

U.S. Army Command and Control at the Operational Level: Where Do We Go From Here?

A Monograph
by

Major Christopher Tucker
Infantry





School of Advanced Military Studies
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Fort Leavenworth, Kansas

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#### **ABSTRACT**

U.S. Army Command and Control at the Operational Level: Where Do We Go From Here? by MAJ Christopher Tucker, USA, 74 pages.

During Operation DESERT STORM, Third U.S. Army was tasked to perform the roles of Army component command for U.S. Central Command (CENTCOM), theater army for all U.S. Army forces in the Persian Gulf theater, and field army headquarters for multicorps operations. The question that faced the commander-in-chief (CINC) and the Army component commander was how to organize the Army chain of command to fulfill these requirements. This monograph seeks to answer one aspect of the problem: to determine whether or not the Army component commander should establish a field army headquarters in a theater of operations.

The study begins with an examination of organization theory. This examination suggests that as an organization moves through its life cycle, its chain of command structure changes as the organization grows. Next, the monograph focuses on an analysis of history to determine trends in theater command and control (C2) and whether the use of a field army was feasible, acceptable, and suitable based on the conditions found in World War II and the Korean War. The monograph then reviews current doctrine to determine the status of Army doctrine for C2 at echelons above corps (EAC). Finally, the study analyzes Third Army's experiences from Operation DESERT SHIELD/DESERT STORM to determine the considerations used to establish the C2 structure in that conflict.

The study concludes that the decision to use a field army and if so, when, is guided by a series of factors: nature of the conflict, nature of the theater, personality of commanders, ability and experience of senior leaders, and span of responsibility. Furthermore, principles such as unity of command and simplicity and factors such as mission, enemy, terrain, troops, and time (METT-T) provide proven readily available considerations the CINC and Army component commander can use to determine whether or not a field army should be established in a theater of operations.

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## LIST OF ACRONYMS

ACC
BCTPBattle Command Training Program BOSBattlefield Operating System
CGSC
ETO European Theater of Operations
FASCOMField Army Support Command FCField Circular FMField Manual
GHQGeneral Headquarters
JCSJoint Chiefs of Staff JTFJoint Task Force
KTOKuwait Theater of Operations
LCCLand Component Commander
NTCNational Training Center
OCMHOffice of the Chief of Military History OOSOperational Operating System
POAPacific Ocean Area PTOPacific Theater of Operations
SAMSSchool of Advanced Military Studies SHAEFSupreme Headquarters Allied Expeditionary Forces SWPASouthwest Pacific Area
TO&E
USCENTCOM

### I. INTRODUCTION

The Army's role in war is to apply maximum combat power against the enemy center of gravity and through swift synchronized joint and combined action to destroy the enemy's will to resist.

America's Army exists to protect and defend the Constitution of the United States. We do that by deterring war and, when deterrence fails, by achieving quick decisive victory on the battlefield anywhere in the world and under virtually any conditions. 22

In February 1991, military forces from seven nations conducted one of the largest and most decisive land campaigns since World War II. In 100 hours this coalition force defeated the Iraqi Army and liberated the country of Kuwait. The quotes above illustrate, in broad terms, what the United States (U.S.) Army's role was in Operation DESERT STORM and why it was part of this operation. My monograph will focus on how the Army organized its command and control structure at the operational level for Operation DESERT SHIELD and DESERT STORM.

The U.S. Army's role in the Persian Gulf conflict began on 4 August 1990, when elements of XVIII Airborne Corps and Third U.S. Army were alerted for deployment to Saudi Arabia. By 24 February, approximately 300,000 soldiers serving in two corps, seven divisions, and the requisite support organizations began ground combat operations that would lead to the liberation of Kuwait. The command and control, administration, and logistical support of these forces fell to Third Army.

During Operation DESERT STORM Third Army was designated to control VII Corps and XVIII Airborne Corps. The Army also served as the theater army for United States Central Command (CENTCOM) for both Operation DESERT SHIELD and DESERT STORM. Hence, Third Army had a large area of responsibility which spanned from the ports of debarkation (POD) to the forward line of U.S. Army forces. As a result, the army commander was responsible for the operational employment of two corps as well as the sustainment of all U.S. Army forces in the theater of operations. This not only stressed the individual abilities of the commander, but also strained the capabilities of the army staff, which was not organized to perform these roles. Not since 1951 when the U.S. Eighth Army controlled Army forces in the Korean War had the U.S. Army been faced with such a command and control problem. The question that faced Lieutenant General John J. Yeosock, Third Army commander, was how to organize the army chain of command to fulfill these requirements.

Current doctrine provides only broad guidance on U.S.

Army command and control procedures and organization in a theater of operations. It does not provide clear guidance on how the Army commander should organize/structure his chain of command at the operational level to accomplish these missions. FM 100-5, Operations and the draft of FM 100-7, The Army in Theater Operations both reflect the field army as the headquarters which is most likely to be used as

the next echelon above the corps level. According to FM 100-5,

a field army may be formed by the theater army commander in coordination with the commander-in-chief (CINC) of a unified command to control and direct operations of assigned corps. 4

The manual, however, does not enumerate the advantages of such a headquarters or the criteria used to determine when the commander should establish a field army. FM 100-7 (draft), published in 1990, provides only broad guidance on Army command and control procedures and organization in a theater of operations.

The purpose of my monograph is to determine whether or not the Army component commander should establish a field army headquarters in a theater of operations. The examination of command and control at the operational level is particularly important to the Army. Although the Army is reducing in size, the post-1995 force structure still calls for four active corps headquarters. Moreover, the future force will be predominantly CONUS based. Future contingencies, therefore, may require deployment of a field army to control multiple corps operations.

Conflicts requiring a large U.S. presence may develop in similar fashion as DESERT STORM, with one exception—the U.S. Army may not be afforded six months to develop and expand within the theater prior to the start of hostilities. The time to consider operational level command and control is during peace, before war occurs. This concern is clearly

stated in <u>Field Circular (FC) 100-16-1</u>, <u>Theater Army</u>, <u>Army Group</u>, and <u>Field Army Operations</u>:

a distinct possibility exists that large scale operations, involving multiple corps, will be undertaken which require an army headquarters as the next higher echelon in the operational chain of command.

My methodology for analyzing this question focuses on theory, history, doctrine, and Operation DESERT SHIELD/DESERT STORM lessons learned. First, I will synthesize information on organization theory to identify institution life cycles and why organizations change command structure. Next, I will analyze U.S. Army theater command and control organizations from 1920 through World War II. The purpose is to identify when and why a field army was employed in the European and Pacific theaters of operations. Third, U.S. Army command and control from the Korean War will be analyzed to provide information on the considerations for employing a field army in a limited conflict. Fourth, I will focus on doctrine for echelons above corps to identify current thought on the organization and employment of U.S. Army theater level command and control (C2) structures. The synthesis of this information will identify considerations used to determine the requirement for a field army organization in a theater of operations. Finally, I will analyze Third Army's C2 lessons learned from Operations DESERT SHIELD/DESERT STORM. purpose of this analysis is to determine why the Army component commander decided on a particular C2 structure for

the theater and the considerations he used to establish his C2 organization.

Throughout the study I will analyze U.S. Army theater C2 organization against three criteria:

FEASIBILITY. Can a field army be established with available resources? Can the Army forces in theater support an additional headquarters? Can the field army control joint and combined forces?

ACCEPTABILITY. Do the benefits of an additional headquarters outweigh the cost of activation? Does an additional command echelon support the CINC's intent for command and control? Is a field army headquarters politically acceptable to coalition forces operating in theater?

SUITABILITY. Do theater conditions warrant a field army headquarters? Will the additional headquarters enhance simplicity and unity of command?

My conclusion will synthesize the results of the historical, doctrinal, and contemporary analyses. These conclusions will identify implications for future C2 at the operational level in the areas of doctrine, training, and organization.

#### II. THEORETICAL PERSPECTIVE

Generally, management of many is the same as management of few. It is a matter of organization.

Sun Tzu (Art of War)

The study of any facet of military art and science, should, at some point, consider theories relevant to that

topic. Theory is useful because it provides a basis for understanding. Moreover, it can assist in developing rules for action. As such it can form a foundation for studies, research, and analyses. Organization theory is one theory which should assist in understanding military C2 structure. It should identify factors which cause change and should suggest the ways to adjust the organizational structure to meet the changes.

## Organization Theory

Organization is a fundamental component of an army. The purpose of organization is to maintain troop control and facilitate the employment of fire and maneuver against an enemy force. Organizational theorists William Scott and Terence Mitchell define an organization "as a system of coordinated activities of a group of people working together toward a common goal under authority and leadership." According to the theorists, organizations are designed to employ resources in order to achieve an objective or provide a service. The structure is generally based on the mission, the conditions in which the organization operates, and the tasks that must be performed to attain the objective. Once designed, the organizational structure usually remains constant until conditions warrant some type of change.

Change can be anticipated in an organization by understanding the life cycle of the organization. Life cycle is a simple idea that describes the stages of an

organization's existence. It states that most organizations "get started," at some point they "expand," then "stablize".

Then at some point the organization will "terminate" or conduct a major reoganization and "start again." 13

The life cycle is very similar to the evolution of a theater of operations. In the beginning the theater is activated and the "deployment" begins. This is followed by an "expansion" phase as additional troops arrive in theater. The expansion may be followed by a period of "stability" as all principle forces are present and full scale operations occur. At some point "redeployment" may occur as hostilities terminate and post conflict operations begin. 14

Explanations for how the organization changes during the life cycle are generally based on the theory that change occurs through internal or external factors. 15 Internal factors include: personnel gains or losses, management dissatisfaction, and organization inefficiency. External factors may consist of changes in the environment, mission, or tasks that support the mission. 15 Moreover, changes such as expansion often require a change in the division of labor and a resultant change in management structure. 17 Consequently, the organization must determine how to adjust the chain of command to meet the change in structure.

There are two methods for expanding the organizational structure, vertically and horizontally. The scalar principle refers to the growth of the chain of command which occurs by adding levels or layers to the command

structure. 'B' The advantage of this process is that it usually results in a narrower span of control, while the disadvantage is a longer chain of command. The functional principle is the method by which the organization grows horizontally. This occurs by adding departments to an existing level within the structure and dividing the organization's tasks among them. 'B' The advantage of this process is more centralized control, while the disadvantage is a wider span of control.

As an organization contemplates expansion, theorists provide a warning—there is a cost involved. The organization must weigh the advantages and disadvantages of expansion as they plan for growth. Although span of control may be enhanced, the length of the chain of command may reduce overall efficiency and effectiveness. 20

In his book On War, Carl von Clausewitz discusses the advantages and disadvantages of expanding the command structure. The principal benefit of increasing layers is that the commander at each level will have fewer subordinates to control. 21 With fewer subordinates, the commander should have the capability to maneuver more rapidly. Clausewitz, however, also recognized the problems that could arise for the higher commander or commander—in—chief: "If the total number of subordinates is too large, the commander's personal authority will be diminished."22 Furthermore, the "whole [army] will be unweildy if it has too many parts."23 Finally, Clausewitz warns that an

extended chain of command may reduce the efficiency of the command and control process. More layers of command influence reaction time, communications, and timeliness of orders. As Clausewitz stated:

every additional link in the chain of command reduces the effect of an order in two ways: by the process of being transferred and by the additional time needed to pass it on.<sup>24</sup>

Modern writer and theorist Martin van Creveld discusses the cost and benefits of horizontal expansion in his work Command in War. The advantages lay in the speed of orders and the simplicity derived from a centralized control system. The problem comes from having an increased span of control. Centralized C2 will require the commander to control a greater number of subordinates thereby potentially reducing his ability control the organization. However, he feels the use of modern communications systems will assist the commander in overcoming the problems associated with a wide span of control.25

In summary, organization theory provides several factors which influence the size and length of a command structure. First, most organizations go through a life cycle which illustrates that during the organization's existence it is likely to expand in some form. Second, as the organization expands factors such as mission, nature of the environment, numbers of subordinates, ability and personality of leaders all impact on when and how the organization changes its structure. Ultimately, as the commander or manager analyzes

the decision to change the organization they must weigh the costs of expansion with the benefits of a refined command and control structure.

### III. COMMAND AND CONTROL IN WORLD WAR II

To understand the future study the past. 25

#### Martin van Creveld

Throughout the history of warfare the introduction of increased lethality to the battlefield has been accompanied by changes in organization and tactics. 27

#### BG William F. Train

The World War I experience exposed twentieth century armies to a number of technological changes in the nature of the battlefield. Inventions such as the airplane, tank, and machine gun did much to change the size and complexity of the battlefield. Although armies changed in size and organization, one principle continued to guide their reorganization:

No greater lesson can be drawn from the World War than that unity of command is absolutely vital to the success of military operations. 25

This lesson, in particular, caused the U.S. Army to examine its command and control structure at higher levels. Although U.S. units were employed predominantly in division size, the American Expeditionary Force (AEF) did establish a General Headquarters (GHQ) to coordinate operational issues and logistics. Confusion as to the roles and functions of this headquarters led to command and control problems for General John J. Pershing and his division commanders.

Consequently, General Pershing pushed for changes following the war.25

During the interwar period changes occured in training, doctrine, and organization. In 1922, the Command and General Staff College initiated a course titled "Tactics and Strategy of Corps, Armies and Army Groups." This was followed in 1930 with the publication of The Manual for Commanders of Larger Units (Provisional). It was the first attempt to provide doctrine for army level operations. As doctrine became available, the U.S. Army activated four field armies for the conduct of operations in 1932. By the end of the decade, as the United States moved closer to global war, the U.S. Army had layed the foundation for an operational level command and control structure.

### European Theater

World War II embraced every field of military endeavor and every type of miltary operation—ground, sea, and air. Operations were conducted simultaneously in every geographic part of the world and present a complex and intricate pattern of . . . relations.

As the U.S. Army entered the war in Europe, <u>FM 100-15</u>, <u>Field Service Regulations-Larger Units</u> and guidance from the War Department were the principle documents that governed the organization and expansion of a theater of operations. The manual, published in 1942, defined a theater of operations and described the organization and functions of army groups, field armies, and corps. 4 Echelons of command within a theater were activated generally based on numbers of forces committed. The organizational method was driven

by a ratio of one headquarters for three subordinate units. For example, if 99 divisions were activated the Army would require 33 corps headquarters and 11 field armies. 35

According to FM 100-15, the field army was the largest self contained unit in a theater of operations. Although the organization was not fixed by doctrine, most field armies controlled from two to four corps and had organic combat support and combat service support units to support up to four corps operations. Generally, the army organization was built as required based on the mission, the area of operations, and the enemy situation.

The European theater structure began late in 1942 with the establishment of a General Headquarters (GHQ) in England. The GHQ was responsible for the administration of U.S. Army units that deployed to England in preparation for the cross channel invasion. 37 From 1942 to late 1943, the largest unit under GHQ control was V Corps. This was due to the Combined Chiefs of Staff's focus on the Mediterranean theater of operations. In the fall of 1943, the theater C2 structure began to expand, partially due to preparation for the cross channel invasion and partially due to British command and control structure. In September, the British created an army level headquarters to begin coordination for invasion planning with Lieutenant General James C. Morgan, the Chief of Staff, Supreme Allied Command. General George C. Marshall, U.S. Army Chief of Staff, recognized that V Corps was too small to conduct planning for the

invasion and their other missions. Furthermore, without an army level headquarters in England, U.S. interests would not be on equal ground with the British. Consequently, U.S. First Army was activated in England in October 1943.

Over the next few months the theater structure continued to expand. In January 1944, to command and control new divisions arriving in England and to allow First Army to concentrate on preparations for the invasion, the theater commander established another field army headquarters.

Third Army headquarters deployed from Texas, where it had served as a training army. 40 The activation of armies within the U.S. first before deploying was common throughout the war because all army headquarters were supplied by the Army Ground Forces (AGF) which was responsible for organizing, training, and deploying units from the U.S. 41

The U.S. Army command and control structure in theater stabilized until after the Normandy invasion (See Appendix A). As operations continued on the continent more divisions and corps were brought ashore. General Eisenhower, who served as the theater army commander, became concerned that the troop commitment would soon exceed First Army's span of control.<sup>42</sup> He and his staff now had to determine when to activate additional field armies—such as Third Army—in France.

Doctrine did not specify when to expand the number of armies, it merely provided the span of control guide of one

army to three corps. 43 Therefore, as additional corps and divisions deployed to the continent an army headquarters would be required due to its ability to provide operational control and logistical support for these units. 44 In addition, Eisenhower had to weigh the decision to expand against the experience of the potential army commanders. Although some generals had experience at corps level, few had any experience at army level other than being present at the Louisiana Maneuvers in 1941. 45 Moreover, the activation of subsequent armies would require an army group headquarters, a level not seen in the U.S. Army since the closing weeks of World War I.45

Complicating the decision making process further,

General Eisenhower and Army planners had to contend with the political side of the decision. The activation of additional armies and specifically an army group would make the U.S. Army command on an equal level with the British.

General Montgomery, however, was to be the senior ground commander until Eisenhower arrived on the continent.<sup>47</sup> As a result, General Eisenhower would have to pick the right time and place to expand the chain of command structure. On 14 July, as planning continued for the breakout from the Normandy beachhead, he informed General Bradley to activate a second field army on a date of his choosing, and to reorganize U.S. Army forces as 12th Army Group. <sup>49</sup> On 1 August 1944, Third Army was activated in France, command of

First Army passed to Lieutenant General Courteney Hodges, and General Bradley assumed command of 12th Army Group.

During the remaining months of 1944 and early 1945, U.S. Army forces continued to expand as the campaign continued toward Germany. By March 1945, the U.S. Army command and control structure in central Europe would include two army groups and five field armies. It would be the largest force the Army would ever employ. 50

The decision to activate a field army in England in 1943 was clearly feasible. The structure had been in the U.S. Army since 1930 and had been proven as a durable organization in training and during combat operations earlier in the war (Sicily 1943).51 Moreover, resources were readily available as both First Army and Third Army had completed the Louisiana Maneuvers and were preparing for deployment. Forces were also available when subsequent armies were activated in 1944 and 1945.50

The use of field armies in the European Theater was acceptable to the American chain of command and allied partners. By this time the British and Canadians had established army level commands in their armies. The compatability contributed to the success of the army organization. The activation of First Army provided a similar command structure among the American, British, and Canadian forces scheduled to land at Normandy. This increased cooperation during the planning and would simplify understanding of the C2 arrangements during the campaign. 5:3

The use of field armies also supported Eisenhower's intent for command and control. He saw the need to establish a command structure that could expand easily after the invasion. Moreover, his broadfront strategy would require multiple armies and corps to execute.

The conditions in theater made the field army a suitable C2 structure. The span of control in England in 1943 was no longer within the capability of a single corps commander. The responsibility to organize, train, and maintain deploying forces and participate in the planning for the invasion were beyond the capability of V Corps' staff. 54 Also, as the theater expanded after the invasion, span of control and geographic dispersion necessitated the additional army level command. The use of armies on the continent also simplified command and control between allied partners. As discussed, the army command structure was present in both British and Canadian Armies. As operations continued across France it would be easier to move corps between armies if required.

The use of the field army in the European theater was a success and contributed to the C2 of the U.S. and allied forces. The preparation for and conduct of campaigns in Europe reflect that theater expansion and the use of field armies may be driven by span of control, terrain, and political considerations within a combined force.

#### Pacific Theater

In 1942, the United States assumed primary responsibility for operations in the Pacific theater.

Unable to settle on a unified command system for the entire theater, the JCS decided to establish two theaters of operations, the Southwest Pacific Area (SWPA) and the Pacific Ocean Area (POA). 55 Initially responsibility for SWPA went to the U.S. Army while the U.S. Navy was given POA. Although both areas had joint commands, most of the U.S. Army forces were assigned to SWPA. 56 Between 1942 and 1945, a total of three field armies were activated to provide command and control to Army forces in the Pacific. 57

The driving factors in the organization of the command and control structure within SWPA were terrain and strategy. The operations began in late 1942 as General MacArthur instituted his "island hopping" strategy. Island assaults were conducted by small units supported by naval and air power. The technique required some form of reorganization to account for the size of the island and the force necessary to secure it. The war continued, force size grew as the scope and complexity of operations increased. By 1945, U.S. Army forces had expanded into a theater level command, U.S. Army Forces Pacific, which was responsible for all Army forces in the Pacific theater.

The Army command and control structure in the Pacific began as U.S. Army SWPA under the command of General MacArthur. This headquarters was sufficient based on the

small unit operations (division and below) that Army forces were conducting on the South Pacific islands. As operations began to broaden in size, corps headquarters were established along with a service (logistics) command.

The Joint Chiefs of Staff (JCS) soon became concerned about the MacArthur's growing span of control because he also served as the joint and combined commander in the theater. They encouraged MacArthur to introduce an army level headquarters which could focus on Army operational issues and logistics. They felt this would free MacArthur to concentrate on the joint and combined matters of his command.

In April 1943, Sixth Army was activated in the SWPA and became MacArthur's principal operational assault force. In addition, the army gave the U.S. a headquarters equivalent to the First Australian Army, which had been the major allied land force headquarters in the theater. 50 Codenamed Alamo Force, Sixth Army conducted operational planning for the island hopping operations and directed the employment of X Corps, XXIV Corps, and Army Service Command. 54 Over the next year, the theater stablized as operations and forces were within Sixth Army's command and control capability.

In late 1944, however, the theater underwent another expansion. As more and larger island invasions became apparent, additional army troops deployed to SWPA. In September of that year another field army, Eighth Army, became operational to control the ever increasing U.S. Army

presence in the theater. General MacArthur now had greater flexibility for conducting operations in the Pacific. The establishment of two field armies allowed him to conduct assault operations with one army, while the second army would follow to conduct security and stability operations on an objective. Moreover, the additional headquarters simplified MacArthur's campaign concept. He would no longer have to reorganize his force after each island campaign. The operations in the Philippine Islands illustrate his use of the field armies. The operations in the Philippine Islands illustrate his use of the field armies.

During the Philippines campaign, MacArthur committed both field armies in sequential operations. The Sixth Army began the assault on 20 October and continued operations until December. On 26 December, Eighth Army assumed control of operations on Leyte while Sixth Army continued to Luzon. See MacArthur continued to rely on his army commanders in a similar manner throughout the remaining campaigns.

The third field army employed in the Pacific was utilized by Admiral Nimitz in the Pacific Ocean Area (POA). Although the POA was primarily a naval enterprise, the roles and missions for ground forces increased, demanding the use of an operational army command. 59 On 20 June 1944, the AGF activated Tenth Army in the United States under Lieutenant General S.B. Buckner who deployed it for use in the Okinawa Campaign. 70

Tenth Army differed from the field armies in other theaters during World War II. The army remained under

operational control of a naval commander throughout most of its operations. It was predominantly a joint task force containing an Army corps and a Marine corps supported by Navy and Air Force assets. 71 Furthermore, LTG Buckner organized his staff with both Navy and Marine officers in addition to his organic U.S. Army staff officers. 722

An analysis of the Pacific theater reflects similarities and differences from the European theater. As in Europe, the decision by General MacArthur to activate field armies was feasible based on the organization and training conducted by the AGF. The assets were available, once again provided by the AGF, to activate armies in theater. 79 In addition, the use of the field army by Admiral Nimitz demonstrated the feasibility of using the army headquarters to control joint operations. Army and Marine ground forces operated effectively under Tenth Army. Furthermore, LTG Buckner reinforced this capability by placing Navy and Marine officers on his staff. 74

The requirement for unity of command and effective control made the field army an acceptable echelon of command in the Pacific. MacArthur was able to unify his corps and divisions into an effective command structure. Moreover, the activation of Sixth Army provided a command structure equivalent to the First Australian Army, the only other major ground force in the combined structure. Finally, the activation of a field army increased efficiency as MacArthur would no longer have to reorganize his units after

each island operation. Reorganization could now be done at corps level within the Sixth Army structure.

The activation of a field army was suitable in many respects. The expanding operations being conducted by multiple corps required another echelon of command to reduce span of control. With the addition of the field army structure, MacArthur could now organize his corps under a single headquarters. Furthermore, the expanding nature of the theater influenced the use of the army headquarters. The number of islands that had to be secured increased the requirement for dispersed operations. In addition, in island chains such as the Philippines, MacArthur wanted to conduct sequential operations to secure his objectives. The use of multiple field armies (Sixth and Eighth) allowed MacArthur to maintain efficient C2 for each phase of the campaign and reduced the requirement for reorganization.

The use of Tenth Army by Admiral Nimitz reinforced the value of the field army. First, it would simplify orders from Nimitz to his ground component which consisted of a U.S. Army and a Marine corps. Second, it enhanced unity of command between the organizations in a joint operation. Finally, the use of a joint army staff reinforced command and control efficiency in a complex, distributed operation.

The use of the field army in World War II reflected the requirement to provide doctrinal C2 to multiple corps in an expanding theater of operations. Each theater in which U.S.

Army forces were employed grew to such an extent that without the use of the field army, unity of command may not have been easily achieved. Furthermore, it allowed the commander a greater degree of flexibility in commanding and controlling simultaneous and sequential operations.

Finally, the use of the field army in Okinawa reflected the versatility of the structure. With minor modifications in staff and support structure, Tenth Army was able to control joint operations. Given the complex nature of the war and diverse theaters of operations, the successful use of the field army demonstrated its value in World War II.

## IV. COMMAND AND CONTROL IN THE KOREAN WAR

In the period between World War II and Korea, the U.S. Army command and control doctrine for larger units evolved though force structure receded to pre-1942 levels. A major change that would affect theater command and control in future conflicts was the National Security Act of 1947. The Act established the JCS as a formal military body and unified the armed forces under the Department of Defense (DOD). Furthermore, it directed the JCS to "establish unified commands in strategic areas when such unified commands are in the interest of National Security."

Army doctrine adjusted to the changes in the Department of Defense. FM 100-15 was revised to include the unified and theater command structure. The theater of operations was defined more in terms of joint and combined aspects of

warfare. It defined the theater commander as responsible for the operation and organization of U.S. Armed Forces in a joint and potentially combined environment.

The manual defined, for the first time, the roles and functions of the theater army commander. He was responsible for the operations and logistical support of all U.S. Army forces in theater. His focus was as a planner, supervisor, and coordinator who "decentralizes combat and administrative functions to his army and COMMZ (Communications Zone) commanders respectively." Consequently, decisions as to the organization and employment of Army forces in theater would always be based on coordination between the theater army commander and the unified commander.

The Army's first opportunity to participate within the unified command system came in the summer of 1950. When the North Korean Army invaded South Korea in July, U.S. forces were under the control of General MacArthur who was the Commander-in-Chief (CINC) of U.S. Far East Command (USFEC). The command, established in 1947, was one of the first activated under the Unified Command Plan (UCP).

Theater development in the Far East began rapidly. When war broke out there was already an army level headquarters in theater. However, the U.S. Eighth Army located in Japan did not resemble its World War II predecessors. The headquarters served as the army component for USFEC and was responsible for the command and control of U.S. Army occupation forces assigned to Japan. \*\* It was primarily a

training army supervising the day-to-day activities of four understrength divisions. More important, the army was available and immediately committed as the theater army for operations in Korea.

Eighth Army assumed control of operations in Korea on 13 July 1950. Lieutenant General Walton Walker, the commander, was designated the Commander of U.S. Army forces in Korea. \*\*A As the command and control structure imposed over the four divisions deployed to the peninsula, LTG Walker's headquarters also became a field army responsible for the operational employment of ground combat units.

Theater force levels continued to expand through the summer. By mid-July, in addition to commanding Army forces in Korea, LTG Walker and Eighth Army received operational control of the South Korean Army (ROK) forces. \*\*\*

General MacArthur, concerned about the growing span of control and the scope and complexity of his planned counteroffensive, requested another army level headquarters from the JCS, but was told he would only receive additional corps. \*\*\*

In August, Eighth Army gained I Corps and IX Corps headquarters, which had been activated in the United States and shipped overseas (See Appendix C). \*\*\*\*

Expansion of the theater also effected Eighth Army's logistical responsibilities. As the theater army, Eighth Army retained responsibility for logistics in Japan and Korea. Eighth Army initially established a rear command to manage logistics in Japan, which was later replaced by the

Japan Logistics Command (JLC). So Within Korea, Eighth Army simplified control over logistics by establishing the 2d Logistics Command at Pusan. So

Theater expansion went through a second phase from September-November 1950. In preparation for and following the Inchon-Seoul Campaign, the theater grew in terms of missions, units, and size. X U.S. Corps was activated as the assault force for the Inchon landing. Eighth Army was responsible for its sustainment, although it remained directly under USFEC control. The Army also received additional divisions to support the breakout from Pusan and link-up with X Corps. 91 By October, Eighth Army consisted of four corps and two logistical commands. Furthermore, with the tactical responsibility for the United Nations participants, Eighth Army had become a combined field army.

In addition to its tactical and logistical requirements, Eighth Army continued to function as an operational headquarters under USFEC. Both the army and USFEC conducted operational planning. Eighth Army was responsible for day-to-day operations in Korea while USFEC planned future operations, maintained the operational reserve, and controlled joint and combined operations in the area surrounding Korea. To compensate for Eighth Army's increasing span of responsibility, the Department of the Army (DA) authorized a significant increase to Eighth Army staff. By the end of 1950, the staff totalled 1,843 compared to a field army TO&E strength of 1,062.

As operations continued into North Korea, Eighth Army's strength grew to 247,707 personnel. Although the strength figures were significant, a field army with four U.S. corps was expected to maintain an authorized strength of approximately 400,000. The army's span of control in terms of personnel, although large, was within doctrinal considerations. 95

Following the Chinese offensive in November 1950 and the subsequent U.S. operations to reestablish the border along the 38th parallel, the theater stabilized for what would be the remainder of the war. Eighth Army maintained its roles as Army component command, theater army, and field army until a change was affected by USFEC. In 1952, USFEC was authorized to activate HQ, U.S. Army Forces Far East Command as the Army component headquarters for the unified command. This relieved Eighth Army of much of its administrative and logistic functions, allowing it to focus on its role as the combined field army.

An analysis of the U.S. Army command and control structure in Korea illustrates many of the different C2 considerations present in a limited war. Although the use of a field army separate from the theater army was supported by the table of organization and equipment (TO&E) and doctrine, its use may not have been feasible. The JCS disapproved MacArthur's request for an additional army headquarters due to concerns over mobilization and the status of the European theater. They told him to shape his

strategy with the forces he had and the corps' approved as reinforcements. Furthermore, due to the organizations being supported in Japan and Korea, it is unclear if USFEC could have established another headquarters with its own resources. Although Eighth Army staff was almost twice its authorized strength by 1951, many of these additional spaces were required due to the army's role as theater army, a task which it fulfilled until 1952.

The cost of establishing army headquarters, in terms of effectiveness and efficiency, may not have been acceptable. Since MacArthur was told to fight with what he had, a field army would have to be organized from resources within Eighth Army. Most forces in the Pacific and specifically in Japan reflected the years of occupation duty in which little training was being done and no unit exercises were conducted above company level. There is some question if there were enough qualified staff officers in theater to support another headquarters. For example, when MacArthur activated X Corps for the Inchon landing, he assigned his chief of staff to command the corps but also required him to retain the duties of chief of staff at the same time.

Finally, though MacArthur wanted another army headquarters in the beginning, he may not have wanted to add a layer of command to the structure. With the exception of some operations conducted when General Ridgeway was in command, MacArthur personally reviewed the army's use of its corps. 199 An acceptable alternative would have been to

establish a separate theater army headquarters leaving
Eighth Army as the field army; however, as discussed above,
this was not done until later in the conflict.

The conditions in Korea made the use of a field army a suitable C2 alternative. Based on experiences in World War II, the field army was suited for both joint and combined operations. The multiple corps employed during the war required a field army headquarters for simplicity and unity of command. However, Eighth Army was able to accomplish the missions of a field army as well as a theater army. Why?

First, the limited nature of the war restricted the design of major operations and the number of troops the U.S. Army employed. Second, the limited physical environment did not require Eighth Army to control significantly dispersed operations. The major challenge to Eighth Army's span of control came as a result of theater responsibilities, which it coped with by establishing separate logistical commands.

The operations conducted in Korea reflected changes from World War II. Limited terrain, limited objectives, and involvement of the United Nations created different conditions than experienced in previous conflicts. The nature of the war and the nature of the terrain became significant considerations in establishing a C2 structure. The dual functions practiced by Eighth Army, though not illustrated in doctrine, reflected the flexibility of tailoring army level organizations to the meet the needs of a theater in a limited conflict.

# V. DOCTRINAL PERSPECTIVE

An army's fundamental doctrine is the condensed expression of its approach to fighting campaigns, battles, and engagements. Tactics, techniques, . . organization equipment and training all derive from it. 101

The basis for U.S. Army doctrine comes from the careful application of theory and history. Furthermore, doctrine, through the synthesis of theory, history, and warfighting conditions, defines broad requirements for our organizations. Given the U.S. Army's comparative experiences from World War II and Korea, it would seem that doctrine for theater organization and operations would be well established and extensive. However, as the U.S. Army prepared for 'to role in the Persian Gulf, doctrine for theater and large unit command and control was only beginning to reemerge after a long recession.

After Vietnam, doctrine for theater level operations became almost non-existent. The Army's focus in the early 1970's was on central Europe, where a corps was the largest operational unit. 192 Doctrine revisions during this timeframe focused on corps and below. FM 100-5.

Operations, produced in 1976, was primarily a manual on tactics, while FM 100-15, Large Unit Operations became FM 100-15, Corps Operations. 193 As a result, the focus became the theater army's role as a sustainment organization, while the field army was eliminated from the Army's formal echelons of command structure. 194

In 1982 doctrine changed. The Army reintroduced operational art and the operational level of war in a revised FM 100-5. The manual stated:

Operational art is the employment of military forces to attain strategic goals . . . through the design organization, and conduct of campaigns and major operations. 105

The manual goes on to state that "theater commanders and their chief subordinates usually plan and direct campaigns," while major ground operations are normally planned and conducted by army groups or armies. 105 The U.S. Army was once again developing doctrine for theater organization and large unit warfare.

Current doctrine on large unit command and control is expressed in FM 100-5, FM 100-16, Support Operations:

Echelons Above Corps, and a recently released coordinating draft manual, FM 100-7 (draft). The Army in Theater

Operations. The principle drawback to these manuals is that they focus on how different units are organized and fail to address how the theater may be organized over time or when units such as the field army maybe appropriate in the theater chain of command. Moreover, the earlier discussions on theory and history indicate that theater evolution has an impact on how the command structure is organized.

FM 100-5 focuses on operational art and its relationship to theater organization. It discusses theater organization and operations in terms of the unified command system and defines the echelons of command through theater army. The

manual also states that the field army echelon may be formed by the theater army commander in coordination with the CINC for the purpose of controlling corps operations. 107 FM 100-5, however, does not discuss theater evolution or the considerations that may warrant the use of the field army.

FM 100-16 focuses on theater army and the combat support and combat service support (CSS) functions that it may perform. It concentrates on these roles in relation to the Army's organization in NATO and Korea. FM 100-16 defines the field army, however, it illustrates only one role the field army may assume, which is to act as an intermediate headquarters between a joint task force (JTF) and corps in a contingency operation. The manual discusses theater evolution but only in terms of expanding EAC support organizations within the theater army.

The most recent attempt to provide doctrine for the army structure in theater operations is in FM 100-7 (draft). The manual, recently published by the U.S. Army Training and Doctrine Command (TRADOC), incorporates much of the previous efforts to clarify the Army's roles and functions in a unified command. Moreover, it ties in with on-going drafts of joint doctrine such as JCS Pub 3-0 (TEST), Doctrine for Unified and Joint Operations.

The manual outlines "principles and functions for the planning and conduct of subordinate campaigns and major operations." 105 It also defines the roles and functions of the theater army, the field army, and the relationship to

corps and the CINC in the theater chain of command. FM

100-7 (draft) mentions theater expansion and that the

decision to establish a field army is one made by the

theater army commander and the CINC. It continues by

providing broad guidance for the use of the field army

headquarters. It does not, however, go into specifics as to

when the field army may be appropriate, such as contingency

operations as addressed in FM 100-16. Furthermore, it

lacks specific considerations that could assist the theater

army commander and CINC in deciding whether or not to use

the field army within the theater structure.

## VI. CONTEMPORARY ANALYSIS

Since 1953, U.S. Army command and control at the theater level has undergone significant change. The theater army has grown in mission and functions as the unified command system has grown in importance with the DOD Reorganization Acts of 1958 and 1986. 109 In 1973, the field army was eliminated as a formal command and control echelon, with its administrative and logistics responsibilities being divided between the theater army and corps. 110

However, in late 1981, the Combined Arms Center (CAC) was directed to review the need for concepts and doctrine at EAC. ''' During the same timeframe, lessons learned from exercises of the Rapid Deployment Joint Task Force (RDJTF) indicated a requirement for an operational headquarters between the unified commander and corps in certain

contingency scenarios. 112 As a result, Third U.S. Army was reactivated in 1982 as a planning and exercise headquarters for contingency situations for the RDJTF, which would become U.S. Central Command in 1987 (CENTCOM). 113 One CENTCOM contingency became a reality when Iraq invaded Kuwait on 2 August 1990.

The U.S. Army presence in the Gulf theater began slowly after General Norman Schwarzkopf, CINC CENTCOM, was alerted to deploy forces to the region. On 6 August, Lieutenant General John J. Yeosock, Commander of Third Army, and Brigadier General William G. Pagonis, J-4 for Forces Command (FORSCOM), arrived in Saudi Arabia with the CINC and Secretary of Defense (SECDEF) for initial coordination with the Saudis. 114 After the CINC and SECDEF departed, LTG Yeosock began building the Army forces in theater. He contacted Major General J.B. Taylor, Chief of the Program Modernization for the Saudi Arabian National Guard (PM SANG), and told him, "you are now my chief of staff... now there are four people in this great big army." 115

The Army buildup in theater continued through August as forces began to arrive. Operational command and control (C2) began to take shape as CENTCOM established its forward headquarters in Riyadh. The chain of command solidified as the CINC chose to organize his command by service component. This meant all U.S. Army forces (less special operations forces-SOF) would be under the Commander, Third

Army, now designated as U.S. Army Forces Central Command (ARCENT). (See Appendix D)

The CINC's guidance led to Third Army's organizational structure in the operational chain of command. 117 As ARCENT, Third Army would be responsible for coordinating with joint and combined forces, providing operational direction, administration, and sustainment for Army forces in theater, planning ground combat operations, and assisting in the sustainment of U.S. Air Forces in theater. 118 Over time these missions would cause ARCENT to fulfill the role of a theater army and, subsequently, a field army. Third Army focused on its ARCENT role first.

As the army component command, Third Army concentrated initially on establishing a defense and building combat power in theater. During August and September that meant ensuring a smooth, calculated deployment for XVIII Airborne Corps and its supporting units. As a component command, Third Army had to coordinate within the service and operational chain of command to ensure the required reserve units were integrated into the Time Phased Force Deployment (TPFD) sequence.'' A large number of reserve units would be needed for sustainment operations since there were no standing host nation support (HNS) agreements.'20 In addition, the Army would need a logistics organization established to coordinate a rapid build-up. As a result, ARCENT activated a support command (SUPCOM) under BG Pagonis.'21

As XVIII Corps closed in theater, Third Army immediately had to balance the missions of a theater army and a component command. This warranted the establishment of EAC units to support the corps and theater army and contributed to the complexity of Third Army's tasks. 122 Although EAC support was present during Operation JUST CAUSE in 1989, much of it was conducted from the United States. Operation DESERT SHIELD was the first time such support would have to be built in an undeveloped theater since Vietnam. 123 According to LTG Yeosock, "establishment of EAC organizations was a complex process involving the overwhelming support from Department of the Army and major commands." 124

As the theater continued to expand, Third Army had to continually manage operational requirements by providing plans, orders, and guidance from the CINC to corps and EAC units. Furthermore, in October, the CINC expanded Third Army's tasks by including them in the operational planning effort. 125 The Army, with only a skeleton staff, in turn required support from corps. 126 Third Army was now fully engaged as an operational headquarters, although initially staffed and resourced at peacetime levels. 127

In November, the theater grew again, especially for Third Army. On the 9 November, the President of the United States committed VII Corps to action in Operation DESERT SHIELD to provide an offensive option if force became necessary.

employment and sustainment of three additional heavy divisions and supporting units. This in turn would require additional EAC units to support a second corps. DA and the CINC further taxed the Army's limited structure when they decided to conduct the force modernization of selected units to provide them with the most modern equipment such as the M1A1 tank. 129

As the date approached for implementation of the U.N. resolutions authorizing force against Iraq, Third Army was conducting missions as both Army component and theater army. Planning continued for the offensive option against Iraq; however, with the two Army corps designated as the main attack, a functional operational headquarters was required to direct, control, and support their operations. 130

The CINC, in coordination with LTG Yeosock, decided to employ Third Army in the role of field army. 131 The Army's roles now increased to include operational employment and direction of a major ground force and the requirement to finalize planning for the army portion of the ground campaign. 132 As the operational headquarters, Third Army staff would not only have to plan operations but synchronize the execution of the operational operating systems (OOS) for the corps and EAC combat support and combat service support units. The army staff, now almost twice its authorized size, would increase to three times its size by the start of the ground war. 1333 By February 1991, Third Army was organized with approximately 300,000 U.S. Army troops

fulfilling the roles and functions of Army component, theater army, and field army. 134 The army would be one of the largest U.S. Army organizations employed since World War II. 135

The use of a separate field army headuarters was probably feasible during DESERT STORM. Although doctrine was limited and the field army was no longer a TO&E organization, resources were available to establish a headquarters to control the operations of multiple corps. During the months prior to DESERT STORM, Third Army headquarters grew to three times its normal size. Moreover, the Army's forward CP operated much like a field army headquarters during the conduct of the ground campaign. 196 The resources available could have been reorganized into a field army. Additionally, liaison teams already established between Third Army and allied units could have been placed under the control of the field army to facilitate joint and combined operations.

In a situation similar to Korea, the evidence suggests that establishing a field army headquarters may not have been an acceptable solution. First, the cost of a larger chain of command in this theater may not have been worth the benefit of reducing Third Army's span of responsibility. 137 Second, the CINC's decision to be the land component commander (LCC) reflected his desire to be intimately involved in the ground campaign. Furthermore, it illustrated the political and military sensitivity of

conducting the land campaign with such a diverse coalition.

If General Schwarzkopf had approved a field army
headquarters distinct from Third Army, it is likely that
Third Army would have been removed from the operational
chain of command (making it strictly a support organization)
reducing the links between the LCC and his main effort.

On the surface, theater conditions suggest that a separate field army headquarters was suitable for Operation DESERT STORM. The diverse missions, sustainment requirements, and coalition coordination responsibilities would have supported dividing the operational and logistical tasks between a separate theater army and field army. However, the CINC's desire for unity of command and a simple, effective chain of operational command led to Third Army retaining the roles of both armies. Furthermore, the CINC and LTG Yeosock's analysis of mission, enemy, terrain, troops, and time (METT-T), and CENTCOM's experience from Exercise INTERNAL LOOK indicated the C2 structure for Operation DESERT STORM was the most effective use for Army assets.

The U.S. Army command and control structure in Operation DESERT SHIELD/DESERT STORM reflects a close tie with history. Like Korea, the nature of the war, the nature of the theater, and the personalities of the senior leadership led to one army headquarters performing the functions of three armies. Furthermore, it illustrates that multiple corps operations remain a distinct possibility.

Consequently, theater leadership must have the capability to determine when or if a field army is required in a theater of operations.

# VII. CONCLUSION AND IMPLICATIONS

The only way to prevent ossification of the mind is to accept nothing as fixed, to realize that the circumstances of war are ever changing, and that consequently, organization, administration, strategy, and tactics must change also . . . 199

In the Persian Gulf the U.S. Army conducted joint and combined warfare on a scale not witnessed since 1950. In the interim between 1950 and 1990, large unit warfare and the doctrine for its conduct had receded to its lowest point in the U.S. Army since A Manual for Commanders of Large Units (Provisional) was written in 1930. In the aftermath of Operation DESERT STORM, where does the Army go from here?

The purpose of this monograph was to determine whether or not the Army component commander should establish a field army headquarters in a theater of operations. The determination could not solely rest on a singular opinion or statement. Resolution of the question required an analysis of theory, history, doctrine, and contemporary experience.

Theory illustrated that insitutions usually have a life cycle. As they go through this cycle, the chain of command normally changes. Theory suggests span of control and changes in environment influence when the manager changes the command structure.

The analysis of campaigns from history indicates that a theater exists much like a theoretical organization.

Furthermore, wartime theaters possess many of the same factors for changing the command structure such as span of control and environment (battlefield conditions and METT-T). Experiences from war also suggest there are other factors in deciding to use another echelon of command such as the field army. Doctrine and the complexity of operations often indicated that multiple corps required an appropriate C2 structure. The success of the Okinawa campaign illustrates that command of large joint operations may be appropriate for a field army.

The U.S. Army involvement in limited war demonstrated different conditions. Although span of control, unity of command, and simplicity warranted a field army, a geographically-limited theater and limited objectives may mean the theater army can fulfill both roles. Moreover, a CINC who wants more centralized control may achieve efficient command and control without separating the field army from the theater army.

The review of doctrine presented additional issues.

Joint doctrine provides the CINC six ways to establish his

C2 structure: service component, functional component, subunified command, JTF, single service command, or direct
command. Army doctrine on theater C2, however, is still
emerging. FM 100-5 and FM 100-16 reflect the units the Army
commander has available to organize his theater but do not

indicate options or considerations for when to establish a field army. FM 100-7 (draft) provides improved doctrine for theater operations by defining theater army, field army, and the roles they may play in the theater, but it does not provide the Army component commander with a full range of options or discuss in detail when or whether or not to employ a field army headquarters.

The analysis of Operation DESERT SHIELD/DESERT STORM confirms the lessons of history and the gaps in doctrine. Although Third Army's span of responsibility—component command, theater army, field army—was large, coalition coordination tasks, the geographically—limited theater, and limited objectives may not have required the activation of a separate field army headquarters. In addition, the CINC's personality may have been a factor. His decision to serve as the LCC may not have warranted the use of an additional layer of command or another headquarters in his span of control.

The doctrine gap is reflected in the considerations LTG Yeosock used to organize his command to support the three command and control functions. In recent interviews and in an article in <u>Military Review</u>, LTG Yeosock makes little mention of doctrine. 141 He primarily cites five tenets which drove his thinking--METT-T.

A review of theory, history, doctrine, and contemporary experience suggests the decision to use a field army and if so, when, is guided by a series of factors: nature of the

conflict, nature of the theater, personality of commanders, ability and experience of senior leaders and span of responsibility. Furthermore, principles such as unity of command, simplicity, and METT-T provide senior commanders with proven, readily available considerations.

Several implications evolved from my conclusion. First, the revision of FM 100-7 should continue and be expanded to include the considerations for use of a field army discussed in this monograph. Second, the JCS and TRADOC should identify ways to train theater C2 organizations. Although cost may be a prohibitive factor, there may be ways to link operations and scenarios between the National Training Center, Fort Irwin California (NTC), and the Marine Corps' maneuver training center located at Twenty Nine Palms California. This would present opportunities to use the field army in a joint/contingency scenario. Third, based on history and the emerging lessons learned from Operation DESERT SHIELD/DESERT STORM, JCS and TRADOC should develop a proposal for a field army structure. Although future organizations must be tailorable, a proposed organization would provide a point of departure for building a future field army. Finally, in the area of materiel, an organization such as Third Army should be resourced to provide the option to establish a field army when required. A basic set of equipment could be stocked under Third Army's control and be made available from deactivating organizations such as VII Corps.

The one thing certain about the future is its uncertainty. This has been reaffirmed as the JCS and DA analyze potential threats around the world. As stated in TRADOC Pamphlet 525-5 Airland Operations, the future army must, among other attributes, be "flexible and versatile." The field army provides both characteristics to the CINC and Army component commander. As the U.S. Army decides where to go from the lessons of the Persian Gulf, it should look to providing the capability of deciding when or if a field army should be employed in a theater of operations.

Appendix A, U.S. Army C2 Structure European Theater, World War II.

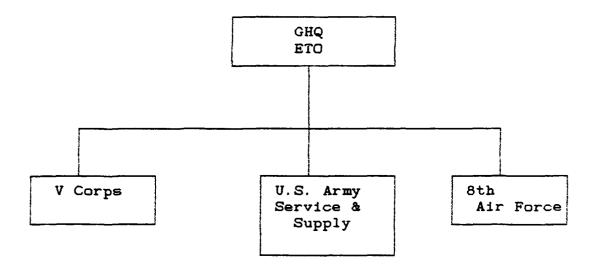
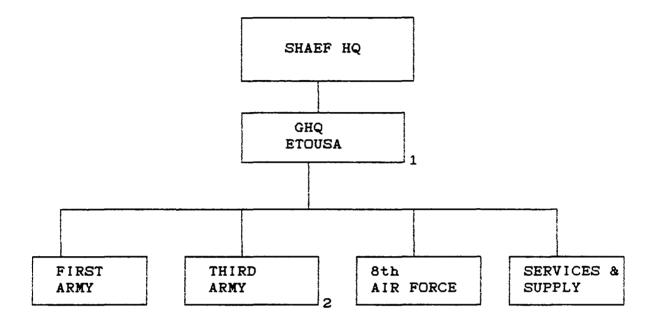


Figure 1. U.S. Army C2 Structure European Theater, August 1943.

SOURCE: Roland G. Ruppenthal, <u>Logistical Support of the Armies</u>, Volume I: May 1941-September 1944, 190.



#### NOTES:

- 1. Although GHQ ETOUSA is reflected under SHAEF, they were commanded by the same person. General Eisenhower served as both Supreme Allied Commander and Commander European Theater of Operations-U.S. Army.
- 2. Third Army was responsible for the administration and training of U.S. Army forces in England until it was activated in France on 1 August, 1944.

Figure 2. U.S. Army C2 Structure European Theater, May 1944.

SOURCE: Forrest Pogue, Supreme Command, 159.

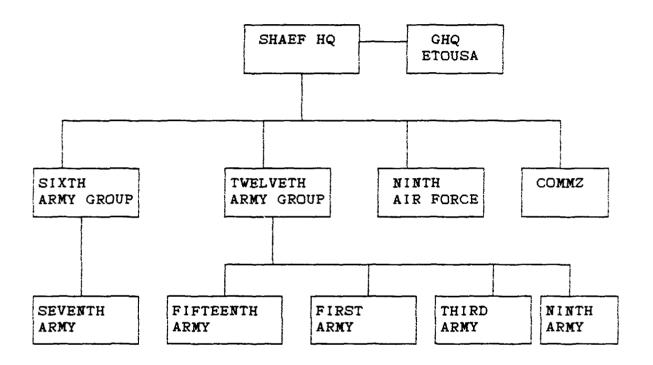


Figure 3. U.S. Army C2 Structure, March 1945
SOURCE: Pogue, Supreme Command, 455.

Appendix B, U.S. Army C2 Structure, Pacific Theater of Operations.

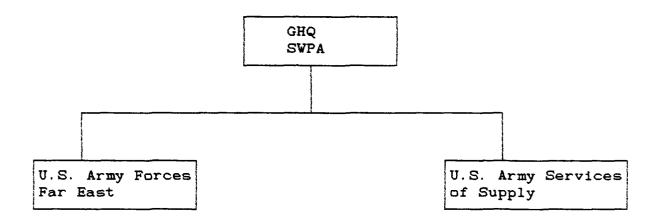
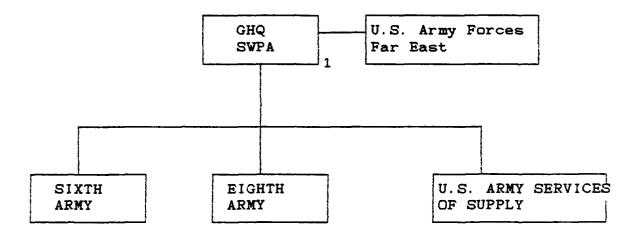


Figure 4. U.S. Army C2 Structure, SWPA, July 1942.

SOURCE: Louis Morton, Strategy and Command: The First Two Years, 254.

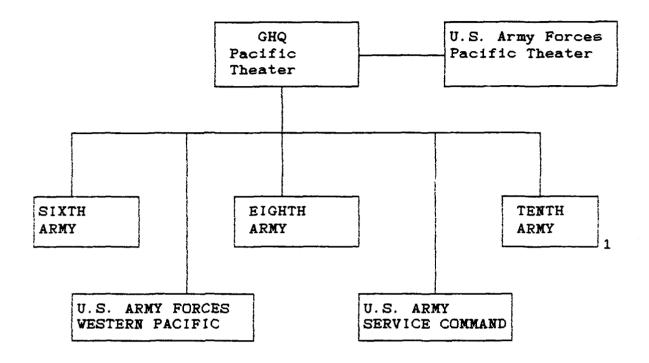


## NOTES:

1. General MacArthur was in a similar situation as General Eisenhower in Europe. He served as the Supreme Allied Commander in the Pacific and Commander U.S. Army Forces Far East at the same time.

Figure 5. U.S. Army C2 Structure, SWPA, December 1944.

SOURCE: Robert Ross Smith, Triumph in the Philippines, 660.



#### NOTES:

1. All U.S. Army Forces in the Pacific were reorganized under one command in the Spring of 1945. Tenth Army, which had been under Admiral Nimitz' control, came under General MacArthur's direct command.

Figure 6. U.S. Army C2 Structure, Pacific Theater, May 1945.

SOURCE: U.S. Army, "Larger Units-Theater Army, Army Group, and Field Army," 4-21.

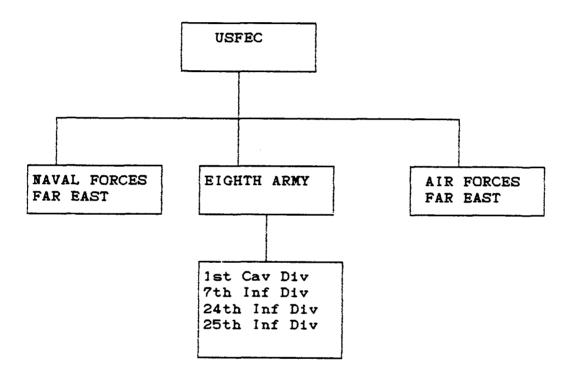
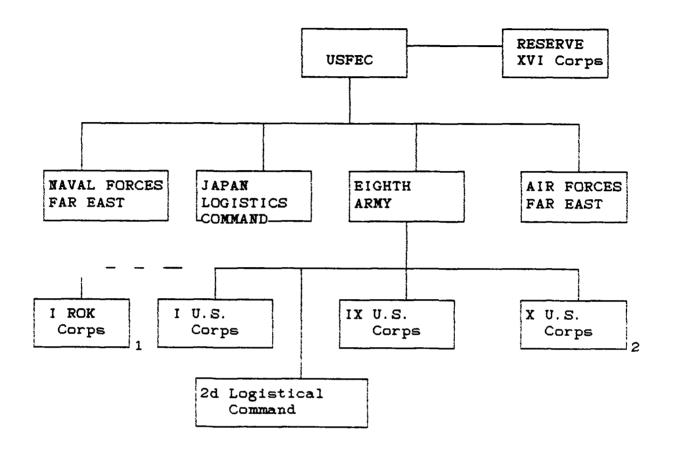


Figure 7. U.S. Army C2 Structure, July 1950.

SOURCE: "Larger Units," 5-2.



## NOTES:

- 1. Eighth Army received operational control of Republic of Korea (ROK) Forces in August 1950.
- 2. X U.S. Corps was placed under Eighth Army's command in December 1950.

Figure 8. U.S. Army C2 Structure, July 1951.

SOURCE: Walter Hermes, Truce Tent and Fighting Front, 54.

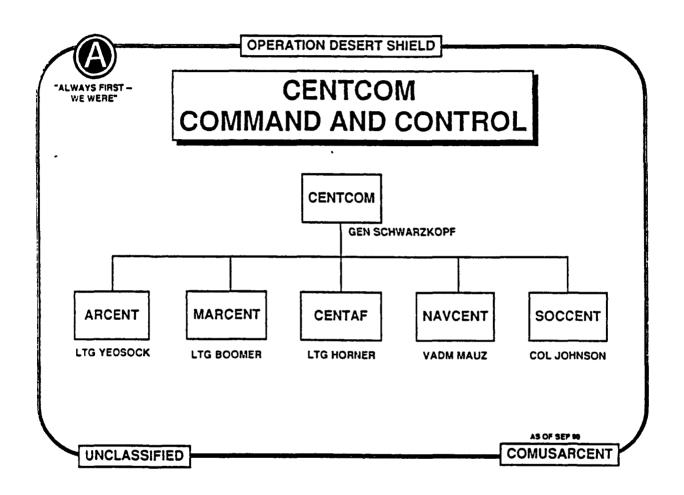


Figure 9. CENTCOM Command Structure.

SOURCE: "DESERT SHIELD/DESERT STORM-The U.S. Army in the Gulf," briefing prepared by the Operation DESERT STORM History Project.

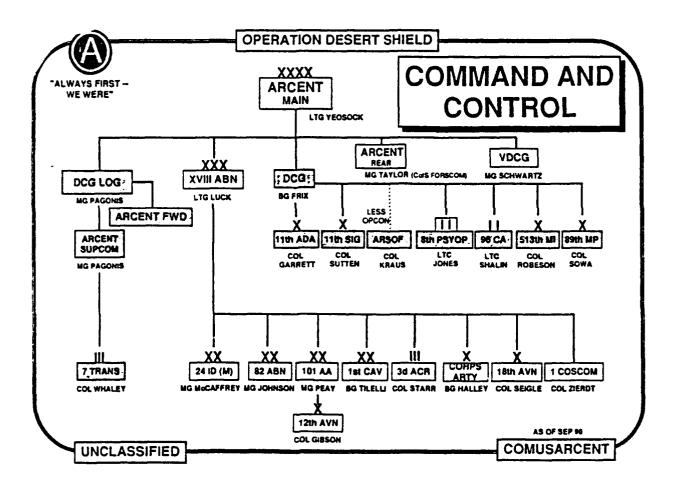


Figure 10. Third Army C2 Structure, September 1990. SOURCE: "DESERT SHIELD/DESERT STORM-The U.S. Army in the Gulf."

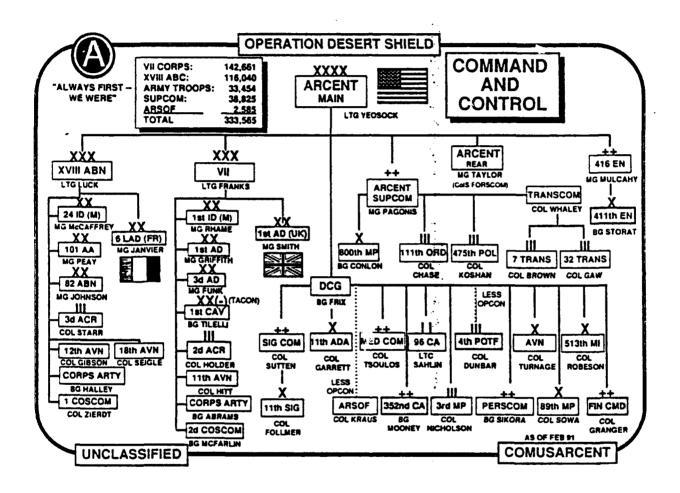


Figure 11. Third Army C2 Structure, February 1991. SOURCE: "DESERT SHIELD/DESERT STORM-The U.S. Army in the

Gulf."

#### **ENDNOTES**

U.S. Army, FM 100-1, The Army, (Washington, DC: Department of the Army (HQDA), 1991), 8.

2Ibid.

\*\*3U.S. Army, FM 100-5, Operations, (Washington, DC: HQDA, 1986), 186. FM 100-7 (DRAFT), The Army in Theater Operations, (Ft Monroe, VA: US Army Training and Doctrine Command (TRADOC), 1990), 3-11.

<sup>4</sup>FM 100-5, (1986), 185.

5U.S. Army, FC 100-16-1, Theater Army, Army Group, and Field Army Operations, (Ft Leavenworth, KS: US Army Combined Arms Combat Development Activity (CACDA), 1984), 1-2.

Sun Tzu, The Art of War, translated by Samuel B. Griffith, (New York, NY: Oxford University Press, 1971), 72.

7U.S. Army, "Syllabus," AMSP Course 1, Foundations of Military Theory, School of Advanced Military Studies (SAMS), (Ft. Leavenworth, KS: US Army CGSC, 1991), 1-1-1.

James J. Schneider, "Theory of the Empty Battlefield," Journal of the Royal United Services Institute (RUSI) (September, 1987): 37

\*William G. Scott and Terence R. Mitchell, <u>Organization</u>
<u>Theory</u>, (Homewood, ILL: Richard D. Irwin Publishers, 1976),
29.

'olbid, 1.

''Ibid.

Organization Structure, (New York, NY: American Management Association, 1952), 123.

Contemporary Introduction, (Englewood, NJ: Prentice-Hall, Inc., 1977), 17.

<sup>14</sup>FM 100-7 (draft), (1990), 5-13.

15Scott and Mitchell, Organization Theory, 324.

'SDale, <u>Planning and Developing the Company Organization</u> Structure, 125.

17Scott and Mitchell, 328.

'albid, 33. The scalar principle is one of the theoretical principles of organizational design. It states that authority and responsibility should flow in a clear chain of command from the highest to lowest manager. As an organization grows it refers to the change that occurs when levels are added to the command structure through the delegation of authority and responsibility.

'9Ibid, 34. The functional principle is also one of the theoretical principles of organizational design. It is sometimes called departmentation. Moreover, it refers to the growth of the organization's structure through the division of labor. As an organization grows departments may be added to an existing level within the structure and the organization's tasks or labor is divided among them.

20Dale, 38-41.

21 Carl von Clausewitz, On War, translated by Michael Howard and Peter Paret, (Princeton, NJ: Princeton University Press, 1976), 295.

22 Ibid.

23 Ibid.

24 Ibid.

25Martin van Creveld, <u>Command in War</u>, (Cambridge, MASS: Harvard University Press, 1985), 87.

26 Martin van Creveld, <u>The Transformation of War</u>, (New York, NY: The Free Press, 1991), 198.

<sup>27</sup>William F. Train, BG, USA, "The Atomic Challenge," Military Review 36 (November 1956), 4.

Organization and Tactics, American Expeditionary Force, July 1919.

Doctrine of Operational Art in U.S. Army: 1920-1940." Monograph, SAMS, (Ft. Leavenworth, KS: U.S. Army CGSC, 1988), 7.

³oIbid, 9.

Field Army, "Larger Units: Theater Army, Army Group, Field Army," Combat Studies Institute (CSI) Report No. 6, (Ft. Leavenworth, KS: Combat Studies Institute, 1985), 1-3.

During World War II, Army War College Thesis, (Carlisle Barracks, PA: U.S. Army War College, 1951), 1.

93"Larger Units", CSI Report No.6, A-1.

34U.S. Army, FM 100-15, Field Service Regulations-Larger Units, (Washington, DC: HQDA, 1942), 49.

The Organization of Ground Troops for Combat (Washington, DC: Office of the Chief of Military History, 1948), 353.

35FM 100-15, (1942), 51.

37"Larger Units," CSI Report No.6, 3-4,3-5.

\*\*Russell F. Weigley, <u>Eisenhower's Lieutenants</u>, (Bloomington, IN: Indiana University Press, 1981), 37-38.

as"Larger Units," 3-5.

<sup>40</sup>Ibid, 3-11. In addition to allowing First Army to concentrate on invasion preparation, the presence of another army in England contributed to the SHAEF deception plan. The second army headquarters would contribute to the idea that an army under Lieutenant General George Patton would land at the Pas de Calais, while a supporting force would land elsewhere in France.

<sup>41</sup>Greenfield, and Palmer, <u>Organization of Ground Troops</u>, 363. During the war all army headquarters were supplied by the AGF. First, Second, Third, and Fourth Armies were activated before the war. Fifth, Sixth, and Seventh Armies were activated overseas with troops provided by the AGF, while Eighth, Ninth, Tenth, and Fifteenth Armies were activated in the U.S. and deployed to overseas theaters.

<sup>42</sup>Forrest Pogue, <u>Supreme Command</u>, U.S. Army in World War II Series, (Washington, DC: Office of the Chief of Military History, 1951), 261. Weigley, <u>Eisenhower's Lieutenants</u>, 170.

43FM 100-15, (1942), 52.

44 Ibid.

<sup>45</sup>Weigley, <u>Eisenhower's Lieutenants</u>, 171-172. The Louisiana Maneuvers were conducted in 1941 to prepare the U.S. Army for the possibility of war. During the maneuvers,

force on force exercises were conducted between units up to army level from First, Second, Third, and Fourth Armies. The officer-in-charge was Lieutenant General Lesley McNair, Commander of the AGF, while the senior operations officer was Brigadier General Mark Clark.

46 Ibid, 182.

47 Ibid, 183.

<sup>48</sup>Pogue, <u>Supreme Command</u>, 261. Weigley, <u>Eisenhower's</u> <u>Lieutenants</u>, 175.

49 Ibid.

solbid, 263.

5'Greenfield and Palmer, <u>Organization of Ground Troops</u>, 362. The field army headquarters was used in combat in Sicily when Seventh Army fought as part of Operation HUSKY in July-August 1943.

521bid, 363.

\*\* Larger Units," 3-9, 3-13.

54 Ibid, 3-5.

Solve The Campaigns in the Pacific, (Washington, DC: Government Priniting Office, 1966), 30.

55 Ibid.

57 Ibid, 183.

59Ibid

se"Larger Units," 4-7.

50 Ibid, 4-19, 4-21.

Years, U.S. Army in World War II, Pacific Theater, (Washington, DC: OCMH, 1961), 242-243.

52 Ibid.

Signature of the Pacific, 391. "Larger Units," 4-7. Prior to Sixth Army's activation the major land force in the Pacific was the Australian Army under General Sir Thomas A. Blamey, who also served as the Commander Allied Land Forces, SWPA. After Sixth Army's

activation U.S. Army forces rarely operated under General Blamey's control but reported directly to General MacArthur.

\*\*Mendt,"Organization and Command Relationships," 13. US Army, "Larger Units," 4-9.

\*\*Wendt, 13-15.

55 Ibid.

57"Larger Units," 4-9.

SBIbid.

Field Army Operations: A Primer on Joint Operations."
Monograph, SAMS, (Ft. Leavenworth, KS: U.S. Army CGSC, 1986), 12.

70"Larger Units," 4-11.

71 Ibid.

Pattle Front, U.S. Army in World War II Series, (Washington, DC: OCMH, 1968), 448.

73Greenfield and Palmer, Organization of Ground Troops, 371. "Larger Units," 4-15.

74Byrd, "Command and Control Considerations for Field Army Operations," 17.

75Morton, Strategy and Command, 245.

75Archibald Galloway, "Operational Functions of A U.S. Army Contingency Headquarters--Do They Meet the Requirements for the Operational Level of War?" SAMS Monograph (Ft. Leavenworth, KS: U.S. Army CGSC, 1986), 21. Byrd, "Command and Control Considerations," 19.

77U.S. Joint Chiefs of Staff, Directive 1259/27, Subject: The Unified Command Plan, Washington, DC: Department of Defense, 1946.

79FM 100-15, (1950), 11.

79Ibid, 12.

Japan (Washington, DC: Government Printing Office, 1966), 82.

"William F. Sachs, "The U.S. Army Command and Control Structure in a Unified/Sub-unified Command." Student Thesis, US Army War College (Carlisle Barracks, PA: U.S. Army War College, 1969), 13-14.

eamLarger Units," 5-1.

93 Ibid. 5-2.

94 Sachs, "The U.S. Army Command and Control Structure," 16.

Yalu, (Washington, DC: OCMH, 1961), 109.

Lessons of Korea, (Boston, MASS: Houghton Mifflin Co., 1969), 89.

The Years of MacArthur, Volume III: 1945-1964 (New York, NY: Houghton Mifflin Co., 1985), 442-443.

\*\*Appleman, 104.

eelbid, 114.

90"Larger Units," 5-20.

<sup>9</sup> Appleman, 112.

92"Larger Units," 5-4.

53U.S. Army, <u>Table of Organization and Equipment (TOE)</u> 51-1, <u>Field Army</u> (Washington, DC: HQDA, 1950). Information on Eighth Army strength obtained from "Larger Units," 5-5.

94U.S. Army, "Staff Study on Service Support for Eighth U.S. Army Korea," U.S. Army Command and General Staff College Staff Study (Ft. Leavenworth, KS: U.S. Army CGSC, 1952), A-1.

95 Ibid, 21.

Washington, DC: OCMH, 1973), 70.

<sup>97</sup>James, <u>The Years of MacArthur</u>, 444.

<sup>98</sup>Appleman, 227.

991bid, 128.

100 James, The Years of MacArthur, Volume III, 445.

- 101FM 100-5 (1986), 6.
- (Ft. Monroe, VA: U.S. Army TRADOC, 1980), 89-91.
- 103U.S. Army, FM 100-5, Operations (Washington, DC: HQDA, 1976), 1-2. The last version of FM 100-15, Large Unit Operations was produced as a draft manual in 1974, subsequent editions became FM 100-15, Corps Operations.
- 104U.S. Army, <u>Echelons Above Division Study Report</u> (Ft. Leavenworth, KS: U.S. Army Combat Developments Command, 1970), 64 "Department of the Army Staff Analysis of the EAD Study." (Washington, DC: HQDA, 1973), 22. The EAD Study Report recommended eliminating corps or field army; The analysis by DA based highly on the role that corps had in central Europe decided to eliminate the field army.
  - 105FM 100-5 (1982), 2-2.
  - 106 Ibid.
  - 107FM 100-5 (1986), 12.
  - 108FM 100-7 (draft), i.
- (Washington, DC: HQDA, 1985), 2-2. FM 100-7 (draft), The Army in Theater Operations (Ft. Monroe, VA: U.S. Army TRADOC, 1990). 1-9, 2-5.
  - 110EAD Study, 64.
- 111 Memorandum from TRADOC to LTG Stone, Commander Combined Arms Center, December 1981.
- Place of Staff for Operations, U.S. Army, 1981. The interview was conducted by Major Tim A. Cardwell, U.S. Air Force for his research project, "Command Structure for Theater Warfare: The Quest for Unity of Command," (Maxwell, ALA: The Air University, 1984)
- John J. Yeosock, LTG, USA, "Army Operations in the Gulf Theater," Military Review (September 1991): 3.
  - ''4Ibid.
- "" Tom Donnely, "From the Top," Army Times (24 February 1992), 11.

- 115Richard Swain, COL, USA, "Desert Shielc 'Desert Storm Command and Control," briefing to SAMS 27 August 1991. Information was also provided by Major Richard Antala of the DESERTSHIELD/DESERT STORM History Project.
- "''Yeosock, "Army Operation in the Gulf Theater," 4.
  U.S. JCS, JCS Pub 3-0 (TEST) Doctrine for Unified and Joint Operations (Washington, DC: US JCS, 1990), III-1,3.
- Lessons Learned, Volume III (Ft Leavenworth, KS: Desert Storm Special Study Project, 1991), III-2.
  - 119Ibid, III-3.
  - 120 Ibid, III-9.
  - ¹≥¹Yeosock, 11.
  - <sup>122</sup>FM 100-16 (1985), 1-3. Yeosock, 10.
- Volumes I-III (Ft. Leavenwort, KS: Center for Army Lessons Learned (CALL), 1990), I-1, III-9. Very little EAC support was required for URGENT FURY (Grenada) due to the operation's size. Although corps did not play a major operational role in Vietnam, many EAC organizations operated under U.S. Army Vietnam (USARV) during the conflict.
  - 124Yeusock, 12.
- 125 DESERT SHIELD/DESERT STORM Lessons Learned, Volume III, III-3,4.
- 'asDonnely, "The General's War," <u>Army Times</u> (2 March 1992), 13. To meet its requirements during Operation DESERT SHIELD/DESERT STORM Third Army staff received augmentation from U.S. Army units outside the theater, the Battle Command Training Program (BCTP), and the U.S. Army Command and General Staff College.
- DESERT SHIELD/DESERT STORM," briefing, August, 1991.

  DESERT SHIELD/DESERT STORM Lessons Learned, Volume III, III-4.
  - 128Ibid.
- 129 DESERT SHIELD/DESERT STORM Lessons Learned, Volume III, III-4,5.
  - 130Yeosock, 12.
  - DESERT SHIELD/DESERT STORM Lessons Learned, III-5.

- 132Yeosock, 13-14.
- 133 DESERT SHIELD/DESERT STORM Lessons Learned, III-7.
- 134Yeosock, 2.
- 195This is based on comparison strength figures for Eighth Army in 1952, which approximated 250,000. Although the U.S. deployed almost 500,000 servicemen and women to Vietnam, the U.S. Army strength was only a portion of the total force. Furthermore, most units employed in Vietnam were of division size or smaller.
- 196Discussions with LTC Kevin Reynolds, Executive Officer 1st Brigade, 1st Cavalry Division, November 1991. LTC Reynolds was the Chief, G-3 Plans, Third Army Forward Command Post during Operation DESERT STORM.
- 137There were two principle options available for placing a field army in the operational chain of command. First, the field army could have reported directly to General Schwarzkopf who served as the LCC. This option, however, would have increased his span of control. Second, the field army could have been activated under Third Army. This alternative would add another link in the chain of command, thereby creating a longer command structure from the CINC to the corps commanders of the theater main effort.
  - 198Yeosock, 13.
- 199J.F.C. Fuller, <u>Armored Warfare</u> (Harrisburg, PA: The Military Service Publishing Co., 1951), xix.
- 140 Joint Chiefs of Staff, JCS Pub 2 Unified Action Armed Forces (UNAAF) (Washington, DC: U.S. JCS, 1986), 3-2.
- '4'Yeosock, 14. Also based on discussions with Major Antala of the Desert Shield/Desert Storm History Project.
- (Ft. Monroe, VA: U.S. Army TRADOC, 1991), 13.

## BIBLIOGRAPHY

### ARTICLES

- Cate, Paul E. "Large Unit Operational Doctrine." <u>Military</u>
  <u>Review</u> (December 1982): 3-10.
- Donnelly, Tom. "From the Top." <u>Army Times</u> (24 February 1992): 8-14.
- . "The General's War." <u>Army Times</u> (2 March 1992):
- Franz, Wallace P. "Grand Tactics." <u>Military Review</u> (December 1981): 32-39.
- Holder, L.D. "Training for the Operational Level." <u>Parameters</u> (Spring 1986): 7-13.
- Schneider, James J. "Theory of the Empty Battlefield." <u>Journal</u> of the Royal United Services Institute (September, 1987): 35-42.
- Stuckey, John E. "Echelons Above Corps." <u>Parameters</u> (December 1983): 39-47.
- Sutten, Charles G. "Command and Control at the Operational Level." <u>Parameters</u> (Winter 1986): 15-22.
- Train, William F. "The Atomic Challenge." <u>Military Review</u>
  November 1956: 3-8.
- Yeosock, John J. "Army Operations in the Gulf Theater." <u>Military</u> Review (September 1991): 2-15.

#### BOOKS

- Albers, Henry, H. <u>Principles of Organization and Management</u>. New York, NY: John Wiley and Sons, 1966.
- Appleman, Roy E. <u>U.S. Army in the Korean War: South to the Naktong, North to the Yalu</u>. Washington, DC: Office of the Chief of Military History, 1961.
- Blumenson, Martin. <u>Breakout and Pursuit</u>. Washington, DC: Office of the Chief of Military History, 1961.
- Brown, Alvin. The Armor of Organization. New York, NY: Hibbert Printing Co., 1953.

- Clausewitz, Carl von. On War. Translated by Michael Howard and Peter Paret. Priceton, NJ: Princeton University Press, 1976.
- Dale, Ernest. Planning and Developing the Company Organization Structure. New York, NY: American Management Association, 1952.
- Fuller, J.F.C. <u>Armored Warfare</u>. Harrisburg, PA: The Military Service Publishing Co., 1951.
- Garland, Albert and Howard Smyth. Sicily and the Surrender of Italy. Washington, DC: Office of the Chief of Military History, 1963.
- Greenfield, Kent R., Robert R. Palmer, et al. The Army Ground Forces: The Organization of Ground Combat Troops.

  Washington, DC: Office of the Chief of Military History, 1947.
- Hamilton, Sir Ian. <u>The Soul and Body of an Army</u>. New York, NY: George H. Doran Co., 1921.
- Harrison, Gordon, A. <u>Cross Channel Attack</u>. Washington, DC: Office of the Chief of Military History, 1951.
- Hermes, Walter G. <u>Truce Tent and Fighting Front</u>. Washington, DC: Office of the Chief of Military History, 1973.
- James, D. Clayton. <u>The Years of MacArthur, Volume III: 1945-1964</u>. New York, NY: Houghton Mifflin Co., 1985.
- MacArthur, Douglas. The Reports of MacArthur: The Campaigns in the Pacific. Washington, DC: Government Printing Office, 1966.
- Massie, Joseph L. and John Douglas. <u>Managing: A Contemporary Introduction</u>. Englewood, NJ: Prentice-Hall Inc., 1977.
- Mayo, Lida. The Ordnance Department: On the Beachhead and Battle Front. Washington, DC: Office of the Chief of Military History, 1968.
- Morton, Louis. <u>Strategy and Command: The First Two Years</u>. Washington, DC: Office of the Chief of Military History, 1961.
- Pogue, Forrest. <u>Supreme Command</u>. Washington, DC: Office of the Chief of Military History, 1947.
- Scott, William G. and Terence R. Mitchell. Organization Theory. Honewood, ILL: Richard D. Irwin, 1976.
- Tzu, Sun. <u>The Art of War</u>. Translated by Samuel B. Griffith. New York, NY: Oxford University Press, 1971.

- Van Creveld, Martin L. <u>Command in War</u>. Cambridge, Mass: Harvard University, Press, 1985
- . The Transformation of War. New York, NY: The Free Press, 1991.
- Weigley, Russell F. <u>Eisenhower's Lieutenants</u>. Bloomington, IN: Indiana University Press, 1981.

# GOVERNMENT PUBLICATIONS

- Moenk, Jean R. A History of Large-Scale Army Maneuvers in the United States: 1935-1864. Ft Monroe, VA: HQ Continental Army Command (CONARC), 1964.
- Romjue, John R. A History of Army 86, Volume II. Ft Monroe, VA: HQ, TRADOC, 1980.
- U.S. Joint Chiefs of Staff. <u>Joint Publication 1, Joint Warfare of U.S. Armed Forces</u>. Washington, DC: National Defense University Press, 1991.
- U.S. Joint Chiefs of Staff. <u>JCS Publication 0-2, Unified Action</u>
  <u>for the Armed Forces</u>. Washington, DC: Joint Chiefs of Staff, 1986.
- U.S. Joint Chiefs of Staff. <u>JCS Publication 3-0, Doctrine for Unified and Joint Operations</u>. Washington, DC: The Joint Chiefs of Staff, 1990.
- U.S. Army. Army Command and Control Master Plan, Volume I. Ft Leavenworth, KS: U.S. Army Combined Arms Combat Development Activity, 1985.
- U.S. Army. "Department of The Army Staff Analysis of the EAD Study." Washington, DC: Department of the Army, 1973.
- U.S. Army. <u>Echelons Above Corps Study Report</u>. Fort Leavenworth, KS: U.S. Army Combined Arms Combat Development Activity, 1980.
- U.S. Army. <u>Echelons Above Division Study Report</u>. Fort Leavenworth, KS: U.S. Army Combat Developments Command, 1970.
- U.S. Army. "Larger Units: Theater Army, Army Group, Field Army." CSI Report # 6. Ft. Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College.
- U.S. Army. Operation DESERT SHIELD/DESERT STORM Lessons Learned Volume III. Ft. Leavenworth, KS: The Desert Storm Special Study Project, 1991.

- U.S. Army. FC 100-16-1, Theater Army, Army Group, and Field Army Operations. Fort Leavenworth, KS: U.S. Army Combined Arms Combat Developments Activity (CACDA), 1984.
- U.S. Army. FM 100-1, The Army. Washington, DC: Department of the Army, 1991.
- U.S. Army. FM 100-5, Field Service Regulations, Operations. Washington, DC: Department of the Army, 1941.
- U.S. Army. FM 100-5, Operations. Washington, DC: Department of the Army, 1986.
- U.S. Army. FM 100-6, Large Unit Operations (Coordinating Draft). Fort Leavenworth, KS: U.S. Army CGSC, 1987.
- U.S. Army. FM 100-7 (draft), The Army in Theater Operations. Fort Monroe VA: U.S. Army Training and Doctrine Command (TRADOC), 1990.
- U.S. Army. FM 100-15, Field Service Regulations, Larger Units. Washington, DC: Department of the Army, 1942.
- U.S. Army. FM 100-15, Field Service Regulations, Larger Units. Washington, DC: Department of the Army, 1950.
- U.S. Army. FM 100-15, Larger Unit Operations (TEST). Washington, DC: Department of the Army, 1974.
- U.S. Army. TRADOC Pamphlet 525-5, AirLand Operations. Ft. Morroe, VA: U.S. Army TRADOC, 1991.

## UNPUBLISHED DISSERTATIONS, THESES, AND PAPERS

- Byrd, Diane E. "Command and Control Considerations for Field Army Operations: A Primer on Joint Operations." Monograph, School of Advanced Military Studies (SAMS), U.S. Army Command and General Staff College (CGSC), 1986.
- Cardwell, Tim A. "Command Structure for Theater Warfare: The Quest for Unity of Command." Maxwell Air Force Base, ALA: The Air University, 1984.
- Crosbie, Phillip A. "Command and Control of Rear Operations at Echelons Above Corps (Theater Army)." Monograph, SAMS, U.S. Army CGSC, 1987.
- Cushman, John H. "Command and Control of Theater Forces: The Korea Command and Other Cases." Cambridge, MASS: Harvard University Press, 1987.

- Ellison, John S. "Determining the Need for a Unified Command Army Service Component in PACOM." Thesis, Master of Military Art and Science, U.S. Army CGSC, 1978.
- Galloway, Archibald. "Operational Functions of U.S. Army Contingency Headquarters--Do They Meet the Requirements for the Operational Level of War?" Monograph, SAMS, U.S. Army CGSC, 1986.
- Johnson, Robert. "Intermediate Headquarters." Research Paper, University of Kansas, 1991.
- Matheny, Michael R. "Development of the Theory and Doctrine of Operational Art in the U.S. Army, 1920-1940." Monograph, SAMS, U.S. Army CGSC, 1988.
- Sachs, William H. "The U.S. Army Command and Control Structure in a Unified/Sub-unified Command." Student Thesis, U.S. Army War College, 1969.
- Sandoy, Andrew S. "The Land Component Commander: Is One Required?" Monograph, SAMS, U.S. Army CGSC, 1990.
- Thompson, Michael R. "Do We Practice What We Preach? Recent Exercises and the Operational Art." Monograph, SAMS, U.S. Army CGSC, 1990.
- Wendt, Willam R. "Organization and Command Relationships During World War II." Norfolk, VA: U.S. Armed Forces Staff College, 1951.

# BRIEFINGS AND INTERVIEWS

- Reynolds, Kevin P. LTC, USA. Executive Officer, 1st Brigade, 1st Cavalry Division, Fort Hood Texas. Interview conducted at Ft. Leavenworth, Kansas, November 3, 1991.
- Swain, Richard COL, USA. "Desert Shield/Desert Storm Command and Control." The briefing was given to the School of Advanced Military Studies 27 August 1991.