules, consumption rates of the classes of supply, workload, and other items. TRADOC additionally requested the Army Communications Command, the Intelligence and Security Command, and the Army Health Services Command to assist the planners.[32]

The Combined Arms Center Develops the AOE[11]

In the meantime, AOE planning had begun at Fort Leavenworth.[33] Lt. Gen. Carl E. Vuono, who had replaced Lt. Gen. Merritt as the CAC commander in June had already set concept and force design planners to work on the new light division. On 22 August, he formally initiated the AOE project at the Combined Arms Center, issuing preliminary guidelines to the TRADOC schools on that date. Vuono named Maj. Gen. Leonard P. Wishart III , his deputy commander, newly arrived in late July I 983, to head the project task force. He directed Col. Richard A. Burke, Jr., Director of Force Design in the Combined Arms Combat Developments Activity, or CACDA, to superintend the AOE effort day to day under Wishart's direction.[34]

To the planners, Lt. Gen. Vuono identified the need to constrain force designs across the whole Army as the driving principle of the project. Vuono urged the TRADOC school commandants to consider the best interests of the Army as a whole as they expressed the branches' concerns in the organizational effort. He asked for their personal involvement and all due haste to execute the effort in the few weeks allotted.[35]

The CAC planners worked closely with the major Army commands. who provided officers on site at Fort Leavenworth to the 1983 planning effort. Changes, proposals, and decisions were communicated to the

[11] Ibid., 37-42.

major Army command leaders by message, with 24-hour replies the rule. A series of action officer and general officer workshops drew the effort together, with strong contributions from the TRADOC commandants and school staffs. Planners and action officers from the 82d Airborne Division, 101st Airborne Division (Air Assault), the XVIII Airborne Corps, and the Forces Command met with the CAC planners during the design of the AOE airborne and airmobile divisions. Seven-day work-weeks characterized much of this quickly-done project.[36]

The decisions on the Army of Excellence design, rapidly developed upon the Army 86 basis and the new light infantry division concept, were made through the coordination of several senior leaders. The close interest of General Cavazos, the FORSCOM commander, has been noted. Lt. Gen. Vuono, the CAC commander, and his deputy, Maj. Gen. Wishart, met and communicated frequently with General Wickham and General Richardson, the TRADOC commander. Richardson worked intimately with Vuono and guided the AOE project closely. Wickham, who inaugurated the AOE redesign, gave it push and drive throughout. General Maxwell R. Thurman, as Vice Chief of Staff of the Army, was a strong AOE supporter.[37]

A considerable part of the design effort lay in the give and take between school and CAC planners on unit strength.

Meeting with TRADOC school representatives on 24 August at Fort Leavenworth, the CAC planners emphasized the need, in the light division, to reduce the workload and manpower authorization criteria applicable to organizations to the minimal essential. Consumption rates had to be based on supply availability; allocation rates would have to be severe. Strength quotas were issued to the schools for their functional areas. A considerable part of the design effort lay in the give and take between school and CAC planners on unit strength.[38]

Manpower spaces were saved throughout the tactical force by conscious "productivity enhancing" measures and technology which General Wickham supported. Significant savings in support manpower resulted from adoption of palletized loading system measures that had been tested out in the 9th Division at Fort Lewis. Institution of a new combat field feeding system, employing ready-to-eat meal packages and reducing kitchen staffs also saved significant support strength.[39]

In terms of total numbers, the initial guidance the TRADOC commander gave the planners at Fort Leavenworth was to redesign the "division force equivalent Army." The DFE Army consisted of the Active Army divisions and other combat units, totaling 435,000, together with a specific number of U.S. Army Reserve and Army National Guard, and the five Active Army corps, totaling all together 998,700 personnel. General Richardson's guidance to the CAC planners noted, significantly, that the AOE was to emphasize the capability of the corps. Some risk in an undermanned echelons above corps was acceptable. Reduction of the heavy division was to be carried out without compromise to its ability to execute AirLand Battle doctrine. The five Active Army corps- the I, XVIII Airborne, and III Corps in the United States, and the V and VII Corps in Germany- were to be redesigned against the specific governing war plans. The CAC planners were told to examine the feasibility of a seventeenth Active Army division. Richardson advised them that there were no organizational sacred cows. Clearly evident here was that the AOE effort transcended the traditional allotment of force responsibilities: force design by TRADOC, force structuring of those designs into the Army's troop units by Headquarters Department of the Army.[40]

The method the AOE planners at the Combined Arms Center followed was first to lay out, by specific corps, and down to the last company, the organization of the entire DFE force - numbering, active and reserve, 985,200.[41] They then proceeded to the question of how the DFE force should be organized within the guidance and limits. Their framework was unit disposition on the battlefield from the forward line of troops (FLOT) rearward. Thus, they dealt first with the armored cavalry regiment (ACR), then the

division, followed by the corps, and finally, the echelons above corps - within the differing requirements of each of the five corps.

….. [paragraphs omitted]

Turning from the ACRs, the AOE planners set aside the five types of divisions- the heavy armored and mechanized infantry, airborne, air assault, high technology light division, and light infantry division - making end-strength assumptions for each type and for the nondivision support required. They then set about "constraining" the five corps with a view to assuring capability to execute AirLand Battle doctrine.

For the two light corps, the I Corps and XVIII Airborne Corps, they used the constrained version of the Contingency Corps 86 design, while for the heavy III, V, and VII Corps, the constrained version of Corps 86 was applied. Those designs, both resulting from Army 86 substudies, had been developed during 1979- 1982.[42] The corps design focus- its idea being to improve the combat capability of the corps commander to fight the AirLand Battle- was on the aviation, air defense, and field artillery elements. The next step was allotment of strength by specific corps and theater to the echelons above corps tactical support increment of the division force equivalent.

Keeping the operational concept ahead of the organizational design was the AOE planners' approach to the new 10,000-man infantry division, although in actuality concept and design were often developed at the same time. After an "umbrella," or general, concept was completed by the CACDA Concepts Directorate on 23 August 1983, the several functional concepts to support it were written by the TRADOC schools. The important thing was that the design fit AirLand Battle doctrine.[43]

Lt. Gen. Vuono, Maj. Gen. Wishart, and the Combined Arms Center planners analyzed closely previous TRADOC organizational studies. They examined the Close Combat (Light) Mission Area Analysis for the light forces deficiencies it highlighted. The recent Command and Control Systems Program Review was useful to them in showing how organizations and the new materiel systems worked together.[44] Planners also solicited from the U.S. Army Center of Military History a historical study of the World War II experimental light divisions, structures that were not well accepted, and they analyzed the reasons for the failure of those divisions in testing at Hunter Liggett Military Reservation in California in 1943-1944.

Coordination by the AOE planners with the staff of the 9th Division at Fort Lewis produced benefits derived from HTLD resting. Results of tested concepts for a "high tech" personnel system; tactical deception; long range surveillance units; and command, control, and communications were incorporated into the design work at Fort Leavenworth. Many 9th Division concepts the fast attack vehicle was a case in point- could not be exploited; the light infantry division could employ only that materiel available by 1986.

An important materiel decision in the light division planning was to standardize the fewest types of vehicles throughout the division. The AOE planners settled on three helicopters, the OH-58, the UH-60A Black Hawk, and the attack helicopter. They limited light division trucks to three types: the 5-ton, the high mobility multipurpose wheeled vehicle, and the commercial utility cargo vehicle. The equipment decisions were of major importance in keeping support costs low.

Few light infantry division issues were simple to arbitrate, as the branch schools made their arguments for strong divisional organizations for which they were proponents. A considerably less than "robust" air defense unit was designed, the light infantry division being organized primarily for low-to-mid-intensity warfare. It did not prove possible to allocate engineer platoons to habitual association with each maneuver battalion - there was not enough division strength to do that. The placement of antiarmor weapons required some discussion to resolve. In putting a military intelligence company in the reconnaissance

battalion, planners departed from the separate military intelligence battalion concept of several years standing and went back in part to a combined reconnaissance, surveillance, target acquisition concept that had been examined in the Division 86 Study. The proposed elimination of an important innovation of Army 86, the forward support battalions of the division support command, or DISCOM, in favor of forward area support coordination officer (PASCO) units was controversial. A tentative early proposal to keep attack helicopters completely out of the light infantry division met stiff and successful resistance from the major Army command leaders.

The CAC planners entertained various light division designs, including an organic high technology brigade copied from the HTLD effort. That option received mixed reviews when propagated to the major Army commands for consideration. Those commanders, particularly those most familiar with contingency requirements in third world regions, influenced the effort toward a less pervasive antiarmor concept. In both third world and European scenarios, selected organizational designs were war gamed at Fort Leavenworth by the Combined Arms Operations Research Activity.[45]

On 20 September 1983, the CAC planners briefed the TRADOC commander on the emerging organizations of the Army of Excellence. Further directives followed, which CAC transmitted to the schools the following day.

General Richardson's late September decisions reflected the difficult costs of making the light division indeed light. Richardson affirmed a nine-man infantry squad, directed development of a concept for a dismounted reconnaissance platoon, and dismissed the idea of an antiarmor company in favor of a TOW missile platoon in the infantry battalion headquarters and headquarters company (HHC). The infantry platoon's antiarmor squad was discarded in favor of a medium antiarmor platoon one level up in the infantry battalion headquarters. Richardson directed that the combat aviation brigade of the light infantry division be established with a headquarters and headquarters company, combat aviation company, one attack helicopter battalion, and a reconnaissance squadron of two air cavalry troops, one HMMWV - mounted ground troop, and a military intelligence company. Division intelligence fusion and dissemination capabilities were to be placed in the division HHC. Division artillery development was to continue, based on a structure of three I 05-mm. howitzer battalions, each of 3 batteries of 6 howitzers. The engineer battalion was to be restructured to 3 companies of 2 platoons each, and the brigade engineer company was eliminated. In air defense artillery, the product-improved Vulcan air defense system (PIVADS) complement was reduced from 24 to 18 in a battalion of two PIV AD-Stinger batteries. Further cuts were directed for the division support command.

….. [paragraphs omitted]

Looking to the corps and echelons above, the TRADOC commander told the AOE planners in his late September guidance to build the best structures they could. For the corps, they should maintain its ability to fight and its combat service support capability. The programmed mix of active and reserve units needed attention, but each theater had its own active versus reserve demands. For example, a corps deploying to Southwest Asia needed all active component units; Northeast Asia did not need a big structure- the Eighth Army structure was in place. Echelons above corps structure should include and be shaped by what remained from the corps development effort and from whatever could be afforded, the TRADOC commander directed.[46]

. . . the TRADOC commander told the AOE planners in his late September guidance to build the best structures they could.

Chapter III

THE ARMY OF EXCELLENCE DESIGN[12]

When the Chief of Staff of the Army directed that TRADOC through the AOE effort with an earnest ear tuned to other views, the major Army commands took him at his word. They had that opportunity when, during September 1983, the Combined Arms Center deputy commander, Maj. Gen. Leonard Wishart, and the combat developments force design director, Col. Richard Burke travelled to brief them. Their responses went into the planning as the project developed further. The light infantry division was well supported generally by the troop commands, but there was no similar enthusiasm for the cuts to the heavy division.

The MACOM Commanders Assess the Emerging Design[13]

The commander-in-chief of U.S. Army Europe, General Glenn K. Otis, welcomed the planned increase in foxhole strength and the better deployability of the light division. For any USAREUR commander, the overwhelming reinforcement need was heavy divisions. But Otis also saw a possible role for the light division in N ATO secondarily to and following receipt of adequate heavy division reinforcements. There was light-division terrain in NATO's Central Army Group sector, where two brigades of a light infantry division could be usefully married to a heavy brigade as the right tactical answer. Experience had shown that a light infantry division alone could not do much against armor. General Cavazos, the FORSCOM commander, viewed the light division design positively, but cautioned against design decisions sacrificing the range and accuracy of division howitzers for mortars. Cavazos also argued for keeping at least some 155—mm. howitzers in the light infantry division because of their capability to fire scatterable mines and the guided Copperhead round.[1]

….. [paragraphs omitted]

The task of compressing the complex missions of the infantry division into a 10,000-organization and reducing the heavy division while consolidating functions at corps with a concomitant reduction of echelons above corps structure clearly raised many difficult problems. By late September 1983 most of them were well apparent to the TRADOC headquarters, Combined Arms Center, and center and school planners, In addition to those just noted, there were others. For example, as organizations were cut to meet the force-level constraints, and combat service support companies were either eliminated or were consolidated under fewer battalions, many battalion headquarters would be lost. Morale costs were incurred when types of rations and laundry and bath services were reduced. Signal cuts were considerable, and cuts in the adjutant general activities depended greatly on the presumption of smoothly functioning communications and automatic data processing. The engineer cuts raised problems such as an inadequately defined responsibility for airfield repair. Removal of aviation capabilities from the division was seen as inhibiting the aviation's ability to operate as an integral part of the combined arms team. There was some apprehension that a major force design effort was proceeding with little or no conceptual basis. Similar reservations were voiced on the Army Staff, where the Chief of Doctrine and Force Design in the Office of the Deputy Chief of Staff for Operations and Plans, pointed out that the now much diminished Division 86 designs had

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[12] Ibid., 42-111.
[13] Ibid., 43-45.

been based on thorough TRADOC studies coordinated and agreed on throughout the Army. The 10,000-light division was supportable, but would turmoil ensue from the radical changes to the heavy division?[4]

In the MACOM commanders' critique, which focused on the light and heavy divisions and the heavy corps, the High Technology Light Division and its future lay on the periphery of the Army's general concern. Yet, just what role that division had in the new Army of Excellence remained ambiguous. On 21 September 1983, General Richardson sent General Wickham a paper laying out the rationale for both the light infantry division and the HTLD, pitching the latter to Southwest Asia employment. Richardson noted that the division had not yet achieved through testing the sought-after antiarmor lethality and survivability, but he acclaimed the division's value as a test vehicle. But the TRADOC commander suggested the LID design as the eventual design for the 9th Division.[5]

The Airborne and Air Assault Divisions[14]

….. [paragraphs omitted]

The Heavy Divisions[15]

….. [paragraphs omitted]

Revised Division Force Equivalent Methodology[16]

As directed in August 1983, the AOE planners presented the revised division force equivalent (DFE) methodology they had employed, along with its results. Besides the division increment, the DFE consisted, secondly, of the non-division combat increment — the corps and division attributable combat forces as well as corps, EAC, and division-attributable combat support forces. The third DFE element was the tactical support increment — corps, EAC, and division-attributable forces. The revised "division slice" methodology involved starting with doctrine and force structures to revise workload factors and allocation rules, employing the FASTALS[13] model, determining the division-attributable units, allocating the corps and EAC slices, computing the division slices, and then computing the theater-level and Army-level DFEs.

The division slice in increments and by division type was calculated (Table l), averaging for all the division types at a division slice of 41 personnel for the Southwest Asia theater. For Europe, the division slice was 37,900, and for Korea, 33,600 (Table 2).

Recommendations[17]

TRADOC recommended approval of the concept for the 10,000-man light infantry division. TRADOC also recommended its testing by the 7th Infantry Division at Fort Ord, Calif. — FORSCOM to direct the test, and TRADOC to take responsibility for the test design and evaluation. Reduction of the heavy division was recommended, as previously outlined, as well as approval of the concept of reconfigured airborne and air assault divisions. TRADOC recommended approval of a reserve component rear area combat operations brigade for each corps, and the troop tailoring concept, by corps, that it had outlined. Further recommended was approval of the Army force structure as laid out by the AOE planners — for Army Staff analysis and refinement by all the major Army commands. TRADOC recommended further work to develop constrained allocation rules and workload factors; and the expedited development of

[14] Ibid., 48.
[15] Ibid., 49-50.
[16] Ibid., 51-52.
[17] Ibid., 52.

doctrine, organizations, and materiel required for the new special operations forces mission. TRADOC recommended approval for revising the division force equivalent and for the concept for the division slice.

TRADOC additionally recommended the constitution of one additional light infantry division; conversion of the 2d, 7th, 9th, and 25th Infantry Divisions to 10,000—man designs; approval of the needed funding; and removal of reserve component roundout units from the division structures.

General Wickham Approves the AOE Design[18]

The Chief of Staff of the Army made decisions about most of the far reaching AOE issues and recommendations at the October 1983 commanders' conference. But for some issues, he directed further study by the Army Staff and TRADOC.

General Wickham approved the 10,000-man light infantry division. He directed the conversion of the 7th Infantry Division to the new authorized design. The Chief of Staff excluded a full-blown division test, directing that the 7th Division at Fort Ord serve as a mechanism for evaluating and resolving the key organizational, operational, training, and equipment issues. He wanted quick movement on the LID. the 7th Division was in line for conversion, and testing space at Fort Ord and nearby Fort Hunter Liggett was adequate. In General Wickham's mind, waiting for the activation of the Fort Drum-based division and construction of its needed facilities would impose unacceptable delays. The 7th Division was the right certifying vehicle. [14]

*The **Chief of Staff of the Army** [emphasis added] made decisions about most of the far reaching AOE issues and recommendations. . .*

General Wickham, at this time, made one additional materiel decision: to equip every infantry squad soldier in the 10,000—man division with a night sight. Both the 2d Infantry Division, based in Korea, and the 9th Infantry Division, where high-technology designs had been in testing since 1981, were excluded from the new design. The 2d Division, with its special missions, would keep its current structure, and the 9th Division would not be reconfigured. General Wickham directed the Pentagon staff to develop schedules for the remaining infantry division conversions. He directed the addition of a light infantry division to the force structure as the seventeenth Active Army division, as well as the addition of 2 more Army National Guard light infantry divisions, bringing the Army's programmed structure to 17 active and 10 reserve divisions.

Developing the light infantry divisions as hard-hitting, elite forces derivative of the Rangers was integral to the whole concept in Wickham's directive. High individual and unit esprit, competence, and confidence were essential to the success of a light infantry division operating with light materiel. A premium would be placed on the capabilities of the individual light infantry soldier and his unit. TRADOC was charged to prepare an approach for developing the light divisions as elite units in terms of individual and unit training requirements.

The light infantry decision was of major potential significance for the reserve components. Scheduling and sequencing the conversion of the Army National Guard infantry divisions to the 1,000-man structure would, if programmed, take some time. But the Chief of Staff of the Army directed that the first steps be taken soon, capitalizing on the active component's experience. Wickham directed that Headquarters Department of the Army and the National Guard Bureau work together to develop a conversion plan.

[18] Ibid., 52-56.

General Wickham directed retention of the 9th Division as a high technology test bed for both light and heavy concepts and with a wartime mission and an authorized strength of about 13,000 personnel. He decided, however, that one National Guard division, which had been programmed for conversion to a high technology light division, would be reconfigured as a light infantry division instead. The costs of the equipment needed to sustain a high-technology division, as so far envisioned in 1983, were clearly high and the Department of the Army did not consider such sustainment cost effective for a unique division. The Department of the Army deputies for operations and for logistics were to study whether the 9th Division would be formed of a high tech - light infantry mixture or would be a pure high technology light division.

The light infantry approach for structuring the airborne and air assault divisions was approved in October 1983. Wickham generally supported the reduction but said it should be examined in the context of the total light corps package and in the light of sustainability and contingency considerations.

….. [paragraphs omitted]

Several larger force structure decisions had bearing on the future AOE. General Wickham reaffirmed that a continuing Active Army end strength of 780,000 could be expected. Though the AOE was approved for implementation at full manning level — Level I —the ARSTAF would need to assess and determine the affordability of a Level 2 Army. The large question of the deployment of reserve component units that were unable to meet operations plan requirements, discussed at the October conference, led to directives by General Wickham to FORSCOM to identify missions that needed transfer from reserve component units to active component units, and to identify those high priority reserve component units that required more resources. [15]

The current standard division force equivalent methodology was judged to be unsuitable for further force structuring. Its related allocation rules and workload factors were inaccurate. The current DFE method did not properly allocate combat support and combat service support structure by type division to specific theater. Combat power was often improperly counted as "tail," resulting in artificial "tooth-to-tail" ratios, The Chief of Staff of the Army directed the ARSTAF Deputy Chief of Staff for Operations and Plans to determine the feasibility of adopting the new methodology TRADOC had offered: the division slice. He told TRADOC meantime to review and further revise the workload factors and allocation rules to reflect accurately the division slice by type division in specific theaters. [16]

Based on the Army Chief of Staff's decisions of 21 October 1983 and subsequent directives regarding undecided details, the Combined Arms Center force designers again briefed the AOE force to General Wickham on 10 November. On that date, Wickham endorsed it for planning. [17] On 23 November 1983, he issued directions for implementation of the Army of Excellence based on his decisions of 21 October and subsequently on the points at issue. The AOE designs, General Wickham said, combined affordability, high combat readiness, and strategic deployability. They struck a sound balance between heavy and light forces. They continued the modernization of the force, while implementing rigorous training programs and new special operations forces initiatives, while improving as well the match between the Army's active and reserve components by better alignment of missions, capabilities, and component.

The AOE designs, General Wickham said, combined affordability, high combat readiness, and strategic deployability.

General Wickham now directed the reorganization of infantry divisions to the 10,000- man design at the authorized level of organization (ALO) I — the most ready level. The high readiness level was crucial to rapid reaction to contingencies. Light divisions would have the designed "plug-in" capability for heavier combat missions. They would have an additional aviation lift company besides their organic helicopter

lift capability in order to enhance tactical mobility. As planned, Wickham directed that the 7th Infantry Division would serve as the evaluation mechanism to "wring out" key organizational, operational, training, and equipping issues, with TRADOC in overall control of that effort. Modifications to the initial design would be made provisionally as developed during testing. The 7th Division's experience would then be applied to the subsequent infantry division conversions, excepting the hybrid 2d Division and high-technology 9th Division.

….. [paragraphs omitted]

On 10 January 1984, the Department of the Army issued further general implementing decisions and instructions. The phased restructuring of the Army was to begin in late FY 1984 and extend throughout the next several years. Restructuring actions to fulfill the new heavy division, separate heavy brigade, and corps designs would proceed. Two active-component infantry divisions, the 7th to transition between late FY 1984 and late 1985, and the 25th, to transition subsequently, would convert to the light design. By the January 1984 directive, the 6th Infantry Division was named tentatively as the new light division to be activated during the period 1985— 1987, and the 29th Infantry Division, consolidating existing brigades, to be activated in the Army National Guard. Evolution of the high technology light division (the 9th Division) would continue. Headquarters Department of the Army and the major Army commands would continue their assessments of new airborne and air assault division designs. The 2d Infantry Division in Korea would retain its hybrid infantry form.[19]

Chapter IV

THE LIGHT INFANTRY DIVISION AND ITS CERTIFICATION[19]

With the approval of the Army of Excellence designs by the Chief of Staff of the Army in October and November 1983, many force development actions lay ahead. The new basic structure, which was built on a strong heavy corps, armor and mechanized infantry divisions in the 16,000— 17,000 range, and strategically deployable 10,000--man light divisions, had been designed. Force developers at the TRADOC integrating centers and schools now set about the major tasks of completing and refining the full force designs, documenting and developing the new tables of organization and equipment (TOE), defining the necessary new system requirements to equip the force, and revising doctrinal publications, along with the residual work of revising unit allocation rules, consumption rates, and workload factors.[1]

Important issues of design still awaited resolution in early 1984, The major unfinished AOE elements included the final design of the light infantry division, the light corps, the newly expanded special operations forces, the organizations of the revised heavy corps, the rear battle issue and separate infantry brigades, the aviation arm and the combat aviation brigades, and other design questions including tanks in the cavalry squadron and long range surveillance units for the military intelligence battalion.

The major AOE design projects carried out in 1984 were the completion of the light infantry division, the airborne and air assault divisions, the heavy division, the hybrid 2d Infantry Division, echelons above division units, the separate infantry brigade, and documentation modifications relative to the whole effort.[2] Completing action on the division force equivalent examined by TRADOC in 1983, the TRADOC commander in September 1984 sent the Department of the Army the results of the further study General Wickham had directed. Planners felt that the analysis provided a methodology leading to a more accurate force structuring model than the one replaced.[3] In addition to those 1984 design and development tasks, planning went forward for evaluation of the new light infantry division.

Certification of the 7th Infantry Division (Light)[20]

The infantry division chosen to certify the 10,000 structure — the 7th Infantry Division at Fort Ord, California — was a "straight" infantry division which, in 1984, was about 18,300 strong including its reserve component roundout brigade. The new structure of 10,000-plus was to be entirely active component, consisting of 3 brigades commanding 9 infantry battalions of approximately 540 men each; a combat aviation brigade commanding 1 attack helicopter battalion, 2 combat aviation companies, and a reconnaissance squadron; a division artillery of three 105mmbattalions, possibly to be supplemented by a general support 155--mm. battery; a division support command; and headquarters, military police, signal, air defense, and engineer units. By plan, certification results would be applied to the other active and reserve component light infantry divisions.[18]

Reconfiguration Of the division to the new design began in March 1984 and extended to January 1985. The first phase of the certification process began the latter month.[19] The division's roundout brigade, the 41st Infantry Brigade, together with another roundout unit, the 2d Battalion, 218th Field Artillery, were withdrawn as the new smaller division became wholly an Active Army organization.[20] At Fort Benning, Georgia, the first of the division's battalions, the 4th Battalion, 17th Infantry, completed the new fifteen-week light infantry one station unit training course on 29 March 1985 under the COHORT concept. Ranger training was a key part of the whole idea. Other specialized training included a sapper leader course for combat engineer cadre at Fort Leonard Wood, Missouri; a three-week "light fighters" course;

[19] Ibid., 57.
[20] Ibid., 62-65.

and a one-week "rites of passage" course. Special doctrinal literature for the light divisions was prepared in the form of field circulars and focused on light infantry operations at squad and platoon, company, and battalion level.[21]

The certification of the 7th Infantry Division (Light) went forward during 1985—1986, conducted primarily at Fort Hunter Liggett, California, It was a joint TRADOC - Forces Command effort. The principal players were the TRADOC Combined Arms Test Activity, or TCATA, headquartered at Fort Hood, Texas, aided on the scene at Fort Hunter Liggett by the Combat Developments Experimentation Center, or CDEC, based at nearby Fort Ord; the I Corps, which was the FORSCOM intermediate headquarters at Fort Lewis, Washington; and the 7th Infantry Division. The 7th Division units transitioned to their new structures in sequence between March 1984 and September 1985, the division assuming its rapid deployment force posture on I October that year. TRADOC's Field Circular 71—101, Light Infantry Division Operations, was published for certification use on 31 July 1984. The initial outline test plan followed in September. A TRADOC and FORSCOM memorandum of agreement of 24 October 1984 established the I Corps commander as the certification director and the 7th Division commander, Maj. Gen. James E. Moore, as his deputy. The TCATA commander, Maj. Gen. James E. Drummond, functioned as the certification manager, with CDEC, headed by its director, Dr. Marion R. Bryson, developing the overall certification plan and providing subject matter experts to collect data. Maj. Gen. William H. Harrison succeeded Moore at the 7th Division in January 1985, and Maj. Gen. Robert L. Drudik replaced Drummond as TCATA commander in March 1986. Certification events progressed in three phases beginning in January 1985. The certification employed unit Army training and evaluation programs, or ARTEPs; brigade field training exercises; and a divisional command post exercise, Gallant Knight, culminating in August 1986 in the certification exercise, Celtic Cross IV, for the division and corps slice.[22]

By early 1985, a stronger light division had emerged from the continuing deliberations. At approximately 10,700, the division reflected the addition of the proposed general support artillery battery of eight M-198 155—mm. towed howitzers; a six-man 60—mm. mortar section in each infantry line company (162 soldiers in all); and a 313—man military intelligence battalion to replace the 132—man intelligence company originally envisioned.[23] In March 1985, TRADOC directed the integrating centers to reexamine the light division's forward support concept to determine whether forward support battalions of the heavy division design were not needed as well in the light divisions. A factor here, however, was the "split-stationed" 6th Division and 10th Division with their separately located reserve roundout brigades.[24] The final decision was to keep the original concept for forward support and not employ the special forward support battalions.

Considerable work went into keeping the light division transportable at 500 or fewer C- 141 B air sorties. During 1985, the Combined Arms Center planners found that the only way they could do this and also maintain the division's basic required capabilities would be to eliminate important elements. Options included such choices as the 155—mm. battery, the air defense artillery battalion, and elimination of one infantry battalion. Early in 1986, the Chief of Staff of the Army rejected all those options and agreed with the Leavenworth planners to postpone a sortie decision pending the results of the certification.[25]

Although full manning by active component units was an axiom of the light division concept, the compromise of that readiness requirement surfaced in 1985, as we have seen. Queried by the Department of the Army as to the likely impact of roundout units, TRADOC responded on 17 April that such an option "diametrically opposed" the whole concept of high readiness and deployability as well as the design and training objectives on which the light divisions were structured. TRADOC also noted the question of whether a rounded-out unit of the division, containing much of the divisional foxhole strength, could deploy in accordance with the War Powers Act. Training implications — time, land,

distance, facilities — arising from a roundout option were severe, and these TRADOC spelled out in detail.[26]

In all, evaluators identified a total of twenty-seven deficiencies that they believed were significant.

Many other issues arose during the certification events. Among doctrinal issues were low intensity conflict doctrine, attack helicopter doctrine in such conflict, and fire support doctrine in maneuver tactics. There were numerous operational issues. An example was the adequacy of the new HMMWV to be the primary vehicle for the division. The HMMWV had several uses and configurations, including artillery prime mover. But its transportability by the UH-60 remained in question, and the HMMWV itself could not transport the battery computer system, forward area alerting radar, or position azimuth determining systems — three systems critical for the light division. Other operational issues involved a perceived inadequate number of vehicles, the size of soldiers' loads, how best to lighten, and rigger support for aerial resupply of long-range surveillance units. Light infantry division in-process reviews of combat service support matters, which were convened by the U.S. Army Logistics Center at Fort Lee, Virginia during the period, enabled planners from all five of the light divisions eventually activated or converted to deal with logistics issues. Most logistics problems appeared settled by the certification process, though support of the independent brigade task force, the field feeding system, and maintenance exchange items presented challenges.[27]

In all, evaluators identified a total of twenty-seven deficiencies that they believed were significant. Numerous changes were recommended by the subject matter experts and by organizations throughout the Army to resolve the problems identified by the certification. About 2,000 such recommendations were accepted of twice that total presented.[28]

The overall conclusion of the certification was that, for the division's mission, the organizations and concepts of the 10,000 division were basically sound. The need for changes, however, was apparent. The recommended light division strength was raised to approximately 1 deployable in 550 air sorties. Certification results published in late 1986 highlighted several areas needing still further analysis. For rear battle operations, additional firepower was still needed. Command and control issues included the need for an additional general support military police platoon, reorganization of air defense artillery into four batteries, reorganization of the signal battalion into four companies, and formation of an air assault battalion headquarters. The certification results indicated that supply needed to be made more mobile through a palletized load system. Other findings were that the M9 armored combat earthmover should be replaced with a smaller airmobile bulldozer, that a five-ton wrecker be added to the infantry brigade maintenance section, and the need to add a brigade engineer cell. Other issues to be decided included consolidation of linguists at an echelon to be determined above division, deletion or non-deletion of the proposed 155—mm. artillery battery, addition of a nine-man surgical squad, addition of organic ambulances, and an increase in Army Materiel Command supply capability.[29]

The Combat Developments Experimentation Center and the TRADOC Combined Arms Test Activity published after action reports on Celtic Cross IV in October and December 1986, respectively, and results of the certification were briefed to all light division commanders.[30] The TRADOC Combined Arms Test Activity submitted the official certification report through the 7th Division and I Corps for review and comment in November 1986 and then to the Combined Arms Center on 15 January 1987. It was briefed to General Wickham on 19 February.[31] The independent evaluation report was completed in March 1987, the final documentation of the process.[32]

The certification of the 7th Infantry Division (Light) by the TRADOC Combined Arms Test Activity thus resulted in numerous final design changes to the division's tables of organization and equipment. TRADOC saw the additions as valuable and with no significant compromises to strategic lightness. The

certification process was, in General Richardson's mind, a sound analytical vehicle for future use.[33] During early 1987, the Army Chief of Staff approved those changes, the major of which were new designs for the combat aviation brigade, the signal battalion, and the maintenance battalion.[34] Another result of the process was the subsequent convening of periodic light infantry division commanders conferences, held in turn at the headquarters of the several light divisions, to take up common problems.[35]

At strength of 10,843 personnel in the approved tables of October 1986 (Chart 42), the light infantry division in its certified form was a three-maneuver brigade structure of 9 infantry battalions of 559 personnel each. The division artillery, 1,356 strong, commanded 3 battalions of towed 105—mm. howitzers, each containing 3 six-piece batteries, along with the single eight-piece battery of towed 155—mm. howitzers for the division, together with a headquarters and headquarters battery. At 979 personnel, the combat aviation brigade fielded 2 combat aviation (assault helicopter) companies, an attack helicopter battalion, and a reconnaissance squadron, along with the headquarters and headquarters company (HHC). The 1,333—strong division support command disposed over a maintenance battalion, a supply and transport battalion, a medical battalion, and an HHC. Making up division troops were the division HHC at 238 personnel; band, standard at 41 ; military police company of 77 personnel; signal battalion at 470; air defense artillery battalion at 305; engineer battalion, 314 strong; and military intelligence battalion at 357 personnel.[36]

Chapter V

THE LIGHT DIVISIONS TRANSITION TO THE AOE[21]

The AOE goal of standardized light divisions for the active and reserve force encountered two difficulties following General Wickham's decisions of late 1983. The first problem was how to bring standard features to those divisions having specific type missions (the airborne and air assault divisions, as well as the experimental high-technology 9th Infantry Division), or to a division with a specific geographical assignment where strategic and regional considerations foreclosed standardization, the 2d Infantry Division in Korea. The second major difficulty the Army faced in achieving standardized 10,000-man light divisions throughout the force was the congress of training and funding problems that conversion held in store for the Army National Guard infantry divisions. As the Department of the Army phased its field forces into the AOE structures in the mid-1980s, the first problem was accommodated to a degree. However, the latter problem, with the exception of one newly activated reserve division, defied solution through the end of the decade.

Conversion of the Standard Infantry Divisions[22]

The conversion of the standard, nonmechanized infantry division to the new light division design was bound up in the more paramount consideration of readiness. Equipment delivery timetables, as well as deployment factors specific to the division involved, influenced the conversion process. That was particularly true for the two airborne divisions, the 82d Airborne Division at Fort Bragg, North Carolina, and the 101st Airborne Division (Air Assault) at Fort Campbell, Kentucky, both high in priority for strategic deployment. The conversion of those divisions will be discussed in a subsequent section.
Each of the three standard infantry divisions of the Active Army in 1983, the 2d in Korea, the 7th at Fort Ord. and the 25th in Hawaii, followed a different route to conversion. We have already taken note of the 7th Division's certification process, which set the final standard LID design. Conversion of the standard-mission 25th Division proceeded on the model of the 7th, while the focus of the hybrid 2d Division on specific Korean defense considerations required different answers.

[21] Ibid., 67-73.
[22] Ibid., 67-68.

On 8 February 1985, the Secretary of the Army formally announced that the 25th Infantry Division based at Schofield Barracks, Hawaii, would be organized as a light division during FY1986. A myriad of actions to carry out the conversion was required. Preparations had actually begun in the last half of 1984.

In August 1984, General Wickham had written Maj. Gen. Claude M. Kicklighter, commander of the 25th Division, that the light divisions' primary orientation was low intensity conflict. Wickham told the 25th Division commander to concentrate on Army Training Evaluation Program missions appropriate to low intensity conflict but also to develop the division's ability to operate with heavy units. In September 1984, the 25th Division's concept for reorganization toward the objective TOE structure via the living TOE process went to the Department of the Army. The following month, the division named an assistant chief of staff for force integration on the division staff to coordinate the effort. In October 1984 also, the division developed a training approach for the new infantry division (light) based on General Wickham's white paper of the preceding April, as well as on a TRADOC-supplied training strategy issued in May, and on the experience of the 7th Division.

Just as had the 7th Division, the 25th called upon the light leader course at Fort Benning for its battalion leaders. Upon conversion to the AOE designs, the division's individual units trained in their new form and mission. Division personnel visited the 7th Division during late 1984 to gain insights from "lessons learned" by the California unit. A force integration standing committee began meetings in December 1984, and monthly force integration command reviews began in February 1985.

On 8 March 1985, the Chief of Staff of the Army approved the 25th Infantry Division (Light) concept plan. COHORT battalions[1] were designated. The division's reorganization plan became final in May, spelling out the personnel, logistical, training, communications, and force modernization details. Local training stepped up in mid- 1985, including dispatch of division personnel to Ranger courses, construction of training facilities, and establishment of a "Tropic Lightning" Fighters School Command employing the division' s nickname. The division's air defense artillery and aviation brigades were provisionally formed in June and July 1985, respectively. Planners developed special procedures to retire or redistribute equipment from the old structure that would either be surplus or not included in the new division's concept and tables. At the same time, much new equipment was arriving in the summer of 1985, requiring feats of coordination. The 25th Division completed its final organizational conversion, as scheduled, in 1986.[2]

Redesign of the 2d Infantry Division had begun in the Combined Arms Combat Developments. Activity at Fort Leavenworth in the summer of 1984. Planners used the established light division and other AOE unit designs where possible, but the uniqueness of the Korea-based division created special needs and problems. The 2d Division had no local corps organization, it needed a heavy/light force mix for the six U.S. Army maneuver battalions it possessed, and it was integrally involved in combined operations with allied forces. The division was indeed a U.S. KATUSA organization.[3] For those reasons, the design effort which proceeded during 1984 was a shared endeavor with the Korea-based Eighth Army headquarters. Stronger artillery and antiarmor firepower were the outcome. Following review by the Army Commanders' Conference of October that year, classified guidance by General Wickham pointed toward provision of stronger local echelons- above-division elements and a closer formal tie-in of the attached KATUSA battalions. That work was completed by the Fort Leavenworth designers by the close of 1984 (Chart 43).[4]

Presented to the Chief of Staff of the Army in April 1985 was a design for 3 brigade headquarters and 2 battalions each of armor, mechanized infantry, and standard infantry. Combat support and combat service support units reflected the heavy/light nature of the 2d Division, while the air defense artillery, signal, military police, and chemical units were standard AOE heavy division designs. The divisional engineers

and military intelligence battalion, based on the heavy designs, were modified for the 2d Division's special requirements, as were the division artillery and combat aviation brigade. Echelons-above-division units included a Multiple Launch Rocket System battalion, an 8-inch howitzer artillery battalion, a military police company, a ground surveillance radar platoon, a sensor platoon, a smoke platoon, 2 Chaparral air defense battalions, a light truck company, and a remotely piloted vehicle battery.

The new design of the 2d Division notably increased the division's firepower, especially in artillery and antiarmor systems. On I May 1985, General Wickham approved the AOE 2d Infantry Division design, as well as that of the associated forward deployed echelons-above-division units. The 2d Division LTOE was implemented in October 1986. Chart 44 depicts the organization of the 13,600-man Korea-based hybrid division.[5]

Activation of the New Light Divisions[23]

Planning proceeded in early 1984 toward the activation of the first of the additional light divisions. As we have seen, only one new active component LID had been planned during the design work of 1983. However, following a summer 1984 AOE review, the Secretary of the Army, on 3 August 1984, recommended to the Secretary of Defense the activation of two new light divisions in the Active Army. One would be the 10th Mountain Division, to be activated at Fort Drum in early 1985, and the other, the 6th Infantry Division (Light), in Alaska, during FY 1986.

With Joint Chiefs of Staff support, the Secretary of Defense approved, and on 11 September 1984 the Department of the Army announced, selection of Fort Drum, New York as the home for the 10th Division, the Active Army's seventeenth. On that date, the department also announced its proposal for the 6th ID (Light), to be headquartered at Fort Richardson and built upon the 172d Infantry Brigade resident at that Alaska location. The stationing would strengthen Active Army forces on the West Coast. Each of the two new divisions would by plan be rounded out, unlike the 7th Division, with a reserve component brigade. As announced, the two divisions would actually be constructed on but one new division set of resources. The 10th Division received two active component brigades, while the 6th Division acquired one, adding it to the resident theater organization already in place, the 172d Infantry Brigade.

The Department of the Army's 11 September announcement also included the projected reactivation of an additional reserve component division, the 29th Infantry Division, to be formed in the Maryland and Virginia National Guard. As noted earlier, that announcement raised immediately the issue of readiness for rapid deployment.[6]

Activation of three, rather than one, additional light divisions had not been part of the original AOE planning of 1983. The concept had called for a seventeenth division as a full-up Active Army unit. The decisions by General Wickham and Secretary Marsh on creation and placement of the seventeenth and eighteenth active component divisions had come out of executive department basing considerations. Those decisions necessitated, as noted, the rounding out of both divisions with a reserve brigade. Although the roundout solution undercut the argument for an all-active, ready and strategically deployable division in the case of the 6th and 10th, it did not affect the "division-minus" or single-brigade strategic deployability of those two divisions as parts of a force package. Opposition in Defense circles was overcome, and the Army' s decision was supported by Secretary of Defense Casper Weinberger and by the congressional committees.[7]

Basing studies had begun under FORSCOM auspices in February 1984. The Forces Command initially considered nine installations, reducing those stationing possibilities to seven installations and nine mixed-

[23] Ibid., 69-74.

basing alternatives. The seven posts were Forts Lewis, Ord, Benning, Campbell, Drum, Wainwright, and Richardson. Only Benning and Drum were considered possible sites for an entire division. The other alternatives consisted of various combinations of installations such as Forts Lewis and Ord. or Forts Drum and Campbell. Three alternatives involved Alaska locations. The stationing criteria were drawn from an earlier "Review of Division and Brigade Stationing," published by the Engineer Studies Group of the Office, Chief of Engineers in 1977. Six categories were assessed: training, support facilities, community support, environment, mission, and "other" — training being the most significant consideration.[8]

Of importance beyond doubt in the selection of Fort Drum as headquarters of the 10th Mountain Division (Light) was the active interest of the State of New York and the New York congressional delegation. The Adjutant General of New York stated the case for Fort Drum to the Chief of Staff of the Army in early February 1984. Letters to Secretary of the Army Marsh from Rep. Joseph P. Addabbo and to General Wickham from Rep. Samuel S. Stratton in February and March 1984, respectively, urged Fort Drum's selection while promising close House committee attention to that decision, so that actions would not be taken, in Rep. Addabbo's stated view, "which might preempt the committee's appropriation oversight responsibilities and unnecessarily delay or terminate the light division concept." The Fort Drum decision was to generate considerable media criticism, focused on the high construction costs involved as well as the base's cold climate location.[9] Both the activation decisions and the basing decisions proved controversial. The internal and public critique of those and other aspects of the AOE design effort will be discussed subsequently in this history.[10]

Activation of the seventeenth division of the active force, the 10th Mountain Division (Light Infantry), took place on 13 February 1985 at Fort Drum, along with activation of selected divisional units. Only one brigade was activated initially at that location, however. Because of inadequate facilities and housing at the northern post, the division's other active component brigade was activated at Fort Benning, Ga. in October 1985 and did not make the move to Fort Drum until October 1988, following completion of facilities at that post. Selected in May 1985 as the 10th Division's roundout, third brigade was the New York based 27th Brigade of the 42d Infantry Division, ARNG. Stationing costs for a full division at Fort Drum were estimated at $l billion.[11] Activation of divisional maneuver battalions followed in early 1986. Weapon fielding’s proceeded, but with many delays.[12]

The choice of Fort Drum in upstate New York as the division's headquarters provided the requisite cold weather basing and training site for the additional mission of the 10th Division beyond its generic low intensity conflict purpose.

The 10th Mountain Division (Light Infantry) activation recalled to life the Army's only mountain division of World War II, the 10th Light Division (Pack, Alpine). The choice of Fort Drum in upstate New York as the division's headquarters provided the requisite cold weather basing and training site for the additional mission of the 10th Division beyond its generic low intensity conflict purpose. The 10th was designated for strategic support to U.S. Army Europe, where it was designated to serve in mountainous, hilly, and other terrain best suited to light infantry. The choice of Fort Drum also established, in the northeastern United States, the sole division-size Army force in that region.

Plans to activate the eighteenth Army division, the 6th Infantry Division, were received with some concern by TRADOC. General Richardson believed, and advised the Chief of Staff that a strategic need for an Alaska-based division was not present and that the division if activated would result in support costs demanding an increase in Active Army end strength.[13]

Plans to activate an eighteenth active division also raised the issue of tailoring a division structure adaptable to the specific cold weather operations of Alaska. The original concept for the division in fact

stated that the theater defense of Alaska would be its primary mission, but that the division needed the ability to deploy to any part of the world.

The selection of Forts Richardson and Wainwright for the 6th Division came following the FORSCOM stationing studies earlier noted. Facilities and housing already existed for the Active Army brigade at Fort Richardson — the converting 172d Infantry Brigade — but such facilities still had to be built at Fort Wainwright, which was projected as the division's ultimate headquarters and the location of its second Active Army brigade. The training criterion was ambiguous: the Alaska posts were excellent for arctic and northern warfare training but not usable for at least seven months of the year for other types of training. Although the Forces Command found the Alaska location disadvantageous for training, the Secretary of the Army, in a November 1984 record of decision, considered the facility and unique training environment advantageous for the Army, and that location was chosen. A deployability consideration was the Alaska division's short polar routes. The influence of Alaska's U .S. Senator Ted Stevens was also a significant factor in a federal system in which military posts and units were dispersed among the several states.[14]

Activation of both new divisions, as well as all the infantry division conversions in the continental United States, involved the U.S. Army Forces Command, which commanded those units through its corps- FORSCOM's responsibilities for the readiness and response of its units led that headquarters to urge to the Department of the Army that the new 6th Division be primarily a stand-alone, nondeploying force. FORSCOM did not judge a standard light division design solution to be appropriate for the 6th. It proposed in fact that the division's special support requirements would justify manning one of the Active Army infantry battalions from the reserve components in order to free up the billets for support.

Reviewing the FORSCOM plan, Headquarters TRADOC and Combined Arms Center planners found it unsuitable as a long-term solution, and in February 1985 they set about developing an operational concept for an "Alaska Theater Defense Division." The Combined Arms Center view recognized the reality of Alaska theater requirements, and planners wrestled with the disparate missions in the subsequent design effort. The CAC design guidance called for a structure paralleling that of the basic LID but emphasizing special arctic equipment, including the small unit support vehicle. The guidance also called for additional military police, signal, and command and control capabilities, and modified combat service support organizations. Headquarters TRADOC supported that design and, following a Fort Leavenworth workshop in April 1985, a comprehensive concept statement and a division design were ready. However, at 1 1,319 strong, the strength of the design exceeded the light division goal by 500—600 personnel. Subsequent briefings of the design by the Combined Arms Center planners brought to the surface the continuing questions of strategic deployability, vehicles, combat service support structure, and artillery, aviation, and engineer capabilities. All the while, the FORSCOM commander, General Robert W. Sennewald, held to his insistence that the division was designed for a specific theater need and should not be considered a light division. General Richardson endorsed the proposed design in October 1985 with several changes involving above-division unit structure. The same month, the Department of the Army approved activation of three new COHORT light infantry battalions for the new 6th Infantry Division (Light) and conversion of three existing battalions to the new light infantry design.

The Alaska Theater Defense Division idea, however, failed to gain General Wickham's approval when briefed to him on 10 March 1986. On that date, Wickham directed keeping the light infantry division design. He approved that design for the 6th Division, placing the needed nonstandard elements in the above-division structure — a decision that preferred strategic deployability over the Alaska theater defense. By Wickham's direction, the special support troops and equipment for cold weather operations were placed in å separate organization under the division commander' s control. The Army Chief of Staff also approved a reserve roundout brigade and other roundout units for the division, including the divisional air defense artillery battalion and 155mm. howitzer artillery battery.[15]

The 6th Infantry Division (Light) was activated at Fort Richardson on 23 March 1986. Activation of its constituent units followed.[16] With its projected two active component brigades at Fort Richardson and Fort Wainwright, the division roundout brigade selected was the 205th Infantry Brigade (Separate), USAR, Minnesota.

Detrimental to the planned fleshing out of the 6th Division were the $l billion cost estimates for installing the full division between Fiscal Years 1985—1992 as planned at the Alaska posts. Military construction and housing, principally at Fort Wainwright, accounted for $631 million of that total.[17] The Drum and Wainwright basing for the two new light divisions, totaling together $2 billion in estimated multiyear costs, were bound to have a skewing effect on the Army military construction program. In the changing strategic defense climate of the late 1980s, that expense proved less and less defensible. FORSCOM manpower cuts of February 1988, encompassed in Program Budget Decision 731, directed elimination of 1,297 positions in the 6th Division. Unit activations projected for FY 1989, including two infantry battalions that would have filled out the division's second Active Army brigade, were cancelled.[18]

The third new light division was the 29th Infantry Division (Light), ARNG. Planning for it by the National Guard Bureau had begun in early 1984. The Secretary of Defense granted approval on 31 May 1984 to activate it as a reserve component light infantry division and as the tenth National Guard division in the force. The Department of the Army formally announced the plan on 11 September 1984, along with the 10th and 6th Division announcements. Organized on 5 October 1985, the 29th Infantry Division (Light), ARNG was the only reserve component division organized in the 1980s in the new light division form. With headquarters at Fort Belvoir, Virginia, the division was formed from the 116th Infantry Brigade of the Virginia National Guard and the 58th Infantry Brigade of the Maryland National Guard, with the remaining units drawn from the two states.

….. [paragraphs omitted]

Restructuring the Airborne Divisions[24]

….. [paragraphs omitted]

Chapter VI

THE HEAVY DIVISIONS TRANSITION TO THE AOE[25]

Doctrinal Currents and the Heavy Corps[26]

At least equally significant to the AOE's introduction of new light infantry divisions were the doctrinal and organizational realignments of the heavy units that more firmly established the strong corps as the command and control organization that fought the AirLand Battle. The AOE heavy corps of 1983 realized organizationally, in a stronger way, the operational art implications of the fighting doctrine the Army had adopted in 1982. That organizational change, together with the other doctrinal efforts of 1983 and the period following, resulted in a further refinement of AirLand Battle doctrine, which the Army published in a new FM 100-5 *Operations* edition in May 1986, clarifying the roles and interaction of the corps and the heavy divisions.[1]

[24] Ibid., 77-78.
[25] Ibid., 85-97.
[26] Ibid, 85.

Corps Doctrine and the Operational Level of War[27]

….. [paragraphs omitted]

The AirLand Battle Study[28]

In order to examine the impact that AirLand Battle would have on the conduct of combat operations, TRADOC in October 1983 assigned the Combined Arms Center to study the subject in detail. The AirLand Battle Study focused on the 1989 force against a 1992 threat, employing the Cordivem analytical model. The aim of the study was to determine the Army's capability to synchronize rear, close-in, and deep battle. The Combined Arms Operations Research Activity commander, Brig. Gen. David M. Maddox, headed a monitoring committee. Conducted during 1984-1985, the extensive war gaming for this study was analyzed and published in a final report in June 1986.

Results of the AirLand Battle Study were classified. They revealed insights pertaining to the whole range of corps battle functions and organizations. The general thrust of the findings was to confirm the tenets of AirLand Battle doctrine.[6]

[27] Ibid., 85-87.
[28] Ibid., 87.

Deep Attack[29]

A prominent part of the corps AirLand Battle was attack upon the enemy's second or follow on echelons deep in his own part of the battlefield simultaneously with action in the close-in battle against the enemy's assault echelon. That aspect of doctrine was the subject of a second important doctrinal study of the mid-1980s, which was launched by the chartering of a Deep Attack Programs Office (DAPO) at Fort Leavenworth by the Vice Chief of Staff of the Army, General Maxwell Thurman, in March 1984. The purpose of the DAPO group was to coordinate and synchronize deep attack related programs to support AirLand Battle doctrine. The group, headed by Brig. Gen. Wilson A. Shoffner, produced several major analytical and doctrinal products which set the direction of subsequent deep attack inquiries.

The DAPO group completed a number of useful analyses and tools focused on command and control and including operational templates, as well as a field circular on corps deep battle operations and a Deep Battle Action Plan. The plan was comprehensive, treating doctrine, organization, training, and equipment questions. General Thurman approved it in July 1985 to guide the continuing deep battle work. The plan called for an advanced capability for sensing, acquiring, and attacking deep targets by 1991. Within TRADOC, a TRADOC System Manager Deep Battle was chartered under Headquarters Combined Arms Center to continue and coordinate the Deep Attack Programs Office work. The DAPO corps battle analysis cell continued its efforts under the Combined Arms Operations Research Activity at Fort Leavenworth as the corps battle analysis task force to develop corps training simulations and to continue to examine key issues at the corps level of command. Closely related to the deep attack project were the Army's growing commitment in the mid-1980s to the J-STARS and J-TACMS deep battle systems.[8]

The plan was comprehensive, treating doctrine, organization, training, and equipment questions.

Results of these doctrinal currents- the further inculcation of the operational level of war and the insights gained from the AirLand Battle Study and the Deep Attack Program Office work -were integrated directly into Army doctrine during 1985 and 1986.[9]

Doctrine, the Corps, and NATO[30]

….. [paragraphs omitted]

The Heavy Divisions Convert[31]

….. [paragraphs omitted]

Cavalry Organizations[32]

The 1983 AOE concept for eliminating the armored cavalry regiments (ACR) in favor of brigades did not survive review by Army cavalrymen and others, and the ACRs remained intact in the Army of Excellence. The ACR fielded 3 armored cavalry squadrons and l combat aviation squadron; an air defense artillery battery; a support squadron; engineer, military intelligence, and chemical companies; and a headquarters and headquarters troop. Each armored cavalry squadron commanded a headquarters and headquarters troop, 3 armored cavalry troops, a howitzer battery, and a tank company, the combat power of the squadrons greatly enhanced by their new M I tanks and cavalry fighting vehicles (Chart 66). Tables of organization and equipment for the ACR were implemented in April 1986.[30]

[29] Ibid., 87-88.
[30] Ibid., 88-89.
[31] Ibid., 89-92.
[32] Ibid., 94-96.

The AOE redesign brought change to other cavalry organizations. In 1985, planners designed the light reconnaissance squadron component of the light infantry division combat aviation brigade. Organic to the brigade but normally operating under control of the division headquarters, the light reconnaissance squadron consisted of a headquarters and headquarters troop, a cavalry reconnaissance (light cavalry) troop, two air reconnaissance troops, and a long range surveillance detachment. [31]

Inclusion of the long range surveillance detachment in the cavalry organization of all divisions resulted from a Department of the Army directive in March 1985.[32] In June 1986, however, TRADOC designers moved the detachment from the cavalry and reconnaissance squadrons to the division military intelligence battalions. The corps long range surveillance unit companies were placed in the tactical exploitation battalion of the military intelligence brigades. Those shifts consolidated human intelligence capabilities with signal and electronic intelligence in both corps and division.[33]

Meanwhile, a study of the heavy division cavalry squadron was begun in 1985 by the Armor School, which completed it in May 1986. Major recommendations were to expand the squadron's mission to include the traditional guard mission and to develop an organization of 2 air cavalry troops and 3 ground troops, the latter troops each to command two M3 Bradley platoons and two M1 tank platoons. The proposals were widely briefed and were strongly supported by Army corps, division, and squadron commanders, but some senior commanders disagreed about the guard function. In October 1986, General Wickham determined the suggested organization with its third ground troop to be unaffordable. Thus, the Division 86 squadron design of 2 air cavalry troops and 2 ground troops of three M3 platoons only, and no tanks, would continue under the AOE. The heavy division cavalry squadron TOE was implemented in October 1986. At the close of the decade, however, five of the six mechanized infantry divisions and one armored division still retained the pre-Division 86 division cavalry squadrons with M60A1 tanks and Mll3 armored personnel carriers, rather than the new, and "tankless," Bradley fighting vehicle system coofiguration.[34]

General Wickham determined the suggested organization with its third ground troop to be unaffordable.

Did the AOE designs resolve satisfactorily the dilemmas of the cavalry units' multiple missions? At the close of the 1980s, most observers would probably have answered no. The reconnaissance-counter reconnaissance-surveillance, or RCRS, mission carried out by the battalion scout platoon, the division cavalry squadron of the heavy division and reconnaissance squadron of the light division, and the armored cavalry regiment all pointed up the problem. The sheer complexity of the multiple missions raised special problems of organization and training. The new cavalry squadron, for example, did not appear to be either organized or equipped for its wide mission range. Nor was an adequate reconnaissance capability available to the brigade commander. Late- 1980s decisions by the Chief of Staff of the Army approved the redesign of the maneuver battalion scout platoon, replacing six M3 cavalry fighting vehicles with two HMMWV vehicles. Provision of a stronger RCRS unit *to* the heavy brigade appeared excluded by cost. Additional ground troops for the light division's reconnaissance squadron and the heavy division's cavalry squadron remained unattained and unresolved, even as the assumed linearity of the future battlefield came in question following upon the operational-strategic changes in Central Europe after 1989. The protracted issue of providing tanks for the division cavalry squadron. however, appeared closed as the decade ended.[35]

Heavy Separate Brigades[33]

….. [paragraphs omitted]

[33] Ibid., 96.

Chapter VII

PROGRAMMING AND DOCUMENTING THE AOE[34]

The transition to the AOE-planted squarely atop the major materiel modernization of the 1980s Army - was no mere exercise in organizational change. It was a complex, multi-year effort. Although largely accomplished by the close of the decade, some unit conversions remained unfinished even at that juncture. The sheer complexity of the AOE transition was astonishing. For any single organization, the design, the approval of that design by the Army Chief of Staff, the development of requisite TOEs, and the conversion of the organization being replaced or transformed to a new table with receipt of its new equipment, all proceeded in sequence. But the transition of the AOE as a whole offered no such orderly path. Final designs, documentation, and conversion old to new, occurred simultaneously along numerous routes. The steps in the process were always subject to the primary concern of equipment acquisition and the paramount concern of the readiness of the organization. In this chapter, we will discuss the transition and modernization challenge and the mechanisms by which the AOE as a whole was documented and programmed.

The Challenge of Transition[35]

From start to finish, the development of the Army of Excellence entailed four distinct tasks: designing the new AOE organizations, programming the existing organizations for conversion, documenting the AOE designs with new TOEs and related documents, and actually converting the old organizations and structures to the new.

From start to finish, the development of the Army of Excellence entailed four distinct tasks: designing the new AOE organizations, programming the existing organizations for conversion, documenting the AOE designs with new TOEs and related documents, and actually converting the old organizations and structures to the new. Once designed, the new organizations of the AOE needed to be programmed by type and increment into the force, displacing the old. Since that process coincided with a massive infusion of weaponry and equipment, the programming action by the Department of the Army - aided by TRADOC, the Army Materiel Command. And particularly by the troop commands whose tactical units were the object of the exercise- was a vastly complex, multiform, multiyear process. Concomitantly, TRADOC was fully engaged to document the new organizations with new TOEs, tables which in many cases necessarily had interim forms to accommodate the receipt at different times of the various new equipment. Finally, with receipt of its new equipment and transfer or retirement of its old equipment, came the troop commands' conversion of the unit- the completion of the modernization cycle. While responsible by mission for designing and documenting the organizations of the Army of Excellence, the Training and Doctrine Command played a supporting role in programming the force and lent assistance to the troop commands as they converted their tactical organizations to the AOE designs.

AOE Planning[36]

As it completed the major portions of the AOE design effort. TRADOC's method for bringing the remaining issues and designs to decision was through the means of semiannual AOE briefings to the Chief of Staff. Most of the design issues were resolved by late 1986, although design adjustments to the 1980s Army continued through the decade, as did the semiannual update briefings for the Chief of Staffs decisions.[1]

[34] Ibid., 99-101.
[35] Ibid., 99.
[36] Ibid., 100.

The TRADOC commander, General Richardson, presented an initial AOE status report to the summer 1984 Army Commanders' Conference. The presentation highlighted the difference between the projected AOE force and the then programmed force. Following thereon, the Vice Chief of Staff of the Army, General Maxwell Thurman, asked TRADOC to develop a plan outlining required actions to transition the FY 1986-1990 programmed force to the Army of Excellence. In November 1984, General Richardson sent Thum1an the result, termed "the Difference Report," a product of a comparison of the FY 1990 programmed force and the AOE, which he described as a management tool to assist in determining what manpower requirements should be programmed year by year to reach the AOE design by the end of FY 1991.[2]

The "Difference Report" presented a master matrix that delineated the manpower spaces necessary to reach the AOE, by functional area. It also provided potential manpower space reductions in the Army's Program Objective Memorandum 1991 covering Fiscal Years 1987-1991. The report further provided a ready audit to the Army's efforts to implement the AOE and enabled the ARSTAF to monitor the programming status of the AOE initiatives.[3] This force structure review was presented to General Wickham on 30 November 1984. The Army Chief of Staff approved the recommended changes and most of the AOE force was incorporated into the programmed force.[4]

The Modernization Dilemma[37]

The transition to the AOE was greatly complicated by the sheer number of new weapons coming into the force. Few outside the Army were aware either of the massiveness and complexity of the modernization events under way in the 1980s, or of the limitations under which they proceeded. Speaking to a conference in July 1984, the Assistant Deputy Chief of Staff for Force Development on the Army Staff, Maj. Gen. Louis C. Wagner, Jr., described the ongoing modernization of the Army as "occurring at an astronomical rate." Thirty-five percent of the 7,500 programmed M1 tanks had been delivered and accepted to date, 17 percent of Bradley Fighting Vehicles, 40 percent of the UH-60A Black Hawk helicopters, and 11 percent of the Multiple Launch Rocket Systems. Over 3,500 trucks a month would soon be rolling into the kasernes of U.S. Army Europe.

The modernization affected parts of the reserve components almost as directly as the Active Army, as the distribution of new equipment was accelerated in 1984 and 1985. Roundout units were provided the new materiel the same time as their parent active divisions. But Maj. Gen. Wagner additionally noted that the cycle of higher modernization funding was corning to a close. The first two years influenced by the higher defense commitment of the Reagan Administration had seen a 12 percent growth in Army resources for modernization. That cycle, Wagner said, had eroded.[5]

Maj. Gen. Wagner's reminder pointed up the dilemma of force modernization in the mid-1980s. The fruits of the Reagan buildup of the early part of the decade were in delivery to an Army force and support structure for which growth had stopped and which indeed would soon be in retrenchment. The fielding of the new AOE designs and their equipment had nonetheless to go forward as rapidly as possible.

[37] Ibid., 100-101.

At the same time, the transition from old to new was considerably more complicated than the simple deployment of new equipment to redesigned battalions and divisions. In remarks to the TRADOC headquarters staff in July 1983, General Richardson declared that planners needed to get away from viewing the modernization effort only in terms of weapon systems and instead to focus on organization. It was force integration. Richardson said that developers needed to emphasize. Some measures to do that involved the institution of integration staff officers in the Training and Doctrine command, together with the conduct of organization assessments, and a focus on fielding viable units. Those were all steps that had begun in 1983 and that developed more fully in 1984-1985.[6]

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Problems and Lessons[38]

Writing in *Army* magazine in October 1988, Secretary of the Army John Marsh chronicled the Army's growth during the decade. Since 1980, the Army had added 2 active and 2 reserve divisions, for a total of 28 - 18 active and 10 in the reserve components. In the past 8 years, the Army had grown by 79 combat battalions (to 379), 4,844 new M1 series tanks, and 4,919 Bradley Fighting Vehicles acquired or with funds committed against an end goal of 6,882. The Army had by late 1988 accepted or had funds to acquire 603 of 675 AH-64A Apache attack helicopters, 931 of 1,107 Black Hawk helicopters, and 416 Multiple Launch Rocket Systems. The quantities of equipment in prepositioned overseas readiness had been doubled. The Army had by 1988 converted 3,124 M60 series tanks from older models to M60A3 models and upgraded 342 Cobra attack helicopters to the modem AH-1 S version. A total of 61,719 commercial utility cargo vehicles, 21,825 high mobility multipurpose wheeled vehicles, and 6,963 heavy expanded mobility tactical trucks had been placed in the force. [19]

These weapon and equipment figures reflected a major modernization achievement. But they masked a weakness in units at the theater army level and to a degree at the corps level, that resulted from the increase in the number of Active Army divisions within the constant 780,000 active ceiling. Some such units were of the "component 4" category, the unmanned portion of the required force. Divisional understrength, too, was a dilemma of the 1980s. Whereas the Army force in Europe was maintained at 100 percent manning levels during that crucial decade, and the Eighth Army in Korea stood at a high readiness level, the U.S. based divisions of the Forces Command were, out of necessity, manned at much lower strength levels. Of the Army's 28 total divisions, active and Guard, many could not have called upon sufficient combat support and combat service support elements to deploy.[20]The cited statistics also masked a lagging transition to the new designs in the Army's support units and in the reserves. As of September 1989, approximately 85 percent of the Active Army combat manpower- but only 41 percent of Active Army support manpower- were converted to Army of Excellence designs. The combined total was 72 percent. The corresponding figures for the Army National Guard were 64 combat and 23 support, for a total of 53 percent converted units. In the U.S. Army Reserve, only 29 percent of combat units and 20 percent of support units- a total of 22 percent overall- had converted to the AOE designs.[21]

The statistics told a two-sided story about the 1980s transition of the U.S. Army's tactical units to their AOE forms. Whereas the great bulk of the Active Army had successfully converted by the close of the decade, the con version of the reserve components, integral to the concept of the interdependent Total Army, measured a much smaller success rate.

The question also remained as to what degree the very "hollowness" that force designers and force structuring planners had set about to eliminate in the late 1970s and early 1980s was in fact remedied. If

[38] Ibid., 107-109.

that hollowness had been ameliorated to some degree, it had by no means been eliminated. The larger number of divisions, but also the receding defense resources in the late 1980s, together with the decrease in urgency owing to the decline of Soviet power, and the beginnings of a drawdown of the force- all were factors in the two-sided story of transition. A review of the AOE design and implementation experience by the General Accounting Office during 1990 supplied lessons about the complex and arduous conversion project.[22] Emphasizing the slowness of reserve units to convert, the 1990 GAO report placed total Army conversion to the AOE design at 56 percent- an uneven record, measuring the active and reserve contrasts.

This only partial gain resulted, however, from the AOE's reduction in the number of unresourced units, and from its dedication to staffing more units at 100 percent of their required levels. A sizable disparity persisted in 1989 between requirements and authorizations. The GAO attributed the disparity to several causes. The first was the Army decision to add a twenty-eighth division.

Another was the retention of unique or one-of-a-kind division structures. A third was the failure to convert the National Guard infantry division to AOE designs. Nor had the AOE succeeded in its design aim of increasing Army combat forces in relation to the size of its support force, the GAO survey found. Though the number of combat battalions had increased, the ratio of combat to support, in 1989 as in 1983, stood at 64 percent to 36 percent. And despite that unchanged status, organic support problems remained significant. The integration of active and reserve forces- in reserve roundouts to some divisions and in many crucial functions - remained a dilemma. Nine of the 18 active divisions had roundout brigades or battalions as of September 1989. By definition, how could reserve units deploy in a state of readiness as high as that of Active Army units? A total of 67 percent of all the Army's support forces were in the reserve components. In addition, the AOE aim of division standardization was only partially achieved.

The GAO critique declared that the manpower savings that should have been realized through labor-saving initiatives of the Logistics Unit Productivity Systems Program undertaken during the period, had suffered from inadequate management. Relatively few of the logistics units had converted to the new designs by late 1989. A question mark in the entire transition exercise was the Army's increased reliance on host nation support personnel - documentable by formal agreements in a friendly theater, but an unknown quantity in undeveloped theaters into which Army forces might have to go.

The 1990 GAO assessment of AOE conversion found, in sum, that the force structure design of the Army of Excellence was realistic, that it had matched force structure requirements to authorized personnel, but that the Army lacked a systematic tracking system for the conversion that could have identified the emerging problems early.[23]

The other side of the modernization story was that the very validity of the General Accounting Office critique of the Army's conversion to the AOE was itself a measure of the immensity, and the complexity, of the historic Army modernization effort of the 1980s. The buildup and conversion of the Army of Excellence, if incomplete in its result, was a nonetheless substantial achievement. The military challenge to the West mounted by the Soviet Union in the late 1970s and early 1980s was unprecedented and massive. During the period, the U.S. Army experienced major doctrinal reform and a generational flood of new weapons and equipment. Those events were followed in the last half of the decade by the historic shift from aggressive Soviet threat to recession of Soviet power, and by the levelling-off and decline of defense resources and the move to force drawdown. All those factors were powerful influences penetrating and affecting the implementation of the AOE designs in the force of the 1980s. In the end, the overall achievement of the Army of Excellence greatly outweighed its shortcomings.

Chapter VIII

THE LIGHT INFANTRY DIVISION DEBATE AND THE HEAVY/LIGHT ARMY[39]

Most initial reaction to the redesigned Army of Excellence, inside and outside the Army, was positive. The new heavy division and heavy corps structure, which made the corps the prosecutor of AirLand Battle and cockpit of combat power, was a convincing adjustment of organization to AirLand Battle doctrine. The real decline in divisional strength was indisputable, both in transferred units and in artillery crews and infantry squads smaller by one man. But there was a recognition that the corps together with its divisions retained, as a unit, very strong combat power and that it constituted the right doctrinal answer.

The new light infantry division also met an initial positive response. The 1982 British action in the Falkland Islands by which naval-deployed, well-trained British foot infantry dislodged a heavily manned Argentinean occupation force in a dramatic and decisive action 8,000 miles distant from the British Isles was fresh in memory in 1983. Operation Urgent Fury, the successful U.S. action liberating the Caribbean island-nation of Grenada from a communist coup in October November 1983 was an even more immediate reminder of the vulnerability of U.S. interests outside NATO. Urgent Fury was a reminder, too, of the need for rapidly deployable light forces. If anything, the Grenadian action, which clearly signaled the end of post-Vietnam American military passivity in the face of Soviet-sponsored and Soviet client-sponsored moves on independent third world states, indicated the rising likelihood of future U.S. contingency involvements. Many of those actions could be expected to fall into the light force sector.

Though overall the AOE maintained its early support throughout the 1980s, a critique of the new light division arose in the public forum in late 1984. The debate extended into 1986 and had not fully subsided at the close of the decade. As we have seen, the certification process of 1984-1986 resulted in numerous changes to the division that left it marginally larger, at 10,843 personnel, and somewhat stronger than its initial 10,212 version. Those adjustments did not, however, go to the heart of the main points of the debate. The critique focused not only on the capabilities of the light infantry division and its design methods, but upon motives and assumptions alleged to lie behind the new design. As a major organizational departure with doctrinal implications, the formation of the LID also bore upon, and stimulated discussion of, another permanent and axiomatic consideration of force design: the proper organizational mix of heavy and light forces.

The AOE and Beyond[40]

The Army of Excellence as a whole had not drawn significant criticism when its designs were revealed in late 1983. Once the reduction of the heavy divisions to build a stronger corps to conduct AirLand Battle doctrine was well understood, there was general agreement to the shape of that predominant portion of the AOE. However, as we have seen, the onset of the debate about the capabilities of the AOE light infantry division also included criticism of the retention of so many division types. To that criticism were joined, in the latter half of the 1980s, the beginnings of a more fundamental critique that went beyond the AOE and its perceived gap between heavy and light division capabilities and that extended to the relative roles of brigade, division, and corps.

During 1985-1986, a markedly different corps was theorized and designed in a study conducted at the National Defense University. The Maneuver Oriented Corps- 1996 (MOC-96) Study posited an even greater combat role for the corps but with an organization whose divisions were smaller and more numerous. Separate brigades were eliminated in the MOC-96 concept, and the AOE division size

[39]Ibid., 111.
[40]Ibid., 123-127.

reduced, so that five divisions could be carved out of three. Self-sustaining and independent regimental combat teams (RCT) were the centerpiece for tactical maneuver. The RCTs and corps constituted the operational and tactical fighting forces, with divisions becoming control headquarters.[47]

Another feature of the late-1980s critique was the growing discussion of the viability of combined arms battalions. Brig. Gen. Bahnsen's Armed Forces Journal article of November 1985 viewed the AOE as essentially a continuation of the ROAD concept of a common division base and task-organized brigade and battalion-level combined arms teams. Bahnsen called for eliminating the ad hoc task force concept and forming combined arms battalions composed of the AOE's single-weapon companies. He argued that AirLand Battle doctrine placed a premium on combined arms forces that could be rapidly concentrated, an imperative not supported by ad hoc task organizing by battalion and brigade.

Noting the maneuver-oriented corps and division initiatives recently advanced by the National Defense University, Bahnsen also argued for a shift in corps-division-brigade roles. He noted that the World War II corps had been an operational echelon strictly, and that the divisions had received their logistical support from the field armies. Elimination of the field army level in the early 1970s had saddled the corps with the double role of operations and logistics, abridging its ability to concentrate maneuver combat power. Bahnsen recommended resurrecting that capability in the division, which he saw as "easily the equivalent of a World War II corps." The ROAD style division base should be dismantled, the division should get out of the logistics business, and its assets should be moved down to fixed-strength brigades or up to corps. Bahnsen thus pushed to the fore the fixed maneuver brigade with organic tank, mechanized infantry, artillery, engineer, logistics (in forward support battalions), and signal units, with general support artillery and air defense artillery going to corps. With the smaller, more agile heavy division resulting, the corps commander would fight his divisions and artillery brigades, using the division echelon as a purely tactical headquarters under which to rapidly concentrate fixed brigade structures.[48]

Elimination of the field army level in the early 1970s had saddled the corps with the double role of operations and logistics, abridging its ability to concentrate maneuver combat power.

A major difficulty lying in the advocacy of fixed or independent brigades as the future central fighting element was the resulting break-up of the supple and demonstrated division artillery system in order to provide direct-support artillery battalions to the brigades. In addition, brigades which were staffed at more junior levels lacked by definition the division-level staff maturity and experience needed to fight the battle. Divisions themselves had potential for further, valuable development in a new doctrinal world. Maneuver in the "third dimension" introduced by attack helicopters that were served by real-time intelligence and targeting and that possessed pinpoint accurate weapons opened the potential of a more powerful forward-reaching divisional aviation brigade. Future corps needed flexible structuring, based foremost not on heavy or light theories but on where the corps would be deployed. A future corps could be both heavy and light.[49]

Writing in August 1988 in Military Review, and looking ahead into the air-land future, Kevin D. Stubbs proposed a new force design also based on combined arms battalions but in a restructured single heavy division with three mechanized brigades, an aviation brigade, and a headquarters brigade incorporating division support and artillery. Stubbs also recommended a restoration of the cavalry role by taking full advantage of the helicopter in a corps air cavalry division of three attack regiments, one air cavalry regiment, and a fighter-bomber regiment equipped with AV-8B Harrier VSTOL aircraft, and an air assault infantry brigade. Stubbs believed creating the air cavalry division for corps would bring a revolution in warfare akin to that created by the German Panzer divisions.[50]

At the close of the 1980s, the general ideas being bandied about - the concept of combined arms battalions, and the concepts for redefined designs and structures for corps, divisions, and brigades- had acquired a foothold in the Army's organizational thinking. Out of its evolutionary development, the 9th Infantry Division (Motorized) had fielded heavy and light combined arms battalions. In the AirLand Battle - Future concept developed by the Training and Doctrine Command in 1991, planners advanced concepts of moving traditional division functions.[51] Although those ideas were not new to the 1980s, the critique of the AOE and the light division stimulated debate about them and provided a springboard for doctrinal and organizational studies to come.

AN ASSESSMENT[41]

The central historical question pertinent to the Army of Excellence of the 1980s - as to any military fighting force- was the following: was the military design right for its time? In the context of the American Army of the 1980s, that question was pertinent at both at the doctrinal organizational level and the national policy level.

The design and activation of the 10,800-man light divisions resolved for the 1980s and the early 1990s the infantry division dilemma that the Department of the Army and its agent for force design, the Training and Doctrine Command, had wrestled with since the late 1970s. It embodied in two respects a noteworthy turn in the history of Army tactical organization. The Army's leadership faced in the first instance the consequence of the fact that an infantry division could not be light enough in manpower and in equipment to deploy rapidly, and at the same time be strong enough to confront enemy heavy forces on the open European battlefield in direct roles. The European mission imposed high strength, equipment, and support costs that obviated that kind of design intent. The primary use of the light infantry division was elsewhere - in the contingency world. Its collateral mission in support of NATO or other heavy forces was a strictly limited one. It would be sent to fight in NATO Europe only when augmented and specifically for use on the urban, forested, and other "light infantry terrain" that called for such units. It would ordinarily fight in components as part of an integrated heavy/light or light/heavy force. In addition, General John Wickham's related decision as Army Chief of Staff, not to extend the high technology light division design further than the 9th Division - followed by his subsequent decision to motorize that organization instead- spelled an end, at least for a time, to the light, high-technology route out of the heaviness dilemma.

. . . an infantry division could not be light enough in manpower and in equipment to deploy rapidly, and at the same time be strong enough to confront enemy heavy forces. . .

Significant in the light infantry decision, secondly, was the implicit commitment to smaller low-intensity and noncombat operations as an important sector of the Army's challenge in the new era. The decision embodied a strengthened recognition that such operations in contingency actions worldwide imposed their own strategic, operational, and tactical demands. The light infantry division provided in sum a rapidly deployable, strategically deployable fighting unit to confront a global range of light force challenges, and it provided the light infantry element of integrated heavy/light forces against heavier challenges in Europe and the third world. The light infantry division gave the Army a new and necessary flexibility.

The question as to whether the AOE heavy division was doctrinally and organizationally right for the 1980s must be answered on the doctrinal terms that were new in 1982. Though reduced in capability from the Division 86 heavy divisions, the scaled-down heavy divisions of the AOE project were the constituents of a scaled-up heavy corps that was better organized and equipped than before to fight more flexibly the AirLand Battle. The stronger heavy corps design that was developed in concert with the late-

[41] Ibid., 125-127.

1983 decisions produced a more powerful fighting organization at the operational level. That level of power would increase even more with delivery of the doctrinally far-reaching Joint Surveillance and Target Acquisition Radar System and the Army Tactical Missile System. New AirLand Battle doctrine placed central emphasis on the corps as the organization that focused command and control of the forces fighting the battle. As Lt. Gen. Carl Vuono, commander of the Combined Arms Center in early 1985 stated, "the Army of Excellence supports the operational level of war and AirLand Battle. That is the key."[1] Thus, the AOE design moved Army tactical organization more fully into consonance with doctrine at the most significant level of organization. With more artillery, aviation, and other assets organic to the corps, the Army of Excellence realized organizationally the operational art implications of AirLand Battle more fully.

Just as is true in most major military structures, the combat balance and diversity of the force embodied compromises purchased at some cost. In 1968, the Active Army had consisted of eighteen and two-thirds divisions in an active force of 1.5 million personnel.[2] In 1986, the Active Army's 18 divisions were carved from an end-strength of 780,000, and many of the divisions contained large reserve roundout elements. The fielding of 18 divisions from so small a force had been achieved only by drastic cutbacks in combat support and combat service support in the active force and by the maintenance or placement of much of the support force, corps and above, in the nonexistent "component 4" category or in the reserve components. There was some degree of validity to the hollowness charge. But in no army in a democracy in peacetime will a fully adequate force be funded. If the Army of Excellence was not the best possible Army, it was an Army of the best affordable divisions and corps at the time.

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By maximizing combat power in more divisions but with no added Active Army end strength, the AOE decisions left many corps and theater functions unmanned and some U.S.-based divisions dependent on less-ready reserve roundout brigades. That inadequacy was the price and prudent risk of General Wickham's decision, a decision supported by the Joint Chiefs of Staff, for the deterrence value believed to be gained. Facing worldwide defense challenges in the 1980s, the U.S. Army leadership chose more divisions and battalions, more forward combat strength and combat diversity, over the security of a force of fewer divisions, stronger in support, manned adequately top to bottom. Whatever the insufficiency in support units, the Army of Excellence that emerged out of the labors of a remarkable decade of modernization and reform was - in its training, its technologically advanced materiel, its initiative -oriented fighting doctrine, its well-crafted organizations, and in its spirit and purpose - a professional army of a high order attained by few other armies in modem history.

The development of the AOE had additional significance at the level of national policy as a major part of the 1980s modernization and reform drive. The adoption of Air Land Battle doctrine early in that decade by the U.S. Army forced the Soviet political and military leadership to the direct realization that their powerful battle echelons could and would be attacked at great depth by U.S. Army and Air Force systems. At the same time, the steady and increasing modernization of American weaponry, including high-technology components, gave the doctrinal reform concrete meaning.[3] Together with those factors, the AOE's alignment of organization to doctrine and its expansion of global contingency forces contributed to the unmistakable message of a resurgent American will to halt worldwide Soviet expansionism. To what extent the U.S. military buildup contributed to the fundamental revision in Soviet economic, political, and military policy beginning in the mid-1980s, future historians must examine. But by the middle months of 1991, the revolution in Eastern Europe, discussed at the outset of this study, had led to the collapse of the Warsaw Pact as a military alliance, to democratic revolution in the Soviet Union, and to the retrenchment of Soviet power worldwide.

In 1990-1991, the Army of Excellence was deployed in significant portion to the Persian Gulf to assist in the dislodgement of the armored armies of Iraq from their seizure in August 1990 of the independent state of Kuwait. Whether it would be employed in deterrence or in war, the Army of Excellence provided the nation an organizationally and doctrinally ready force in a strategically new world.

End Notes

Front Matter

1. For a study of the significant role of the late General DePuy in the post-Vietnam modernization and reform of the Army. see Major Paul H. Herbert. *Deciding What Has to Be Done: General/ William E. DePuy and the 1976 Edition of FM 100-5. Operations* (Leavenworth Paper No. 16) (Ft. Leavenworth, Kan.: Combat Studies Institute. Command and General Staff College. 1988), hereafter Herbert. *DePuy.* Sec also Major Robert A. Doughty, *The Evolution of U.S. Army Tactical 0 (1Ctrint. 1946-1976* (Leavenworth Paper No. I) (Ft. Leavenworth. Kan.: Combat Studies Institute. Command and General Staff College, 1979), pp. 40-50. For a discussion of the lessons and Impact of the 1973 Mideast War. sec *TRADOC Annual Report of Major Activities. FY 1975.* pp. 1- 10 and 138-43. For an account of the development of doctrine by the TRADOC commanders, Generals DePuy and Starry, see John L. Romjue. *From Active Defense to Air Land Boule: The Development of Army Doctrine, 1973-1982* (Ft. Monroe, Va.: Historical Office, HQ TRADOC, 1984), hereafter: Romjue. *AirLand Battle).* For an account of General Starry's inauguration and prosecution of the Army 86 Studies to establish new tactical organizations, see Romjue, A *History of Army 86. Vol. Division 86: The Development of the Heavy Division. September 1978 - October 1979.* and Vol II. *n1e Development of the Light Division. the Corps. and Echelons Above Corps. November 1979 - December 1980* (Ft. Monroe. Va.: Historical Office, HQ TRADOC, 1982) (hereafter: Romjue, *Army 86).*

2. (1) Herbert, *DePuy,* pp. 3-9. 37-107. (2) Romjue, *Airland Battle;* for an account of the critique of the 1976 manual, see pp. 13- 21.

3. See period Annual Historical Reviews of Headquarters TRADOC and Headquarters Army Materiel Command for detailed coverage of the weapon modernization programs from combat developments and materiel development points of view, respectively (the Army Materiel Command went under the designation U.S. Army Materiel Development and Readiness Command. or DARCOM, between 1976 and 1984). See also the reliable annual detailed summaries of Army weapons and equipment in development. by Eric V. Ludwigsen in the October issues of Army magazine *(Army Green Book),* the journal of the Association of the United States Army.

4. Romjue, *Army 86.* Vols I and II. Sec Volt. pp. 1- 10. for an account of the Division Restructuring Study and the organizational designs it produced.

5. The Headquarters TRADOC annual histories. continuous since FY 1974, contain the best account of the modernization of training in the 1970s and 1980s under TRADOC. Sec also Herbert. *DePuy:* Lt Col Romie L. Brownlee and Lt Col William J. Mullen Ill, *Changing an Army: An Om/ History of General William t::. DePuy, USA Retired* (Carlisle Barracks. Pa.: U.S. Army Military History Institute, n.d.). pp. 180- 203. For a concise summary of TRADOC's traini.ng innovations. see Anne W. Chapman. *Tile Army's Training Revolution, 1973-1990: An Overview,* TRADOC Historical Study (Ft. Monroe. Va.: TRADOC Office of the Command Historian. 1991). See also *Tire Origins and Development of the National Training Center. 1976-1984* by the same author, TRADOC Historical Monograph (Ft. Monroe, Va.: TRADOC Office of the Command Historian. 1992). and draft manuscript. TRADOC Historical Monograph, Rodler F. Morris, "A History of the Joint Readiness Training Center: Creating the Blueprint for the Original Institution, 1973- 1987."

6. Interview of General Donn A. Starry by John L. Romjue, 19 Mar 93.

7. In the American Army of the 18th and 19th centuries, forces were traditionally raised and organized by company and regiment. The regiment of the 19th century Army was the highest table of organization unit in the modem sense and the highest organizational element then maintained in peacetime. Brigades, divisions, and corps were traditionally authorized and established only before or soon after the outset of war, as those organizations were for the Civil War, the Spanish-American War, and World War I. The brigade and corps were the baste tactical organizations of the Civil War. and the short war with Spain afforded too small a stage for sustained larger maneuvers. Divisions of three brigades of three regiments each were employed in the Spanish-American War, and the division was formali1.cd in regulations of 1905. The U.S. Army division first came into its own in the First World War, both as a tactical command and as a table of organization unit

8. For a bibliographical note on sources for the tactical organizations and accompanying reorganization effort just discussed, see Appendix C.

9. (1) Jean R. Moenk, *A History of Command and Control of Army Forces in tire Continental United States, 1919- 1972* (Ft. Monroe, Va.: Historical Office. HQ USCONARC, 1972) (hereafter: Moenk. *Command and Control of Army Forces),* pp. 17- 20. 27- 29. 32. 43-45. (2) Report of Activities. Army Field Forces: Army Field Forces, 1945-1949, with encl: ltr ATCH, General Jacob L. Devers, Chief, Army Field Forces to Chief of Staff of the Army, 30 Sep 49. subj: Postwar Report, Army Ground-Field Forces, Ft. Monroe, Va.: OCAFF. 1949, p. 1. (3) Sec Jean R. Moenk. *Operation STEADFAST Historical Summary:* A *History of the Reorganization of the U.S. Continental Army Comma11d. 1972- 1973* (Ft. McPherson, Ga. and Ft. Monroe. Va.: HQ US Army FORSCOM and HQ US Army TRADOC. 1974) for a comprehensive account of the planning and execution of the 1973 reorganization.

Chapter I

1. See Romjue, *Army 86.* Vol I, pp. 1-10 for a documented account of the Division Restructuring Study.

2. The major portion of the *Army 86* Studies. through December 1980, including the heavy division (Division 86), infantry division (Infantry Division 86), heavy corps (Corps 86). and echelons above corps (EAC 86) have been documented in Romjue, Army 86, Vols I and II. Sec the following for detailed narratives of the further development, from 1981 to the advent of the AOE in 1983, of those organizations as well as the contingency and light structures: HQ TRADOC Annual Historical Reviews, FY 1981, pp. 46-113; FY 1982, pp. 43 - 116 (B(CONFIDENTIAL - Info used is UNCLASSIFIED): and Annual Command History. FY 1983. pp. 329- 35 (SECRET - Info used is UNCLASSIFIED)

3. (I) Romjue. Army 86, Vol I. pp. 1- 10. (2) Starry Interview by Romjue, 19 Mar 93. (3) TRADOC Annual Historical Review, FY 1976/7T. pp. 38-47. (CONFIDENTIAL - Info used IS UNCLASSIFIED) (4) For a report of TRADOC's extensive study of the lessons of the 1973 Arab-Israeli War, see Final Report. Analysis of Combat Data- 1973 Mideast War. Ft. Leavenworth. Kan.: HQ USACACDA. July 1974. Vols I-VIII: and TRADOC Annual Reports of Major Activities, FY 1974. pp. 14-19 and FY 1975. pp. 1- 10. (5) Sec letter ATCS. Maj Gen Robert C. Hixon, TRADOC Chief of Staff to distribution, 18 May 77, subj: Division Restructuring Study Phase I Report, with/encl. Division Restructuring Study, Phase I Report. Ft. Monroe. Va.: HQ TRADOC, I Mar 77. Vols I-VI, for detailed reporting of the DRS. (6) For accounts of the Division Restructuring Evaluation (ORE) conducted at Fort Hood (during 1976-1978, see Romjue, *Army 86,* Vol I. pp. 8-12. 42-48: TRADOC Annual Historical Review, FY 1977, pp. 170-78. and FY 1978, pp. 204-08. (7) For a listing of the extensive reports documenting the DRE, see Romjue. *Army 86.* Vol I. footnotes on pp. 42, 46, 48.

4. This summary of the development of Division 86 is based, except where otherwise noted on Romjue, *Army 86,* Vol I and Vol II, pp. 1-24. "86" was 1986, the furthest intelligence projection available to TRADOC planners in1978.

5. Starry Interview by Romjue. 19 Mar 93.

6. General Starry became convinced of the technological feasibility of deep conventional attack to disrupt the Soviet second and follow-on echelons in the summer of 1977 following review, at Headquarters TRADOC, of a Braddock. Dunn, and McDonald study of nuclear targeting for

the Defense Analysis Agency. The enabling weapon systems were the multiple launch rocket system. in development. and what would become the Army Tactical Missile System and the Joint Surveillance Target Acquisition Radar System.
7. Starry Interview by Romjue, 19 Mar 93.
8. Romjue, *Army 86.* Vol. I. pp. 9- 10.
9. See *ibid.* Vol II for a documented account of the development of the infantry division, the corps, and EAC.
10. *Ibid.,* Vol II, pp. 58-85, 140-56.
II. (1) *Ibid.,* pp. 89- 114, 157-73. (2) Ltr ATCD-AM, HQ TRADOC 10 distribution, 19 Dec 80, with/enclosure: Final Report, Echelons Above Corps Study (EAC), Phase I.
12. (1) TRADOC Annual Historical Review, FY 1981, pp. 68-71. (CONFIDENTIAL - Info used is UNCLASSIFIED) See this source for an account of the initial planning for Phase II. (2) Ltr ATZLCAEAC, Lt Gen William R. Richardson, Cdr USACAC to distribution, 25 Aug 80, subj: CD Study Plan: EAC (Phase II).
13. EAC Phase l Report, Vol IV.
14. (1) Memo ATCD-PA. Brig Gen Carl E. Vuono. DCS for Combat Developments to Brig Gen Morelli, DCS for Doctrine, n.d, subj: Tile Fundamental EAC Problem. (2) TRADOC Annual Historical Review. FY 1981, pp. 72-73. and FY 1982, pp. 61-62. (Both CONFIDENTIAL-Info used is UNCLASSIFIED)
15. TRADOC Annual Historical Review. FY 1982. pp. 62- 64. (CONFIDENTIAL - Info used is UNCLASSIFIED)
16. (l) See *ibid.* pp. 64-71 for a detailed discussion of the 1982 concept. (2) Briefing, USACAC for CSA General Meyer, 29 Apr 82. subj: EAC. (3) FM 100-16. Support *Operations Echelons* Above Corps, coordinating draft, June 1982.
17. (1) "TRADOC Annual Historical Review. FY 1983. pp. 330-31. (SECRET- Info used is UNCLASSIFIED) (2) MFR ATCS-H, John L. Romjue, TRADOC Historical Office. 18 Nov 83. subj: Current Projects of ODCSDOC. (3) TRADOC Annual Command History,1989, pp. 85-88. (FOR OFFICIAL USE ONLY - Info used is not protected)
18. (1) Briefing slides, HQ TRADOC. The Force Modernization Problem. n.d. (Sep 1981). (2) TRADOC Annual Historical Review. FY 1982, pp. 51 - 52, *56.* (CONFIDENTIAL - Info used is UNCLASSIFIED)
19. See TRADOC Annual Historical Review. FY 1982. pp. 56-60 for a detailed account of the Division 86 Restructuring Study and decisions.
20. For a full account of Separate Brigades 86 planning, see TRADOC Annual Historical Review, FY 1981, pp. 73-75, and FY 1982, pp. 95-98 (Both CONFIDENTIAL - Info used is UNCLASSIFIED), and TRADOC Annual Command History, FY 1983, pp. 333-35. (SECRET- Info used is UNCLASSIFIED)
21. The nomenclature "light division" introduced by the Army 86 planners in 1979 referred to a reduced structure in the mold of the traditional straight, nonmechanized infantry division and as the "light" complement to the Division 86 heavy division. The 1979 nomenclature did not imply a division concept resembling the experimental U.S. light divisions of World War II.
22. Romjue, *Army 86.* Vol II, p. 25.
23. (I) Annual Historical Review, HQ FORSCOM, FY 1979. p. 21. (SECRET- Info used is UNCLASSIFIED) (2) "1979 Command and Staff Directory," *Army Green Book.* 1979. p. 106 ff.
24. Romjuc. *Army 86.* Vol II. p. 25.
25. Sec *ibid.,* pp. 25- 57 for the documented account of the ID 86 Study and designs on which this summary is based.
26. Letter ATCD-AN. General Donn A. Starry to Cdr, USACAC. 29 Oct 79. subj: Combat Developments Study Directive: Light Divisions for the Next Decade (LD 86)
27. Sec Michael J. Mazarr. Light Forces and the Future of U.S. Military Strategy. Washington, D.C.: Brassey's (US), Inc., 1990, for the argument that Meyer in 1980 was seeking a "middleweight" light armored infantry division.
28. For a documented account from the TRADOC perspective of the establishment, early planning, and test programs of the High Technology Test Bed/Army Development and Employment Agency, sec TRADOC Annual Historical Reviews, FY 1981, pp. 93- 113: FY 1982, pp. 100-16 (Both CONFIDENTIAL-Info used is UNCLASSIFIED): and TRADOC Annual Command History, FY 1983. pp. 311-28. (SECRET- Info used is UNCLASSIFIED) For an account of the HTTB and high technology light division by the command historian of I Corps, the unit that commanded the 9th Division HTTB/HTLD, see Joseph Huddleston, draft manuscript, *The High Technology Test* Bed *and High Technology Light Division, Inception through 30 September 1983.* Vol I. (Ft. Lewis. Wash.: HQ I Corps and Fort Lewis. II Mar 86). Sec also Motorized Experience of the 9*th Infantry Division, 1980-1989.* eds. Lt Col Stephen L. Bowman. Lt Col John M. Kendall. and Lt Col James L. Saunders (Ft. Lewis. Wash.: HQ 9th Infantry Division (Motorized). 9 Jun 89), pp. 12-44, for a useful but undocumented summary of the 9th ID experience.
29. Memorandum of Understanding Between FORSCOM, DARCOM, and TRADOC. subj: The 9th Infantry Division HTTB. Maj Gen John W. McEnery, CofS, FORSCOM, 18 Aug 80: Brig Gen William H. Schneider. CofS DARCOM, 8 Oct 80: Maj Gen John B. Blount, CofS TRADOC, 25 Aug 80.
30. TRADOC Annual Historical Review, FY 1981, pp. 93- 113. (CONFIDENTIAL - Info used is UNCLASSIFIED)
31. TRADOC Annual Command History, FY 1983, pp. 314-I5. (SECRET - Info used is UNCLASSIFIED) HTTB. Maj Gen John W. McEnery, CofS, FORSCOM, 18 Aug 80: Brig Gen William H. Schneider. CofS DARCOM, 8 Oct 80: Maj Gen John B. Blount, CofS TRADOC, 25 Aug 80.
30. TRADOC Annual Historical Review, FY 1981, pp. 93- 113. (CONFIDENTIAL - Info used is UNCLASSIFIED)
31. TRADOC Annual Command History, FY 1983, pp. 314-IS. (SECRET - Info used is UNCLASSIFIED)
32. TRADOC Annual Historical Review, FY 1983, pp. 107- 10. (CONFIDENTIAL -Info used is UNCLASSIFIED)
33. (1) Ibid, pp. 110-16. (CONFIDENTIAL- Info used is UNCLASSIFIED) (2) Interview of General William R. Richardson by John L. Romjue, 24 Feb 93. (3) Starry Interview by Romjue, 19 Mar 93.
34. TRADOC Annual Command History, FY 1983, pp. 311- 15. See that account, pp. 311-28, for a summary discussion of the 1983 HTLD developments. Huddleston, op. cit., pp. 199- 243 contains a detailed account of the 9th ID events up to September 1983. See also Bowman, Kendall, and Saunders, op. cit.
35. TRADOC Annual Historical Review, FY 1982, pp. 71-79. (CONFIDENTIAL- Info used is UNCLASSIFIED). See this source for a detailed organizational description. TRADOC Annual Historical Review, FY 1981, pp. 75-78, 80-92 contains a documented discussion of the contingency force planning issues. (CONFIDENTIAL – Info used is UNCLASSIFIED)
36. TRADOC Annual Historical Review, FY 1982, pp. 71. 84-85. (CONFIDENTIAL - Info used is UNCLASSIFIED)
37. (1) TRADOC Pam 525-14, Operational Concept for Contingency Corps Operations - 1986, Ft. Monroe, Va.: HQ TRADOC, 14 Jun 82. (2) FM 100-16, Support Operations: Echelons Above Corps, HQ DA, 16 April 1985. (3) For a detailed discussion of the organizations and concept of

the contingency forces, see TRADOC Annual Historical Review, FY 1982, pp. 71-79. For a discussion of the 1981 interim contingency force doctrine, sec ibid., pp. 82-86.
(CONFIDENTIAL - Info used is UNCLASSIFIED)
38.TRADOC Annual Historical Review, FY 1982, pp. 79- 82. (CONFIDENTIAL - Info used is UNCLASSIFIED)
39. (1) TRADOC Annual Command History, FY 1983, pp. 332-33. (SECRET - Info used is UNCLASSIFIED) (2) See TRADOC Annual Historical Review. FY 1981. pp. 78-80. and FY 1982. pp. 86-95 for a discussion of the numerous issues and the concepts and organizations of airborne and air assault division planning. (Both CONFIDENTIAL - Info used is UNCLASSIFIED)
40. (1) Interview with Maj Gen Leonard P. Wishart III, Dep Cdr. Combined Arms Center, by Dr. John W. Partin, 24 Jul 84. Wishart believed the Army had been betting on an expansion in the future in the budgetary "out-years." (2) Interview with Col Orville Bulls, Dir Comb Arms and Svcs Staff Sch, CGSC, by Dr. John W. Panin, 12 Oct 84. Colonel Bulls, who was assistant deputy commander of the Combined Arms Combat Developments Activity during July 1983- July 1984 and had been a member of the Division 86 planning team, stated that Army 86 planners believed Congress would be moved to provide the additional strength needed.
41. Starry Interview by Romjue, 19 Mar 93. Starry characterized Division 86 and Army 86 as an "unhappy compromise," evident at the Lime.
42. (1) Interview of General Glenn K. Ous by John L. Ronyue, 15 Feb 93. (2) Richardson Interview by Romjue, 24 Feb 93.
43. Briefing, TRADOC In-Process Review of Division 86 for General Meyer, 18 Oct 79.
44. Memo, TRADOC Chief of Staff to Chiefs of General and Special Staff Offices, 5 Jul 83. subj: Commander’s Summer Conference.
45. (1) USAREUR Historical Review, 1982 – 1983, HQ USAREUR, 1 May 85, pp. 20. 25, 27. 29. (2) FORSCOM Annual Historical Review, FY 1983, Ft. McPherson, Ga.: HQ USAFORSCOM. 1 Feb 85, pp. 179, 180. (Both SECRET - Info used is UNCLASSIFIED)

Chapter II
1. The term, "Army of Excellence," appears to have originated in the logo the Force Design Directorate of the U.S. Army Combined Arms Combat Developments Activity at Fort Leavenworth, Kan. used on its briefing slides for the project: "Force Design for an Army of Excellence." "Excellence" was the official 1983 Army theme, announced at the beginning of the year by Secretary of the Army John O. Marsh, Jr., and propagated extensively in the derivative TRADOC slogan, "Excellence Starts Here." The Department of the Army message to TRADOC of 1 September 1983 assigning a "Force Structure and Design Initiatives for an Army of Excellence," officially coined the phrase, endorsed by the new Chief of Staff of the Army, General Wickham. (I) MFR ATMH. John L. Romjue, TRADOC Office of the Command Historian, 31 Oct 90, subj: Interview of Mr. Robert L. Keller, Current Forces Directorate. USACAC-DA by John L. Romjue. 22 Oct 90 (hereafter: Keller Interview by Romjue). (2) Interview of Brig Gen John R. Greenway. DCS for Doctrine, HQ USATRADOC. by Dr. John Partin, CAC Historian, 26 Jun 84, Ft. Monroe. Va. (hereafter: Greenway Interview by Partin). (3) Msg. HQDA to Cdr TRADOC, 011913Z Sep 83, subj: Force Structure and Design Initiatives for an Army of Excellence. (SECRET Info used is UNCLASSIFIED)
2. Romjue, AirLand Battle, pp. 30, 32.
3. Interview of General John A. Wickham. Jr., USA (Ret) by John L. Romjue, 20 Jan 93.
4. Richardson Interview by Romjue, 24 Feb 93.
5. TRADOC Office of the Command Historian (OCH) files.
6. (1) For a discussion of General Abrams' rebuilding initiatives as Army Chief of Staff, sec Lewis Sorley. Thunderbolt: General Creighton Abrams and the Army of His Times, New York: Simon & Schuster. 1992, pp. 360-66. (2) Wickham Interview by Romjue. 20 Jan 93. Wickham was involved in the Abrams initiative in an advisory capacity as Defense Secretary Schlesinger's Senior Military Assistant in 1973-1976. In 1973 Wickham actively recommended "incentivizing" the Army to author its own efficiency measures for post-Vietnam downsizing by converting fat to muscle and support Structure to combat structure, rather than having Defense Department analysts accomplish the shrinkage task less discriminately.
7. Wickham Interview by Romjue, 20 Jan 93. Tile High Technology Test Bed development method of the 9th Division had disadvantages in General Wickham's mind. While the least bad was a good method for developing new equipment and equipment applications. The need remained to put such equipment through the scrutiny of field testing to assure its operational practicality - the same process employed m the standard combat developments cycle. Wickham was wary of rushing unproven equipment into expensive production. U.S. Army Infantry Center and School Annual Historical Review, 1983. Ft. Bcnmng. Ga., HQ U.S. Army Infantry Center and Ft. Benning, n.d., p. 12.
9. (1) Edward N. Luuwak, Rcpon, An Historical Analysis and Projection for Army 2000, Chevy Chase. Md.: 1982-1983. (2) Semiannual Historical Report, ODCSDOC. Oct 82 - Mar 83, p. 6.
10. (I) Greenway Interview by Parlin, 26 Jun 84. (2) Memorandum for Record ATCS-H, John L. Romjue, TRADOC Historical Office, 30 Jun 84, subj: Army of Excellence: Record of interview of Brig Gen John R. Greenway by Dr. John Parlin, CAC Historian, 26 Jun 84 (hereafter: MFR, Greenway Interview). (3) Memorandum for Record ATCG. Col John R. Greenway, 20 May 83, subj: TRADOC Update for CSA.
11. Study Report, Strategic Requirements for the Army to the Year 2000, Middle East and Southwest Asia, Washington: Center for Strategic and International Studies (CSIS), September 1982. This study was an expansion of an Army Staff study signed by the Chief of Staff in June 1981, "Army Strategic Requirements to the Year 2000." Codirectors of the CSIS study were William J. Taylor. Jr. and Robert Kupperman. Information Paper DAMO-SSL, HQDA, 28 Feb 83, subj: Strategic Requirements for the Army to the Year 2000 Study.
12. HQ TRADOC briefing presented to CSA, General Edward C. Meyer. n.d. May 1983]. subj: Light Forces of the Future.
13. Memo DACA-BU, Lt Gen James M. Lee, Director. ARSTAF to Army Staff Council Members, 3 Jun 83, subj: Commanders' Summer Conference.
14. Memo, TRADOC Chief of Staff to Chiefs of General and Special Staff Offices, 5 Jul 83, subj: Commanders’ Summer Conference.
15. Ibid.
16. (1) TRADOC Office of the Command Historian files. FY 1983, (2) Interview of Lt Gen Carl E. Vuono by Dr. John W. Partin. (3) Interview of Mr. Robert L. Keller by Dr. John W. Partin, 20 Jun 84.
17. (1) Memorandum, General William R. Richardson, DCS for Combat Developments, 14 Jun 83. Sub: The Changing Force Structure. (2) Wishan Interview by Partin, 24 Jul 84.
18. Ltr, General William R. Richardson to Lt Gen Jack N. Merrill, Dir, Joint Staff, Pemagoo. 29 Jun 83, no subj.
19. MFR, Greenway Interview.
20. Interview with General Witham R. Richardson, Cdr TRADOC, by Dr. Henry O. Malone, Jr., 27 Aug 86.
21. (1) Memo ATDO-C, Maj M. Ferguson. Combat Directorate, ODCSDOC to DCS for Doctrine, n.d. (July 1983), subj: Concept Statement Review Board (CSRB). Major Ferguson was the author of the July concept statement. (2) MFR ATZL-CAD-C. Lt Col B1lly T. Brooks, Chief, Combined Arms Concepts Division, CACDA, 22 Jul 83. subj: General Richardson's Comments, 22 Jul 83, (3) Semiannual Historical Report. ODCSDOC, Apr-Sep 1983, p. 5. (4) TRADOC OCH files.

22. Disposition Form, Chief of Staff to DCS for Combat Developments. 4 Aug 83, subj: Commander's Summer Conference Presentation, with encl.
23. George C. Wilson, "Reallocation: Pentagon Studies Shifting $10 Billion from Navy to Army," Washington Post, 9 Aug 83.
24. Memo, Richardson to Chief, Planning Office, 9 Aug 83, subject. (SECRET - Info used is UNCLASSIFIED)
25. TRADOC OCH files. A sum of $1 billion was provided the Army by Deputy Secretary of Defense decision in the,21 July 1983 meeting of the Defense Review Board.
26. The August briefing was prepared by Colonel Greenway, then in his capacity as Chief of the Planning Directorate, in the HQ TRADOC combat developments office. Greenway Interview by Partin, 26 Jun 84.
27. New Organization Training Team (N01T) After Action Report, USACGSC, 9 Oct 83.
28. FLOT battle: the main battle, fought at the division's forward line of own troops.
29. (1) Briefing charts. TRADOC briefing presented to Army Summer Commanders' Conference, 16 17 Aug 83. "The Proper Force for the 80's." (SECRET- Info used is UNCLASSIFIED) (2) Greenway Interview by Partin, 26 Jun 84.
30. (1) Ltg. John O. Marsh. Jr. to John Wickham. Chief of Staff of the Army 8 Sep 83, no subject. (SECRET – Info used is UN-CLASSIFIED) (2) Wickham Interview by Romjue, 20 Jan 93.
31. (1) Message, HQDA to Commander TRADOC, 011912Z Sep 83, subj: Force Structure and Design Initiatives for an Army of Excellence, (2) Letter, General John A. Wickham, Jr., Chief of Staff of the Army to CINCUSAREUR and Commanders. DARCOM, FORSCOM, TRADOC, and Eighth US Army, 19 Sep 83, subj: Report on the 1983 Commanders' Summer Conference. (CONFIDENTIAL - Info used is UNCLASSIFIED) (3) Wishart Interview by Partin, 24 Jul 84.
32. Message. Cdr TRADOC to Cdrs USACAC and USALOGC, 3016002 Aug 83, subj: Force Structure and Design Initiatives for an Army of Excellence. (CONFIDENTIAL- Info used is UNCLASSIFIED)
33. Except where otherwise noted, this section is substantially based on Interview. Colonel Richard A. Burke. Jr., Director, Force Design Directorate, CACDA. by Dr. John W. Partin, 24 May 84. See also Wishart Interview by Partin, 24 Jul 84.
34. Maj Gen Wishan and Col Burke were added by Col Arthur Richards of the CACDA Concepts Directorate and Col John Noble of the AirLand Battle Study Directorate in the Command and General Staff College. Other key CACDA planners were Col John Hubbard for the force development Issues: Mr. Robert Keller, Chief of the Plan. Division in the Force Design Directorate, who developed the methodology; Lt Col George Hollwedel who worked with division design; and Lt Col Thomas Walker and Mr. James Core, who analyzed combat support, corps, and EAC 1ssues. (1) Burke Interview by Partin, 24 May 84. (2) Interview with Mr. Robert L. Keller, Force Design Directorate, CACDA, by Dr. John W. Partin, 20 Jun 84, (3) Interview with Lt Col Ward A. Lutz, CACDA, by Dr. John W. Partin, 12 Jun 84. The CACDA Materiel Integration Directorate, headed by Col Richard P. Diehl, contributed by prioritizing affordable equipment lists for the AOE designs and coordinated the materiel design matters with DARCOM. For a later General Accounting Office critique of the AOE development methodology, see GAO Report to the Secretary of the Army, Army Force Structure: Lessons to Apply in Structuring Tomorrow's Army, Washington, D.C.: USGAO, November 1990, pp. 15-24.
35. Message, Cdr USACAC to d1str, 22 Aug 83. subj: Force Design Initiatives, Army 86 Study. (CONFI DENTIAL Info used is UNCLASSIFIED)
36. (1) Burke Interview by Partin. (2) Interview of Col Orville Buns, Director, Combined Arms and Services Staff School. by Dr. John W. Partin, 12 Oct 84. Col Buns was the CACDA assistant deputy commander between July 1983 and July 1984.
37. (1) Interview of Col David C. Meade, Executive Officer to Commanding General TRADOC. by Dr. John W. Partin, 26 Jun 84. (2) Interview of Col Arthur E. Richards III, Director. CACDA Concepts Development Directorate, by Dr. John W. Partin, 16 May 84. (3) Wishart Interviews by Partin, 24 Jul and 7 Dec 84. (4) Interview of Lt. Gen. Carl E. Vuono, Commander, US Army Combined Arms Center, by Dr. Dr. John W. Partin.
38. (1) Memo ATCD-P, Lt Col George S. Mullen, ODCSCD Planning Directorate to DCS for Combat Developments, Maj Gen McNair, 29 Aug 83. subj: TRADOC Force Structure Initiatives. (CONFIDENTIAL - Info used is UNCLASSIFIED) (2) Keller Interview by Partin, 20 Jun 84.
39. Wickham Interview by Romjue, 20 Jan 93.
40. Letter, Lt Gen Carl E. Vuono to General William R. Richardson, 29 Jan 85, encl: Commander's 1984 Annual Assessment
41. A total of 13,500 non-DFE special operations forces was first subtracted from a total DFE force of 998,700.
42. (1) Romjue, Army 86. Vol. III, p. 85. (2) TRADOC Annual Historical Review, FY 1982, pp. 71- 86. (CONFIDENTIAL - Info used is UNCLASSIFIED)
43. (1) Paper. Light Infantry Division Umbrella Concept, HQ USACAC, 23 Aug 83. (2) Vuono Interview by Partin. (3) Wishart Interview by Partin, 24 Jul 84. (4) Interview of Lt Col John C. Burdette, Directorate of Tactics, USACGSC. by Dr. John W. Parlin, 20 Jun 84. (5) Richards Interview by Partin, 16 May 84.
44. Wishart Interview by Partin, 7 Dec 84.
45. Burke Interview by Parlin.
46. (1) Message, Commander USACAC to distr, 212315Z Sep 83, subj: Force Design Initiatives for an Army of Excellence. (2) DF ATCD-M, Director ODCSCD CCEMWD to DCS for Combat Developments, 28 Sep 83, subj: Force Design for an Army of Excellence, 19-23 Sep 83. (3) Memo A TCD-M. Col Douglas R. Burgess, Dir CCEMWD. ODCSCD to DCSs, 29 Sep 83. subj: Force Design Initiatives for an Army of Excellence, with encl. (4) Burke Interview by Partin, 24 May 84.

Chapter III

1. (l) Memo AEACC, General Glenn K. Otis to General William R. Richardson, 15 Sep 83, subj: Quick Review of Division 86 and Light Division Concept. (2) Otis Interview by Romjue, 15 Feb 93. (3) Burke Interview by Partin, 24 May 84. (4) TRADOC OCH files.
2. (l) Memo. General Glenn K. Otis to General William R. Richardson, 15 Sep 83. (2) Otis Interview by Romjue, 15 Feb 93. (3) Message, Cdr USA Eight to Cdr USACAC. 202224Z Sep 83, subj:10,000-Man Light Infantry Division, Division 861 (4) Memo ATC'D.M, Col Douglas R. Burgess, Dir CCEMWD, ODCSCD to TRADOC DCSs. 29 Sep 83, subj: Force Design Initiatives for an Army of Excellence
3. Wickham Interview by Romjue. 20 Jan 93.
4. (1) DF ATCO-M. Director CCEMWD ODCSCD to DCSCD, 28 Sep 83, subj: Force Design for an Army of Excellence. 19—23 Sep 83. (2) Memo DAMO-FDQ, Col Raoul H. Alcala. Chief, Doctrine and Force Design Division, ODCSOPS. HQDA. 26 Aug 83, subj: Observations from a Senior Officer - Information Memorandum, DCSOPS Papers.
5. Letter, Richardson to Wickham.,21 Sep 83, Wickham Papers.
6. Except as Otherwise noted, this section is based On: (l) MFR ATCG-P, Col John R. Greenway, Chief, Planning Group, 8 Nov 83. subj: CG Back brief on ACC 83. (2) Briefing presented to Army Commanders' Conference. HQDA, 20-21 Oct 83. Army of Excellence, by HQ

USACACDA Force Design Directorate. (Both SECRET — Info used is UNCLASSIFIED) (3) Message, HQDA to distr. 102231?- Jan 84. subj: AOE Force Structure Msg NO. l.
7. Burke Interview by Partin, 24 May 84.
8. (1) Draft Interim Operational Concept. the Light Infantry Division, HQ USACACDA. 21 Oct 83. (2) Interview with Col Richard P. Diehl, Director, Materiel Integration Directorate, CACDA, by Dr. John W. Partin, 21 May 84.
9. (l) Lt Col John W. Wild. Army of Excellence: How Ready?" Army War College Study Essay. 23 Mar 87. p. 14. (2) Lt Col Arthur P.Dupay. Army of Excellence: At What Price to Combat Service Support?" Army War College Study Project. I Apr 88, pp. 23—24.
10. Letter. General Wallace H. Nutting. CINC CENTCOM to CSA. 25 Oct 83.
11. A final corps design assumption was that the heavy division would number about 16.000 personnel. the light infantry division and airborne division 10,000. and the air assault division 15.000 — strengths that not all the division designs Of October 1983 achieved.
12. Romjue, Army 86, Vol Il, p. 83.
13. FASTALS: force analysis simulation of theater administrative and logistical support,
14. Wickham Interview by Romjue. 20 Jan 93.
15. (l) PROFS Note, capt John A. Yroz. CAC-CD Force Design Dir. to John L. Romjue. TRADOC Ofc Cmd Historian. 27 Oct 92, subj: 1983 AOE Decision. (2) As determined during 1984. reserve component round-out units for divisions converted to the light design would retain their current organization, active component affiliation. and equipment priorities. The reserve component forces would be assigned to. or "rounded up" to corps in time Of war and augment light infantry forces when required.
16. (l) Encl, “Booklet, Army Commanders' Conference Wrap-up, Oct 1983," to memo DACS-DPM, Lt Gen Arthur E. Brown. Jr., Director Of the Army Staff to Major Army Commanders and Principal Staff. 25 Oct 83, subj: 1983 Fall Army Commanders' Conference Draft Wrap-up. (2) MFR ATCG-P. Col John R. Greenway, Chief. Planning Group, 8 Nov 83, subj: CG Back brief on ACC 83. (Both SECRET — Info used is UNCLASSIFIED) (3) Message, Cdr TRADOC to distr, 212315Z Oct 83, subj; Organization Documentation of the Light Infantry Division (LTD) Message Number I. (4) Message. HQDA to distr, 102231Z Jan 84, subj: AOE Force Structure Msg No. l.
17. DF ATCD-P. Director. ODCSCD Planning Directorate to distr, 5 Dec 83, subj: Force Structure and Design Initiatives for an Army Of Excellence. (3) Interview with Lt Col Thomas G. Walker, Force Design Directorate, CACDA. by Dr. John W. Partin, 19 Jun 84,
18. (l) Message. CSA to distr, 232049Z Nov 83, subj: Force Structure and Design Initiatives for an Army Of Excellence. (SECRET — Info used is UNCLASSIFIED) (2) Ltr. Cdr CAC to Cdr TRADOC, subj: CAC Cdrs Annual Assessment.
19. Message, HQDA to distr, 102231Z Jan 84, subj: AOE Force Structure Msg Number l.

Chapter IV
1. DF ATCD-P. Director, Planning Directorate to distr, 5 Dec 83, subj: Force Structuring and Development Initiatives for an Army Of Excellence.
2. Letter, Lt. Gen Carl E. Vuono, Cdr USACAC to General William R. Richardson, Cdr TRADOC, 29 Jan 85.
3. Letter, General William R. Richardson, Cdr TRADOC to HQDA (DAMO-ZA), 20 Sep 84, subj: Notional Division Force Equivalent (DFE). (SECRET — Info used is UNCLASSIFIED)
4. (l) Memorandum. White House, Robert C. McFarlane to Secretary Of Defense, 19 Jan 84, subj: Army Light Division. Wickham Papers. (2) Article, "Reagan Approves Army Plan for a Light Division," Washington Post, 20 Jan 84. (3) Message, HQDA to distr, 311930Z Jan 84, subj: Public Affairs Guidance - Formation Of Light Division.
5. (l) Message. HQDA to MACOMs, 232021Z Jan 84, subj: Light Infantry Division General Officer Steering Committee. (2) Message, HQDA to distr, 27171 IZ Mar 84, subj: Meeting Of Light Infantry Division GOSC. (4), (3) Message. HQDA to distr, Jun subj: 17th Light Infantry Division General Officer Steering Committee Meeting Issues and Tasks. DCSOPS Collection.
6. Operational Concept for the Infantry Division (Light), HQ USACACDA. 15 Mar 84. (2) Message, Cdr USACAC to TRADOC Centers and Schools. 262 115Z Mar 84, subj: Light Infantry Division Operational Concept.
7. (l) Booklet. Chief of Staff, US Army White Paper 1984, Light Infantry Divisions. 16 Apr 84. (2) Memo DAMOFOP-C. Brig Gen John R. Greenway. Chairman. GOSC through DCSOPS to CSA. 22 Feb 85, subj: Increase in TOE Design Strength of the LID - Info DCSOPS Collection.
8. (1) Message. DA to Cdr TRADOC, Apr 84. subj: Light Infantry Division Design Issues. (2) Letter. Lt Gen Carl E. Vuono to General William R. Richardson. 29 Jan 85. (3) Letter. Lt Gen Fred K. Mahaffey. DCSOPS to CSA. 16 Jul 84. subj: Army Light Forces Analysis. (4) Message, Cdr USALOGC to Comdt. Academy of Health Sciences. 021430Z May 84, subj: Combat Service Support Analysis of the Light Infantry Division. (5) Letter. Lt Gen Robert Bergquist, Cdr LOGC to General William R. Richard-son. Cdr TRADOC 21 Feb 85. (6) Letter ATZL-TIE, CAC to distr. 14 May 84. subj. Light Infantry Division Independent Evaluation Plan (IEP). (7) Memorandum DAMO-FDP, Brig Gen John R. Greenway, Director Of Force Programs through DCSOPS to CSA, 28 Apr 87. subj: LID Initiatives - Info Memo (hereafter: Greenway Memo. 28 Apr 87)
9. Letters. Wickham to Richardson, 5 Apr 84. and Richardson to Wick-ham. 7 Jun 84, Wickham Papers. 'Ille subjects Of this correspondence were: Infantry in Battle, 2d edition (Washington, D.C.: The Infantry Journal, Inc, 1939), (reprinted by the USACGSC with permission of the Association of the United States Army. 1980: Edward J. Drea, Nomonhan: Japanese-Soviet Tactical Combat. 1939. Leavenworth Paper No. 2 (Ft. Leavenworth, Kan.: USACGSC Combat Studies Institute. January 1981; Maj Scott R. McMichael. Light Infantry Forces, CSI Historical Bibliography No. 2 (Ft. Leavenworth. Kan.: USACGSC Combat Studies Institute, Jan 1984). McMichael, A Historical Perspective on Light Infantry. CSI Research Survey No. 6 (Ft. Leavenworth, Kan.: USACGSC Combat Studies Institute, September 1987) provides a valuable. methodical analysis of the characteristics, organization, and operations of four light infantry forces operating in varying settings.
10. For a discussion of the LTOE process instituted in 1984. see below. pp. 105-07. (l) Letter ATCD-ZXA, DCSCD to distr. 20 Apr and 27 Jul 84 (CONFIDENTIAL — Info used is UNCLASSIFIED) and 25 Feb 85. Subj: Status of Current Actions. (2) Message, Cdr TRADOC to distr. Oct 83, subj: Organizational Documentation Of the Light Infantry Division (LID). Message No. 2.
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44. (1) Memo A TZW-SACG, Col Huba Wass de Czege, Sp Assist to CG 7th Inf Div (Lt) to Maj Gen Burba, CG, 7th lnf Div (Lt), 10 May 88, subj: Employment Concepts for Light Infantry in Europe. Wass de Czege's study was in response to a request by General John Galvin, the SHAPE commander and Commander-in-Chief, U.S. European Command. for an examination of Central Army Group scenarios for employing light infantry in NATO. (2) CAC Briefing. LID Concept Review, prepared for Force Design Update 1991 to Chief of Staff of the Army.
45. (I) Memorandum for Record ATMH. TRADOC Office of the Command Historian, 14 Aug 89, subj TRADOC Liaison Officers Conference. 7- 11 August 1989, (2) Briefing slides. Light Infantry Division Update, briefing presented by Maj M. Ritter, ODCSDOC to TRADOC LO Conference, 7- 11 August 1989, (3) TRADOC General Officer Notes 89-10, October 1989, (4) Otis Interview by Romjue, 15 Feb 93. (5) Letter, General Crosbie E. Saint, Cdr CENTAG to General Joseph T. Palastra, Jr, Commander-in-Chief FORSCOM, 20 Dec 88, w/encl. After Action Report, Employment of Light Infantry in FTX Certain Challenge, (6) See also Col William M. Hartzog and Col John D. Howard, "Heavy/Light Operations," Military Review, April 1987, pp. 24-33. Colonels Hartzog and Howard conducted a series of heavy/light training operations at the National Training Center in February-March 1986. Participating units were the 197th Infantry Brigade (Mech)(Sep), and a task force of the 2d Brigade, 7th Infantry Division (Light).
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51. For a discussion of the AirLand Battle-Future concept, retitled AirLand Operations in 1991, sec TRADOC Annual Command Histories, 1989, pp. 32- 36 and S4- S6; 1990, pp. 27- 36; and 1991, pp. 54-60. See TRADOC Pam 525-5, AirLand Operations: A Concept for the Evolution of

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