

# REPORT DOCUMENTATION PAGE

Form Approved  
GSA No. 670-0100

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Service, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (6704-0100), Washington, DC 20503.

<b>1. AGENCY USE ONLY (Leave Blank)</b>		<b>2. REPORT DATE</b>	<b>3. REPORT TYPE AND DATES COVERED</b> <b>MONOGRAPH</b>	
<b>4. TITLE AND SUBTITLE</b> Joint Publication 3-0 and the Tension between the Attainment of Strategic and Tactical Objectives			<b>5. FUNDING NUMBERS</b>	
<b>6. AUTHOR(S)</b>  John W. Washburn				
<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> School of Advanced Military Studies Command and General Staff College Fort Leavenworth, Kansas 66027			<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>	
<b>9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b> Command and General Staff College Fort Leavenworth, Kansas 66027			<b>10. SPONSORING / MONITORING AGENCY REPORT NUMBER</b>	
<b>11. SUPPLEMENTARY NOTES</b>				
<b>12a. DISTRIBUTION / AVAILABILITY STATEMENT</b>  APPROVED FOR PUBLIC RELEASE DISTRIBUTION UNLIMITED.			<b>12b. DISTRIBUTION CODE</b>	
<b>13. ABSTRACT (Maximum 200 words)</b>  SEE ATTACHED				
<b>14. SUBJECT TERMS</b>			<b>15. NUMBER OF PAGES</b>  47	
			<b>16. PRICE CODE</b>	
<b>17. SECURITY CLASSIFICATION OF REPORT</b>  UNCLASSIFIED	<b>18. SECURITY CLASSIFICATION OF THIS PAGE</b>  UNCLASSIFIED	<b>19. SECURITY CLASSIFICATION OF ABSTRACT</b>  UNCLASSIFIED	<b>20. LIMITATION OF ABSTRACT</b>  UNLIMITED	

20020419 158

## ABSTRACT

JOINT PUBLICATION 3-0 AND THE TENSION BETWEEN THE ATTAINMENT OF STRATEGIC AND TACTICAL OBJECTIVES by MAJOR John W. Washburn, Armor, 47 pages.

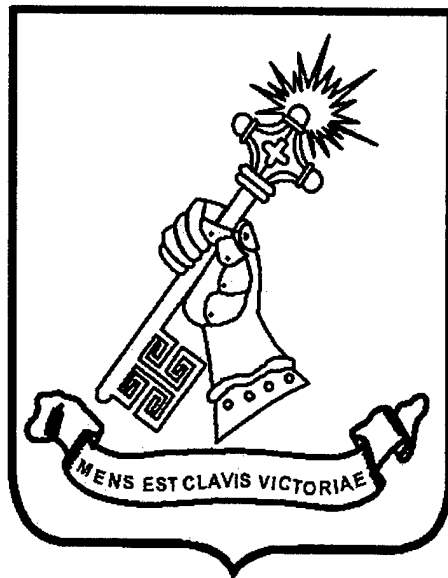
History provides many examples of tension between operational and tactical commanders. Not all of these conflicts can be dismissed as matters of personality or competency. An alternative explanation is that the distinct perspectives of those commanders so affected their views of a given operation or campaign that they were inevitably drawn into conflict over how to proceed. According to military theorist Shimon Naveh, this tension is natural. The tactical commander will inevitably focus on the achievement of his tactical objectives with less regard to the achievement of strategic objectives. Similarly, the operational commander will focus on the achievement of strategic objectives with less regard to the achievement of tactical objectives. This monograph explores this tension with respect to current U.S. Armed Forces doctrine.

The monograph initially examines the writings of two theorists: Ludwig von Bertalanffy and Shimon Naveh in order to describe this cognitive tension that arises between the attainment of strategic and tactical objectives. This segment establishes the theoretical basis for the remainder of the monograph. The monograph then examines a historical example with the purpose of providing concrete examples of cognitive tension and practical examples of how a commander can resolve it. The monograph explores the operations conducted on Luzon in 1945 by Allied Forces, Southwest Pacific Area that resulted in the defeat of the Japanese 14<sup>th</sup> Area Army and its supporting forces. This examination focuses on the interaction between the American operational commander, General Douglas MacArthur, and the primary ground tactical commander, Lieutenant General Walter Krueger, with respect to cognitive tension. The final section of the monograph evaluates the effectiveness of Joint Publication 3-0 *Doctrine for Joint Operations* in regards to cognitive tension and provides recommendations for its revision.

This study recommends that the Joint Staff revise Joint Publication 3-0 based on the theories of Shimon Naveh with respect to the tension that arises between the attainment of strategic and tactical objectives. This study further recommends that this revision include critical supporting concepts from Naveh's writings to include the identification of where the tension resides, the identification of who is responsible for its resolution and the identification of how that commander ultimately resolves it. Finally, the study recommends that the changes to Joint Publication 3-0 also include practical examples of the resolution of cognitive tension, which Naveh's writings do not provide but well-chosen historical examples could.

**Joint Publication 3-0 and the Tension Between the Attainment of  
Strategic and Tactical Objectives**

**MONOGRAPH**  
**BY**  
**Major John W. Washburn**  
United States Army



**SCHOOL OF ADVANCED MILITARY STUDIES**  
**UNITED STATES ARMY COMMAND AND GENERAL STAFF COLLEGE**  
**FORT LEAVENWORTH, KANSAS**

**Academic Year 2000-2001**

Approved for Public Release Distribution is Unlimited

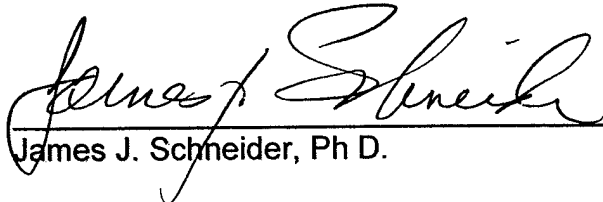
SCHOOL OF ADVANCED MILITARY STUDIES

MONOGRAPH APPROVAL

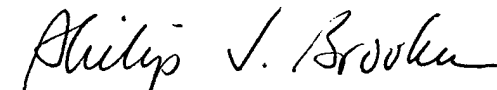
Major John W. Washburn

Title of Monograph: Joint Publication 3-0 and the Tension Between the  
Attainment of Strategic and Tactical Objectives

Approved by:

  
\_\_\_\_\_  
James J. Schneider, Ph D. Monograph Director

  
\_\_\_\_\_  
Robert H. Berlin, Ph.D. Professor and Director Academic  
Affairs, School of Advanced  
Military Studies

  
\_\_\_\_\_  
Philip J. Brookes, Ph.D. Director, Graduate Degree  
Program

Accepted this 15th Day of May 2001

## ABSTRACT

JOINT PUBLICATION 3-0 AND THE TENSION BETWEEN THE ATTAINMENT OF STRATEGIC AND TACTICAL OBJECTIVES by MAJOR John W. Washburn, Armor, 47 pages.

History provides many examples of tension between operational and tactical commanders. Not all of these conflicts can be dismissed as matters of personality or competency. An alternative explanation is that the distinct perspectives of those commanders so affected their views of a given operation or campaign that they were inevitably drawn into conflict over how to proceed. According to military theorist Shimon Naveh, this tension is natural. The tactical commander will inevitably focus on the achievement of his tactical objectives with less regard to the achievement of strategic objectives. Similarly, the operational commander will focus on the achievement of strategic objectives with less regard to the achievement of tactical objectives. This monograph explores this tension with respect to current U.S. Armed Forces doctrine.

The monograph initially examines the writings of two theorists: Ludwig von Bertalanffy and Shimon Naveh in order to describe this cognitive tension that arises between the attainment of strategic and tactical objectives. This segment establishes the theoretical basis for the remainder of the monograph. The monograph then examines a historical example with the purpose of providing concrete examples of cognitive tension and practical examples of how a commander can resolve it. The monograph explores the operations conducted on Luzon in 1945 by Allied Forces, Southwest Pacific Area that resulted in the defeat of the Japanese 14<sup>th</sup> Area Army and its supporting forces. This examination focuses on the interaction between the American operational commander, General Douglas MacArthur, and the primary ground tactical commander, Lieutenant General Walter Krueger, with respect to cognitive tension. The final section of the monograph evaluates the effectiveness of Joint Publication 3-0 *Doctrine for Joint Operations* in regards to cognitive tension and provides recommendations for its revision.

This study recommends that the Joint Staff revise Joint Publication 3-0 based on the theories of Shimon Naveh with respect to the tension that arises between the attainment of strategic and tactical objectives. This study further recommends that this revision include critical supporting concepts from Naveh's writings to include the identification of where the tension resides, the identification of who is responsible for its resolution and the identification of how that commander ultimately resolves it. Finally, the study recommends that the changes to Joint Publication 3-0 also include practical examples of the resolution of cognitive tension, which Naveh's writings do not provide but well-chosen historical examples could.

## TABLE OF CONTENTS

Section I		
	INTRODUCTION.....	PAGE 1
Section II		
	THE LEVELS OF WAR.....	PAGE 5
	WAR AS A SYSTEM.....	PAGE 6
	COGNITIVE TENSION.....	PAGE 7
Section III		
	THE CAMPAIGN PLAN.....	PAGE 10
	THE OPERATIONAL AND TACTICAL COMMANDERS.....	PAGE 11
	THE OPERATIONAL AND TACTICAL PLANS.....	PAGE 13
	THE 14 <sup>TH</sup> AREA ARMY DEFENSIVE PLANS.....	PAGE 15
	LINGAYEN GULF TO CLARK FIELD.....	PAGE 18
	CLARK FIELD TO MANILA.....	PAGE 22
	NEW SWPA PRIORITIES.....	PAGE 25
	THE OUTCOME.....	PAGE 26
	COGNITIVE TENSION AND THE LUZON OPERATION.....	PAGE 29
Section IV		
	ADDRESSING COGNITIVE TENSION.....	PAGE 33
	U.S. DOCTRINE AND THE OPERATIONAL LEVEL OF WAR.....	PAGE 34
	CONFLICT BETWEEN OBJECTIVES.....	PAGE 35
	RESOLVING CONFLICT BETWEEN OBJECTIVES.....	PAGE 37
	DOCTRINE'S COVERAGE OF COGNITIVE TENSION.....	PAGE 40
	CONCLUSION .....	PAGE 40
	BIBLIOGRAPHY.....	PAGE 46

## SECTION I

### INTRODUCTION

The concept of integrating land, sea, air and special purpose forces is the cornerstone of U.S. Armed Forces doctrine.<sup>1</sup> In order to achieve this integration, however, the operational commander and his tactical commanders must work together very closely. Although it is the overall responsibility of the operational commander to achieve this integration of forces, his tactical commanders must complete three critical tasks in support of this integration. Firstly, tactical commanders must complete their own missions in support of the operational commander's plan. Secondly, they must fully integrate their forces based on a solid understanding of their role within the overall plan. Thirdly, they must provide support to and receive support from the other parts of the joint force in accordance with the commander's plan.<sup>2</sup> Ultimately, these three contributions, under the direction of the operational commander, create the integration of land, sea, air and special purpose forces.

The second and third tasks described above are the most problematic for tactical commanders. These tasks require from the tactical commanders the discipline to subordinate the needs of certain tactical units or missions to allow for the success of others or to subordinate the needs of certain tactical units or missions for the greater operational good. These sacrifices have the capacity to bring operational and tactical commanders into conflict.

History provides several examples of operational and tactical commanders in conflict over this notion of subordinating tactical expediency to operational requirements. During World War II, General Dwight Eisenhower and General Bernard Montgomery argued

constantly over how to prosecute the campaigns to liberate Europe. Montgomery consistently criticized Eisenhower's decisions and fought any decisions that reduced the assets of his tactical unit or subordinated the needs of his unit to any other.<sup>3</sup> More recently, during the Persian Gulf War, General Norman Schwarzkopf and Lieutenant General Frederick Franks were in conflict in the closing hours of Operation Desert Storm. Schwarzkopf criticized Franks for not attacking vigorously enough towards his operational objective.<sup>4</sup> In his defense, Franks wrote that he was focused on his tactical operations and that Schwarzkopf ought to have been more direct about what he wanted the VII Corps to accomplish.<sup>5</sup> Clearly, this dynamic is not new and it still exists today.

The simplest explanation for these conflicts would be to categorize them as matters of competency. One or the other commander in these examples was wrong. That commander was guilty of poor judgment or, even worse, incompetence. This is one viable explanation. Consider, however, that these men were professionals who all had many years of military experience. Additionally, all of these commanders were successful. If one judges these commanders to have been competent, then one must consider an alternative explanation for these conflicts.

Another simple explanation for these disagreements would be to dismiss them as personality conflicts. This explanation would account for the passionate nature of the disagreements between these commanders, but would not account for the substance of what they disagreed about. Although in each example, the operational and tactical commanders were very different men, the root cause of each conflict was a disagreement over how to conduct military operations and not a disagreement over their dissimilar personalities.

What is common to both examples is that each conflict included commanders with different levels of responsibility, with one commander focused at the operational level of war and the other focused at the tactical level of war. An alternative explanation for the conflicts between these commanders could be that they were somehow related to the distinct operational or tactical perspective of each of those commanders.

Eisenhower and Schwarzkopf may have focused on operational success to the detriment of actions conducted at the tactical level of war. Responsible for the achievement of strategic objectives through the conduct of major operations and campaigns, these commanders may have sacrificed tactical expediency for operational necessity. In contrast, Montgomery and Franks may have focused on tactical success to the detriment of the larger, operational issues. These commanders may have had little regard for anything but the defeat of enemy forces at the least cost to their own forces.

To explore these examples further is beyond the scope of the monograph, but the question of whether the current U.S. Armed Forces doctrine addresses this issue of perspective is central to the monograph.

Shimon Naveh, a lecturer in the Department of History at Tel Aviv University and a Senior Fellow of the Cummings Center for Russian and East European Studies, addresses this issue of perspective in his book, *In Pursuit of Military Excellence*, in his discussion of what he calls “cognitive tension.” Naveh defines cognitive tension as, “The universal dynamism that results from the inevitable tension between the tactical objective, which orients [on] fighting formations at any level, and the operational or strategic aim, which directs the [military] system as a whole.”<sup>6</sup> This concept of cognitive tension accounts for the different perspectives of the operational and tactical commanders and provides the

basis for the monograph's evaluation of the current U.S. Armed Forces doctrine's coverage of this issue.

The purpose of the monograph is twofold. Its first purpose is to provide a better understanding of the tension between the attainment of strategic and tactical objectives. Its second purpose is to evaluate the current U.S. Armed Forces doctrine with respect to this tension. The thesis argued in the monograph is that the keystone Armed Forces doctrinal publication, Joint Publication 3-0 *Doctrine for Joint Operations*, needs to be revised to acknowledge the tension between the attainment of strategic and tactical objectives.

This monograph consists of this section and three following sections. The second section of the monograph establishes the theoretical basis for the remainder of the paper. It examines the relevant works of two theorists, Ludwig von Bertalanffy and Shimon Naveh, in order to describe the concept of cognitive tension. The monograph's third section explores the conduct of the Luzon operation in 1945 by Allied Forces, Southwest Pacific Area. The purpose of this historical examination is to provide concrete examples of cognitive tension and to provide examples of how the tension was resolved. The fourth section of the monograph evaluates the effectiveness of the Armed Forces' current doctrine with respect to cognitive tension and provides recommendations based on the evidence presented in all four sections of the monograph.

## SECTION II

### THE LEVELS OF WAR

The doctrine of the Armed Forces of the United States recognizes three levels of war: strategic, operational and tactical. Joint Publication 3-0 *Doctrine for Joint Operations* (JP 3-0) describes the strategic level of war as residing at the national level and composed of the development of security objectives and the development and use of national resources to accomplish those objectives.<sup>7</sup> JP 3-0 describes the tactical level of war as the domain of units in combat, which includes their ordered arrangement and the conduct of engagements and battles.<sup>8</sup> JP 3-0 describes the operational level of war as the bridge between the strategic and the tactical levels of war.

Shimon Naveh also discusses the levels of war in his book, *In Pursuit of Military Excellence*. This volume is a work of immense scope in which the author traces the historical development of operational thought from the 19th Century through Operation Desert Storm. The purpose of the book's first chapter is to identify the unique aspects of the operational level of war. It is this discussion that is relevant to the monograph.

Naveh does not view the operational level of war as a mere bridge between the strategic and tactical levels of war. Instead, Naveh argues that the strategic level of war is abstract, cognitive and focused on broad objectives, while the focus of the tactical level of war is on mechanical action. The operational level of war is unique in that it must blend elements of both the strategic and tactical levels of war. The operational commander must translate broad strategic objectives into tactical missions and objectives. This, Naveh argues, is a cognitive function similar to the one performed at the strategic level of war. To attain its objectives, however, the operational-level headquarters must

use mechanical actions in the form of planning and conducting campaigns and operations. These actions are similar to the mechanical actions performed at the tactical level of war.<sup>9</sup>

## WAR AS A SYSTEM

Central to Naveh's discussion of the operational level of war is his supposition that the operational level of war constitutes a military system. Naveh bases this supposition on the theories in Ludwig von Bertalanffy's book, *General Systems Theory*. In this book, Bertalanffy argues that the General Systems Theory can be applied to a wide range of activities including science, industry and the military to solve complex problems with large numbers of variables.<sup>10</sup>

Bertalanffy's General Systems Theory is the theory of wholeness.<sup>11</sup> Systems consist of interacting sub-systems. The sub-systems have two roles within the larger system. Firstly, the sub-systems achieve subordinate functions that move the system towards the achievement of its overall objective. Secondly, the sub-systems interact with the other sub-systems. This interaction enhances the ability of all of the sub-systems to achieve their subordinate functions thus enhancing the overall system's ability to achieve its objective. Consequently, the progress of the system is primarily based on the interaction of the sub-systems and secondarily based on the sub-systems achieving their respective subordinate functions. In essence, the system's whole is greater than the sum of its parts.<sup>12</sup>

The progress of the system is, however, dependent on the system transitioning from its whole to its sub-systems. This equates to increasing the link between the sub-systems and their individual functions.<sup>13</sup> Although necessary for the progress of the system, the

increased link between sub-systems and their functions can reduce the progress of the system by making the system less resilient and increasing the likelihood that the sub-systems will decrease their interaction. This creates a duality in which the system must transition to its sub-systems while retaining its wholeness in order to progress.<sup>14</sup>

In applying the General Systems Theory, Naveh argues that the operational level of war is a military system whose goal is to achieve strategic objectives.<sup>15</sup> The sub-systems of the operational level of war are subordinate tactical organizations.<sup>16</sup> In accordance with the General Systems Theory, the military system must transition to its subordinate systems by allowing the tactical organizations to perform their individual functions. This requires the tactical organizations to perform the tactical missions assigned to them by the operational commander. The duality of the General Systems Theory, however, supposes that this transition will lead to the tactical organizations becoming fixed with respect to their assigned tactical missions. This tendency equates to tactical headquarters viewing their assigned tasks as ends unto themselves.<sup>17</sup>

This fixation with respect to tactical missions simply equates to tactical commanders optimizing the conduct of their tactical engagements with the purpose of securing tactical objectives. In doing so, however, tactical commanders risk losing focus on their role in the overall success of the military system in attainment of its strategic objectives.

## **COGNITIVE TENSION**

As previously noted, Naveh coins the term “cognitive tension” to describe this conflict between the attainment of tactical and strategic objectives. This cognitive tension must be resolved if the entire system is going to continue towards the accomplishment of its strategic objectives. Additionally, it must be resolved where it

inevitably resides: at the nexus of the abstract and the mechanical.<sup>18</sup> Consequently, it falls on the operational commander to resolve cognitive tension.

The operational commander prevents this natural entropy through maintaining cognitive unity of aim throughout the system. Aim provides the system its direction, provides the focus for the sub-systems and establishes the framework in which sub-systems will interact.<sup>19</sup> Aim is the system's unifying force. For the operational level of war, strategic objectives form the basis of aim. In order to make these abstract objectives useful to the military system, the operational commander translates them into concrete tactical missions for subordinate tactical organizations. The operational commander maintains cognitive unity of aim through ensuring that tactical commanders understand that any tactical mission, be it air superiority, maritime exclusion, seizure of an objective or destruction of an enemy force is only relevant in that it moves the entire system towards the attainment of strategic objectives.<sup>20</sup>

Expanding on Naveh's abstract concept of cognitive tension, there are two ways in which cognitive tension will arise. It may arise if the tactical commander places the achievement of tactical objectives over the achievement of operational or strategic objectives. This could include a tactical commander assigning too many resources towards the accomplishment of a tactical objective, expending too many resources on the accomplishment of a tactical objective or delaying the achievement of an operational objective in lieu of the early achievement of a tactical objective. Alternatively, it may arise if the operational commander forces a tactical commander to compromise the attainment of a tactical objective in order to secure an operational or strategic objective. This could include the operational commander diverting forces from the attainment of a

tactical objective or delaying the attainment of a tactical objective with the purpose of securing an operational or strategic objective.

The tactical commander may have compelling reasons for resisting the operational commander when cognitive tension arises. Based on the diversion of forces from a tactical mission, he may be accepting considerable tactical risk. If, as a result of this diversion of forces, he is defeated, the securing of operational or strategic objectives may be delayed even further. Additionally, if the operational commander delays the securing of a tactical objective, the tactical commander may miss an opportunity for early success or allow time for the enemy force to develop tactical countermeasures. This may result in the tactical objective being harder or more costly to obtain than it otherwise would have been.

The operational commander, however, has even more compelling reasons for maintaining cognitive unity. The outcome associated with allowing the tactical commanders to focus on their tactical missions without regard to the larger system would be an increasingly random series of tactical engagements. Although these engagements would be tactically expedient, they would ultimately fail to move the entire system towards the accomplishment of its strategic objectives.<sup>21</sup>

The purpose of this examination of cognitive tension has been threefold. Firstly, it defined cognitive tension. Secondly, it identified where cognitive tension resides and that it is the responsibility of the operational commander to resolve it with the purpose of allowing the military system to move towards the accomplishment of its strategic objectives. Thirdly, it provides the theoretical basis for a historical examination of cognitive tension.

## SECTION III

Forces of Southwest Pacific, covered and supported by the Third Fleet, the 20th and the 14th Air Forces, will, following King II and Love III Operations, seize and occupy Luzon, by overseas operations to seize a beachhead in Lingayen Gulf and thence by overland operations to destroy hostile forces and seize the Central-Plains-Manila area, continuing operations to complete the conquest of the entire island, all for the purpose of establishing bases to support future operations and to reestablish the Philippine Government.<sup>22</sup>

GHQ SWPA Operations Instruction No. 73

### THE CAMPAIGN PLAN

On 3 October 1944, the U.S. Joint Chiefs of Staff directed the Commander of Allied Forces, Southwest Pacific Area (SWPA), General Douglas MacArthur, to seize the island of Luzon. Strategically, there were three principal reasons behind this decision. Firstly, the seizure of Luzon would allow American forces operating from Luzon to cut the sea lines of communications from the Japanese home islands to the resource rich areas of Southeast Asia and the Dutch East Indies. Secondly, Luzon was far enough north to provide bases from which B-29 squadrons could bomb the Japanese homeland. Thirdly, for reasons of national prestige, the recapture of Luzon would signal to the people of the Far East that despite being defeated there in 1942, the United States would honor its obligations to the Philippines.<sup>23</sup>

The seizure of Luzon would constitute the second phase of a three-phase campaign to liberate the Philippines. The first phase would consist of the seizure of the island of Leyte and the building of supply and air bases that would be used to support the Luzon operation. During the third phase of the campaign, the SWPA forces would secure the previously bypassed islands of the Philippines archipelago.<sup>24</sup>

MacArthur initiated the Leyte operation on October 17, 1944. Although operations on Leyte resulted in an American victory, it was a source of some disappointment for MacArthur. MacArthur felt that Lieutenant General Walter Krueger, the commander of the U.S. Sixth Army, had been too cautious in conducting operations on Leyte and largely blamed him for the operation taking longer than expected.<sup>25</sup> Additionally, the SWPA staff had overestimated Leyte's utility as both a supply and air base. Ultimately, the problems on Leyte forced MacArthur to delay the start date of the Luzon operation from 20 December 1944 until 9 January 1945. It also forced MacArthur to replace the Sixth Army with the Eighth Army on Leyte in December in order to allow the commander and staff of the Sixth Army to focus on the upcoming Luzon operation.<sup>26</sup>

For their part, the Japanese had placed a premium on the retention of Leyte and, consequently, the U.S. Navy and Army had dealt them two severe setbacks. The first was the Japanese Imperial Navy's decisive defeat at the Battle of Leyte Gulf. The second setback was the loss of many of the Japanese 14th Area Army's best formations at the hands of the American Sixth Army on Leyte. The constant reinforcement of the Leyte garrison had stripped Luzon of many of its best defenders and had disrupted the 14th Area Army's defensive preparations on Luzon.<sup>27</sup>

## **THE OPERATIONAL AND TACTICAL COMMANDERS**

The operational commander and the principal ground tactical commander for the upcoming Luzon operation had known each other for forty years but were vastly different men. General MacArthur came from a prominent military family and was aristocratic, eccentric, brilliant, and daring. Lieutenant General Krueger was a German immigrant and was stubborn, unpolished, competent, and tactically conservative. MacArthur had

started his career as the top graduate from West Point in 1903. In contrast, Krueger had joined the Army as a private in 1898 in order to fight in the Spanish American War.

Although the Army had promoted MacArthur more quickly than Krueger, the two men would share many of the same military experiences through the end of the First World War. MacArthur and Krueger had first crossed paths as lieutenants in 1903 while stationed in the Philippines. In 1909, the young officers met again while serving on the faculty of the General Service Schools at Fort Leavenworth.<sup>28</sup> Both officers later distinguished themselves in the American Expeditionary Force during World War I.

Between the First and Second World Wars, the two men worked together only once. After World War I, Krueger taught at the Naval War College where he gained expertise in the conduct of naval operations and then commanded an infantry regiment whereas MacArthur went on to serve as West Point's Superintendent. Later, MacArthur, as the Army's Chief of Staff, had Krueger assigned to the Army Staff as the Chief of the War Plans Division. Subsequently, MacArthur went to the Philippines as a military advisor and Krueger went on to distinguish himself as the commander of the Third Army during the 1941 General Headquarters Maneuvers.<sup>29</sup>

Other qualifications aside, both Krueger and the Army's Chief of Staff, General George Marshall, were surprised when MacArthur requested that Krueger be assigned to Allied Forces, SWPA to command a field army in 1943. Krueger had not commanded in combat and was considered by many to be too old for a field command. MacArthur, however, needed an American general who was an able tactician and knowledgeable of naval operations. In Walter Krueger he got both.<sup>30</sup>

At the time of the Luzon operation, MacArthur and Krueger had been fighting together for over a year. In the course of that year, the two commanders had collaborated on major military operations on New Guinea and Leyte and, in spite of their differences, had developed a degree of mutual trust and respect.

## **THE OPERATIONAL AND TACTICAL PLANS**

On 12 October 1944, General Headquarters Southwest Pacific Area (GHQ SWPA) issued Operations Instructions Number 73 detailing its concept for the reconquest of Luzon. GHQ SWPA envisioned a three-phased operation. The first would be an amphibious assault in the Lingayen Gulf area. The second phase would be the seizure of Luzon's central plain and Manila. The final phase would consist of the destruction of the remaining Japanese forces on Luzon and the completion of the island's occupation.<sup>31</sup>

GHQ SWPA was able to muster strong naval forces to support the amphibious assault. GHQ SWPA would employ its organic naval forces, which consisted of Vice Admiral Thomas Kinkaid's Seventh Fleet and Vice Admiral Daniel Barbey's VII Amphibious Force. Based on the scope of the operation, however, these forces would not be robust enough to meet all of the naval commitments. Accordingly, Admiral Chester Nimitz, Pacific Oceans Area Command (POAC), made available to GHQ SWPA elements of Admiral Bull Halsey's Third Fleet including Rear Admiral Theodore Wilkenson's III Amphibious Force.<sup>32</sup> Consequently, Kinkaid would command the naval forces conducting or directly supporting the amphibious assault; this would include Wilkenson's III Amphibious Force whose addition would allow Kinkaid to land two Army corps simultaneously during the amphibious assault. Halsey would remain under POAC control and would command the remaining Third Fleet elements, which would

protect invasion force from significant air and naval threats originating from Japan, the Chinese coast, Formosa or Southeast Asia.

Admiral Kinkaid's escort carriers would provide air support during the first phase of the operation and Lieutenant General George Kenney's Allied Air Forces, SWPA would provide air support throughout the operation. During the first phase of the operation, Kenney would provide support with fighters and bombers flying from the islands of Mindora and Leyte, respectively. During phase two of the operation, Allied Air Forces would provide support from airfields in the Lingayen area. Allied Air Forces would subsequently provide support from Clark Field and other airfields in Luzon as the Sixth Army secured them.<sup>33</sup>

Army forces immediately available to Sixth Army for the conduct of the Luzon operation were limited. This was especially true considering that the Sixth Army expected to be opposed initially by two infantry divisions in the Lingayen area and further expected a divisional-sized counterattack force.<sup>34</sup> Most of the SWPA ground forces were, however, tied up in Australia, New Guinea or Leyte. This left only Major General Innis Swift's I Corps and Major General Oscar Griswold's XIV Corps headquarters, five infantry divisions, a separate regimental combat team (RCT), an armored group and supporting service forces initially available. GHQ SWPA would, however, be able to release additional forces to Sixth Army control as they were freed from other commitments throughout the theater.

The Sixth Army staff developed invasion plans from its headquarters in New Guinea while its commander and a small supporting staff directed the ongoing actions on Leyte. On 20 November 1944, the Sixth Army issued Field Order Number 34.

Acknowledging the lack of useable intelligence to plan for operations beyond the Lingayen Gulf, Field Order Number 34 only directed the initial assault and the securing of the immediate objectives that safeguarded the beachhead.

Sixth Army organized I Corps with the 6th and the 43rd Infantry Divisions and organized the XIV Corps with the 37th and the 40th Infantry Divisions. Sixth Army would initially attack with two corps abreast to secure the beachhead line with I Corps in the northeast and XIV Corps in the southwest. Subsequently, the 13th Armored Group would move on shore and deploy to defeat possible counterattacks and the 158th RCT would move on shore and take positions in the north in order to protect the northern flank of I Corps. The Sixth Army would initially retain the 25th Infantry Division as its reserve.<sup>35</sup>

## **THE 14th AREA ARMY DEFENSIVE PLANS**

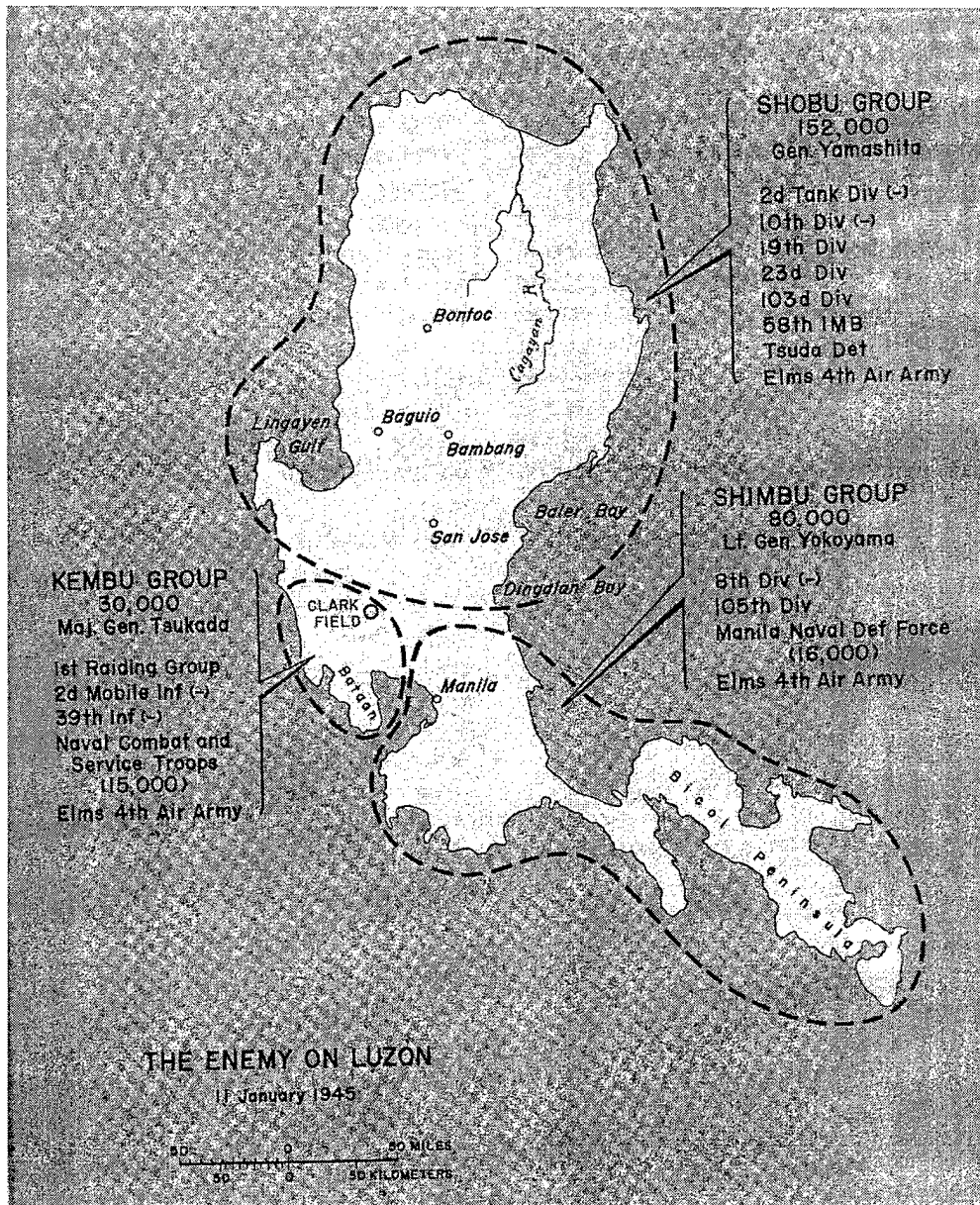
Until September of 1944, the senior headquarters on Luzon was Field Marshal Terauchi's Southern Army. The principle subordinate headquarters to the Southern Army were General Yamashita's 14<sup>th</sup> Area Army, Lieutenant General Tominaga's 4<sup>th</sup> Air Army, Major General Inada's 3<sup>rd</sup> Maritime Transport, and Vice Admiral Okochi's Southwest Area Fleet. In November of 1944, however, the Southern Army and the 3<sup>rd</sup> Maritime Transport headquarters evacuated Luzon for the safer environment of Saigon. This act significantly eroded unity of command on Luzon in the crucial days leading up to the American invasion by leaving three effectively equal headquarters on the island without the Southern Army as the higher headquarters. Although Field Marshal Terauchi appointed Yamashita as the overall commander on Luzon, the naval, air, and transport troops would be slow in passing to his control.

The Japanese forces on Luzon had strength in numbers but lacked almost everything else required to conduct a successful defense. The defending forces were short of virtually all types of supplies to include ammunition, construction materials, medical supplies, communications equipment and food.<sup>36</sup> Yamashita's forces numbered approximately 275,000 soldiers, sailors and airmen. The most effective of these were the soldiers of the 14th Area Army. The Sixth U.S. Army had, however, decimated many of the 14<sup>th</sup> Area Army's divisions in the fighting on Leyte. The remaining air, naval and transport troops would be of limited value to Yamashita, as they would be fighting in a capacity in which they had not been trained.

Given his supply problems, the quality of his fighting men and his inability to retain air superiority, Yamashita chose to conduct a static defense in the hope of fixing large numbers of U.S. forces and, ultimately, delaying the American advance towards the Japanese home islands.<sup>37</sup> To achieve this, Yamashita divided his forces into three groups, which would occupy strong points in the various mountain areas that dominated Luzon.

Yamashita chose to command the largest of the three groups: the Shobu Group. The Shobu Group consisted of three divisions, elements of three other divisions, and other smaller formations and numbered approximately 152,000 men. The Shobu Group occupied positions from just north of Luzon's central plain from Bagio to San Jose to areas east of the Cagayan Valley vicinity Bambang and Bontoc (See Map 3-1).<sup>38</sup> Yamashita designated the 8<sup>th</sup> Division's Lieutenant General Yokoyama to command the second largest group, the Shimbu Group. The Shimbu Group consisted of two divisions and air and naval troops and numbered approximately 80,000 men. The Shimbu Group occupied positions throughout central and southern Luzon but concentrated its defensive

efforts in the mountains east of Manila. Yamashita gave command of the smallest of the three groups, the Kembu Group, to the 1<sup>st</sup> Raiding Group's Major General Tsukada. The Kembu Group occupied defensive positions between Clark Field and the Bataan Peninsula and consisted of three regimental-sized formations and air and naval troops and numbered approximately 30,000 men.



Map 3-1

Although Yamashita's three groups occupied formidable positions in the mountains of Luzon, they could not provide mutual support. The groups were not designed to operate in concert with one another. They would fight separate tactical engagements and would concede the initiative to the invading American forces, which would make the three groups vulnerable to isolation. Given his other problems, however, the tactically savvy Yamashita was obviously willing to accept this risk.

Yamashita did not intend to defend Manila. He viewed its defense as militarily infeasible and far too costly. The Southwest Area Fleet's Vice Admiral Okochi, however, had other ideas. In the confused command structure in the days leading up to the invasion, Yamashita had failed to establish firm control over Okochi's naval forces in Manila and on his own initiative, Okochi had decided to employ his naval forces to defend the city at all costs. Okochi was eventually able to muster 17,000 sailors and soldiers to defend the Philippine capital in spite of Yamashita's orders to the contrary.<sup>39</sup> This effectively established a fourth defensive group on Luzon.

## **LINGAYEN GULF TO CLARK FIELD**

On 9 January 1945, after the destruction of Japanese air power on Luzon by SWPA air and naval forces, the two corps of the Sixth Army assaulted the beaches of the Lingayen Gulf. Both corps faced surprisingly weak resistance and were able to secure the beachhead by 11 January (See Map 3-2).<sup>40</sup> At that point both the operational and tactical commanders were satisfied with the progress of the Sixth Army. The two corps had secured the initial tactical objective, the beachhead, which gave MacArthur his initial operational objective, a foothold on Luzon.



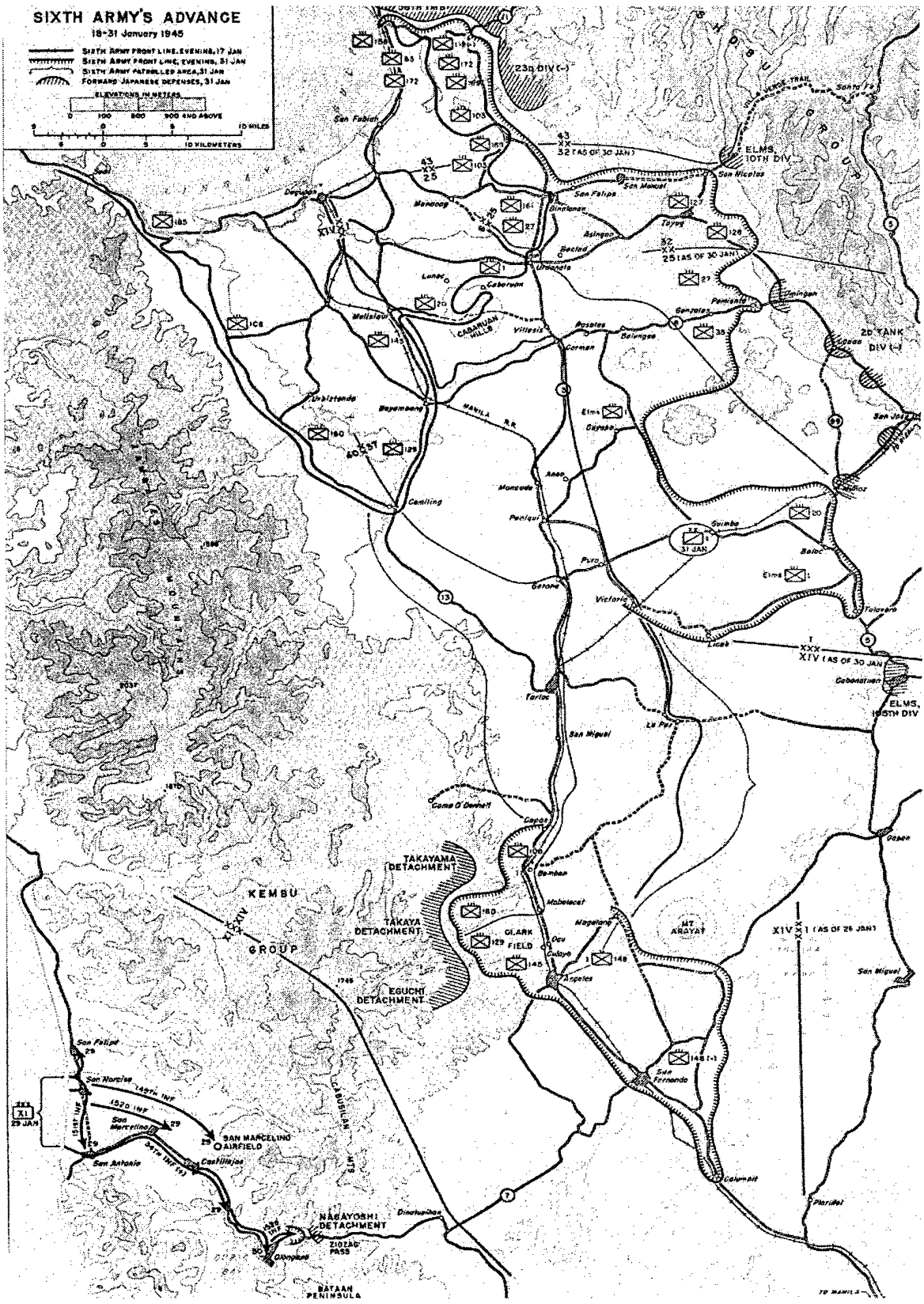
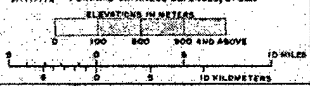
Division of the Shobu Group occupied strong positions in the mountains that dominated much of the I Corps zone. These positions constituted the southern flank of the Shobu Group and effectively slowed the progress of I Corps as it approached the beachhead line.<sup>41</sup> Consequently, a gap developed between the two advancing corps.

By the 17th of January, slow progress in the I Corps zone had jeopardized the further progress of the XIV Corps towards Clark Field (Refer to Map 3-3).<sup>42</sup> Lieutenant General Kenney had been pressuring MacArthur to secure Clark Field to allow its use by SWPA Air Forces, which were at this point relegated to airfields in the Lingayen area. MacArthur was clearly concerned that his ground tactical commander, who was trying desperately to solve a tactical problem on his northern flank, had lost sight of the immediate operational objective, which was Clark Field. This was the subject of heated conferences between MacArthur and Krueger on the 12th and 17th of January and the subject of a 17 January SWPA message.<sup>43</sup> In this message MacArthur implied that Krueger had overestimated the Shobu Group's ability to conduct a viable counterattack and strongly encouraged Krueger to accept risk on his flank and continue his drive towards Clark Field without further delay.<sup>44</sup> Consequently, Krueger directed XIV Corps to seize Clark Field. By the 24<sup>th</sup> of January, elements of the XIV Corps' 40th Infantry Division were in contact with the Kembu Group at Clark Field while the overextended 37th and 6th Infantry Divisions tried to protect the flank of XIV Corps in the center of the Sixth Army zone. GHQ SWPA alleviated some of Krueger's woes by releasing the 112th RCT, the 1st Cavalry Division and the 32nd Infantry Division to his control on the 27th of January.

# SIXTH ARMY'S ADVANCE

18-31 January 1945

- SIXTH ARMY FRONT LINE, EVENING, 17 JAN
- SIXTH ARMY FRONT LINE, EVENING, 31 JAN
- SIXTH ARMY PATROLLED AREA, 31 JAN
- FORWARD JAPANESE DEFENSES, 31 JAN



Map 3-3

Krueger subsequently attached the 32nd Infantry Division to I Corps and attached the 1st Cavalry Division and the 112th RCT to XIV Corps. The attachment of the 32nd Infantry Division allowed I Corps to extend its line to the southeast; this solved one problem for I Corps only to create another. This action helped close the gap between the two corps but brought I Corps into contact with two additional divisions of the Shobu Group, the 10th Infantry Division and the 2nd Tank Division. This prevented I Corps from fully protecting the XIV Corps' northern flank, which detracted from that corps' ability to move south of Clark Field. Meanwhile, XIV Corps was fully engaged around Clark Field with the Kembu Group.

With XIV Corps clearing the areas around Clark Field, MacArthur began pressuring Krueger to advance to the next operational objective, which was the Manila Bay region. The two commanders clashed over when the attack on Manila should begin. MacArthur had promised the Joint Chiefs that he would have forces in Manila four weeks after the initial assault and time was running out. MacArthur wanted Krueger to begin the attack by the 26<sup>th</sup> of February. Krueger, however, felt that he could not continue progress towards Manila without inviting a Shobu counterattack from the north or a Kembu counterattack from the south.<sup>45</sup> Consequently, Krueger directed a two-division attack against the Kembu group on the 28th of January to eliminate the Kembu threat, directed I Corps to secure San Jose in an effort to contain the Shobu Group and refused to attack towards Manila.

## **CLARK FIELD TO MANILA**

Having tried and failed to bully the stubborn Krueger into immediately continuing the attack towards Manila, MacArthur directed two other actions to regain momentum in

the drive towards the Philippine capital. In an effort to dislocate the Kembu Group, the Eighth U.S. Army landed the XI Corps east of Subic Bay on 29 January.<sup>46</sup> The XI Corps, which consisted of the 38th Infantry Division and the 34th RCT, passed from Eighth Army to Sixth Army control upon securing its landing areas on 30 January (Refer to Map 3-3). Although its attack failed to dislocate the Kembu Group, XI Corps succeeded in securing Subic Bay and tying down Kembu forces in northern Bataan. Beginning on January 31st, also under Eighth Army control, the 11th Airborne Division landed near Nasugbu Bay in a combined amphibious and airborne operation (see Map 3-4).<sup>47</sup> By executing these attacks with forces under Eighth Army control, MacArthur prevented Krueger from employing those forces to solve his immediate tactical problems. MacArthur thus ensured that these forces were employed to help secure his operational objective. Also, with the employment of forces under Eighth Army control, MacArthur had hoped to spark competition between the two field armies over the strategic prize of Manila.<sup>48</sup>

The combined results of the tactical and operational commanders' directives solved the most serious of Krueger's immediate problems. The progress of the XIV Corps attack against the Kembu Group around Clark Field coupled with the successful link up of the XI and the XIV Corps on the eastern part of the Bataan Peninsula secured XIV Corps from counterattack from the south. Concurrently, the reinforcements received in the I Corps zone allowed that unit to secure San Jose, which effectively isolated the Shobu Group and protected the XIV Corps from counterattack from the north. These actions allowed XIV Corps to attack with the 37th Infantry Division and the 1st Cavalry



Division towards Manila in earnest in the beginning of February.<sup>49</sup> Meanwhile, the 11th Airborne Division had started its own drive towards the Philippine capital from the south. Both the 11th Airborne Division and the XIV Corps would reach the outskirts of Manila by February 4th (See Map 3-4).

## **NEW SWPA PRIORITIES**

Once elements of the Sixth Army had entered Manila and MacArthur was confident of the Sixth Army's ability to secure the Philippine capital, the SWPA commander issued his operational priorities for the remainder of the Luzon operation. The order, dated 5 February, directed that Sixth Army secure five operational objectives and further provided the sequence in which the Krueger was to secure them. The first was the rehabilitation of the Manila Bay region. This included the capture of Manila, the Bataan Peninsula, the island-fortress of Corregidor and the southern shore of Manila Bay. The second was the clearance of southern Luzon and the securing of the San Bernardino Straits and Verde Island Passage. These actions, coupled with the actions of the Eighth Army in the central and southern Philippines, would secure the SWPA sea lines of communications. The third objective would be the clearance of the northwest coastal region of Luzon in order to allow the subsequent development of airfields in that area. The fourth objective was the destruction of the mountain strongholds of the Shobu, Shimbu and Kembu groups. The order acknowledged that this task would be time consuming based on the terrain, the enemy and its low operational priority. The last operational objective assigned to the Sixth Army was the clearance of the Cagayen Valley.<sup>50</sup>

At this same time that he was establishing priorities for the Sixth Army, MacArthur also initiated the third phase of the SWPA campaign plan: the re-conquest of the previously bypassed islands in the central and southern Philippines. The 5 February SWPA order had directed the Eighth Army to seize the southern exits of the San Bernardino Straits and the Verde Island Passage in the central Philippines. A February 6th SWPA order additionally directed the Eighth Army to seize the island of Palawan in the southern Philippines.<sup>51</sup> MacArthur had decided to initiate this phase early based on a combination of operational, political, personal and humanitarian reasons. Operationally, the securing of the central and southern Philippines would further cut the Japanese sea lines of communication from the home islands to the Dutch East Indies. Politically and personally, MacArthur felt that it was important for American prestige, as well as his own, that the bypassed islands be re-conquered as early as was practical.<sup>52</sup> With regard to humanitarian issues, MacArthur feared that Filipino civilians in the bypassed islands would be subjected to Japanese reprisals if SWPA forces did not act quickly to secure the islands.

The direct effect on Sixth Army of this early transition to phase three of the campaign was that the number of divisions available for operations on Luzon would drop from eleven to nine. The 41st Infantry Division had already been cut from the Sixth Army troop list to support Eighth Army operations and GHQ SWPA would subsequently pass control of the 40th Infantry Division from Sixth Army to Eighth Army control.<sup>53</sup>

## **THE OUTCOME**

The Sixth Army's entry into Manila marked the climax of the Luzon operation. Within forty-eight hours of forces entering the Philippine capital, the operational

commander would make the crucial decisions that would define the remainder of the Luzon operation. From that point on, Krueger would execute operations on Luzon in accordance with the broad guidance provided in the 5 February directive. GHQ SWPA would issue additional directives, but these amounted to nothing more than refinements of the 5 February directive. From MacArthur's perspective on the 5th of February, the outcome of the operation had been determined and the decisions that would follow were merely tactical. The fighting on Luzon after 5 February, though incredibly bitter, was characterized by tactical engagements conducted by single corps.

The liberation of Manila would take another month of hard fighting. Although both the XIV Corps and the 11th Airborne Division would reach the outskirts of Manila by February 4th, both units would spend another week fighting to link up. Subsequently, XIV Corps would have to complete the slow and costly task of clearing the city of its defenders. This task would continue until the 3rd of March.<sup>54</sup>

Beyond the capture of Manila, the first priority set for the Sixth Army in the 5 February SWPA order was the securing of the Bataan Peninsula, the island of Corregidor and the southern shores of Manila Bay. XI Corps secured Bataan and Corregidor by the 26th of February in a series of battles that employed various combinations of amphibious assaults, parachute assaults and conventional attacks.<sup>55</sup> Simultaneously, the 11th Airborne Division in concert with Filipino guerilla forces cleared Japanese forces from the southern shores of Manila Bay.

The second and third tasks assigned to the Sixth Army in the 5 February directive were the clearance of southern Luzon and the clearance of Luzon's northwestern coastal areas, respectively. XIV Corps would spend March, April and May clearing southern

Luzon, the San Bernardino Straits and the Bicol Peninsula employing elements of the 11th Airborne Division, the 1st Cavalry Division, and the 158th RCT.<sup>56</sup> I Corps would secure large portions of Luzon's northwest coastal areas by the first week of March. In addition to making these areas available for airfield development, these attacks also served as a prelude to the attacks into the mountain strongholds of the Shobu Group.

The fourth task given to Sixth Army was the destruction of the remaining mountain strongholds of the Kembu, Shimbu and Shobu Groups. XIV Corps had destroyed most of the Kembu Group at Clark Field during February. Subsequently, XI Corps assumed responsibility for that zone and assigned the completion of that task to the 43rd Infantry Division, and later, the 38th Infantry Division, which ended organized Kembu resistance by the middle of March.<sup>57</sup> The reduction of the Shimbu and Shobu Groups, however, would turn out to be far more costly and time consuming than the destruction of the Kembu Group had been.

Krueger initially assigned XIV Corps the task of defeating Shimbu forces east of Manila. XIV Corps began operations there in earnest on 20 February with the 6th Infantry Division, the 112th RCT and one brigade from the 1st Cavalry Division.<sup>58</sup> Operations focused initially on securing the dams and facilities that provided Manila its water supply. These attacks proceeded slowly because of a lack of forces, the difficult terrain and the tenacity of the entrenched Shimbu defenders. On 15 March, the control of Manila and the areas east of Manila passed to XI Corps, which continued the reduction of the Shimbu Group positions employing the 6th, 38th and 43rd Infantry Divisions supported by Filipino guerrilla forces. The XI Corps would finally end organized resistance by the Shimbu Group in June of 1945.<sup>59</sup>

By the middle of February, I Corps had secured San Jose and had destroyed large elements of the three divisions that it had initially been in contact with. In spite of this, I Corps still faced the most formidable concentration of Japanese forces on Luzon. Krueger had initially expected to employ five divisions against the Shobu Group's positions. Based on its low operational priority, however, the Sixth Army was only able to assign the 25th, the 32nd and the 33rd Infantry Divisions to I Corps. The only additional forces available to I Corps to make up for the shortfall in American divisions were several regiments of Filipino guerillas.<sup>60</sup>

During March, April and May, I Corps attacked the Shobu strong points along three major axes. Given the formidable enemy and terrain, progress was expectedly slow but steady. By April, Sixth Army was able to reinforce I Corps with the 37th Infantry Division. In June of 1945, as other operations concluded on southern Luzon, Sixth Army was able to pass control of the 6th Infantry Division to I Corps. Even with the commitment of the additional divisions, the Shobu Group would continue to fight until the end of the war.<sup>61</sup>

I Corps would also complete the final task directed in the 5 February order. That task was the clearance of the Cagayen Valley, which it completed in May and June of 1945.

## **COGNITIVE TENSION AND THE LUZON OPERATION**

There were three conflicts between the attainment of strategic and tactical objectives during the Luzon operation.

The first was in regards to the timing of the XIV Corps attack towards Clark Field. Krueger was focused on the tactical-level problem of the Shobu Group threatening

his northern flank. Consequently, he committed a considerable amount of his resources to solving that problem. In contrast, MacArthur was focused on the securing Clark Field as early as possible. His reasons were twofold. Firstly, the seizure of Clark Field was pre-requisite to the seizure of Manila. Secondly, the seizure of Clark Field would provide Air Forces, SWPA a valuable facility. This was linked to one of the strategic objectives of the invasion of Luzon in that it would allow SWPA Air Forces to operate B-24 heavy bombers against targets on Formosa and the Chinese coast thus allowing Allied Forces, SWPA to more effectively control the sea lines of communications around Luzon.<sup>62</sup>

MacArthur resolved this tension by re-establishing cognitive unity through the conduct of conferences with Krueger on the 12th and the 17th of January and through the issuance of 17 January message.<sup>63</sup>

The second source of cognitive tension was over the timing of XIV Corps' attack towards Manila. Once again, the tactical-level problem of securing his flanks from counterattack was the focus of the tactical commander. Once again, the operational-level commander was focused on securing an operational objective linked to strategic purpose: the securing of Manila Bay. Having tried and failed to convince Krueger to attack by February 26th, MacArthur conducted two actions to resolve the cognitive tension. Firstly, he employed forces under the control of Eighth Army in an effort to dislocate the Kembu Group in order to secure the Sixth Army's southern flank. Secondly, he employed the 11th Airborne Division, also under Eighth Army control, directly against the operational objective.

The third source of cognitive tension was associated with the tasks assigned in the 5 and 6 February SWPA directives. The directives detracted from Sixth Army's ability to

complete its tactical missions in two ways. Firstly, it diverted resources from the Sixth Army in order provide the Eighth Army the number of divisions it required to conduct operations in the central and southern Philippines. Secondly, it placed the destruction of the large Japanese troop concentrations on Luzon fourth in a prioritized list of five tasks. Consequently, Krueger could not allocate sufficient forces to destroy the Shimbu and Shobu groups early in the Luzon operation. These constraints on Sixth Army provided additional time for the Shimbu and Shobu groups to secure badly needed supplies and to prepare defensive positions. This made Sixth Army's task of destroying those elements even harder and, in all likelihood, lengthened the duration of the Luzon operation.<sup>64</sup>

MacArthur, however, resolved the cognitive tension with respect to the directives by maintaining a clear link between the Luzon operation's strategic objectives and the first three tactical missions assigned in the 5 February directive. The first operational priority for the Sixth Army in the 5 February directive was the securing of the Manila Bay region. This action would demonstrate American commitment to the Philippines commiserate with one of the operation's strategic objectives. The second priority in the 5 February directive, the securing of southern Luzon, which coupled with the actions of the Eighth Army spelled out in the 6 February directive, would allow for the achievement of a second strategic objective of the operation: the control of the sea lines of communications around Luzon. The third priority in the 5 February directive, the securing of the northwest coastal areas of Luzon, was also linked to a strategic objective. In concept, it allowed for the development of airfields in the northern part of Luzon, which could enable SWPA Air Forces to more effectively control the sea lines of communications around Luzon.<sup>65</sup>

This examination of cognitive tension with respect to the Luzon operation allows two conclusions to be drawn. During the Luzon operation, the conflicts between the MacArthur and Krueger were not functions of personality conflicts, poor leadership or poor planning. The two commanders respected each other and were both arguably at the peak of their World War II generalship. This indicates that cognitive tension arises even under the best circumstances. Consequently, the first conclusion is that cognitive tension occurs naturally based on the conflict between strategic and tactical objectives and the paucity of resources that forces choices between the two. The second conclusion is that there is latitude to move beyond Naveh's ethereal discussion of how operational commanders resolve cognitive tension. Naveh limited his discussion of this subject to merely identifying that operational commanders achieve this through maintaining cognitive unity. In contrast, General MacArthur's actions during the Luzon operation illustrated several concrete examples of how this can be done. This provides insight into how current operational commanders can address this issue.

## SECTION IV

### ADDRESSING COGNITIVE TENSION

In assessing whether the U.S. Armed Forces doctrine adequately addresses the concept of cognitive tension requires answering three subordinate questions. The first two of these subordinate questions reflect Naveh's methodology. In order to identify cognitive tension, Naveh first identified the distinct aspects of the operational level of war by contrasting that level with the strategic and tactical levels of war. Following that methodology, the first subordinate question is whether or not the U.S. Armed Forces doctrine identifies the distinct aspects of the operational level of war. Subsequently, Naveh described the cognitive tension that existed at the operational level of war, which is caused by the conflict between strategic and tactical objectives. Therefore, the second subordinate question is whether or not U.S. Armed Forces doctrine describes the tension between attainment of strategic and tactical objectives.

The third subordinate question addresses the practical component of resolving cognitive tension. Naveh identified that the operational commander must resolve cognitive tension through maintaining cognitive unity. He did not, however, provide any practical discussion of how that is done. Since one of the roles of doctrine is to bridge the theoretical with the practical, no doctrinal discussion of cognitive unity is particularly useful without some insight into how it is resolved.<sup>66</sup> Therefore, the third subordinate question is whether or not U.S. Armed Forces doctrine provides mechanisms by which operational commanders can resolve the conflicts that arise between the attainment of strategic and tactical objectives.

## U.S. DOCTRINE AND THE OPERATIONAL LEVEL OF WAR

In order to determine whether the U.S. Armed Forces doctrine identifies the unique quality of the operational level of war, it is necessary to review what Naveh identified as that quality. As discussed in Section II of the monograph, Naveh argued that the unique quality of the operational level of war was its blending of cognitive and mechanical functions. The operational level of war's unique cognitive function allows the operational commander to translate broad, strategic objectives into concrete tactical missions and objectives. The operational level of war also performs a mechanical function through its planning and execution of campaigns and major operations.

*JP 3-0 Doctrine for Joint Operations* is the keystone publication for the Armed Forces of the United States. It provides fundamental guidance on the planning and execution of joint operations. It describes the operational level of war as the link between the strategic and tactical levels of war and states that the instrument of the operational level of war is the operational art. *JP 3-0* further describes the operational art as:

. . . the use of military forces to achieve strategic goals through design, organization, integration, and conduct of strategies, campaigns, major operations and battles. Operational art determines when, where, and for what purpose major forces will be employed and should influence the enemy disposition before combat. It governs the deployment of those forces, their commitment to or withdrawal from battle, and the arrangement of battles and major operations to achieve operational and strategic objectives.<sup>67</sup>

Beyond this initial description, *JP 3-0* expands on several aspects of the operational art. The manual describes the operational art as the basic mechanism that allows commanders to plan, sequence and resource campaigns and major operations. Operational art allows commanders to envision the strategic end state, which allows them to determine when and where to conduct operations and to determine when and where

operations should be avoided. Additionally, operational art includes the employment of forces with respect to time and includes the synchronization of air, land, sea, space and special purpose forces.<sup>68</sup>

JP 3-0's definition of the operational level of war and its description of the operational art clearly identify the unique quality that Naveh addressed in his book. JP 3-0 describes the visualization of the strategic end state, the creative use of forces, and the determination of when and where to conduct operations. These qualities equate to Naveh's operational-level cognitive function. Additionally, JP 3-0's description of the operational art reflects Naveh's concept of operational-level mechanical action. JP 3-0 reflects this concept in describing the operational art as including the planning and sequencing operations as well as the conduct of campaigns and major operations. Although Naveh and the authors of JP 3-0 used slightly different words to accomplish the task, they described the same thing. Consequently, U.S. Armed Forces doctrine successfully identifies the unique quality of the operational level of war.

## **CONFLICT BETWEEN OBJECTIVES**

In the first chapter of *In Pursuit of Military Excellence*, Naveh identified the cognitive tension between the attainment of strategic and tactical objectives. In contrast, U.S. Armed Forces doctrine has no equivalent concept. Consequently, it fails to identify the existence or the potential existence of tension between the attainment of strategic and tactical objectives.

Both Naveh and the authors of JP 3-0 accept that disconnected tactical engagements without operational or strategic purpose constitute failure of the operational art. There is,

however, some divergence between the two sources in what they concluded as the potential causes of that failure.

JP 3-0 attributes disconnected engagements to a lack of operational art in stating, “Without operational art, war would be a set of disconnected engagements, with relative attrition the only measure of success or failure.”<sup>69</sup> The natural extension of this abstract conclusion is that failure of the operational art is a function of poor operational planning or poor operational execution.

In his explanation of failure of the operational art, Naveh included those two considerations and one other. In the language that Naveh used, poor operational planning and poor operational execution equate to a lack of operational cognition or poor mechanical action at the operational level of war. Naveh's third explanation for failure of the operational art caused by disconnected tactical engagement is unresolved cognitive tension. This third explanation accounts for the failure of the operational art in situations in which the operational commander has provided sound operational cognition and the operational headquarters has provided sound operational plans. It additionally accounts for situations in which tactical components, over time, become fixed with respect to their own tasks and separate from the system with respect to aim.<sup>70</sup> Eventually, this fixation with respect to tactical missions causes the failure of the operational art.

JP 3-0 fails to identify that unresolved cognitive tension also results in the conduct of engagements that serve tactical purposes but which are not linked to the attainment of operational or strategic objectives. In doing this, JP 3-0 does not address the compelling reasons of tactical expediency that cause tactical commanders to break with the operational aim.

## RESOLVING CONFLICT BETWEEN OBJECTIVES

Unlike the previous two assessments, Naveh's writings do not provide a methodology from which to evaluate the effectiveness of joint doctrine with respect to resolving the tension between the attainment of strategic and tactical objectives. Naveh limited his discussion of resolving this tension to the abstract in concluding that operational commanders resolve it through maintaining cognitive unity. He did not, however, provide any concrete examples of how operational commanders can accomplish this. This assessment is further complicated by JP 3-0's lack of recognition of this tension. Consequently, in order to determine whether U.S. Armed Forces doctrine identifies methods by which operational commanders can resolve the tension that arises between the attainment of strategic and tactical objectives, it is necessary to use the lessons from the conduct of the Luzon operation.

The examination of MacArthur's actions during the conduct of the Luzon operation provided three practical examples of resolving cognitive tension. Although these three examples do not constitute a complete list, they do provide a framework with which to assess the current doctrine. If the current doctrine identifies these methods or allows for their implementation, then the doctrine provides at least some practical insight into methods by which operational commanders can resolve the tension.

The first method that MacArthur used to maintain cognitive unity was the issuance of operational directives. The SWPA directives maintained clear links between the assigned tactical missions and the operational or strategic objectives. As an example, in its 5 February order, GHQ SWPA directed Sixth Army to "Clear [the] northwest coastal area of Luzon with the objective of opening these areas for airfield development."<sup>71</sup> The

first part of the task explained the tactical task and the second part explained its broader purpose. This broader purpose was further linked to the strategic objective of controlling the sea lines of communications around Luzon. The SWPA directives also established the relationships between its subordinate elements. As an example, in Operations Instruction No. 73, SWPA directed Sixth Army to “Occupy and defend sites for radar and air warning installations as arranged with the Commanders Allied Naval and Air Forces.”<sup>72</sup> In this example, the first part of the sentence explained the tactical task and the second part explained Sixth Army's relationship to the other two commands with respect to that task.

JP 3-0 clearly identifies these techniques for retaining cognitive unity within directives in its description of the commander's intent and the concept of the operation. JP 3-0 describes the commander's intent as including the purpose of the operation as well as the desired end state.<sup>73</sup> It further describes the purpose of the commander's intent as “providing focus for all subordinate elements.”<sup>74</sup> Thus, the commander's intent links all tactical units with respect to the broader operational purpose. JP 3-0 then describes the concept of the operation as the Joint Force Commander's visualization of how the operation will occur. The concept of the operation describes when, where and how the joint force will act in order to achieve its assigned aim. It further assigns missions and objectives to subordinate elements and describes how the subordinate elements will interact to achieve those missions and objectives.<sup>75</sup> Thus, the concept of the operation links tactical units with respect to each other.

MacArthur's second method for maintaining cognitive unity during the Luzon operation was the conduct conferences with the recalcitrant Krueger. The clear purpose

of the conferences on January 12th and 17th was to motivate Krueger to secure Clark Field without delay. JP 3-0 discusses this method of retaining cognitive unity in its section on command. JP 3-0 defines command as “the art of motivating and directing people and organizations into action to accomplish missions.”<sup>76</sup> This discussion on command further lists a number of ways in which the Joint Force Commander influences major campaigns and operations. This list includes: assigning missions, designating priorities and resources, assessing risk, making adjustments, committing reserves, staying attuned to the needs of subordinate commanders and guiding and motivating the organization towards the desired end state.<sup>77</sup> MacArthur's conduct of the 12 and 17 January conferences clearly falls in the category of “guiding and motivating the organization towards the desired end state.”

The third method MacArthur used to retain cognitive unity was the employment of forces under the control of the Eighth U.S. Army. MacArthur employed this method with a dual purpose. His first purpose was to employ combat power directly against operational objectives. In this capacity MacArthur was exercising his command function, as explained in JP 3-0, by adjusting the plan and committing the SWPA reserves. His second purpose was to motivate Krueger to begin his attack on Manila without further delay, which again equates to guiding and motivating the organization towards the desired end state.

In summary, JP 3-0 provides the framework for all three methods of retaining cognitive unity employed by MacArthur during the Luzon operation. Consequently, U.S. Armed Forces doctrine has accomplished something the theorist Naveh did not. That is

to provide practical insight into how operational commanders can resolve cognitive tension.

## **DOCTRINE'S COVERAGE OF COGNITIVE TENSION**

U.S. Armed Forces doctrine adequately contrasts the operational level of war with both the strategic and tactical levels of war. In accomplishing this, the doctrine also identifies the unique qualities of the operational level of war. The Armed Forces doctrine also identifies several methods by which operational commanders can resolve cognitive tension. One shortcoming in the doctrine, however, is its failure to identify the tension that arises between the attainment of strategic and tactical objectives. Consequently, it fails to identify one reason why major operations and campaigns can fail. Therefore, Armed Forces doctrine can be improved with respect to addressing this tension.

## **CONCLUSION**

The concept of cognitive tension is relevant to U.S. joint operations. It is a concept that provides great insight into the distinct roles of operational and senior tactical commanders. Although the current Armed Forces doctrine acknowledges that tactical commanders focus on the tactical level of war and its associated objectives and that operational commanders focus on the attainment of strategic objectives, it fails to identify that tension will inevitably arise between those commanders because of their distinct perspectives.<sup>78</sup> In contrast, the concept of cognitive tension accounts for these differing perspectives and provides a broader understanding into the reasons behind the honest disagreements that arise between operational and tactical commanders over the attainment of strategic and tactical objectives.

Insight into how to resolve cognitive tension is also relevant to U.S. joint operations. The operational commander resolves cognitive tension by retaining cognitive unity of aim throughout the system. He achieves this by keeping tactical commanders focused on their role in the achievement of strategic objectives as well as their role in supporting the other parts of the joint force. The resolution of cognitive tension is one method by which the operational commander prevents the conduct of war from degenerating into tactical battles and engagements that are operationally insignificant. Consequently, the resolution of cognitive tension has the capacity to propel the military system towards the achievement of its strategic objectives.<sup>79</sup>

Although JP 3-0 is an excellent manual, the Joint Staff should revise the manual's discussion of the levels of war. The revised discussion should include a segment on the tension that occurs at the operational level of war with respect to the attainment of strategic and tactical objectives. This discussion should also provide insight into the resolution of that tension.

Shimon Naveh's concepts could provide the framework for this segment. Naveh's definition of cognitive tension fits within the construct of the current U.S. Armed Forces Doctrine's discussion of the levels of war. Its inclusion would broaden the scope of JP 3-0's discussion of the operational level of war and the operational art and would provide great insight into the distinct qualities of operational level of war.

There are additional important supporting concepts from Naveh's writings that should also be included in this segment. The first is that cognitive tension occurs naturally within the military system. This concept accounts for the inevitability of the distinct perspectives of the operational and tactical commanders and accounts for disagreements

between those commanders that are not based on personality, a lack of teamwork or a lack of competency. The second is that cognitive tension resides at the operational level of war. The third is that it is the responsibility of the operational commander to resolve this tension. The fourth is that the operational commander must resolve cognitive tension though maintaining cognitive unity throughout the system.

Moving beyond the writings of Naveh, JP 3-0 should also include a discussion of practical methods by which operational commanders can retain cognitive unity of aim and thus resolve cognitive tension. Historical examples such as the 1945 Luzon operation can form the basis for this discussion. In the case of the Luzon operation, the methods that MacArthur employed to resolve cognitive tension are all discussed in JP 3-0. The only revision that may be required with respect to this issue then, would be to alert the reader to these methods and to provide historical examples that illustrate the relevancy of these methods.

The inclusion of the concept of cognitive tension in a revision of JP 3-0 would be of value in two ways.

As previously stated, its inclusion would provide both a fuller understanding of the operational level of war and broader understanding of the unique contributions of the operational art. It would broaden JP 3-0's discussion of the operational level of war, which is currently relegated to a reference that it is bridge between the strategic and the tactical levels of war.<sup>80</sup> The inclusion of cognitive tension in JP 3-0 would highlight the concept that the operational level of war not only links the strategic and the tactical levels of war, but that it also uniquely combines elements of both to achieve its aim.<sup>81</sup>

The inclusion of the concept of cognitive tension in JP 3-0 would also assist operational commanders in resolving it. Armed with the knowledge of what cognitive tension is and where it resides, operational commanders would be able to more quickly identify it and then apply methods discussed in the manual to resolve it. Also, its inclusion in JP 3-0 could allow tactical commanders to further assist operational commanders in maintaining cognitive unity of aim. By understanding the destructive nature of loss of unity of aim, tactical commanders may be more likely to make the tactical sacrifices necessary to resolve the tension between the attainment of strategic and tactical objectives.

---

<sup>1</sup> Department of Defense, JP 3-0 *Doctrine For Joint Operations*, (Washington D.C.: Department of Defense, February 1995), pages II-4 and II-5.

<sup>2</sup> Department of Defense, JP 1 *Joint Warfare of the Armed Forces of the United States*, (Washington D.C.: Department of Defense, January 1995), page III-10.

<sup>3</sup> Russel F. Weigly, *Eisenhower's Lieutenants*, (Bloomington: Indiana University Press, 1990), pages 277-280, 353 and 441-442.

<sup>4</sup> H. Norman Schwarzkopf, *It Doesn't Take A Hero*, (New York: Bantam Books, 1993), pages 527-528, and 535-537.

<sup>5</sup> Tom Clancy with Fred Franks Jr., *Into the Storm: A Study in Command*, (New York: G. P. Putnam's Sons, 1997), pages 339 and 340.

<sup>6</sup> Shimon Naveh, *In Pursuit of Military Excellence*, (Portland Oregon: Cummings Center, 1997), page 65.

<sup>7</sup> Department of Defense, JP 3-0 *Doctrine For Joint Operations*, page II-3.

<sup>8</sup> Ibid.

<sup>9</sup> Shimon Naveh, *In Pursuit of Military Excellence*, page 8.

<sup>10</sup> Ludwig von Bertalanffy, *General Systems Theory*, (New York: George Braziller Inc., 1968), pages xx and 3 and Naveh, *In Pursuit of Military Excellence*, page 4.

<sup>11</sup> Bertalanffy, *General Systems Theory*, page 37.

<sup>12</sup> Ibid, pages 55 and 56.

<sup>13</sup> Ibid, page 69.

<sup>14</sup> Ibid, page 70.

<sup>15</sup> Naveh, *In Pursuit of Military Excellence*, page 9.

<sup>16</sup> Ibid, page 5.

<sup>17</sup> Ibid, page 6.

- 
- <sup>18</sup> Peter M. Senge, *The Fifth Discipline*, (New York: Currency Doubleday, 1990), page 30.
- <sup>19</sup> Naveh, *In Pursuit of Military Excellence*, pages 5-6.
- <sup>20</sup> Ibid, pages 6 and 7.
- <sup>21</sup> Ibid, pages 10 and 15.
- <sup>22</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, (Sixth Army, 1945), page 109.
- <sup>23</sup> Robert Ross Smith, *Triumph in the Philippines*, (Washington D.C.: Office of the Chief of Military History, 1963), pages 8-9, 14-15.
- <sup>24</sup> Ibid, page 18.
- <sup>25</sup> Geoffrey Parret, *Old Soldiers Never Die: the Life of Douglas MacArthur*, (Holbrook, Massachusetts: Adams Media Corporation, 1996), page 432.
- <sup>26</sup> Hamilin M. Cannon, *Leyte: the Return to the Philippines*, (Washington D.C.: Office of the Chief of Military History, 1954), page 361.
- <sup>27</sup> Ronald Spector, *Eagle Against the Sun*, (New York: Vintage Books, 1985), page 517.
- <sup>28</sup> William M. Leary, ed., *We Shall Return: MacArthur's Commanders and the Defeat of Japan 1942-1945*, (Lexington, Kentucky: The University Press of Kentucky, 1988), page 66.
- <sup>29</sup> Christopher R. Gable, *The U.S. Army GHQ Maneuvers of 1941*, (Washington D.C.: Office of the Chief of Military History, 1992), pages 67-68.
- <sup>30</sup> Parret, *Old Soldiers Never Die*, pages 335-336.
- <sup>31</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, page 109.
- <sup>32</sup> Smith, *Triumph in the Philippines*, page 22.
- <sup>33</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, pages 99-100.
- <sup>34</sup> Ibid, page 117.
- <sup>35</sup> Ibid, pages 117-118.
- <sup>36</sup> Smith, *Triumph in the Philippines*, page 91.
- <sup>37</sup> Spector, *Eagle Against the Sun*, page 518.
- <sup>38</sup> Smith, *Triumph in the Philippines*, page 95.
- <sup>39</sup> Ibid, pages 240-248.
- <sup>40</sup> Ibid, Map I.
- <sup>41</sup> Walter Krueger, *From Down Under to Nippon*, (Washington D.C.: Combat Forces Press, 1953), pages 225-226.
- <sup>42</sup> Smith, *Triumph in the Philippines*, Map III.
- <sup>43</sup> Kenin C. Holzimmer, *A Soldier's Story: A Military Biography of Walter Krueger*, (Ann Arbor, Michigan: UMI Dissertation Services, 2000), pages 518-521.
- <sup>44</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, pages 112-113.
- <sup>45</sup> Krueger, *From Down Under to Nippon*, page 234.
- <sup>46</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, page 113.
- <sup>47</sup> Smith, *Triumph in the Philippines*, Map V.
- <sup>48</sup> William Manchester, *American Caesar*, (Boston: Little, Brown and Company, 1978), page 410.
- <sup>49</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, page 32.
- <sup>50</sup> Ibid, page 113.

- 
- <sup>51</sup> Smith, *Triumph in the Philippines*, page 584.
- <sup>52</sup> Spector, *Eagle Against the Sun*, pages 526-527.
- <sup>53</sup> Smith, *Triumph in the Philippines*, page 585.
- <sup>54</sup> Krueger, *From Down Under to Nippon*, pages 246-252.
- <sup>55</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, pages 49-55
- <sup>56</sup> Smith, *Triumph in the Philippines*, pages 421-445.
- <sup>57</sup> Krueger, *From Down Under to Nippon*, pages 289 and 255.
- <sup>58</sup> Ibid, pages 253-254.
- <sup>59</sup> Ibid, pages 296-297.
- <sup>60</sup> Smith, *Triumph in the Philippines*, pages 449 and 467.
- <sup>61</sup> Ibid, pages 561 and 579.
- <sup>62</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, pages 100-102 and Smith, *Triumph in the Philippines*, pages 8 and 14.
- <sup>63</sup> Holzimmer, *A Soldier's Story: A Military Biography of Walter Krueger*, pages 519 and 521.
- <sup>64</sup> Spector, *Eagle Against the Sun*, pages 529-530.
- <sup>65</sup> Smith, *Triumph in the Philippines*, pages 8 and 14.
- <sup>66</sup> James J. Schneider, "How War Works: The Origins, Nature and Purpose of Military Theory," (Fort Leavenworth, KS: School of Advanced Military Studies, Command and General Staff College, June 1995), page 8.
- <sup>67</sup> Department of Defense, JP 3-0 *Doctrine For Joint Operations*, page II-2.
- <sup>68</sup> Ibid, pages II-2 and II-3
- <sup>69</sup> Ibid.
- <sup>70</sup> Naveh, *In Pursuit of Military Excellence*, page 6.
- <sup>71</sup> Sixth Army, *Report of the Luzon Campaign Volume 1*, page 113
- <sup>72</sup> Ibid, page 109
- <sup>73</sup> Department of Defense, JP 3-0 *Doctrine For Joint Operations*, page III-25.
- <sup>74</sup> Ibid.
- <sup>75</sup> Ibid.
- <sup>76</sup> Ibid, page II-16.
- <sup>77</sup> Ibid.
- <sup>78</sup> Ibid, pages II-1 though II-3.
- <sup>79</sup> Naveh, *In Pursuit of Military Excellence*, pages 309 and 310.
- <sup>80</sup> Department of Defense, JP 3-0 *Doctrine For Joint Operations*, page II-2.
- <sup>81</sup> Naveh, *In Pursuit of Military Excellence*, page 8.

## SELECTED BIBLIOGRAPHY

### PUBLISHED GOVERNMENT SOURCES

Sixth U.S. Army. *Report of the Luzon Campaign Volume 1*. Sixth U.S. Army, 1945.

U.S. Department of Defense. JP 1 *Joint Warfare of the Armed Forces of the United States*, Washington D.C.: Department of Defense, 10 January 1995.

\_\_\_\_\_. JP 1 *Joint Warfare of the Armed Forces of the United States*, Washington D.C.: Department of Defense, 14 November 2000.

\_\_\_\_\_. JP 3-0 *Doctrine for Joint Operations*. Washington D.C.: Department of Defense, 1 February 1995.

### BOOKS

Bertalanffy, Ludwig von. *General Systems Theory*. New York: George Braziller Inc., 1968.

Cannon, Hamlin M. *Leyte: The Return to the Philippines*. Washington D.C.: Office of the Chief of Military History, 1954.

Clancy, Tom with Fred Franks Jr. *Into the Storm: A Study In Command*. New York: G. P. Putnam's Sons, 1997.

Gable, Christopher R. *The U.S. Army GHQ Maneuvers of 1941*. Washington D.C.: Office of the Chief of Military History, 1992.

Krueger, Walter. *From Down Under to Nippon*. Washington D.C.: Combat Forces Press, 1953.

Leary, William M. ed. *We Shall Return: MacArthur's Commanders and the Defeat of Japan 1942-1945*. Lexington, Kentucky: The University Press of Kentucky, 1988.

Manchester, William. *American Caesar*. Boston: Little, Brown and Company, 1978.

Naveh, Shimon. *In Pursuit of Military Excellence: the Evolution of Operational Theory*. Portland, Oregon: Cummings Center, 1997.

Parret, Geoffrey. *Old Soldiers Never Die: the Life of Douglas MacArthur*. Holbrook, Massachusetts: Adams Media Corporation, 1996.

Senge, Peter M. *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Currency Doubleday, 1990.

Smith, Robert Ross. *Triumph in the Philippines*. Washington D.C.: Office of the Chief of Military History, 1963.

Spector, Ronald. *Eagle Against the Sun*. New York: Vintage Books, 1985.

Schwarzkopf, H. Norman with Peter Petre. *It Doesn't Take A Hero*. New York: Bantam Books, 1993.

Weigley, Russell F. *Eisenhower's Lieutenants*. Bloomington: Indiana University Press, 1990.

### PAPERS

Holzimmer, Kenin C. *A Soldier's Story: A Military Biography of General Walter Krueger*. Ann Arbor, Michigan: UMI Dissertation Services, 2000.

Schneider, James J. "How War Works: The Origin, Nature and Purpose of Military Theory." Fort Leavenworth, KS: School of Advanced Military Studies, U.S. Army Command and General Staff College, June 1995.