Staff Development, Deception Operations, and Force Projection: Lessons from the Normandy Invasion

A Monograph

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The invasion of Normandy is widely used by military professionals and historians to draw examples of successes or failures from this complex operation. While the Normandy invasion ultimately lead to the liberation of France and Europe from Nazi Germany, it was not achieved without a considerable amount of planning. Popular history has ignored some of the key aspects of this operation that illustrate the complexity of the planning in this undertaking.

This research examines aspects of the planning, preparation, and execution of the Normandy invasion. Although the invasion occurred more than seventy years ago, the three lessons gleaned from the monograph are relevant to the contemporary environment. Intelligence sharing and cooperation between coalition partners remains a sensitive issue for most military commanders. The ability to synchronize the transition between main and supporting efforts at the operational level of war is a difficult and tricky endeavor to achieve. Finally, the movement and deployment of a large number of men and equipment from geographically dispersed bases onto five objectives is a complex operation that can cause a loss in the operational tempo if the operation is not carefully synchronized.

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Abstract

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The invasion of Normandy is widely used by military professionals and historians to draw examples of successes or failures from this complex operation. While the Normandy invasion ultimately led to the liberation of France and Europe from Nazi Germany, it was not achieved without a considerable amount of planning. Popular history has ignored some of the key aspects of this operation that illustrate the complexity of the planning in this undertaking.

The research conducted in support of this monograph includes the use of source documents concerning the planning and preparations for the invasion by the Allies. The source documents center on three operations: Operation Fortitude, the deception operation; Operation Neptune the amphibious assault; finally, Operation Crossbow, the air operation. The source documents range from the operation orders used by the invasion forces; the ULTRA signals intelligence used to decode intercepted German radio traffic and the transcripts between senior Allied commanders and their staffs. Enhancing the source documents is a variety of historical works written by both British and American authors covering the invasion from varying perspectives.

The research into the planning, preparations, and execution of the Normandy invasion revealed several constraints that the Allies placed upon themselves, and how those constraints led to an increased rate of operational friction. The operational friction became apparent in the sluggish progress through the Norman Bocage and the vicious fighting in the city of Caen. The Allied progress became so slow that it hindered the efforts of the Allied corps and divisions to achieve their key objectives for several weeks. Throughout most of the summer of 1944, the Allied objectives at the corps and division level became focused on the next hedgerow or road intersection, rather than the next city or port.

Although the invasion occurred more than seventy years ago, the three lessons gleaned from the monograph are relevant to the contemporary environment. Intelligence sharing and cooperation between coalition partners remains a sensitive issue for most military commanders. The ability to synchronize the transition between main and supporting efforts at the operational level of war is a difficult and tricky endeavor to achieve. Finally, the movement and deployment of a large number of men and equipment from geographically dispersed bases onto five objectives is a complex operation that can cause a loss in the operational tempo if the operation is not carefully synchronized.

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Acronyms

ADRP	Army Doctrine Reference Publication
COSSAC	Chief of Staff Supreme Allied Command
JIC	Joint Intelligence Command
LCS	London Controlling Section
MI-6	Military Intelligence Section 6
OPS GP	Operations Group
OSS	Office of Strategic Services
SHAEF	Supreme Headquarters Allied Expeditionary Force
ULTRA	Codename for the Allied radio and signal cryptography that intercepted the radio traffic of the German government.

Introduction

The Lessons of Normandy

> Every plan in the war is the option to be examined, weighed, and adjusted, until it is carried out, or not.
>
> — Winston Churchill, *Prime Minister of the United Kingdom*

In the early morning of June 5, 1944 the giant manor house that stood in Bushy Park was a den of activity. Built shortly before Henry the VIII's acquisition of the park the manor house had provided solace and privacy to several monarchs of England for almost four hundred years.[1] Ten months before the home had acquired a new role as the site for an Allied command charged with planning the invasion of France. The Tudor and Victorian furnishings were almost completely gone and replaced with maps, desks, phone banks, and offices for the Supreme Headquarters Allied Expeditionary Force's (SHAEF) personnel to plan and coordinate the largest invasion in human history.[2] A giant map of Northern France that hung in the operations room of the SHAEF's Operations Room seemed to dominate the entire headquarters —— like a mute sentinel that served as a constant reminder of the staffs ultimate purpose. The map was a central feature of the headquarters and an item that naturally drew the attention of people when they walked into the home.

By June of 1944, the map of Northern France that hung in the Operations Room was almost perfectly drawn in the head of SHAEFs Commander General Dwight D. Eisenhower.[3]

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[1] Monro MacCloskey, *Planning for Victory: a Behind-the-Scenes Account* (New York: Richards Rosen Press, 1970), 55. The section's epigraph is from William Manchester, *The Last Lion: Defender of the Realm, 1940-1965* (New York: Random House, 1989), 322.

[2] Dwight Eisenhower, *Crusade in Europe* (New York: Double Day, 1948), 241.

[3] See "D-Day Plus 20 Years: Eisenhower Returns to Normandy," Paley Center for Media, Paley Center, last modified June 1, 2012, accessed December 18, 2014, http://www.paleycenter.org/collection/item/walter+ cronkite/&p=6&item=T77:0030. Segments two and three for a documented account of the personal knowledge that General Eisenhower had about the terrain and plan for the Normandy Invasion.

For the past nine months every road, town, village, and counter was etched into his memory. His knowledge of the map was a by-product of continuous study of a problem that he and representatives of the United States had advocated for since entering the war in 1941—the invasion of continental Europe. The time was 4:15 AM on the morning of June 5, 1944 and as General Eisenhower gazed at the map he knew that the time to refine the planning and preparations that went into the upcoming invasion were over.[4] He had given the authorization to start the invasion and given the size and scope of the invasion force he knew that once he gave the order he could not halt it. All of the time spent coordinating the details of the operation between the Allied Commanders, their respective services, and the political leadership of the nations involved had finally reached the point of transition from a plan to action.

The Allies had conducted a difficult, and nearly impossible, endeavor to invade Northern France. The German military was only half of the problem the Allied Forces faced. The Allied Commanders and their staff had a myriad of issues to address. The amount of men, material, and the required coordination needed to focus those assets towards a single objective required constant attention. There may never be a full account of the preparations that were required to make the invasion a success. This work is an attempt to survey three important aspects of the operation that either enabled or hindered the Allies' ability to plan and execute the invasion. The primary aim of this research is to answer the following question. Did the senior Allied leadership provide its invasion forces with the intelligence, operational security, and the ability to conduct operational art beyond the initial objectives in the Normandy invasion? The findings of the research reveal three distinct aspects of the Normandy invasion: first, the Allied command had difficulty in creating an intelligence staff that could provide useful intelligence to the senior and operational commanders; second, the deception operations were very successful, but constrained the Allies ability to plan for the Normandy invasion; third, the marshalling and moving of the

[4] Eisenhower, *Crusade in Europe*, 243.

invasion force succeed in achieving their primary objectives, but caused a temporary loss of momentum for the Allies.

Methodology

The first section will discuss the composition and purpose of the Chief of Staff Supreme Allied Command (COSSAC) and SHAEF intelligence staff. The intelligence staff was comprised of several nations' militaries all working towards the same goal. However, they all possessed different restrictions and limitations placed on them by their parent government. These restrictions affected the amount, type, and content of intelligence that was available to each member of the staff and their ability to create an accurate picture of the situation. The question answered in this question is did the commanders of SHAEF create an intelligence staff that could give the Allied Commanders at the corps and division a clear understanding of the enemy? Through a combination of first person accounts, planning documents from SHAEF, and secondary sources, the first section is an examination of the creation, development, and purpose of the intelligence staff of SHAEF.

The second section will focus on the need for operational security during the planning of the invasion of Normandy. The COSSAC staff were planning the invasion of Normandy concurrent to the ongoing deception operation against German intelligence efforts.[5] The deception operation had to ensure that the German military believed that the invasion from England would take place at the Pas-de-Calais and not Normandy.[6] As a result, the British and United States Governments, and the SHAEF implemented extensive measures to conceal

[5] Michael Howard , *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume V, Strategic Deception* (Cambridge: Cambridge University Press, 1988), 104-105.

[6] Roger Hesketh, *Fortitude: The D-Day Deception Campaign*, 19.

information about the actual invasion site and preserve the deception operation. These measures included withholding information from Allied corps and divisions until the final days preceding the assault onto Normandy.[7] During the subsequent fighting in Normandy, the Allies had to fight through several pieces of terrain that many of their tactical units were unprepared to encounter. The question answered in this question is did the SHAEF staff, or the strategic leadership at SHAEF, place the assault of Normandy secondary to the deception operation? Through a combination of intelligence documents, planning documents from SHAEF, Allied situation reports, and secondary sources the second section examines the deception operation and the reasons the operation constrained the actual invasion force.

The third section will discuss how the Allied command provided the focus and direction to the Allied ground forces during the planning and preparations prior to the invasion. The German military had made preparations in anticipation of the Allied invasion of Northern France since 1940.[8] The Allies needed to breach Germany's Atlantic Wall and establish a lodgment and logistic center before large-scale ground operations could occur in France. The Allies had to deploy roughly 135,000 men from across the British Isles onto five beaches within four hours to gain access into Northern France.[9] The Allied Command estimated that the German course of action would enable the Allies to secure the beaches and move inland to other objectives within

[7] Jonathan Bastable, *Voices from D-Day* (Cincinnati: F&W Pulbications Inc.), 45-48; Martin Blumenson, *Breakout and Pursuit* (Washington DC: Center of Military History, 1961), 65.

[8] Gordon Harrison, *Cross-Channel Attack* (Washington DC: Center of Military History, 1950), 128-130.

[9] United States Army Command and General Staff College, *Battle Analysis: Operation Overlord, Volume 1: Part 1,* (Fort Leavenworth: United States Command and General Staff College Press, 1947), 34-36; Headquarters Supreme Headquarters Allied Expeditionary Force, *Eyes Only Cable dated June 6, 1944, 1335 hours.* (London: Supreme Headquarters Allied Expeditionary Force, 1944), 1. The transcript is a decoded message sent from the *HMS Belfast* reporting that all of the invasion beaches are secure.

several days. It was not until thirty days of continuous fighting that the Allies were able to move further inland and capture key pieces of terrain outlined in their original orders.[10] Did the Allies become too focused on seizing the beach objectives and neglect to conduct a detailed assessment of the requirements needed in the initial ground campaigns in Normandy? Through a combination of intelligence documents and planning documents from SHAEF, Allied situation reports, interviews with US officers who fought at Normandy, and secondary sources the third section will be an examination of the reasons that led the Allies to assess the German course of action in Normandy.

The final section will provide recommendations to military commanders and staff officers on staff development, deception operations, and force projection for current use in the contemporary environment. The final section provides a brief overview of this monograph, and examines how its research relates to issues in the contemporary environment.

Limitations

The scope and depth of information about the invasion of Normandy is extensive and is too large to cover in a single work. For this reason, the author has chosen three aspects of the campaign to highlight the complexity of the operation and the difficulties the Allies experienced working on a combined staff towards the same goal. The majority of the secondary sources used to create this work are from British and American authors and works. Two sources address the Canadian experience and one source addresses the German experience during the campaign. There were no French accounts of the operations used in the course of this monograph. The bulk of the source documents originate from the SHAEF headquarters, and cover the period from the fall of 1943 to July of 1944. There is a limited amount of examination of the Allied actions after the Allied operation to breakout of the Contention Peninsula: Operation Cobra. Two events limit

[10] Blumenson, *Breakout and Pursuit*, 22-25.

examination of operations in Normandy after Operation Cobra: first, the conclusion of the Allied deception operation in support of the invasion; second, the transition of the Allied ground operations in France from seizing terrain in Normandy to pursuing the retreating German Army in France.

Staff Development

> There is only one thing worse than fighting with allies, and that is fighting without them.
>
> — Winston Churchill

A second conflict involving Germany in continental Europe was a concern for many military and political leaders during the 1920s and 1930s. The political and military leaders of Britain and the United States periodically addressed the possibility of a second war with Germany both formally and informally since the 1930s.[11] Major General Fox Conner had taught the future commander of the Allied invasion General Dwight Eisenhower that the next conflict against Germany would require a combined effort by several nations, and that the future coalition needed to create a more cohesive command structure to ensure that they could win in the next continental war.[12] Although plans existed to mobilize the nation if a future conflict occurred, no formal plans existed for integrating coalition forces and staffs. General Conner imparted a concept about the next conflict to the future US commanders, and the coalition staff structure needed to make it successful.

The Allies had been operating as a combined staff since 1942. From Operation Torch to Operation Husky and Operation Avalanche the Allied Commanders and their staffs had

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[11] Manchester, *The Last Lion: Winston Spencer Churchill: Alone, 1932-1940*, 122-125, 225. The section's epigraph is from William Manchester, *The Last Lion: Defender of the Realm, 1940-1965* (New York: Random House, 1989), 220.

[12] Edward Cox, *The Grey Eminence: Fox Conner and the Art of Mentorship* (Stillwater: New Forums Press, 2011), 250; Geoffrey Parret, *Eisenhower* (New York: Random House, 1999), 145-147, 212.

developed a breadth of experience and understood about their capabilities as a staff to plan and coordinate large-scale operations against the German military.[13] This team's structure had undergone several evolutions since the invasion of North Africa and developed through hard fought experience and sacrifice; the British and American militaries were refining their ability to work with each other towards defeating Germany. In the spring of 1943, the Allied command needed the experience of the staffs in the Mediterranean for the invasion of Northern France.[14] The majority of the officers used to plan the next operation would primarily come from the staffs that had achieved success in North Africa and Italy.[15] Those staff officers selected by the senior command had experience at the division and corps levels. While their experience in the Mediterranean added to the organization, their experience was limited to the tactical echelons of the Allied militaries. The Allied Command would discover that the complexities of the invasion of Normandy would test their entire commands individual and collective competencies.

The Allied Command established COSSAC in the spring of 1943 because of the decision made at the Casablanca Conference to invade Continental Europe. The Supreme Command

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[13] See Rick Atkinson, *An Army at Dawn* (New York: Owl Books, 2002) 32-40, 49-63 and Rick Atkinson, *The Day of Battle* (New York: Henry Holt and Company,2007) 179-187, 200-219. Operation Torch was the Allied invasion of North Africa in 1942 and the first attempt at Allied amphibious operations. Operation Husky the invasion of Sicily was the second amphibious operations by the Allies. Operation Avalanche—the Allied invasion of Italy in 1943 — was the third allied amphibious operation in the North African, Mediterranean, and European Theatre. Between 1942 and 1943, the Allies had gained a significant amount of experience in combined amphibious operations and the individuals and staffs that worked on those operations had practical experience in the planning and execution of amphibious operations. Those individuals were a logical choice to plan the invasion of Normandy.

[14] See Forrest C. Pogue, *The Supreme Command* (Washington DC: Center of Military History, 1989), 47-50 and F.H. Hinsley, *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume 3, Part 2* (Cambridge: Cambridge University Press, 1989), 9-12, 15-18. These works provide an examination of the selection and assignment of officers with experience in planning and leading amphibious operations in the Mediterranean to COSSAC and SHAEF staffs.

[15] Harrison, *Cross-Channel Attack*, 68-70; Pogue, *The Supreme Command*, 99.

charged COSSAC, and eventually SHAEF, with planning the combined Allied invasion of Northern France.[16] COSSAC was a combined staff composed of British, Commonwealth, and US officers and its organization was similar to the combined staffs that oversaw the planning and execution of operations in North Africa and the Mediterranean.[17] The composition of its senior members was determined throughout the summer and fall of 1943, and their appointments to various positions within the staff were staggered to ensure a smooth transition. The majority of the primary staff members had arrived for duty by December of 1943; many of them had served in similar staff positions in North Africa, and many of them provided a niche level of expertise. The operational experience of the staff members that planned the combat operations in North Africa and the Mediterranean was crucial to ensuring COSSAC possessed the right expertise for the invasion of Normandy.

The Evolution of COSSAC

The senior leadership that arrived to assume control of COSSAC went to great lengths to ensure that it was an integrated and combined staff. General Eisenhower had arrived in early December of 1944 to assume command of the overall operation to invade Continental Europe from England. The previous operations in the Mediterranean were not free from problems. British and American Commanders and their staffs had developed a very acrimonious relationship with each other during the invasion of Italy.[18] The success of future operations depended on the

[16] See Pogue, *The Supreme Command*, 56-50. He provided an explanation of how COSSAC became SHAEF and the duties and responsibilities that SHAEF assumed in the planning and execution of the invasion of Northern France.

[17] Pogue, *The Supreme Command*, 41-49; Harrison, *Cross-Channel Attack*, 76-78; Dwight Eisenhower, *Crusade in Europe* (New York: Simon and Schuster 1948), 122-125.

[18] Pogue, *The Supreme Command*, 45-48; Douglas Porch, *The Mediterranean Theatre in World War II: The Path to Victory* (New York: Farrar, Straus, and Giroux, 2004), 662-665.

combined staffs cooperating in an environment that promoted cooperation. From the outset of his arrival, General Eisenhower made an extraordinary effort to ensure that the dynamic of the COSSAC staff was working in collaboration towards a unified goal. In January of 1944, the planning for the invasion of Normandy passed to a new Allied staff: Supreme Headquarters Allied Expeditionary Force (SHAEF).[19] SHAEFs chief of staff, Lieutenant General Walter B. Smith, remarked, "[Eisenhower] made every available effort to ensure that every section of the staff understood that it was a team effort."[20] This need to ensure the integration of the Allied staff and its sub-components was an ongoing effort that required constant attention.

From the spring to the fall of 1943, the staff of COSSAC was composed primarily of British, and Commonwealth officers, and the daily operations of COSSAC strongly reflected this influence.[21] As the operations in North Africa transitioned to Sicily, the COSSAC staff's personnel grew with an increasing number of US officers filling the ranks. COSSAC had been operating for several months under a British system of staff operations. The majority of the British staff would work in a similar way that their predecessors had in World War I.[22] Their staff would work for roughly twelve hours per day and then leave a small amount of personnel available for issues that arose in the evening. The American staff sections would operate in shifts

[19] Porch, *The Mediterranean Theatre in World War II: The Path to Victory*, 559-562.

[20] Pogue, *The Supreme Command*, 64. See Dwight D. Eisenhower Presidential Library Archives, *Walter Bedell Smith Collection, Chief of Staff's Official Correspondence File, 1942-1944, Memorandum dated October 1943, The Conduct and Behavior of US Personnel Serving on a Joint Staff* (London: Supreme Headquarters Allied Expeditionary Forces Europe, 1944).

[21] Jock Haswell, *D-Day: Intelligence and Deception*, (New York: New York Times Books, 1979) 33. See Burg, *Oral History Interview*, 7-10 for a first-hand account of how the senior Allied staff officers overcame the challenges of integrating American and British intelligence staffs in support of the Normandy Invasion.

[22] F.H. Hinsley, *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume 3, Part 1* (Cambridge: Cambridge University Press, 1989) 54; Burg, Oral History Interview, 12-15, 22-25.

covering twenty-four hours a day with a similar number of personnel on each shift. This system created a staff that worked on a shared problem in separate cycles. American teams could outpace their British counterparts in terms of analysis and shared understanding. However, much of the planning had to stop until the British counterparts would arrive to continue the effort. This mismatch of operating cycles caused some frustration and at times and was a constant irritant for the Chief of Staff.

In a short amount of time, the British and American officers from all services were functioning in as efficient a manner that the situation permitted. Integration of the separate air, ground, and naval service staffs needed to reach a point where it would meet both British and American interests. In November 1944, the COSSACs Chief of Staff instituted a separate working group dedicated to resolving inter-service issues.[23] The inter-service working group functioned separately from the main body of the COSSAC, and eventually the staff of the SHAEF. The joint working group would examine issues pertaining to joint problems separately from COSSAC's primary staff and bring their recommendations to the team.[24] The inter-service staff group proved to be useful in some coordinated efforts, but it had a limited effect on the joint integration of the operation. Its greatest contribution to the process was the ability to delineate which branch was in charge of key events during the operation and when its authority would transition to another service command at the tactical level.[25] Senior leadership resolved most of

[23] Chief of Staff Supreme Headquarters Allied Expeditionary Force, *Weekly Intelligence Summary for 29 March, 1944* (London: United States War Department, 1944),11.

[24] See Dwight D. Eisenhower Presidential Library Archives, *Walter Bedell Smith Collection, Chief of Staff's Official Correspondence File, 1942-1944, Box 15*, (Abilene: Dwight D. Eisenhower Presidential Library, 1944). Memorandum dated January 9, 1944, issued by the Chief of Staff, SHAEF, Lieutenant General Walter Bedell Smith for an outline of the requirements and purpose of the joint staffs working group, and instructions on rules of cooperation between each national command authority.

[25] See Gordan A. Harrison, *Cross Channel Attack*, 105-111 for a detailed understanding of how the senior commanders at SHAEF determined the command structure for the invasion of Northern France.

the staff challenges in an efficient manner and ensured that the performance of the Allied staff did not suffer due to organizational methods or differences; however, issues with the intelligence staff would remain unresolved.

The Problem with the Intelligence Staff at SHAEF

The staff section that managed intelligence was the most sensitive and reluctant to any changes to its methods of sharing information and its routine operations. When the supreme command assigned US Brigadier General Thomas Betts to assume responsibility for the intelligence staff, he found it very difficult to coordinate the integration of the British and American intelligence staffs. The British and their Commonwealth officers worked separately from their American counterparts.[26] The British had civilian personnel assigned to COSSAC from MI-5 and MI-6 that worked almost exclusively with the British members of the staff and did not report to a military chain of command.[27] The intelligence section of SHAEF was responsible for developing an understanding of the environment for the senior leadership and the COSSAC staff. However, due to its compartmentalized structure and different approaches to British and American intelligence, senior commanders bypassed the intelligence section and shared intelligence with each other in private conversations.

A political constraint that the Allies had to contend with to share intelligence was the Joint Intelligence Committee. This was a committee established by the British government in 1936 and was designed to oversee intelligence operations of the British government and military. The committee was primarily responsible for the control of the intelligence and counter

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[26] Burg, *Oral History Interview*, 7-10; *Hinsley, British Intelligence in the Second World War: Its Influence on Strategy and Operation, Volume 3, Part 1*, 109.

[27] Headquarters European Theatre Command, *Operations of the Military Intelligence Service, 1942-1949*: *Joint Operations* (London: Government Printing Office, 1945), 20-23, 33.

intelligences efforts that the British conducted worldwide. The British military was subject to its scrutiny throughout the war and through the British presence on the COSSAC and SHAEF staffs the Joint Intelligence Committee could influence the intelligence sharing among the Allied nations.[28] Due to the location of the planning and preparations for the invasion of Northern France, the intelligence committee had a considerable interest in the authorization and release of information throughout the Allied command. Certain forms of intelligence had to be approved by the committee for its release, a process that was often laden with legal restrictions and caveats. The legal restrictions were so sensitive that twenty of the twenty-eight individuals assigned to provide Allied field commanders with decoded German radio traffic and other strategic intelligence had law degrees.[29]

A measure implemented by the British military leadership to control the release of intelligence from one operation to another between military organizations was the establishment of the Joint Intelligence Board (JIB). The JIB primarily served as a release authority for intelligence between the armed services and was a subsidiary of the Joint Intelligence Command (JIC). When the US military began to integrate their efforts with the British in January of 1942, they found that this board controlled most of the information sharing within the British military.[30] The JIB retained approval authority over all intelligence shared within the British Isles including the invasion of Northern France and its supporting operations, and would play a significant role in the ability of the combined staff of COSSAC and SHAEF to share information and effectively

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[28] Howard, British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume V, Strategic Deception, 17-20; Hinsley, British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume 3, Part 2, 10-11.

[29] James Gilbert and John Finneigan, *U.S. Army Signals Intelligence in World War II* (Washington DC: Center for Military History, 1993), 34.

[30] Pogue, *The Supreme Command*, 97-99; Mary Barbier *D-Day Deception: Operation Fortitude and the Normandy Invasion* (Westport: Preager Security International, 2007), 42-46, 57.

coordinate many staff functions.

The intelligence staff of the COSSAC had two broad purposes. The first purpose was to share intelligence between the Supreme Staff and the Allied army, navy, and air commands.[31] The second was to inform the Allied command about German capabilities and predict their intent. The COSSAC had a limited ability to do both. General Betts admitted the staff needed to receive reports from subordinate ground units to gain and provide a better understanding of the situation in Normandy, but could not due to the absence of units on the ground in Normandy providing a steady flow of information back to the Allied Command. The intelligence section at COSSAC had the ability to task certain units within its chain of command to find information for the planning efforts.[32] The request had to go through multiple levels of command, the unit tasked with finding the piece of information had to take measures to collect the data, and finally, a compartmentalized intelligence system through the same multiple commands sent the information back to the COSSAC and eventually SHAEF staffs.

Without Allied ground, forces engaged in daily ground combat in Northern France, the ability to gather intelligence from corps or divisions about ground force actions was limited—if it existed at all. The air and naval services participated in simultaneous operations and could provide information to the COSSAC concerning their operations and the tactical actions they performed; however, some of the information was of limited value to the actual planning of Operation Neptune.[33] Many of the activities that air and navy services conducted were in support of the invasion of Northern France. The usefulness of their intelligence was limited to their operations purview and could provide a limited amount of information about actual conditions of

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[31] Pogue, *The Supreme Command*, 71-73.

[32] Maclyn P. Burg, *Oral History Interview*,15-16, 20 for a first-hand account of the bureaucratic processes and the limitations that arose from those systems and its effect on COSSAC and SHAEF intelligence efforts.

[33]*Burg, Oral History Interview*, 25.

the Normandy area.

The United States Office of Strategic Services (OSS) and the British counterpart of MI-6 had intelligence operations in France that supported the Allied invasion of Normandy and worked alongside the French resistance. The French resistance was a collection of irregular fighters that had been resisting German occupation of France since 1940. The resistance provided information about the German Army's dispositions and activity through a complex network of informants. These informants would rely their information in various forms to Allied agents that would in turn process the information and distribute it to the various intelligence agencies in England.[34] The organizational system designed to protect the resistance efforts it from German intelligence analyzed the information for relevance and compartmentalized the information. Very little of this information was available to the COSSAC staff; information that was received was fragmented and incomplete after a review by the Joint Intelligence Committee.

What the SHAEF Intelligence Staff Provided

The COSSAC and SHAEF staff possessed a limited capability to gather intelligence without effecting national, operational, and legal limitations, and left the intelligence section with a limited understanding of the German activity in France. However, they possessed the authority to request a large amount of information. This information could arrive at the staff from many sources, and in such a volume that it would overwhelm the senior commanders, and the rest of the staff, with an endless flow of memorandums, and summaries of all types of information about the German's activity. The commanders and their chiefs of staff needed to gain an understanding of the environment and provide guidance to the staff to assist them in their ability to focus the

[34] F.H. Hinsley, *British Intelligence in the Second World War*: *OSS and JEDBURG Operations* (Cambridge: Cambridge University Press, 1990), 106; Headquarters Chief of Staff Supreme Allied Command, *Digest of Operation Overlord*, (London: Supreme Headquarters Allied Command Europe, 1943), 8; Burg. *Oral History Interview*, 12, 28-29.

intelligence staff on the enemy situation to determine whether events in other parts of Europe had any impact the environment of Northern France. A technique used to avoid overloading the commanders by the intelligence staff was with intelligence summaries.

The intelligence summaries were a compilation of information from the various service arms and consolidated into a concise narrative that covered topics of relevance to the senior leaders of the COSSAC. The intelligence summaries went through several drafts prior to their publication and were subject to a high level of editorial scrutiny.[35] Often, the chief of staff would remove information from summary drafts in an effort to preserve brevity in reporting and to narrow the focus of the intelligence staff.[36] The need achieve brevity in the summaries resulted in a reduction in detail about intelligence that tactical formations would find useful in planning their portion of the campaign. Prior to the dissemination of the operations order from COSSAC, Allied corps and divisions received most of their information about the defenses in Northern France from unclassified intelligence sources —— such as newsreels and radio broadcasts.

Many of the intelligence reports drafted by SHAEF contained information about the strategic situation in the European Theatre of Operations. Most of the data was concerned with broad topics of the German military's capabilities.[37] In one summary dated March 8, 1944 the COSSAC intelligence staff mainly discussed the losses of German tanks and aircraft in Russia and how the losses produced a degraded state for the German military as a whole.[38] In the same

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[35] Pouge, *Supreme Command*, 71; Harrison, *Cross Channel Attack*, 88.

[36] See Pouge, *Supreme Command*, 71-73 and Burg, *Oral History Interview* 13-17, 22-25. These provide a comparison between two works about the process of delivering intelligence to the senior commanders of SHAEF.

[37] See Dwight D. Eisenhower Presidential Library Archives, *Weekly Intelligence Summaries March 1, 1944- July 15, 1944*, Box 30, (Abilene: Dwight D. Eisenhower Presidential Library, 1944). The weekly intelligence summaries from March 1944 to July 1944 for a weekly intelligence overview delivered to senior Allied commanders of SHAEF prior to, and during, the invasion of Northern France.

[38] Dwight D. Eisenhower Presidential Library Archives, *Weekly Intelligence Summaries*

document, there was very little discussion about Northern France with one exception, the estimated movement of several divisions around the Pas-ds-Calais.[39] The movement of German units in Northern France were of high importance to the COSSAC and SHAEF staff and identified as an issue that would determine the timing of the invasion since the commencement of the invasion planning in 1943. If the German reserve units were too close to Normandy, the German reserve could reinforce the defenses of Normandy and might defeat the Allied invasion on the beaches.[40]

The COSSAC disposed of or cataloged most of the intelligence excluded from the intelligence summaries. The intelligence contained several classifications, and each could exclude certain parties or individuals from access to the information. The national caveats the British and American intelligence officers worked under further complicated the classification system at COSSAC. The intelligence staff withheld useful information was from the rest of COSSAC due to the political and legal sensitivities of the information's source.[41] By June of 1944, the intelligence staff stored a significant amount of intelligence in a system that purposely hid it's knowledge from the entire command to preserve secrecy, and contained several types of restrictions on who had access to the data; most of the information remained inside COSSAC's staff until after the end of the war.

March 1, 1944- July 15, 1944, Box 30 (Abilene: Dwight D. Eisenhower Presidential Library, 1944), Weekly Intelligence Summary for March 8, 1944.

[39] Dwight D. Eisenhower Presidential Library Archives, *Weekly Intelligence Summaries March 1, 1944- July 15, 1944, Box 30*, Weekly Intelligence Summary for March, 8 1944; Headquarters Chief of Staff Supreme Allied Command, *Digest of Operation Overlord* (London: Supreme Headquarters Allied Command Europe, 1943), 8.

[40] Harrison, *Cross Channel Attack*, 114-115.

[41] Gilbert and Finneigan, U*.S. Army Signals Intelligence in World War II*, 166-170; Jock Haswell, *D-Day: Intelligence and Deception*, 68; Burg, *Oral History Interview*, 9-14.

Staff Development's Conclusion

The information provided by the COSSAC intelligence staff was very limited in its scope and nature. Most of the intelligence about Normandy that would be useful to the ground invasion was limited, due to the lack of ground forces in Northern France that could gather intelligence for SHAEF. The OSS or MI-6 agents examined any information provided by the French resistance to preserve operational security; then if the information met stringent classification restrictions, the information was relayed to the COSSAC.[42] The air and naval services could provide information about their operations and collect intelligence in Northern France for COSSAC; however, the information was limited to the capabilities of each service and thus limited the scope and amount of knowledge about the situation in Normandy.[43] The operational security of the campaign underpinned the entire collection effort. For example, if the air services started to conduct a noticeable increase in the number of aerial reconnaissance mission flown over Normandy, German intelligence could predict the invasion site, and possibly, ruin the efforts of Operation Fortitude South. In the interest of operational security, Allied air forces had to limit their collection activities.

There were different priorities placed on what intelligence COSSAC required for analysis and what the corps and division staffs needed for their operations. The overall logistic, force staffing, and combat power of the German formations at the army and army group level became the primarily concern for the intelligence section at COSSAC.[44] The COSSAC intelligence staff's focus was not on particular aspects of military terrain or its effects on the ground forces

[42] Burg, *Oral History Interview*, 21-22; *Hinsley, British Intelligence in the Second World War, OSS and JEDBURG Operations*, 212.

[43] Burg, *Oral History Interview*, 18; Haswell, *D-Day: Intelligence and Deception*, 88.

[44] Pouge, *Supreme Command*, 71.

ability to maneuver in depth, rather, they focused on the size, capability, and capacity of the German military throughout France. COSSAC conducted the majority of the analysis about the landing beaches and the types of terrain around Normandy in the fall of 1943 and the winter of 1944; however, the primary terrain feature for COSSAC was the logistic capacity of the ports on Normandy.[45] The responsibility for understanding and gathering the details of the German military in Normandy was indirectly passed to the Allied ground force, the 21st Army group.

The intelligence staff of COSSAC had to provide a better understanding of the environment to the senior Allied Commanders in a very constrained environment. The intelligence staff had to work through several issues to enable the Allied Commanders to understand the battlefield. The first issue was the British and American ability to share intelligence aimed at a shared operational objective. The second issue was the information briefings that the intelligence section provided to the senior leaders did not focus on the operational activity of the German military in Northern France; rather, they were concerned with the overall picture of the European Theatre of Operations. The third issue was the limited ability that COSSAC and SHAEF possessed to gather intelligence on the ground in Northern France in a manner that would not expose the true Allied objective in France. The last issue was the compartmentalization system that they imposed on the Allied intelligence system to protect the secrecy of the intelligence. While the intelligence staff functioned effectively given its constraints, it was not able to provide the ground forces with accurate information needed to execute the invasion of Normandy. Despite the Allies best efforts, the Intelligence staff at the COSSAC and the SHAEF could only provide a limited amount of useful information to the ground forces during the invasion of Northern France.

[45] Headquarters Chief of Staff Supreme Allied Command, *Digest of Operation Overlord*, 7.

Deception Operations

> Good deception costs something. The expenditure of the means of deception must be in the right proportion to the purpose of deception.
>
> — *Generaloberst* Hans von Greiffenberg

While the SHAEF staff was planning the invasion of Normandy, a separate staff group was planning and executing the deception operations against the German military in France. The Allies formed this staff group in a similar manner as the intelligence staff group—however they had a very different purpose. In March of 1944, this staff group implemented one of the most successful deception operations in World War II. The staff had the distinction of planning and successfully maneuvering ground forces in England against the German Army in northern France months before the invasion forces did, and successfully protecting the actual invasion force's maneuver onto their objectives for roughly a month after the initial landings.

The planning for the invasion of Normandy took place in an environment that contained simultaneous deception operations aimed at the German military and espionage networks. In 1941, the British military in concert with civilian and political leadership commenced a strategic deception program designed to enhance their military operations.[46] The deception operation had two purposes first, to increase the ambiguity of the invasion preparations to confuse the German Intelligence, and second to provide a measure of operational security in the planning and execution of the actual operations. Initially, the British centralized the coordination of the deception operations at the strategic level. After a short period, the British mandated that all

[46] Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, 34-37; Hesketh, *Fortitude: The D-Day Deception Campaign*, 21. The section's epigraph is from Headquarters Chief of Staff European Theatre of Operations U.S. Army, *Interview of German General Officers: Summary of Experiences in use deception operations in the European Theatre of Operations* (London: European Theatre of Operations, 1945), 9.

theatre commands develop a deception branch to manage military deception in their respective areas of responsibility and coordinate their actions through a central committee.

The deception branch in each theatre command would work in concert with the London Controlling Section (LCS). The LCS was a centralized committee of senior officers from the various armed services in the British military established to provide a level of continuity to the various deception operations.[47] This section's primary responsibility was the coordination and integration of each deception operation into a larger narrative. The section had a unique composition of people whose skill sets ranged from set designers for movies to an actor hired to act as a body double for Field Marshal Bernard Montgomery.[48] Within two years, the LCS had coordinated an elaborate and complex set of deception operations across Europe and North Africa that influenced German intelligence and military operations.[49] The LCS would become a key component in the Allied effort.

In early 1942, the US military began to gain access to the British operations in support of operational security and deception. US military forces arrived in Europe and discovered that the British military and government——using the LCS—— had been operating a deception campaign against the Germans for several years. To ensure that the deception operations maintained a level of plausibility and secrecy, the British retained control of most of the deception operations throughout the European Theatre of Operations in 1943 and 1944.[50] The

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[47] Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, 42; Howard, *British Intelligence in the Second World War: Its influence on Strategy and Operations, Volume V, Strategic Deception*, 21-23.

[48] Hesketh, *Fortitude*, 47; Gilbert and Finneigan, *U.S. Army Signals Intelligence in World War II*, 56.

[49] Howard, *British Intelligence in the Second World War: Its influence on Strategy and Operations, Volume V, Strategic Deception*, 28.

[50] Gilbert and Finneigan, *U.S. Army Signals Intelligence in World War II*, 37; Haswell, *D-Day: Intelligence and Deception*, 72.

British military increasingly integrated the US military into these deception operations.[51] However, the US participants understanding of how the deception operations worked remained limited. At the time of the Normandy invasion, the US military had one representative present at the LCS board. The British military would dominate the activity for most of the planning and execution of the deception operations in support of the Normandy invasion.

The British military placed a high priority on the capabilities of the LCS and its deception operations. The British political and military leadership believed that the use of deception operations had ensured the survival of the United Kingdom since 1940, and would continue to do so in the immediate future. The LCS conducted multiple deception operations from the British Isles. An invasion of Northern France could expose the other deception operations to German Intelligence if there were a lapse in operational security, or if the activity of the Allies revealed discrepancies in the ongoing narrative coordinated by the LCS.[52] Despite this risk, the Allies needed to conduct planning and preparations for the invasion of France.

Supporting the Normandy Invasion through Deception

In October of 1943, COSSAC took responsibility for the establishment and control of the deception operations in support of the Normandy invasion.[53] In January 1944, SHAEF executed the largest deception operation conducted to that point in the war: Operation Bodyguard. Operation Bodyguard was a strategic deception operation designed and implemented by the

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[51] Haswell, *D-Day: Intelligence and Deception*, 30; Jon Latimer, *Deception in War* (New York: The Overlook Press, 2001), 156.

[52] Hesketh, *Fortitude*, 17; Howard, *British Intelligence in the Second World War: Its influence on Strategy and Operations, Volume V, Strategic Deception*, 122.

[53] Chief of Staff of the Headquarters Supreme Allied Expeditionary Force, Memorandum of record Dated October 7, 1943 directing the establishment of operations to deceive enemy intelligence and the mask the activity of Allied forces in the United Kingdom (London: United States Government Press, 1944).

Allies to deceive German intelligence and guide the decision-making of senior German leaders about an invasion of Continental Europe from the British Isles. The staff of COSSAC had to prepare and execute the deception operations and the invasion preparations for northern France. COSSAC and the LCS had to integrate the deception operations under Operation Fortitude to the adjacent deception operations under Operation Bodyguard into a single narrative.

The Allies designed Operation Bodyguard with several sub-operations conducted throughout the British Isles working in concert with each other.[54] These sub-operations were invasions of Continental Europe from different locations within the British Isles and the Mediterranean. While all sub-operations of Bodyguard had a degree of creditability, the Allies knew that the Germans would identify the deception in several of the operations. However, the more resources the Germans spent looking for these operations, the greater inability they would have to concentrate fully on any single one. General Eisenhower and the staff of the SHAEF identified Operation Fortitude South as the most significant activity of Operation Bodyguard and the one that directly supported the invasion of Northern France.

The deception staff at SHAEF and the LCS had improved their ability to conduct deception operations throughout the campaigns in the Atlantic, Operation Torch in North Africa, Operation Husky in Sicily, and Operation Avalanche in Italy, and the strategic bombing campaign of central Germany. The Allies increased their skill and understanding about deception operations from the experience gained in North Africa and the Mediterranean campaigns. One operation, Operation Cockade, would provide the inspiration and experience needed for Operation Fortitude South's success.

In 1943, the LCS authorized the initiation of Operation Cockade, an operation aimed at diverting German airpower away from Italy towards the Pas-de-Calais. Operation Cockade used

[54] Haswell, D-Day: *Intelligence and Deception*, 106-107; Hesketh, *Fortitude*, 49-55.

radio traffic in England in an attempt to deceive the German air force that a significant Allied air operation would commence conducting bombing operations against targets in France, Belgium, and the Netherlands.[55] The intent of Cockade was to draw a portion of the German Air Force's resources away from Italy. The Allies used a combination of radio traffic and aerial maneuvers from England and the Mediterranean to give the impression that the operation was real.[56] Despite the amount of coordination and sophistication involved in Operation Cockade, the German military was not convinced of the deception operation; however, Operation Cockade was a partial success. Operation Cockade gave the Allies a better understanding of German capabilities and their decision-making capability at the operational and strategic levels of war.[57] This knowledge would be valuable in Operation Fortitude.

Operation Cockade was coordinated through two staff groups COSSAC in England and Group A in the Mediterranean prior to Operation Husky's commencement. Group A was an Allied military staff established in 1940 to conduct deception operations across the Mediterranean.[58] Group A worked for the theatre commander and coordinated their deception operations through the LCS. The deception operations included air, naval, and land operations in support of Allied operations in the entire Mediterranean. By 1944, this intelligence group had the most experience in conducting deception operations in support of Allied efforts. Shortly after

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[55] Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, 49-51; Gilbert and Finneigan, *U.S. Army Signals Intelligence in World War II*, 194.

[56] Howard, *British Intelligence in the Second World War: Its influence on Strategy and Operations, Volume V, Strategic Deception*, 74-77, 99-107.

[57] Haswell, *D-Day: Intelligence and Deception*, 47; Howard, *British Intelligence in the Second World War: Its influence on Strategy and Operations, Volume V, Strategic Deception*, 74-77, 99, 107.

[58] Howard, *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume V, Strategic Deception*, 107; David Mure, *Master of Deception* (London: William Kimber & Co. Ltd., 1980), 146-147.

Operation Avalanche, the Allies established Operations Group B, the group responsible for the development of the deception operation in support of the invasion of continental Europe and began, to transfer many members of Group A out of the Mediterranean to the SHAEF.[59] Shortly after the establishment of Operations Group B, the LCS directed the planning of Operation Bodyguard in support of the Allied invasion of Northern France.

To compensate for the actual invasion forces preparations and to synchronize the activity of both efforts into a single narrative, the planners at COSSAC incorporated the model of deception that Group A had established in the Mediterranean.[60] In the Mediterranean and North Africa, Group A had been very successful in conducting deception operations in coordination with actual operations. An essential component of the Allied deception effort in the Mediterranean was the use of multiple scenarios across the theatre. In the Mediterranean, Group A in coordination with other Allied staffs would task and maneuver real and faux units to execute a form of tactical actions in time, space, and purpose to find where the German military focused its intelligence and operations efforts, and to test the level of responsiveness to the deception moves. [61] By 1943, Group A had conducted successful deception operations across the Mediterranean that had a significant effect on the German's understanding of Allied operations in that theatre. The selected personnel were a logical choice for planning the deception operation in support of Operation Neptune.

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[59]Mure, *Master of Deception,*194.

[60] Howard, *British Intelligence in the Second World War: Its influence on Strategy and Operations, Volume V, Strategic Deception*, 62; Hesketh, *Fortitude*, 89-92.

[61] See Hinsley, *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Volume 3, Part 2,* 78-113 for a detailed account of the development of Group A's approach to conducting operational deception and how the Allies refined their deception abilities in the Mediterranean theatre of operations.

Throughout the European theatre, the Allies could rely on ULTRA intelligence to grant them access to the German's decision-making process. ULTRA intelligence was the deciphered radio traffic between Germany's military and civilian leadership at the strategic level. The ability to decipher the messages existed since 1940, and it granted the Allies unprecedented access to German military decisions.[62] The Allies used ULTRA to aid in the deception operations and their future decisions about the deception campaign. ULTRA intelligence provided the Allies with unparalleled access to the German intelligence communications and enabled the Allies to gauge the German assessments and reactions to the Allied activity in England and throughout Europe.[63] The deception activities included a variety of ruses from maneuvering faux ground formations of vehicles constructed of canvas and wood, to moving large amounts of actual supplies to different supply depots.[64] After determining the German's reactions to the deception operation's activity, Group A would then adjust the deception campaign using the ULTRA transmissions to tailor the deception activities to influence the German intelligence assessments.

The Allies Main Effort in the Deception Operations

Operation Fortitude South was the deception operation that received the most attention from the Allies and the Germans. The operation had the most likely chance of success of convincing the Germans that the invasion would take place in the Pas-de-Calais, and the highest risk of failure due to its proximity to German intelligence networks and the close geographic proximity between England and France. The operation centered on the fictitious 1st Army Group

[62] Gilbert and Finneigan, *U.S. Army Signals Intelligence in World War II*, 18; Josef Garlinski, *The Enigma War* (New York: Charles Scribner's Sons, 1980), 23.

[63] Hesketh, *Fortitude*, 34; Mure, *Master of Deception*, 55-58.

[64] Howard, *British Intelligence in the Second World War: Strategic Deception*, 71; Hesketh, *Fortitude*, 100-103; Mure, *Master of Deception*, 68-72.

and its preparations for the invasion of Northern France.[65] German intelligence identified Operation Fortitude South's anticipated objective as the Pas-de-Calais, in January 1944.[66] The actual invasion forces were adjacent to and in intermingled within the 1st Army Group's area, and some of the units participated in the deception operation prior to and after the invasion of Normandy.[67]

The use of ULTRA signals intelligence was an essential component for gaining an understanding of the German Army's activity and its responses to Allied activity in England. The Allies compared ULTRA traffic against Operation Fortitude South's actions as a gauge to measure the effectiveness of the operation's activities. The Germans were not entirely sure that the invasion would take place at the Pas-de-Calais. Throughout the winter and spring of 1944, there were several times when German Intelligence began to reassess the invasion site as possibly Normandy. The Allies used ULTRA radio intercepts as guides to German intentions and perception to alter the activity of Operation Fortitude South several times. Without the use of ULTRA, modifying the German intelligence efforts away from Normandy and towards the Pas-de-Calais would have been difficult.[68] The capability ULTRA and its information provided were

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[65] Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, 22; Hesketh, *Fortitude*, 66; Harrison, *Cross Channel Attack*, 113.

[66] See ULTRA signals intelligence, *ULTRA Intelligence microfilm: Reel 16*, Microfilm (London: Public Records Office, 1974) Accessed from the Combined Arms Research Library, Fort Leavenworth, Kansas. For an intercepted and decoded message dated January 12, 1944 from the OKW to the German high command in Berlin. The message is an assessment about the anticipated Allied attack in Northern France.

[67] See Chief of Staff European Theatre of Operations, *Operations in Support of NEPTUNE FORTITUDE SOUTH II: Diversionary Plan, Summary and Results* (London: Headquarters European Theatre of Operations, 1944), 5. For a graphic depiction of the units assigned to the 1st Army Group during Operation Fortitude.

[68] Haswell, *D-Day: Intelligence and Deception*, 16, 98-102; Headquarters European Theatre of Operations, Chief of Staff European Theatre of Operations U.S. Army, *Synthesis of Experiences in The use of ULTRA Intelligence by U.S. Army Field Commands in the European Theatre of Operations* (London: European Theatre of Operations, 1946), 28.

so restricted that the majority of the Allied Commanders and staffs did not know that their side possessed the ability decode most of the German radio traffic until 1974.[69]

The deception operation would have to perform three tasks in order to make the actual invasion successful. First, it needed to convince the German military that the Allied invasion would occur near the Pas-de-Calais and not Normandy. Second, it needed to ensure that the German intelligence did not assess the movement of the invasion forces to ports of embarkation as the actual invasion force. Finally, it needed to convince the German military that Operation Neptune— the invasion of Normandy— was a feint for the real attack near the Pas-de-Calais. Operation Fortitude South accomplished the desired aim of the Allies plan— but at a significant cost in maneuver capability for the forces participating in Operation Neptune. To ensure that the tasks of Operation Fortitude South were a success, the Allied deception operation needed physical space in the middle of the same area that the Allies were conducting preparations for Operation Neptune.[70] The Allies cordoned certain areas in Kent, Sussex, and Surrey to support Fortitude South.[71] The SHAEF restricted travel and maneuver in these areas, and established curfews to prevent local citizens from the discovering the operations activity.

Allied air movements were coordinated to fit the narrative that the invasion would launch from Southeast England and arrive in the Pas-de-Calais. This required a limited amount of sorties devoted to the reconnaissance of the Norman coast, further hampering the intelligence staff at COSSAC and SHAEF. The Allies also needed to enable German aerial reconnaissance flights to penetrate English airspace in order to gather date about the disposition and activity of the 1st

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[69] Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, 76; Haswell, *D-Day: Intelligence and Deception*, 24, 41-43; Burg, *Oral History Interview*, 18.

[70] Mure, *Master of Deception*, 335; Howard, *British Intelligence in the Second World War: Strategic Deception*, 89.

[71] Bastable, *Voices from D-Day*, 32; Manchester, *The Last Lion: Defender of the Realm, 1940-1965*, 316.

Army Group. This incurred a significant risk to Allied air defense measures and could have possibly revealed the deception operation if the resources on the ground did not meet what the German intelligence assessed through monitoring the Allies radio traffic.

The senior command of the SHAEF used significant amounts of military resources in Operation Fortitude South. The Allies had constructed airfields, marshaling yards, and supply depots designed to create the illusion of the 1st Army Groups activity.[72] The airfields, depots, and marshaling yards contained canvas and wooden silhouettes of equipment and hardware, while small numbers of personnel to maintained the image of actual pre-invasion activity. The size of the invasion Allied forces and the need to maximize available space forced the Allied command to integrate actual units and the notional unit's activities into the deception operations.[73] The Allies implemented through security measures to preserve the Operations Fortitude's secrecy. The primary method used by the Allies was ensuring that the other Allied forces maintained minimal contact with the faux 1st Army Group, and the activity of the 1st Army Group remained known to only a handful of commanders.

The combined leadership of the Supreme Allied Command had to come to mutual agreements about the amount and type of intelligence to disseminate to the army groups, corps, and divisions participating in Operation Neptune.[74] Two overarching reasons limited the sharing of intelligence between the SHAEF and the invasion forces. First, there was the need to maintain operational security in support of the ongoing deception operations in Operation Fortitude. The

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[72] Eisenhower, *Crusade in Europe*, 118.; See Dwight D. Eisenhower Presidential Library Archives, *Walter Bedell Smith Collection, Chief of Staff's Official Correspondence File, 1942-1944, Box 15* (Abilene: Dwight D. Eisenhower Presidential Library, 1944). Memorandum dated January 22, 1944. Issued by the Chief of Staff, SHAEF, Lieutenant General Walter Bedell Smith directing the construction of necessary faculties to support Operation Fortitude South.

[73] Chief of Staff European Theatre of Operations, *Operations in Support of NEPTUNE FORTITUDE SOUTH II: Diversionary Plan, Summary and Results,*13.

[74] Gilbert and Finneigan, *U.S. Army Signals Intelligence in World War II*, 219; Garlinski, *The Enigma War*, 23.

second reason was the political sensitivity of the information and the concern that the origin of the data would affect the United Kingdom's ability to maintain an intelligence advantage within the alliance, and continue to use the strategic deception efforts against the Germans through the LCS.[75] The intelligence released by SHAEF prior to April 1944 was very broad and generalized. The released intelligence mainly consisted of directives outlining the need for the ground and naval forces to conduct training in preparation for amphibious operations, and the natural and manmade obstacles they would encounter. The guidance also emphasized combined arms training of the land forces starting from the individual through division level exercises. The Allied training guidance centered on two tasks that the Allies could not conceal through operational deception if they were to invade continental Europe: training to fight a mechanized war, and amphibious operations.[76]

Operation Fortitude South's activity and proximity to the units tasked with the Allied invasion placed significant restrictions on the staff of COSSAC and eventually SHAEF. The Allied staffs responsible for the deception operation and the Normandy invasion had limited

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[76] See Supreme Headquarters Allied Expeditionary Force, *Neptune Initial Joint Plan February, 1944* (Southampton: Supreme Headquarters Allied Expeditionary Forces Europe, 1944), 16-21 and Harrison, *Cross Channel Attack*, 45-48 for a detailed concept of the amphibious training that the Allies planned and conducted in support of the Normandy invasion. The Allies conducted amphibious operations throughout England and Northern Ireland in an effort to expose as many of the Allied ground forces to the tasks needed to conduct a successful assault from the sea. In *Cross Channel Attack,* the author mentions the German Navy's attack against an amphibious training exercise in Lyme Bay near Slapton, England on April 28, 1944. Because of the attack, the Allies considered postponing the invasion due to the possible risk of exposing the deception operations and invasion plan of France to the German military. After a review of the ULTRA signals intelligence from late April to early May of 1944: *ULTRA intelligence microfilm: Reel 15,* Microfilm (London: Public Records Office, 1974). Accessed from the Combined Arms Research Library, Fort Leavenworth, Kansas; *ULTRA intelligence microfilm: Reel 16,* Microfilm (London: Public Records Office, 1974). Accessed from the Combined Arms Research Library, Fort Leavenworth Kansas, the author can find no assessment from the German military that the attack by the German Navy on the amphibious training exercise near Slapton England provided any further insight into the German's understanding of the timing and location of the Allied invasion.

contact with each other. In an effort to maintain operational security, the group tasked with planning the execution of Operation Fortitude South had limited contact with most of the COSSAC staff.[77] To ensure that there was no breach of operational security the staff from Group A, working under SHAEF, planned and coordinated Operation Fortitude separately from the SHAEF headquarters with a limited number of senior Allied Commanders remaining as the only source of knowledge about the details of each operation.[78] Despite the successful execution of Operation Fortitude South, the deception staff planned and executed the operation in isolation from the remainder of the Allied staff and as a result, the Allied staff had a limited ability to synchronize and coordinate their actions without having to notify the senior Allied leadership.

The Impact of the Allied Deception Operations

The compartmentalization of the deception operations while necessary for operational security, created a disconnected staff that worked in isolation from certain parts of the plan and operation. From January 1944 until late May of 1944, the priority for the planners of the SHAEF were Operations Bodyguard and Fortitude South. The tactical actions that the SHAEF conducted focused on achieving two tasks to meet the strategic aim of the operation. The first task was convincing the German military and intelligence that the invasion would occur near the Pas-de-Calais. The second task was ensuring that the German strategic reserve remained in support of the defenses near the Pas-de-Calais.[79] These actions determined the activity of the SHAEF personnel tasked with supporting Fortitude South and the 1st Army Group in England, and affected the

[77] Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, 69; Mure, *Master of Deception*, 144.

[78] Hesketh, *Fortitude*,56-58; Howard, *British Intelligence in the Second World War: Strategic Deception*, 110.

[79] Headquarters Chief of Staff Supreme Allied Command, *Digest of Operation Overlord* (London: Supreme Headquarters Allied Command Europe, 1943), 8; Harrison, *Cross Channel Attack*, 45.

ability of the Allies to gain and refine information about the operational environment of Normandy. In a short time, Allied air and sea operations were supporting the ground actions of the faux 1st Army Group. The Allies enabled access to England for German reconnaissance flights and spy networks to observe certain areas to validate the concerns of German intelligence based on information gleaned from the ULTRA transmissions. The Allied naval services anchored their ships in particular harbors to give the German's the impression that their disposition supported an invasion from the South Eastern portion of England into North Eastern France.

In a short time, Operation Fortitude had many characteristics of the purpose of operational art as defined by the 2012 publication Army Doctrine Reference Publication (ADRP) 3-0, Unified Land Operations.[80] For several months, the 1st Army group was conducting the "arrangement of tactical actions in time, space, and purpose" to support Operation Neptune.[81] Until June of 1944 the 1st Army Group was the only Allied ground formation maneuvering against the German Army in Northern France. The strategic aim of the 1st Army Group was the movement of the German Army's strategic reserve away from the Normandy. Due to the need to keep the German reserve away from Normandy, Operation Fortitude received the preponderance of support from the SHAEF. Operation Fortitude was a success, and the German military did not discover the true intent of the 1st Army group for almost a month after the commencement of Operation Neptune.

The success of Operation Fortitude became the main effort for SHAEF. If the deception operation failed to achieve the desired effect of holding the German strategic reserve near the Pas-de-Calais, or if the German military discovered that the activity was a hoax, the Allies would

[80] See Army Doctrine Reference Publication (ADRP) 3-0, *Unified Land Operations* (Washington DC: Government Printing Office, 2012), 4-1.

[81] ADRP 3-0, 4-1.

be unable to execute the invasion of France. The operation had such a high priority of success for the Allies that it continued to operate for three weeks after the initial invasion of June 6, 1944. All of the weekly intelligence summaries open with a comment about the location of the German Army's strategic reserve in France and its projected movements for the next several days.[82] The senior Allied commanders of SHAEF devoted a large amount of time toward Operation Fortitude as they did to the actual invasion of Normandy.

Operational Deception's Conclusion

The SHAEF commanders focused on maneuvering the units in Operation Fortitude, constrained the sequencing of the tactical objectives of the actual invasion of Northern France within a finite period, and in doing so relegated the invasion of Normandy secondary to Operation Fortitude. The delegation of planning for the invasion by SHAEF to the 21st Army Group was a sound concept and meets the doctrine and military theory for the period. However, the army groups lacked a detailed understanding of the terrain and enemy activity in Northern France. When SHAEF released the information to the army groups, they were given a finite period to develop and disseminate the invasion plan. On April 11, 1944, the US Army's 1st Army, and the British 21st Army received orders to commence planning for the Normandy invasion.[83] The Army Groups had a limited ability to gain an understanding of the terrain and enemy on the objectives without compromising Operation Fortitude, and therefore missed key features such as

[82] See Dwight D. Eisenhower Presidential Library Archives, *Weekly Intelligence Summaries March 1, 1944- July 15, 1944*: *Box 30* (Abilene: Dwight D. Eisenhower Presidential Library, 1944), weekly intelligence summaries from June 1944 to July 1944 for a weekly intelligence overview delivered to senior Allied commanders during the invasion of Northern France.

[83] Chief of Staff Supreme Headquarters Allied Expeditionary Force, *Memorandum of Authorization: Commencement of Planning and Preparations for Operation NEPTUNE, April 11, 1944* (London: Supreme Headquarters Allied Command Europe, 1944), 2.

the Norman Bocage or Hill 112 south of Caen, which corps and division staffs could have discovered with more time.[84]

The amount and frequency that the allies discovered mines and booby traps throughout the Normandy area is an example that demonstrates the lack of intelligence at the division level that hindered the allies' seizure of key objectives beyond the beachheads. In the first assault on Caen, the 185th Infantry Brigade assigned to the 3rd Infantry Division, United Kingdom, encounters a significant amount of booby traps during the week following their seizure of Sword Beach.[85] Their commanders did not expect to encounter the traps with great frequency. In a short period, the 185th brigade—along with other Allied infantry units— started to incur a significant amount of casualties from the traps set by the German defenders.[86] Allied intelligence had intercepted several messages from the German military through ULTRA that mentioned the course of action for the defense of the Normandy beaches. In the decoded traffic, there were several dispatches sent by the German military in France to Berlin that mention the increased use of mines to offset the lack of available construction material.[87]

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[84] See Blumenson, *Breakout and Pursuit*, 92-101 for a detailed examination about the Norman Bocage and the Allied reaction to that terrain. Throughout the month of June 1944, the Allies had to fight through the terrain with a limited understanding about its nature until their tactical formations encountered it in large numbers. If the Allies knew of the Norman Bocage and its restrictive nature, they may have chosen an alternate axis through Normandy. Also, see John Lincoln, *Thank God and the Infantry: From D-Day to VE-Day with the 1st Battalion, the Royal Norfolk Regiment*, (London: Amberley Publishing, 2009) 38, 45-49 for an overview of the significance of Hill 112 near Caen. The hill provided the German Army an excellent field of view across most of the British Army's main axis of advance during the first days of the battle to seize Caen. If the Allied tactical units knew about the terrain feature, they may have decided on a different axis of advance.

[85] Lincoln, *Thank God and the Infantry: From D-Day to VE-Day with the 1st Battalion, the Royal Norfolk Regiment*, 42-46; Bastable, Voices from D-Day, 60; Blumenson, *Breakout and Pursuit* (Washington DC: Center of Military History, 1993), 22.

[86] John Lincoln, *Thank God and the Infantry: From D-Day to VE-Day with the 1st Battalion, the Royal Norfolk Regiment*, 52; United States Army Signal Corps, *Notes from Normandy* (London: Newness and Pearson Printing, 1944), 4.

[87] See ULTRA signals intelligence, *ULTRA Intelligence microfilm: Reel 15*, Microfilm

The employment of mines and booby traps was not unique to Northern France. The Allied forces in Italy had encountered the extensive use of mines and booby traps by the Germans during their defense of the Italian peninsula.[88] Given the relative inexperience that most of the units had at the corps and division level, the knowledge about the use of mines and booby traps would have enabled their fighting men to understand the German's use of the terrain. The tactical forces below the brigade level might have developed effective countermeasures prior to the invasion. This would have decreased casualties, and enabled the allies to maintain the desired tempo of their operations.

Despite the lack of time available to Allied corps and divisions, the success of Operation Fortitude cannot be understated. The Allies began maneuvering Allied ground formations against the German Army in Northern France in March of 1944. At the commencement of Operation Neptune in June of 1944, the Allied 1st Army Group had been successfully maneuvering against the German Army for over three months. Operation Fortitude not only succeeded in fixing the German Reserve formations in Eastern France, it also created a second Allied Army for the Germans to contend with during the spring and summer of 1944. Underpinning the Allies planning efforts for Operation Neptune, the amphibious assault of Normandy was the lynchpin to ensure that Operation Fortitude South was a success.

(London: Public Records Office, 1974). Accessed from the Combined Arms Research Library, Fort Leavenworth, Kansas. For an intercepted and decoded message dated December 2, 1944 from the OKW to the German high command in Berlin discussing the use of mines to offset the lack of available construction material in Normandy.

[88] Rick Atkinson, *The Day of Battle* (New York: Henry Holt and Company, 2007) 231, 322.

Force Projection

> We're going down there, and we're throwing everything we have into it, and we're going to make it a success."
>
> — *General* Dwight D. Eisenhower

The Allied command at the SHAEF had to contend with more complex issues than the limited amount of ground intelligence and to ensure that their movement and actions did not disrupt the deception operations. They had to ensure that the movement of the ground forces from England to Northern France was effectively coordinated and synchronized. For the amphibious assault on the beaches of Normandy, Operation Neptune, the Allies needed to coordinate and synchronize the movement of 400,000 men and military material arrayed in areas throughout the United Kingdom to sea and airports of embarkation.[89] The movement of these ground forces needed to synchronize with air and naval operations that supported the assault. Underpinning the movement was the requirement to reach the Normandy coast before the German military could understand where the attack was occurring and reacted to the Allied assault.[90] The complex problem of moving the number of volume of men and equipment coupled with the existing intelligence and deception operations required the staff at SHAEF to focus on one phase of the operation at a time and limited it's ability to plan for activities beyond the capture of the initial beachheads.

The Allied command initially arrayed the ground forces across the British Isles without a particular focus on assaulting Northern France. The buildup of men and the force arrangement of

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[89] Christopher Yung, *Gators of Neptune: Naval Amphibious Planning for the Normandy Invasion* (Annapolis: Naval Institute Press, 2004) 15-18; Harrison, *Cross Channel Attack*, 22; United States Army Command and General Staff College, *Battle Analysis: Operation Overlord, Volume 1, Part 1* (Fort Leavenworth: United States Command and General Staff College Press, 1947) 33. The section's epigraph is from Ernie Pyle, *Brave Men* (Omaha: University of Nebraska Press, 2001), 91.

[90] Harrison, *Cross-Channel Attack*, 187; Haswell, *D-Day: Intelligence and Deception*, 14.

Allied ground forces in England occurred in three phases. The first phase was the increase of the British and Commonwealth forces. The second phase was the arrival of the American forces. The final phase was the deployment of those forces for operations outside of England.[91] By June of 1944, the Allies had been conducting a steady buildup of men and materiel for four years, and filled the English countryside with numerous Allied units of all types.[92] In December of 1943, SHAEF had identified the corps and divisions most likely to participate in the invasion of Normandy.[93] By January of 1944, the Allied command needed to posture a force that had been occupying the British Isles without the intent of invading Northern France, and quickly orientate it towards Normandy.

The first phase June 1940- June 1944 aimed at defeating an invasion of England from continental Europe. The remnants of the British and Commonwealth forces returned from Dunkirk and immediately assumed defensive positions along the Southeastern portion of England.[94] Most of those initial locations provided the foundation for more permanent

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[91] See Joseph Bykofsky and Harold Larson, *The Transportation Corps: Operations Overseas* (Washington DC: Center for Military History, 1990), 62-64, 69-70, and Manchester, *The Last Lion: Defender of the Realm, 1940-1965*, 134-142, 155. These comparative works illustrate the three phases of the Allied ground forces arrival. The three phases occurred simultaneously. The first phase roughly covers a period that occurred from 1940-1944. The second and third phases overlap in the years 1942-1944.

[92] Bykofsky, Larson, *The Transportation Corps: Operations Overseas*, 71-72; Eisenhower, *Crusade in Europe*, 88.

[93] Headquarters Supreme Headquarters Allied Expeditionary Force, *Organization and Chain of Command for Operation NEPTUNE, 18 January 1944* (London: Supreme Headquarters Allied Expeditionary Force, 1944) 8-9, 14; Headquarters Supreme Headquarters Allied Expeditionary Force, *Initial Joint Plan for Operation NEPTUNE February 12, 1944* (London: Supreme Headquarters Allied Expeditionary Force, 1944) 3, 40-41, 71. Harrison, *Cross Channel Attack*, 22.

[94] Egbert Kieser, *Hitler on the Doorstep Operation Sea Lion: The German Plan to Invade Britain, 1940* (Annapolis: Naval Institute Press, 1997) 28; Richard Hough and Denis Richards, *The Battle of Britain: The Greatest Air Battle of World War II* (New York: W.W. Norton & Company, 1989), 78-89.

installations that the British Army would occupy after the Battle of Britain. While most of the world focused on the Royal Air Force and the Luftwaffe's engagements in the Battle of Britain, the British and Commonwealth ground forces readied their formations for the invasion of England by the German Army. The initial plan called for the defense of Southern England focusing on the area between Southampton to Folkstone followed by the defense of the Home Counties around London.[95] The British Army did not have to defend England from an amphibious assault by the German Army. By the end of 1940, the British had a large share of their ground forces arrayed in Southeastern England.

By December of 1940, the Imperial Staff arrayed the bulk of the British and Commonwealth corps and divisions capable of offensive operations in Southeast England. After the Battle of Britain the Allied armies continued to build up their ground forces and the Imperial General Staff decided to keep the British forces in the areas they had occupied in 1940 —— even after the threat of an amphibious invasion from continental Europe had passed. The force locations of the British and Commonwealth forces remained relatively unchanged in that area until 1944.[96] The decision to keep the bulk of British troops in the Home Counties enabled the Allied command to place the American units in the southwestern part of England. This decision did not mean that the units that initially occupied areas in England remained fixed in those locations. However, the logistic and support infrastructure for each army would co-locate in the same areas to support the maneuver forces activity.

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[95] Kieser, *Hitler on the Doorstep Operation Sea Lion: The German Plan to Invade Britain, 1940*, 14-17.

[96] See Kieser, *Hitler on the Doorstep Operation Sea Lion: The German Plan to Invade Britain, 1940*, 55-62 and Supreme Headquarters Allied Expeditionary Force, *Initial Joint Plan for Operation NEPTUNE February 12, 1944 Annex B.* Compare the maps of the British force arrayal during the Battle of Britain and the maps in the Initial Joint Plan for Operation NEPTUNE. The force arrayal for the British and Commonwealth ground forces in Southern England remained largely within the Home Counties and the London metropolitan area between 1940 and 1944.

In February of 1942, the first units of the US Army began to arrive in England. The buildup of these forces came at a steady rate for the next two years, and the Allies needed to accommodate roughly 1,000,000 American Service members stationed in England.[97] Building the necessary support infrastructure became a priority for the Allied Commanders, and without the infrastructure, the Allied preparations for future operations would not have occurred. By June of 1944, American and British forces were located in many areas of the British Isles. The locations of the Allied Forces in England did not hinder the initial operations in the Mediterranean or Italy. The forces that embarked England for North Africa in 1942 were primarily American, and the proximity to the many deep-water ports in England was within easy access from most Allied posts and camps within England.[98] This array of forces also indirectly supported Operation Bodyguard and enabled the operational deception to appear as if the Allied forces were postured to embark from any location.

How SHAEF Projected Ground Forces onto Continental Europe

In March of 1944, the SHAEF had identified most of the units that would comprise their invasion force and organized the units under the 21st Army Group's headquarters. The ground forces that had been in England, or transferred to England in support of the invasion, conducted a significant amount of tactical training in support of future operations against the Germans. Soldiers to generals on both sides of the English Channel assumed that there would be future combat operations commencing in the spring and summer of 1944— however, no one outside of a few senior Allied Commanders knew where. The German and Allied intelligence entities focused their activity on discovering the intent of their respective opponents. During the month of

[97] Bykofsky and Larson, *The Transportation Corps: Operations Overseas*, 77.

[98] Bykofsky and Larson, *The Transportation Corps: Operations Overseas*, 88; Porch, *The Mediterranean Theatre in World War II: The Path to Victory,* 45.

May 1944, ULTRA intelligence intercepted multiple German dispatches concerning Allied aerial reconnaissance of Normandy.[99] In this constrained environment, the Allies needed to move and launch the invasion of Northern France in a finite period, gain an understanding of the German military activity in Northern France, and maintain the operational security of Operation Fortitude South.

On April 11, 1944, United States Army Europe published the operation order for the movement of the ground forces from their camps in England to the sea and airports of embarkation for the assault in Normandy.[100] The document contained the overall plan to support the massive movement of men and material. This order outlined a plan to move not only the first echelons of assault troops to Normandy, but also the reinforcing ground forces scheduled to arrive after D-Day, and the logistic sustainment needed to keep the forces in Normandy supplied for several weeks. These documents were the result of almost three years of developing and refining the movement of men and material throughout the British Isles. The movement order contained three phases to move the designated personnel and their equipment to the boats that would deliver them to the objectives.[101] The first phase was the alert and initial movement to holding areas. The second phase was the movement of equipment and personnel from the holding area to the ports of embarkation. The final phase was the flow of follow-on forces through the transportation system to the ports of embarkation.

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[99] Garlinski, *The Enigma War*, 46, 112; See ULTRA signals intelligence, *ULTRA Intelligence microfilm: Reel 21,* Microfilm (London: Public Records Office, 1974). Accessed from the Combined Arms Research Library, Fort Leavenworth, Kansas. During the month of May 1944, the Allies decoded multiple messages from the German military concerning Allied reconnaissance activity of the Normandy Coast.

[100] Headquarters Southern Base Section European Theatre of Operations United States Army, *Administrative Order No. 7* (Southampton: Headquarters European Theatre of Operations United States Army, 1944), 1.

[101] Headquarters Southern Base Section European Theatre of Operations United States Army, *Administrative Order No. 7*, 4; Bykofsky and Larson, *The Transportation Corps: Operations Overseas*, 252-254.

Once the SHAEF authorized the mobilization of the invasion forces, the movement plan had a fixed amount of time in which to achieve the objectives outlined in the movement order. The Allied Forces had roughly one week —— between May 31, 1944, through June 5, 1944—— to move the first echelon of the Allied assault forces from points all over England, to the embarkation ports, and into the ships for movement to the assault beaches.[102] The Allies used the majority of the rail and road infrastructure in England to the move the Allied ground forces, and for a period of about a week, the Allies dominated movement along these transportation networks.[103] Due to the size of the Allied force, the ports within Operation Fortitude's area of operation had to be used. This enhanced the deception operation and maintained Operation Fortitude South as a viable course of action to German Intelligence.

The key concepts of the movement plan relied on a massive amount of military and civilian transportation infrastructure to work for the sole purpose of bringing the ground forces to the ports. The size and scope of the infrastructure required a significant number of people to operate. Once the movement of men and material began in earnest the ability to maintain operational security waned. Ordinary citizens sensed that an invasion, or major event, would occur. The movement also meant there would be an increased chance of exposing Operation Fortitude South. The movement of the actual invasion forces had to coincide with the faux actions of the 1st Army Group, and the 1st Army Group needed to use some of the transportation resources to maintain plausibility.[104] By June 1, 1944, many people in southern England realized that the movement towards the invasion of France had begun.

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[102]Harrison, *Cross-Channel Attack*, 272; Bykofsky and Larson, *The Transportation Corps: Operations Overseas*, 168.

[103]Bykofsky and Larson, *The Transportation Corps: Operations Overseas*, 188; Manchester, *The Last Lion: Defender of the Realm, 1940-1965*, 377-382.

[104]Barbier, *D-Day Deception: Operation Fortitude and the Normandy Invasion*, 201; Bastable, *Voices from D-Day*, 12, 22-23.

The large movement of Allied Forces coupled with the need to maintain operational security caused the staff at SHAEF to focus on the German Reserve formations near the Pas-de-Calais. The ability to gather intelligence about the German activity in Normandy increased with the execution of the movement plan. On May 31, 1944, the German military noticed an increased amount of movement in Southern England and determined that it may be the beginning of 1st Army Group's assault on the Pas-de-Calais.[105] This assessment was supported by the increased amount of Allied air attacks on Northern France, with a focus on the Pas-de-Calais and southern Belgium area. The Allies also used the ULTRA radio messages to verify the German course of action and observe their activity during the movement of forces to the staging area.[106] During the Allied movement to the air and sea ports of embarkation, Allied intelligence received, a strong indication that the Germans assessed an invasion of northern France would occur soon. However, German intelligence believed the main Allied attack would not occur in Normandy. Through the use of ULTRA intelligence, the Allies were able to track the German assessments about the initial plan throughout the operation.

Synchronizing the Invasion Force and the Deception Operation

The effects that Operation Crossbow had in degrading the German radio and radar infrastructure in France and the Low Countries, coupled with the activity of Operation Fortitude South in southeastern England had focused most of the German commander's attention away

[105] Hesketh, *Fortitude: The D-Day Deception Campaign*, 322-324; ULTRA signals intelligence, *ULTRA Intelligence microfilm: Reel 18*, Microfilm (London: Public Records Office, 1974). Accessed from the Combined Arms Research Library, Fort Leavenworth, Kansas. The intercepted message dated June 1, 1944. The message summarizes the high amount of Allied activity detected along the southern coast of England and mentions the possibility that this activity is a prelude to an invasion.

[106] Gilbert and Finneigan, *U.S. Army Signals Intelligence in World War II*, 241; Garlinski, *The Enigma War*, 77.

from Normandy.[107] The event also caused the staff at SHAEF to concentrate most of its efforts on the Pas-de-Calais area as well.[108] The risk of focusing on the Pas-de-Calais and not on Normandy left SHAEF without a significant amount of current knowledge about the German situation in the Cotentin Peninsula. SHAEF chose to assume some risk and focus on the German reserve formations in the Pas-de-Calais for two reasons. The first reason is that any increase in Allied activity over Normandy not carefully coordinated with the deception operation could expose the real intent of the Allied invasion.[109] The second reason is that the Allied ground moving to their ports of embarkation could be preparing to assault the Pas-de-Calais, and that supported the Allied main effort: Operation Fortitude. The ability of an Allied corps or division commander to stop their activity and assess intent of the movement may desynchronize the movement plan to the points of embarkation and cause unnecessary friction throughout the transportation system.[110] At this time in the operation, many of the Allied Commanders at all command levels remained myopically focused on their immediate tasks.

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[107] Thomas A. Hughes, *Overlord: General Pete Quesada and the triumph of tactical airpower in World War II* (New York: New York Times Press, 1994), 233; Eisenhower, *Crusade in Europe*, 270. In the book *Crusade in Europe*, the Low Countries is the title given to aggregate the countries of Belgium, Holland, and Luxembourg.

[108] See Headquarters Supreme Headquarters Allied Expeditionary Force, *Eyes Only cables from May 31, 1944 to June 9, 1944* (London: Supreme Headquarters Allied Expeditionary Force, 1944). The author discovered that the majority of the traffic between senior Allied commanders concerning the invasion was the activity of the German military near the Pas-de-Calais, and the invasions progress took a secondary priority of importance for the first few days of Operation Neptune.

[109] Howard, *British Intelligence in the Second World War, Volume V, Strategic Deception*, 117; Albert Norman, *Overlord Design and Reality: the Allied Invasion of Western Europe* (Harrisburg: Military Service Publishing Company, 1952), 68.

[110] Bykofsky and Larson, *The Transportation Corps: Operations Overseas*, 201-203; See Headquarters Southern Base Section European Theatre of Operations United States Army, *Administrative Order No.7* ,6. This page contains the instructions to subordinate units stating that the success of the operation depended on the force's ability to keep the tempo of the movement to the ports of embarkation in accordance with the timeline.

The plan to assault the Normandy beaches can be divided into four broad events: the airborne insertion, the reduction of the coastal defenses and obstacle belts, the amphibious assault, and the consolidation of the ground forces on the beach. The concept of the operation anticipated these events to occur simultaneously throughout the amphibious assault, and each of the air, sea, and ground components shared a part of each event to varying degrees.[111] The execution of the plan called for the land, air, and sea forces postured for the assault and every leader in the command possessing a clear understanding of their mission and overall role in the operation. In the interest of operational security, most of the units below the company level did not find out about the details of their mission until they were in the transport ships on the English Channel.

The need to achieve surprise in Operation Neptune underpinned the concept of the operations and consumed the majority of the focus for the Allied Commanders. In the first part of Operation Neptune, the airborne assault of three divisions containing 1,360 transport aircraft and 3,500 gliders assault the German rear areas of the five beachheads eight hours ahead of the amphibious assault.[112] While the airborne assault was underway, the Allied naval forces began to reduce the obstacle belts located within the littoral area of the English Channel and Northern France, and provide navigational assistance to the airborne assault across the English Channel.[113] The airborne assault and the creation of sea lanes through the German obstacle belts in the channel took most of the evening of June 5, 1944. The reduction of the naval obstacles continued

[111]Harrison, *Cross-Channel Attack*, 275-276; Yung, *Gators of Neptune: Naval Amphibious Planning for the Normandy Invasion,* 255.

[112] Thomas A. Hughes, *Overlord: General Pete Quesada and the Triumph of Tactical Airpower in World War II* (New York: New York Times Press, 1994) 122.

[113] Yung, *Gators of Neptune: Naval Amphibious Planning for the Normandy Invasion,* 262; Harrison, *Cross-Channel Attack,* 288.

well into the afternoon of June 6, 1944.[114] These activities required a significant amount of effort and focus on the part of the Allied command. Despite the friction that arose while a large formation of forces conducted a series of actions aimed at producing a single event, the first two portions of Operation Neptune were a success.

Within six hours of the airborne assault, the plan for Operation Neptune called for the naval bombardment of the five assault beaches, Utah, Omaha, Gold, Sword, and Juneau, to commence at 5:00 a.m..[115] Within one hour of the naval bombardments commencement, the first units of 135,000 assault troops would step ashore on Utah Beach, the westernmost objective, and the first wave of ground forces assaulting Sword beach the eastern most objective by 0730 hours.[116] This gave the naval forces and the Allied corps and divisions roughly two and a half hours to move 135,000 men and their supporting equipment from the English Channel to the five assault beaches. The Allies had a finite accounting of time for the landings and believed that their tactical formations could accomplish this task within the given window of time. The actual execution of the Allied assault on the Normandy beaches commenced thirty minutes later than expected, and the Allied Army Groups reported that the first wave of the amphibious assault was complete four hours later at 1230 hours.[117] The Allies managed to perform a difficult operation of

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[114] Yung, *Gators of Neptune: Naval Amphibious Planning for the Normandy Invasion,* 270; Albert Norman, *Overlord Design and Reality: the Allied Invasion of Western Europe* (Harrisburg: Military Service Publishing Company, 1952), 68.

[115] United States Army Command and General Staff College, *Battle Analysis: Operation Overlord, Volume 1, Part 1* (Fort Leavenworth: United States Command and General Staff College Press, 1947) 78-82; John Lincoln, *Thank God and the Infantry,* 22.

[116] United States Army Command and General Staff College, *Battle Analysis: Operation Overlord, Volume 1, Part 2* (Fort Leavenworth: United States Command and General Staff College Press, 1947) 34-37; Supreme Headquarters Allied Expeditionary Force, *Neptune Initial Joint Plan February 1944* (London: United States Government Press, 1944) 6-7.

[117] See Headquarters Supreme Headquarters Allied Expeditionary Force, *Eyes Only Cable dated June 6, 1944, 1335 hours* (London: Supreme Headquarters Allied Expeditionary Force, 1944) 1. The transcript is a decoded message sent from the *HMS Belfast* reporting that "all of the invasion beaches are secure."

moving, embarking, and deploying the invasion forces from England to France despite the friction that occurred while the operation took place.

Loss of Tempo and Speed for the Allied Ground Forces

The Allied forces achieved the consolidation of the ground forces at the lodgment created by Operation Neptune, but it took them roughly one week to consolidate after the initial assault. There were three primary reasons for the length of time it took the Allies to consolidate the lodgment in Normandy. Firstly, the airborne divisions were dispersed across a broad front and they possessed a limited ability to contact the units on the beaches.[118] The second reason was the large number of men and materiel involved in the assault required an extensive search by the assault units to locate casualties and regroup their tactical formations into effective organizations.[119] The third reason was a lack of actual combat experience throughout the Allied divisions and corps involved in the operation had prior to the invasion. [120] During the consolidation of the invasion forces, the Allies had to contend with the continued attacks by German Army units trying to disrupt their advance inward while accommodating the second and third echelons of the ground forces arriving to reinforce the initial assault. These dynamics

[118] Norman, *Overlord Design and Reality: the Allied Invasion of Western Europe* 68; Eisenhower, *Crusade in Europe*, 310.

[119] Norman, *Overlord Design and Reality: the Allied Invasion of Western Europe*, 112-114; Anthony Hall, *Operation Overlord: D-Day, Day by Day* (St. Paul: MacRae Blue Book Incorporated, 2003), 18.

[120] See Headquarters Supreme Headquarters Allied Expeditionary Force, *SHAEF Weekly Intelligence Summary June 9, 1944* (London: Supreme Headquarters Allied Expeditionary Force, 1944) 5-6. This portion contains a brief assessment about the effects that a lack of combat experience amongst the allied forces had on the overall operation; Harrison, *Cross Channel Attack*, 218; See Eisenhower, *Crusade in Europe*, 230-234. Also mentions the level of inexperience that the Allied forces had and how the Allies overcame that limitation during the operation.

allowed inexperienced units to gain combat experience and effectiveness quickly—but at a cost of tempo and time for the entire operation.

By June 10, 1944, four days after the invasion, the Allied commanders split the campaign in Northern France into several operations: Operation Fortitude, Operation Perch, and the advance to capture Cherbourg.[121] The Allied command in England temporarily focused its attention on the success of Operation Neptune, then, refocused its attention towards Operation Fortitude. At this point in the campaign, the 21st Army group had control of the situation of Normandy and its need to focus on the multiple operations and the inflow of reinforcements from England consumed its efforts. This refocusing of SHAEF and 21st Army Group was prudent and doctrinally acceptable. By June 10, 1944 an extensive command infrastructure was in place to monitor the fighting in Normandy and the ground intelligence needed to continue the expansion of the lodgment was readily available to the 21st Army Groups and its tactical units. The German Army retained a significant ability to block any further advances into France with the strategic reserve and the Allied Command needed to continue to ensure that the German reserve formations were still committed to counter the actions of the 1st Army Group in England.[122] Four days after the invasion, the Allied Commanders had two separate commands: 21st Army Group and the SHAEF deception staff using the 1st Army Group fighting in different areas of Northern France—but in a disjointed manner.

The German military and government considered the invasion force that landed on June 5_{th} and 6_{th}, 1944 a supporting attack to the actual invasion force that would land near Pas-de-

[121] See Headquarters Supreme Headquarters Allied Expeditionary Force, *SHAEF Weekly Intelligence Summary June 9, 1944* 2-6; Headquarters Supreme Headquarters Allied Expeditionary Force, *SHAEF Weekly Intelligence Summary June 16, 1944* (London: Supreme Headquarters Allied Expeditionary Force, 1944) 2-6. These documents provide a list of the follow on operations that SHAEF authorized or conducted after the consolidation of the lodgment on Normandy.

[122] Haswell, *D-Day: Intelligence and Deception*, 198; Norman, *Overlord Design and Reality: the Allied Invasion of Western Europe*, 128.

Calais. Operation Fortitude had accomplished its intended goal and met the aim of the Allied Command by forcing the Germans to fight two army groups instead of one. The deception staff at SHAEF continued to operate until June 21, 1944. During this period, the command at the SHAEF remained focused on the actions of the German reserve formations and left Normandy to the 21st Army Group. Despite reports from the 21st Army Group that progress was slowing, the German reserve formations were mentioned first in the intelligence and operations summaries at the SHAEF. [123] The existing Allied doctrine advocated that a commander focus on the activity of forces two echelons below his level his chain of command.[124] This enabled him to see the progress of his formation in detail. The staff at SHAEF focused primarily on the German reserve formations near Pas-de-Calais in June of 1944. The 21st Army Group focused on the operations in Normandy. This arrangement did not allow the command at SHAEF to understand the situation in Normandy that lead to confusion about the actual progress of the operation amongst the senior Allied Commanders. The Allies had one unifying commander —— General Dwight Eisenhower —— responsible for two separate operations, and mainly focused on one: Operation Fortitude.[125] The Allied effort started to show significant operational friction in the follow-on actions during the campaign in Northern France and the failure to fully transition between main and secondary efforts began to appear.

Shortly after the invasion, the estimates of time it would take to reach the inland objectives outlined in the concept of operations in the 21st Army Group's order were far from being met and the Allied advance into Normandy had become a slow grinding advance through

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[123] Haswell, *D-Day: Intelligence and Deception*, 231; Headquarters Supreme Headquarters Allied Expeditionary Force, *SHAEF Weekly Intelligence Summaries* dated June 9, 1944 to July 7 1944 (London: Supreme Headquarters Allied Expeditionary Force, 1944), 2-6.

[124] United States Army, *Field Manual 100-5: Field Service Regulations* (Washington DC: Government Printing Office, 1943), 12.

[125] Eisenhower, *Crusade in Europe*, 122; Pogue, *Supreme Command*, 89.

Normandy. Given the time and effort to plan the invasion, the results of the first month of the campaign fell short of the expectations set by the SHAEF. It appeared that the careful and methodical plan the Allies had turned into a disorganized din of activity across the Allied corps and divisions areas of operation. US VII Corps captured its primary objective of Cherbourg on June 26, 1944. Caen was not in Allied control until July 21, 1944.[126] It was not until Operation Cobra in July of 1944 that the Allies met their objective of moving past the town of Saint Lo.

The primary purpose of Operation Fortitude was to hold the German reserve formations near the Pas-de-Calais. The initial plan called for the seizure of Caen and Cherbourg within two weeks of landing. These actions were considered critical to ensuring that the 21st Army Group had the airfields and logistical ports to conduct a sustained fight against the German army—especially the German formations near the Pas-de-Calais. The focus by SHAEF on Operation Fortitude and the focus on Operation Neptune by the 21st Army Group did not provide the Allied Command with the adequate unity of effort needed to manage the invasion.

Force Projection's Conclusion

For all that appeared to be going wrong with the Allied progress in Normandy, the 21st Army Groups had met the tactical actions outlined in the operation's orders. The challenging effort of mobilizing, moving, and deploying a force of 400,000 men and their equipment under operational security constraints and disseminating to the mission and tactical objectives of the operations within seven days of notification was a success. The ability to coordinate and move three airborne divisions and and an amphibious assault force of 135,000 men and their equipment onto five separate beaches within 12 hours was an excellent demonstration of the level of skill

[126] Omar Bradley and Clay Blair, *A General's Life: An Autobiography* (New York: Simon and Schuster, 1983), 301; Eisenhower, *Crusade in Europe*, 334.

and proficiency that the Allied Command had developed since Operation Torch in 1942.[127] The limitations of the invasion planning arose when the Allies lacked a realistic plan for operations following the consolidation of forces and the establishment of a lodgment created after the initial assault.

The Allies had limited intelligence about the terrain and German disposition in Normandy due to the lack of an effective intelligence organization that could gather intelligence in Northern France without the risk of revealing the true nature of Operation Fortitude. The 21st Army Group had to gain knowledge about the area after it had landed and established a cohesive level of command and control on the beach. This requirement meant that the 1st US Army, the British I and XXX Corps, and the 2nd Canadian Division were waiting on intelligence from subordinate units. This created a lapse in the ability to gather a clear understanding and picture from the Allied corps and divisions and between June 6 1944, to June 21 1944, the offensive tempo slowed.[128] The limited ability of the 21st Army Group to project future operations in sufficient depth during this period gradually improved as the Allies increased their contact with German forces. The increased contact with the German Army through the innumerable skirmishes and firefights enabled the Allies to accurately assess their opponents strength and capabilities. From June 6, 1944, to June 21, 1944 understanding the situation in Normandy was achieved by examining the tactical actions of the Allied ground forces. The 21st Army continued

[127] See Headquarters Supreme Headquarters Allied Expeditionary Force, *Organization and Chain of Command for Operation NEPTUNE, 18 January 1944*,15-18; Headquarters Supreme Headquarters Allied Expeditionary Force, *Initial Joint Plan for Operation NEPTUNE February 12, 1944, Annex, A,* and United States Army Command and General Staff College, *Battle Analysis: Operation Overlord, Volume 1, Part 1* (Fort Leavenworth: United States Command and General Staff College Press, 1947) 167-169. The numbers of personnel vary between literary works about the invasion. For clarification, the author has identified the numbers of initial assault echelons based on authorized personnel strength in each division.

[128]Albert Norman, *Overlord Design and Reality: the Allied Invasion of Western Europe*, 155.

to measure the campaign through small tactical engagement until Operation Cobra.[129] Using small tactical engagements to measure the progress of the overall campaign with a formation as large as the 21st Army Group created a very difficult task for the Allied commanders and their staffs to assess the progress of the campaign at the operational level..

The initial assault on Normandy by 135,000 men coupled with the supporting air and naval plans, Operation Fortitude, had consumed a large portion of the SHAEF's time and effort, and the deception operation limited the plan's exposure to subordinate units. The command at SHAEF had to assume some risk in the operation's process. The risk the Allied Commanders assumed was preventing the detailed planning of operations by the 21st Army Group once the beaches on the Norman were secure. SHAEF chose to withhold the detailed information about the plan to subordinate commanders for two reasons: first, the possibility that the Germans would discover the true nature of Operation Fortitude; second, SHAEF assessed that the initial assault forces did not need detailed information about the of the German Army's divisions guarding the Norman coast due to their limited combat power and capabilities.[130] The overall effects of these decisions made the sequencing of tactical actions in time and space by the 21st Army group temporarily stop once the Allied Forces secured the lodgment on Normandy. The pause cost the Allies a significant amount of time, resources, and human casualties, and delayed the anticipated progress of the Allies strategic timetable for Operation Overlord.

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[129] See Headquarters Supreme Headquarters Allied Expeditionary Force, *SHAEF Weekly Intelligence Summary June 23, 1944* (London: Supreme Headquarters Allied Expeditionary Force, 1944), 2-4; Norman, *Overlord Design and Reality: the Allied Invasion of Western Europe*, 162.

[130] United States Army Command and General Staff College, *Battle Analysis: Operation Overlord, Volume 3, Part 1* (Fort Leavenworth: United States Command and General Staff College Press, 1947) 12-14; Headquarters Supreme Headquarters Allied Expeditionary Force, *SHAEF Weekly Intelligence Summary July 18, 1944* (London: Supreme Headquarters Allied Expeditionary Force, 1944), 5.

Conclusion

All of the landing beaches in Normandy are now cleared of the enemy. Reinforcements and supplies are getting across safely. More airborne landings were made during the night when five waves of glider troops seized fresh positions on the Cherbourg Peninsula. Heavy armored fighting has started inland.

—BBC evening news bulletin 9PM broadcast, June 7, 1944

As the rain started to fall on the positions of the US Army's 16th Infantry Regiment, the soldiers were exhausted and yet elated. June 6, 1944 had been "a day like no other."[131] The soldiers had survived the assault of Omaha Beach and cleared the fighting positions and obstacle belts near the beach in a vicious close range fight. Now, they were several miles inland preparing a defensive position for the anticipated counter-attack.[132] What many of those soldiers, nor most of their commanders did not know, was the next objective in the operation. In the following days, the entire operation would transition into a grinding battle where commanders measured daily success in capturing the next hedgerow or road intersection. As American journalist Ernie Pyle noted about the fighting after D-Day: "This hedgerow business is a series of little skirmishes . . . clear across the front, thousands and thousands of little skirmishes. No single one of them is very big. But add them all up over the days and weeks, and you've got a man-sized war, with thousands on both sides being killed."[133] The skirmishes that Ernie Pyle mentioned were part of a period of friction and adjustment for the Allies operational approach and focus.

The decision to withhold valuable intelligence to most of the 21st Army Group to ensure that Operation Fortitude remain a secret began to tax the effectiveness of the Allied Armies once

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[131] Bastable, *Voices from D-Day*, 83.

[132] Bastable, *Voices from D-Day*, 85; Pyle, *Brave Men*, 33. The section's epigraph is from British Broadcasting Corporation, "9pm BBC radio news Bulletin for Wednesday June 7, 1944", BBC, June 5, 2014, accessed December 18, 2014, http://www.bbc.co.uk/programmes/articles/7-june-1944-9pm-news.

[133] Pyle, *Brave Men*, 52.

they moved off the beach. For the next month, many Allied corps and divisions found themselves in weed-choked hedgerows, villages and roads laden with mines and booby-traps, facing an enemy that was not defeated and fighting savagely to retain his position. The SHAEF estimated that it would take the 21st Army Group one month to achieve most of its objectives in Normandy and posture its forces towards Paris. Unfortunately, the Allies would find that the operation took the better part of three months to meet that objective.

The sluggish Allied fighting throughout the summer and early fall of 1944 gives the answer to the research requirement. Did the senior Allied leadership provide their invasion forces with the intelligence, operational security, and the ability to conduct operational art beyond the initial objectives in the Normandy invasion? SHAEF did not provide the 21st Army Group or the Numbered Allied Army's with an adequate amount of intelligence needed to understand the environment and the German Army in Normandy. The Allies did provide the invasion forces with an adequate amount of time to establish a lodgment by fixing the German reserve formations through Operation Fortitude. The lack of intelligence hindered the Allied corps and divisions ability to develop a detailed analysis of the environment. The Allies assumed a large amount of risk in the orders dissemination to their tactical formations to ensure that the deception operations maintained their plausibility for as long as they could. In retrospect, it is impossible to know if the Allies would have had more success with the operations beyond the initial invasion if they gave their corps and division commander's time to analyze the mission. However, there is little doubt that Operation Fortitude and Operation Neptune worked in the short term, but the follow-on operations to seize key terrain in the Normandy stalled due to a lack of available intelligence at the Allied corps and division level about the German military in Northern France.

Despite taking place more than three-quarters of a century ago, the invasion of Normandy can yield lessons for modern military professionals that are applicable to the contemporary environment. Historians may never achieve a full understanding of the Allied efforts in the campaign's planning and development; However, there is an enduring lesson that military

planners can learn from the invasion of Normandy that can improve their ability to conduct operational art: Incorporation of intelligence between coalition nations, synchronizing deception operations to other military operations, and the ability subordinate commanders have to conduct operational art in a constrained environment.

The use of intelligence by a combined staff is a delicate affair, but crucial in coalition warfare. Different countries have different caveats about the access and willingness to share information with members of a coalition force. This can create a serious gap in a common understanding about a mission or problem amongst a military staff working towards a common operational goal. It is a common understanding of the background of a problem that will give a coalition staff better clarity to analyze the mission and the tasks needed to accomplish that mission. In the contemporary environment, new challenges are evident through the intelligence sharing between military staffs, and other government organizations that are now an integral part of most military operations. Commanders must maintain a careful balance between retaining a national advantage in intelligence and granting the ability of a combined staff to share information.

A characteristic of deception operations are the multiple costs associated with its use. The greatest cost is the loss of operational flexibility on the part of the supporting units. Many deception operations limit operational flexibility due to the need to maintain the secrecy of the operation's activities. The success of Operation Fortitude South was decisive to the outcome of the war. This operation was essential to enabling the Allies' access to France with a reasonable level of assurance that the initial invasion forces could secure a lodgment and have adequate time to prepare for a counter attack. To ensure the operational deception was a success the Allied Command withheld information from its subordinates for as long as they considered necessary. This reduced the Allied corps and division understanding of the environment and German forces. This lack of understanding caused a considerable amount of friction once the Allies moved out of the lodgment.

It is difficult to image the size and breadth of the personnel and equipment involved in the Normandy invasion. An operation of that size may never be conducted again, but it does not mean that the lessons learned from alerting, marshaling, and moving that amount of people and material has limited utility in future operations. The movement of the ground forces from England towards ports of embarkation using an intermediary staging facility is very similar to the contemporary staging and movement of forces in current operations. The requirement to move people and equipment in support of the Normandy invasion of this magnitude while synchronizing that movement with an ongoing deception operation is one of the most successful actions of World War II. In future operations the need to use a deception operation to cover the activity of the actual force is still relevant to the contemporary environment, and the activity conducted from May 31, 1944 to June 6, 1944, is a prime example of how to maximize operational deception.[134]

The events that shaped the planning that negatively effected certain aspects of the Normandy invasion were in some ways self-imposed by the Allies. The lessons of this campaign, and constraints placed on the Allied staffs, are valuable to future commanders in developing and refining coalition alliances, operational deception, and military logistics at the operational level of war. At the time of this research, the US Army was undergoing a significant change in the role of our nation's defense. Some individuals believe that wars of the scope of World War II offer a limited amount of value to the contemporary study of military history— the findings about invasion of Normandy in this paper proves that there are still many valuable lessons for the futher

[134] See Field Manuel (FM) 6-0, *Commander and Staff Organization and Operations* (Washington DC: Government Printing Officer, 2014), 11-1 and Headquarters Chief of Staff European Theatre of Operations U.S. Army, *Interview of German General Officers: Summary of Experiences in use deception operations in the European Theatre of Operations*, 10-21. Compare the principles of military deception — focus on the target, getting the target to act, centralized planning and control, security, conforming to the time available, and integration— located in FM 6-0 to the summary given by *Generaloberst* Hans von Greiffenberg. The similarities between the principles in FM 6-0 and the summary are virtually identical in their content and advice.

understanding of coalition warfare, deception operations, and force projection that the operation can yield.

Recommendations

In future conflicts, senior commanders must should be willing and able to share all relevant intelligence in the planning and execution of combined operations amongst Allied and partnered nations participating in the operations. Accurate intelligence creates a greater understanding amongst the participants, clears ambiguity, and enables both superior and subordinate commander's access to a greater understanding of the problem. If a coalition cannot share the appropriate intelligence for the operation, they could place undue risk on their forces. During the planning for the invasion of Normandy, information through ULTRA was available and should have been released to the Allies corps and divisions. However, it was not and resulted in not only loss of tempo but also a loss in men. If intelligence is contained in a restricted system of bureaucracy and caveats, it could result in a lack of common understanding amongst the coalition effort and possibly cause the fighting man involved in carrying out the plan at the tactical level to incur an unnecessary sacrifice on the part of the mission.

Deception operations can play a decisive role in the success of a campaign. Commanders should find an appropriate balance when using a deception operation in conjunction with a real operation to ensure that the deception operation does not overshadow the efforts of the actual operation. Operation Fortitude came to dominate the senior Allied commander's focus that its success caused SHAEF to withhold intelligence from the corps and divisions responsible for carrying out the tactical fight. Withholding that information from the Allied corps and divisions, directly related to the stalled tempo of the Allied attack once the Allied corps and divisions captured their initial objectives on the beaches. Despite the success of Operation Fortitude, the Allies should have transitioned the primary effort to Operation Neptune at an earlier point in their planning timeline. While this would not have guaranteed a greater level of success, it would have

better balanced the Allies' priorities between an operation that committed actual troops and equipment into harm's way from an operation that was never fired a shot against an armed adversary.

The projection of a ground force from a secure base to a port of embarkation is a difficult and, under certain conditions, a precarious effort. What the Allies accomplished in the movement, embarkation, and deployment of its invasion forces during Operation Neptune was nothing short of amazing. Modern operations may require similar types of movement of forces from basing areas to objectives in a short amount of time. The movement of large amounts of ground forces such as the ones that participated in Normandy requires a joint effort between multiple services. The surprise achieved in Operation Neptune is a prime example of the Allies ability to project large formations of ground forces quickly, and is a skill that modern ground force commanders should consider developing to meet contemporary threats in a similar manner.

Appendix Operation Codenames

Operation Avalanche	The codename for the Allied Invasion of Italy.
Operation Big Drum	The codename for the naval component of Operation Fortitude.
Operation Bodyguard	The codename for the Allied deception operation to protect the British Isles
Operation Cobra	The codename for the Allied attack against the German defenses near St. Lo, France.
Operation Cockade	The codename for the Allied deception operation in support of Operations Avalanche and Husky.
Operation Crossbow	The codename for the Allied air campaign to reduce the German radar and rocket sites in Northern France, Belgium, Holland, and Luxembourg, and it also supported the aim of Operation Fortitude.
Operation Fortitude	The codename for the Allied deception operation aimed at confusing the German's as to the location and timing of the invasion of continental Europe.
Operation Fortitude South	The codename for the Allied Deception operation aimed at confusing the German's as to the location and timing of the Allied invasion of Northern France.
Operation Husky	The codename of for the Allied invasion of Sicily.
Operation Neptune	The codename for the Allies amphibious invasion of Normandy.
Operation Perch	The codename for the first Allied assault on the German defenses in the city of Caen
Operation Torch	The codename for the Allied invasion of North Africa.

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