

# FORTUITOUS ENDEAVOR

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## Intelligence and Deception in Operation TORCH

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**I**n the European theater of World War II, 1942 marked the nadir of Allied fortunes. German forces in the Soviet Union had reached Stalingrad and threatened the oil fields of the Caucasus; Axis forces in Africa seemed on the verge of pushing the British out of Egypt; and German U-boat wolf packs preyed on Allied shipping with relative impunity. Late in 1942, however, two significant Allied successes served to turn the tide against the Axis powers. At El Alamein, a British offensive defeated General Erwin Rommel's Afrika Korps, while almost simultaneously a huge Anglo-American force landed in North Africa to contest Axis control. These two actions led to a final thrust toward Italy through Sicily in

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1943, greatly facilitating the eventual Allied victory. The North African and Mediterranean Allied campaign, however, was also significant for different, very secret reasons that have only come to light in full detail in recent decades.

This article will demonstrate that the Anglo-American TORCH effort was a hallmark of effective combined operational planning and execution—facilitated by military deception informed by proven intelligence. Specifically, examining TORCH through the new historical lens provided by decrypts of German signals intelligence (SIGINT) cements the contemporary principle that intelligence preparation of the environment, if done artfully, not only provides enemy order of battle intelligence but reveals exploitable adversary perceptions.

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In this case, SIGINT not only assisted in the unmolested Atlantic and Mediterranean passage of immense convoys but effectively gauged Axis capabilities and intentions, as well as the reactions to Allied deception measures, prior to and during the operation. Thus, the Allies effected the largest-scale combined joint undertaking in the history of warfare by 1942 virtually unopposed, due largely to consistent “reading of the enemy’s mail.”<sup>1</sup>

A brief introduction of Allied signals intelligence in World War II, a TORCH overview, and a detailed look at SIGINT sources help place the operation in context. Then, an analysis of the threat-assessment process illustrates how insights into German perceptions helped shape the operational plan. Next, recently declassified decrypts fill in historical gaps to show how the Allies used focused intelligence efforts to conceal force movements for the operation and gauge the efficacy of the deception stratagem. These decrypts also reveal the Axis response as the landings occurred and help explain Allied countermoves. The role of “all-source intelligence fusion” in the strategic deception effort is then related. Finally, a discussion of TORCH as a model for intelligence and deception in operational planning and execution offers lessons for contemporary maritime planners, warfighters, and intelligence leaders.

### SIGNALS INTELLIGENCE

Allied signals intelligence dramatically expanded during TORCH planning. Breakthroughs earlier in the war by British cryptanalysts at the Government Code and Cipher School (GCCS) at Bletchley Park led to the breaking of high-grade German ciphers, based on the ENIGMA machine, and in turn a new source of intelligence information known as ULTRA. Moreover, similar American cryptanalytic efforts led to several significant additions to the many British special-intelligence sources. The North African and Mediterranean campaign of 1942 under General Dwight D. Eisenhower’s Armed Forces Headquarters (AFHQ) represents the first actual, operational use of ULTRA and other special intelligence in the planning and execution of large-scale campaigns and the first instance of Allied collaborative strategic deception. Indeed, TORCH represents a vehicle for the practical application of signals intelligence to an Allied campaign that became the model for future operations, such as HUSKY in Sicily and OVERLORD on the beaches of Normandy.

The Allies formed AFHQ in August 1942, after a July Anglo-American decision that the invasion of northwest Africa should be made before any attempt to execute a cross-channel offensive against German-occupied France. Originally, President Franklin D. Roosevelt and General George C. Marshall, chief of staff of the U.S. Army, were against any offensive not directly aimed at the German heartland, but London’s persistent and frank assessment of the limitations of

Allied forces actually available vis-à-vis expected German opposition convinced them otherwise.<sup>2</sup> The Combined Chiefs of Staff (CCS) then agreed upon a fall offensive, under the code name TORCH, to capitalize on German preoccupation with the Russian theater, thus initiating the “second front” so desperately needed by the Soviet Union.

The envisioned TORCH plan was ambitious, considering the obvious dangers associated with Allied transatlantic and Mediterranean convoys in 1942. For instance, the plan eventually called for over 1,400 ships to sail from American and British ports carrying enough men and materiel to support an extended campaign in foreign territory and passing through U-boat-infested waters and Axis-controlled sea-lanes. Historian F. H. Hinsley declares that “the scale of the Allied undertaking was without previous parallel in the war, indeed in the history of warfare: never before had states collaborated in dispatching such huge armadas over thousands of miles of ocean and landing so large an expedition in hostile or potentially hostile territory.”<sup>3</sup>

The scheme required that Allied forces establish a base on Africa’s Atlantic coast from which to launch a campaign aimed at Tunisia through Algeria. The final plan envisioned three separate amphibious assaults in the vicinity of Casablanca (in French Morocco), and upon Oran and Algiers on the Mediterranean coast. The plan called for three task forces: the Western Task Force from the American east coast and the Central and Eastern task forces from the United Kingdom. Finally, a concerted Allied push eastward along the North African coast from Algiers, along with increasing pressure from the east by Montgomery’s Eighth Army, was expected to force an engagement with and then crush the remaining Axis forces in Tunisia. Berlin, however, could potentially array a substantial order of battle against TORCH forces.

The primary threat to the task forces was Axis sea- and airpower, though the potential hostile reaction of French military forces in the African colonies could not be discounted. As for Axis strength, Italian forces in the Mediterranean, though not formidable in themselves, could doom the operation if used in a concerted effort to attack the convoys. These forces consisted mainly of a small surface fleet with a few capital ships, several torpedo boats, a few submarines, and limited aircraft for patrol and attack. The Germans, on the other hand, had numerous long-range patrol and attack aircraft in Sardinia and Sicily (which might operate out of French Mediterranean bases), many U-boats operating in the Atlantic and Mediterranean, and Rommel’s armored formations in Tunisia. Additionally, Germany could order the reluctant Vichy French forces, particularly the fleet in Toulon, into action. These consisted mostly of French warships, small army garrisons, and shore batteries. Last, the threat of hostilities with heretofore neutral Spain existed, but Washington seems to have consistently

overemphasized it. Planners knew that ultimately the speed and stealth of the Allied operation would decide what additional Axis forces Berlin deployed in response to the invasion.

Various sources of SIGINT provided the intelligence that TORCH planners used to estimate enemy forces and intentions. Most of these sources were British, but there were several American ones as well. First (listing the sources in relative importance, from least to most valuable), the Signal Intelligence Service broke Vichy French weather ciphers broadcast from North Africa and France in July 1942.<sup>4</sup> These decrypts provided valuable up-to-date weather assessments of the proposed invasion sites, as the success of amphibious assaults was (and still is) extremely dependent on weather. Additionally, after September 1942 GCCS was reading the German air force (Luftwaffe) counterpart to Vichy weather signals, encoded in a system known to the British as CELERY, providing current weather data difficult or impossible to gather otherwise.<sup>5</sup> Although weather reporting was not considered “special intelligence,” it was important nonetheless. Eisenhower, for example, frequently expressed his vexations with weather as D-day approached, in one instance declaring, “I fear nothing except bad weather and possibly large losses due to submarines”—the latter phrase a seeming understatement.<sup>6</sup>

Second, Vichy authorities continued to use many of the same naval codes the French had used before German occupation, an apparent Axis oversight that produced a consistent SIGINT source. Vichy forces did attempt some novel encoding, but the sophisticated GCCS apparatus had no trouble with it, since the basic ciphers had been in British hands since 1940, when several French warships sailed to the United Kingdom instead of capitulating to the Nazis.<sup>7</sup> By the time TORCH planning began, GCCS was also decrypting similar Vichy air force signals that described air assets available in North Africa.

Third, several Italian codes also provided important special intelligence to invasion planners. GCCS had in 1941 broken the C38M medium-grade cipher, which was used and routinely decrypted until the war’s end.<sup>8</sup> This naval cipher, used primarily for Mediterranean shipping, provided special intelligence on Italian naval forces and intentions—though usually only after the Italians had organized combined actions with the Germans. Further, the Italian air force high-grade “book” cipher was broken prior to TORCH and provided similar information on aircraft disposition; however, Italian aircraft played a minor role before and during TORCH, only to come into action in reinforcing Tunisia after the landings.<sup>9</sup>

Another key special-intelligence source involved Axis and Vichy French diplomatic decrypts. By far the most consistently decrypted and utilized of these, the Japanese diplomatic PURPLE ciphers, which had been broken by American

cryptanalysts in 1940, offered consistent insights into the German high command's intentions and its reactions to Allied moves. These decrypts, distributed as "MAGIC Summaries," provided reliable accounts of Axis order of battle, and, further, vital feedback as to the efficacy of Allied deception measures from the highest levels. Until November 1942 the Allies also read Vichy diplomatic ciphers, deriving additional insight into French forces and government disposition and confirming other sources of intelligence on possible future reactions. Italian and German diplomatic ciphers, however, were not broken consistently enough to contribute to TORCH planning, the former becoming unreadable after the summer of 1942 and the latter not being decrypted usefully before 1943.

GCCS consistently broke the German military intelligence ciphers of the *Abwehr* and *Sicherheitsdienst* (SD), the intelligence services of, respectively, the armed forces and the Nazi Party (and thereby the SS). From them it gleaned even more information on intentions against, and perceptions of, Allied operations. *Abwehr* ENIGMA ciphers known as "ISK" and "GGG" were broken after February 1942, providing key glimpses of the effectiveness of various deception and cover plans for TORCH.<sup>10</sup> SD decrypts represented vital corroboration of other special intelligence, particularly on Vichy French and Spanish government reactions after the initial landings. Moreover, SD decrypts proved particularly useful in gauging the effectiveness of false information planted via double agents, as they contained detailed reports sent to Berlin from Nazi agents in the field.

Thus, several reliable special-intelligence sources gave Allied planners valuable information on critical Axis moves and countermoves. Another vital source of intelligence, however, was that referred to as "Y." Y intelligence was battlefield-level, raw information gained by listening posts and small units intercepting radio transmissions in low- and medium-grade codes and ciphers, as well as uncoded messages. It was useful for identifying the constitutions, locations, and unit call signs of enemy forces, as well as for confirming and complementing other, higher-grade signals intelligence. ULTRA and other special intelligence could sometimes make sense of otherwise useless Y information. However, even when successful cryptanalysis eluded GCCS, the presence of Y signals and wireless transmissions generally—particularly fitting known trends of format, signature, or volume—could (through "traffic analysis") indicate enemy activity of a certain nature. Peter Calvocoressi comments in his *Top Secret Ultra* that effective "SIGINT—independent of any deciphering—may bring an element of intelligibility to the babble of the ether and transform it into a picture of the realities on the ground."<sup>11</sup> TORCH appears to be the first effective Allied fusion of ULTRA and Y for operational planning and execution.<sup>12</sup> From such fusion flows a greater understanding of how component elements form a system network, revealing element criticality and potential vulnerabilities (nodal analysis).

Further, German army ENIGMA ciphers, known to GCCS as CHAFFINCH I, II, and III, provided another source of signals intelligence peculiar to the Afrika Korps. These ciphers were broken consistently after April 1942, producing material on logistics, tactics, and strategy.<sup>13</sup> For instance, CHAFFINCH contributed directly to the success of the British offensive at El Alamein by disclosing specific tactics and confirming Rommel's desperate supply situation. German high command signals also gave clues as to intentions and capabilities for the Mediterranean and African theaters.

Other German ciphers, however, would prove much more useful in the planning and execution of TORCH. German navy ENIGMA ciphers, for example, were critical for gauging shipping and naval movements, as well as maritime shore activities during the critical weeks just before the invasion. GCCS decrypted PORPOISE ciphers after August 1942, generating information on trans-Mediterranean traffic before and during the operation.<sup>14</sup> Additionally, DOLPHIN, read after August 1941, provided information on German home-waters shipping, occasionally imparting snippets of intelligence relevant to TORCH.<sup>15</sup> Furthermore, these decrypts provided routine summaries of Italian admiralty intelligence assessments—significant in that Italy operated far more warships, transports, and merchant ships in the Mediterranean than did Germany. By evaluating the sources and locations of German concerns in such decrypts, the Allies went far toward accurate assessments of Axis intentions and capabilities in the Mediterranean.

Finally, by far the most reliable and accurate source of ULTRA comprised Luftwaffe ENIGMA ciphers. Aside from U-boats, Luftwaffe patrol and attack aircraft posed the most dangerous threat to the invasion convoys and forces. Accordingly, GCCS relied heavily upon Luftwaffe signals for indications of movements and intentions. It read LOCUST ciphers, for instance, after January 1942, deriving from them detailed information on the locations and employment of Luftwaffe assets in Sicily and Sardinia.<sup>16</sup> A factor that made these signals so valuable was that all Mediterranean reconnaissance and attack aircraft reported findings via Luftwaffe ENIGMA, making them a vital source of data for planning Allied operations and deceptions. This traffic provided the bulk of indications as to Axis discernment of TORCH, such as convoy sightings and estimates of destinations.

#### GERMAN PERCEPTIONS

Revelations of key German perceptions shaped the operational plan. Before formulating any concrete operational invasion plan for North Africa, AFHQ had to conduct a detailed assessment of Axis intentions and capabilities in the Mediterranean theater. This assessment was largely a British one, as American

intelligence agencies had little information to work with beyond general impressions gleaned from MAGIC decrypts. Some divergence, in fact, still existed between the two allies as to TORCH's basic purpose. As the two nations' military relationship developed through the CCS and AFHQ, however, so did their ability to learn from each other. A closer exchange of special intelligence at the higher-levels invasion planning led on the American side to an appreciation of the more realistic British assessments. American leaders, however, remained concerned about the contingency of Spanish hostility, and the final draft plan considered this point. Intelligence from proven SIGINT sources assuaged some of Marshall's and Eisenhower's apprehensions.

Early on, GCCS focused on Luftwaffe ENIGMA decrypts. The Air Intelligence Section at GCCS had established a good baseline of Luftwaffe information by the summer of 1942 from longer-term analytical studies. In fact, the director of this branch described the picture obtained from Luftwaffe decrypts as the most complete ULTRA source: "The intentions of the German Air Force were the intentions of the German Armed Forces as a whole."<sup>17</sup> He took this knowledge with him to Eisenhower's staff at Norfolk House in London.

Specifically, Luftwaffe decrypts provided telling evidence that up to D-day the enemy had little information on the TORCH plan, affording Armed Forces Headquarters the advantage of confidently shaping the operation around known enemy understandings. The gradual but extensive buildup of the British base at Gibraltar in preparation for the operation, for example, could not long be hidden from the Axis powers. Luftwaffe decrypts revealed, however, that Berlin was misinterpreting it as staging for either a Malta resupply convoy via the Cape of Good Hope or a landing in Tripolitania or Tobruk in support of the British Eighth Army.<sup>18</sup> Decrypts also immediately revealed Luftwaffe movements or reinforcements and their intentions—often, in fact, stating their objectives. With European and African Axis force disposition known to TORCH planners, Armed Forces Headquarters calculated that if operational security could be maintained, the operation could succeed.

An item of particular strategic value that special intelligence provided to TORCH planners was information on Axis anxiety over the possibility of Allied invasion. For instance, German references in MAGIC to forces massing in the United Kingdom and to an apparently impending Allied offensive—presumably a second front to ease the burden on the Soviet Union—repeatedly mentioned specific locations of interest. In fact, disturbingly accurate MAGIC signals in early October projected Allied intentions to invade Africa to open the second front.<sup>19</sup> The Japanese ambassador to Berlin, General Oshima Hiroshi, exchanged such information routinely with German military and diplomatic leaders. Nevertheless, it appears that a myriad of other sources of information, combined

with the self-perceived superiority of German intelligence, prevented any Axis response—a fact revealed, again, by ULTRA. Oshima's accurate reports on Axis intentions and disposition were often based directly on discussions with the highest levels of German leadership, even Hitler himself.<sup>20</sup> Similarly, repeated references in high-grade SIGINT throughout the summer and autumn of 1942 revealed Axis concern about an Allied threat to northwest Europe, Norway, and the Aegean.<sup>21</sup> Finally, diplomatic signals between Madrid and the Spanish embassy in Washington before the North African landing showed that although the “neutral” Spaniards discerned the probability of the Allies' alighting somewhere in North Africa, they knew not when or where.<sup>22</sup> Certainly, such information on Axis European strategy was useful to both operational and deception schemers, permitting them to orchestrate an operation in the assurance that the geographical area was receiving less than maximal Axis scrutiny.

These intelligence sources, then, allowed AFHQ to mold an offensive with the highest probability of success. By October, TORCH planners assessed the following: that German forces were tied down in the Soviet Union at Stalingrad and in the Caucasus, with no prospect of victory in the foreseeable future; that the war in the African desert was taxing Axis resources—some of them sent to the bottom of the Mediterranean by ULTRA-forewarned aircraft and submarines from Malta; that generalized Axis apprehension existed about an Allied offensive in Europe or the Mediterranean; and that few reinforcements were being diverted toward the Mediterranean or to support any move into Spain.<sup>23</sup>

Armed Forces Headquarters drew these conclusions from specific, corroborated intelligence on enemy intentions. For instance, by October, Field Marshal Albert Kesselring, Axis commander in the Mediterranean, predicted that Allied forces would likely land somewhere in North Africa but he was much distracted by the stalwart British outpost of Malta; repeated bombing and invasion attempts had failed to dislodge its entrenched garrison, and Royal Air Force sorties from Malta were consistently interdicting his seaborne logistics train. Furthermore, Hitler's reliance on his own intuition (vice the more prudent counsel of his marshals) in dismissing Italian warnings of the imminent invasion in North Africa denied Kesselring assets that he urgently requested.<sup>24</sup> Anxious as AFHQ leaders were, therefore, about the threats to the extensive TORCH flotillas, the realities of an enemy both materially preoccupied with a fluid front line some 1,500 miles away and focused locally on the struggle in Egypt reassured them.

Once the Allies reached the major strategy decisions and AFHQ staff solidified under Eisenhower, the Americans began to come more fully into the fold of British special intelligence, thoroughly appreciating as they did its depth and its significance to TORCH. Indeed, it was the imminence of the invasion that brought the introduction of American officers to Britain's most highly guarded secret.<sup>25</sup> By

September American analysts served at GCCS, participating fully in cryptanalysis, signal watches, and research functions in a cooperative Allied effort.<sup>26</sup>

By August, a TORCH intelligence picture had been produced that was truly a combined Anglo-American effort. The first study, dated 7 August, dealt with three primary issues: the likely reaction of Vichy French forces, the threat of Spanish hostility and a possible German thrust through Spain, and the forms and extents of other potential Axis responses.<sup>27</sup> The assessment, informed by special intelligence, predicted the following: Vichy forces would resist only until a resolute attack demonstrated Allied supremacy; Spain would resist German pressure to move against Gibraltar unless that pressure were backed by force; Italy would not send forces to Tunisia to reinforce Rommel or, probably, risk its navy beyond the air cover of home waters; German U-boats could not be rapidly reinforced; and the speed of the Allied advance to Tunisia would dictate the magnitude of Axis response.

By early August, realizing the need to filter the deluge of intercepted signals down to a usable core of data, AFHQ G-2 (intelligence) staff had focused on Axis presence in the Mediterranean. While the Allied picture of enemy intentions was good, order-of-battle information was in short supply. Over time, Luftwaffe ENIGMA, Italian C38M, and Italian air force high-grade cipher decrypts provided a coherent picture of Axis forces. The fact that the draft TORCH naval operational plan, dated 3 October, indicated specific locations, numbers, and types of Axis and Vichy aircraft and naval units demonstrates that intelligence efforts had achieved a high degree of success. These forces amounted to the following: the small but capable Vichy fleet in Toulon and the meager naval forces in French North Africa; several hundred aged French fighters and bombers at North African airfields; the reticent Italian fleet, spread among Taranto, Messina, and Naples; roughly sixteen German U-boats operating out of Greece and Italy and a few E-boats in the same areas; 170 Luftwaffe fighters, bombers, and reconnaissance aircraft stationed in Sicily and Sardinia; three hundred less capable Italian air force bombers and fighters located in Sicily, Sardinia, and Tripolitania; and Rommel's Afrika Korps.

The October study concluded that the only serious opposition to the landings themselves would be offered by Vichy forces, as the distant German forces in the central Mediterranean could do little without reinforcements. TORCH planners gauged the Axis aircraft in Sicilian and Sardinian bases to be the greatest air threat to the operation and shaped the operation around this factor, but they estimated that Berlin would send no reinforcements to the Luftwaffe until "D minus 4" (that is, four days before the planned invasion date) and that seaborne reinforcements to Rommel could not arrive until two weeks after the invasion commenced.<sup>28</sup> The reinforcement estimates, however, proved illusory, as Armed

Forces Headquarters based them not on quantifiable data but on conservative estimates of German responsiveness—not considering the possibility that Hitler would be unwilling to accept the loss of North Africa. In any case, Luftwaffe flexibility and resilience ultimately proved the planners wrong on this point. On balance, though, Eisenhower’s draft plan for the operation assessed enemy capabilities fairly accurately on the basis of early October special intelligence.

### CONCEALMENT AND ASSESSMENT

Focused Allied deception efforts concealed force movements, and intelligence gauged the stratagem’s efficacy. After the October assessment, GCCS and Armed Forces Headquarters scrutinized special intelligence for movements or buildups of Axis Mediterranean forces. Especially important was any transfer of aircraft to Luftwaffe Mediterranean airfields from other theaters or between the fields themselves. AFHQ was also seriously concerned about Luftwaffe and U-boat buildups in the Mediterranean as TORCH preparations moved forward; ULTRA, however, indicated no significant reinforcement of the former, and Admiralty U-boat tracking rooms reported no sign of the latter. In fact, a transfer of Luftwaffe assets from Sicily to the Aegean on 29 October strengthened Allied confidence in the lack of Axis foreknowledge of the invasion and, in fact, supported deception plans.<sup>29</sup> A previous transfer of Luftwaffe aircraft to Norway in the spring of 1942 had also fit Allied interpretations of German invasion fears for northwest Europe—these aircraft did not return to Kesselring’s command until early November. Such knowledge was invaluable.<sup>30</sup>

When in late October Allied forces prepared for sailing, U-boats became a paramount concern. Armed Forces Headquarters ordered Anglo-American manpower and materiel assembled only just in time for October sailings; the final TORCH plan established 7 November as D-day. Just before the huge fleet began to move, AFHQ focused on timing the convoys to avoid the U-boat threat. Unfortunately, this was the one area of German military operations in which GCCS could provide little signals intelligence to assist the invasion planners.

Two significant cryptologic successes on the German side allowed the U-boats to operate with such impunity in 1942 that by December they had sunk 1,160 ships, totaling over six million tons. First, for operational security, the German navy in February 1942 switched to a four-wheel ENIGMA machine for U-boat signals. This new key, known to GCCS as SHARK, impeded greatly the ability of the current code-breaking machinery to decrypt signals.<sup>31</sup> German U-boat ciphers were unbroken until December 1942; in the meantime other, less exact means had to be used to locate the many U-boats and evaluate their threat to Allied shipping. This absence of U-boat special intelligence created a major risk for TORCH commanders, in that the sinking of even a few critical vessels could jeopardize the entire operation.

Second, the German naval intelligence branch, the Beobachtungsdienst, broke British Naval Cipher Number 3 consistently from February 1942 until June 1943.<sup>32</sup> This was the primary cipher used for communication with, and the routing of, Anglo-U.S.-Canadian merchant convoys across the Atlantic. Admiral Karl Doenitz's wolf packs exploited this precious intelligence on the locations and timing of Allied convoys, as well as on Allied estimates of German U-boat dispositions. The commander of the first TORCH convoy to leave the United Kingdom commented that he "would consider his task successful if he got half of his convoy to Algiers and Oran through the expected gauntlet of Luftwaffe dive-bombers and U-boat wolf packs in the Mediterranean."<sup>33</sup> The collaborative means by which the Allies evaded the wolf packs on this occasion are notable. First, DOLPHIN ciphers were still being consistently broken and provided at least some intelligence on U-boat activity in the Atlantic and Mediterranean.<sup>34</sup> Second, combined Admiralty and U.S. Navy submarine tracking rooms used these decrypts in conjunction with sighting reports, direction finding, traffic analysis, and any other available information to establish a picture for both the Atlantic and Mediterranean. These organizations were amazingly successful in routing and rerouting convoys, directing convoy escorts and air support to engage U-boats, and managing photoreconnaissance assets. Complex traffic-analysis techniques took advantage of frequent reports required from U-boats to Doenitz's command center, and of its replies, to follow individual submarines. Furthermore, special intelligence disclosed to TORCH planners that in response to Kesselring's insistent requests for reinforcements, long-range reconnaissance aircraft in Norway and Bordeaux were shifted to the Mediterranean theater just before the invasion force sailed; consequently British TORCH convoys were not observed while in the Atlantic en route to Africa.<sup>35</sup> The Allies avoided coordinated U-boat attacks partly because of resulting Axis intelligence gaps. Last, the highly secure cryptographic and wireless-traffic arrangements made long beforehand, along with stringent radio silence observed by all ships, provided little signals traffic for the enemy to intercept, much less analyze. The propitious environment for TORCH sailings was the result of the strategic denial of intelligence to the enemy thanks to the Allied tracking rooms' efficacy—all the more impressive in light of estimates that ninety-four U-boats were operating in or en route to the Atlantic at the time.<sup>36</sup>

Moreover, beyond the invaluable tracking room assistance, a U-boat confrontation with a non-TORCH British merchant convoy off West Africa proved highly fortuitous for the Allied fleets nearing the Azores. Instead of keeping the ten U-boats of Group Streitaxt on station outside the Strait of Gibraltar, Doenitz ordered them south to Madeira to attack northbound British convoy SL-125, sighted on 27 October.<sup>37</sup> The U-boats pursued and fired torpedoes at this empty

convoy returning from Sierra Leone for seven days, sinking thirteen ships. To this day it is unknown as to whether this was a strategic sacrifice on the part of Allied commanders or simply fortuitous; regardless, it was fortunate for TORCH, in that the diversion pulled the U-boats well south at a critical time, allowing invasion convoys safe passage.

Finally, events in the Mediterranean, partly because of deception operations, drew U-boats to the east away from invasion shipping arriving in the theater. On 5 November, the bulk of initial British TORCH convoys passed Gibraltar into the Mediterranean, where the seventeen U-boats alerted to their presence were preparing for coordinated attacks. Special intelligence revealed that Axis photoreconnaissance aircraft had sighted the convoys and that Berlin expected them to proceed to Malta.<sup>38</sup> Seeing the need to reinforce the Mediterranean but not divining the purpose of these unexpected convoys, Doenitz ordered seven U-boats from Biscay ports to sail for the Mediterranean on 4 November—too late to oppose the successful landings on the 8th. Doenitz then positioned nine Mediterranean U-boats in a line from Cartagena to Oran in anticipation of the passing convoys. These U-boats, however, did not intercept the TORCH convoys, as British naval activity near Cyprus and Port Said caused Doenitz to shift them eastward to intercept traffic to Malta from either east or west. Finally, a heavy concentration of antisubmarine ships and aircraft supporting invasion shipping prevented the few U-boats that actually sighted the convoys from attacking effectively. Only one, in fact, was able to loose any torpedoes at all, managing only to disable a U.S. transport.

Strict operational security was a key factor in the flow of this intelligence from Bletchley Park to TORCH operational commanders. While some Americans considered the stringent British security measures an obstacle to operational use, the strict accountability procedures and destruction by burning immediately after briefings to cleared parties protected sources and deception schemes and so contributed materially to operational success.

Thus, the passage of the invasion flotilla without the loss of a single ship before the landings was due to a combination of special intelligence, skillful convoy routing, energetic operational security and deception measures, relentless Allied anti-submarine warfare, and plain good luck—what Eisenhower called an “effective scheme for helping get our convoys through the submarine-infested zone.”<sup>39</sup>

## AXIS RESPONSES

Insights into the Axis response to TORCH landings informed Allied operational decisions. Signals intelligence was of prime importance in gauging the Axis response after the discovery of the invasion convoys. For instance, although special intelligence revealed Axis intelligence had noted the gradual buildup of air

and naval forces at Gibraltar, Berlin took little action beyond the aforementioned minor Luftwaffe reinforcements. A reason might have been a German assessment that the arrivals and departures were connected with routine exercises, as suggested in several decrypted German situation reports of 30 and 31 October.<sup>40</sup> As TORCH shipping began passing the strait en masse, however, AFHQ became acutely concerned that early detection would bring an air onslaught that could endanger the entire operation. After 5 November, repeated German decrypts announced convoy sightings by agents in Spain and Spanish Morocco as well as by Italian and German air patrols, all reporting an easterly or northeasterly course toward the Mediterranean. Kesselring began to realize that something larger than a Malta resupply effort could be under way. Invasion commanders must have been relieved, however, when his response—known via Luftwaffe ENIGMA—was to await the convoys west of the Sicilian channel and attack on the morning of the 8th with reinforced aircraft based nearby.<sup>41</sup> The Eastern and Central task forces instead turned due south toward Algiers and Oran under cover of darkness on 7 November. The Axis inability to ascertain the objective of the convoys and Kesselring's limited response to sightings allowed them to pass unhindered to North Africa.

There were other reactions than Kesselring's reinforcements of fighter and long-range bomber aircraft to Sicily and Sardinia, and special intelligence revealed them. For example, knowledge of the specific areas in which Kesselring had concentrated air and surface reconnaissance warned the Allies what sectors to avoid. Additionally, special Italian naval wireless service orders in a 7 November decrypt placed aircraft in Sardinia and Sicily into a "state of readiness," disclosing preparations to meet the convoys near Sicily and suggesting the likelihood of imminent sailings from Italian ports.<sup>42</sup> These decrypts all helped confirm that Axis attention was focused well away from actual objectives.

After TORCH convoys reached their destinations in Casablanca, Oran, and Algiers and began the landings, Armed Forces Headquarters was primarily concerned with how the Axis powers would react once they grasped the full scope of the invasion. The earliest decrypts mentioning the actual landing sites appeared in an 8 November situation report with incomplete information on "attempted landings" near Oran and Algiers.<sup>43</sup> Berlin quickly appreciated the immense scale of the landings, however, when follow-up reports gave the numbers of ships involved. In fact, when briefed on the armada's size by General Albert Jodl, chief of the armed forces operations staff, Hitler declared, "If these reports are true, this is the greatest fleet in the history of the world."<sup>44</sup> Signals after 8 November revealed the beginnings of a massive Tunisian reinforcement, with Luftwaffe decrypts ordering transfers of fighters and dive-bombers from all fronts, including Russia. Similarly, an 11 November PORPOISE decrypt specifically stated an intent

to form a bridgehead in Tunisia, with orders from Hitler to hold the North Africa position against Allied invasion.<sup>45</sup> Likewise, Luftwaffe ENIGMA disclosed seizure of airfields near Tunis and Bizerte for air resupply of the bridgehead and an order from Berlin for a panzer regiment to reinforce Rommel.<sup>46</sup> Thus, special intelligence provided early and unambiguous indication that Axis powers would fight for Tunisia. Unfortunately, Allied slowness in acting on that indication led to a winter stalemate in North Africa.

Armed Forces Headquarters also needed intelligence on the possible Vichy French reaction. A covert plan by the Office of Strategic Services (OSS) sought to foment an uprising in the objective area of pro-Allied groups to seize control of local authorities, media, and power stations in hopes of minimizing local opposition. Special intelligence from Vichy diplomatic ciphers gave mixed indications on the possible response, but a late-breaking OSS report that the deputy prime minister of Vichy France, Admiral François Darlan, was in Algiers gave AFHQ reason to hope for a quick capitulation. Additionally, Armed Forces Headquarters hoped that inflated figures being circulated on the British victory at El Alamein would demonstrate an Allied victory on that continent and lessen Vichy concern for German reaction to perceived collusion with the Allies.<sup>47</sup> Eisenhower's TORCH deputy, Major General Mark Clark, engineered some adventurous diplomacy in the French colonies that finally led to the surrender to Allied forces under Darlan's orders. Special intelligence, then, assisted AFHQ in a classic combined political and military effort, praised by William Casey in *The Secret War against Hitler* as a successful meshing of intelligence and diplomacy in supporting operational success.<sup>48</sup>

Just after the landings, special intelligence quickly disclosed German orders to Vichy France and actions taken in French territory. Diplomatic decrypts revealed German pressure on the Vichy French to oppose the Allies at all costs and an offer of German assistance to expel them.<sup>49</sup> The Vichy response was largely as predicted in the initial TORCH study, except for the Casablanca landings, where General George Patton, Jr., encountered dogged if confused resistance by French naval units and shore batteries. Algiers fell on 8 November, Oran on the 10th, and Casablanca on the 11th. It is noteworthy that because during the initial landings in all three locations the reports of subordinate commanders were sketchy at best, the clearest picture of events available to Armed Forces Headquarters was provided by French naval and diplomatic decrypts.<sup>50</sup> Decrypts of reports to the Abwehr of a Vichy agent, as well as MAGIC reports from Oshima, confirmed that the French fleet in Toulon had not sailed in opposition to the landings. Moreover, the same sources later disclosed Vichy government vacillation after news of Darlan's armistice, and an additional PORPOISE decrypt spelled out specific German orders to occupy the whole of France in response.<sup>51</sup>

Finally, special intelligence gave Armed Forces Headquarters important information on German occupation of French Mediterranean air bases and Hitler's order to seize the Toulon fleet, which led to the immediate scuttling of the ships by the French navy.<sup>52</sup>

Special intelligence also proved critical in judging the Spanish reaction to TORCH, about which Eisenhower had agonized up to the day of the landings. The Allies sought to avoid any action that might sway Madrid toward the Axis powers and invite aggression against the Allies, especially against Gibraltar. For instance, Armed Forces Headquarters directed the purposeful exaggeration of the Allied victory at El Alamein among the Spanish population to demonstrate Allied commitment to final victory and to guarantee freedom of operation from the Gibraltar outpost.<sup>53</sup> Abwehr decrypts had previously revealed that with Spanish assistance the Germans had by late 1941 established observation posts close to the strait, in Spanish territory, providing highly accurate shipping reports. Significantly, special intelligence disclosed a reliable and accurate Axis capability to gauge the nature of shipping movements even in low visibility or fog—the decrypts revealing the existence of new, highly sophisticated infrared and low-light systems that caused the Allies grave concern.<sup>54</sup> Moreover, London exploited this knowledge in a formal protest to Madrid regarding Spanish neutrality, a *démarche* that ultimately led to the disruption of the German posts' operations just before TORCH convoys slipped into the Mediterranean.<sup>55</sup> Last, after the landings, Axis diplomatic decrypts expressly stated that no cross-Spanish invasion or combined attacks on Gibraltar would occur, finally allaying American fears of a two-front North African operation.<sup>56</sup>

#### ALL-SOURCE FUSION

All-source intelligence fusion integrated with operations shaped strategic deception. Special intelligence facilitated the application of a deception scheme that clouded for the enemy the nature and destination of the offensive, aiding in the venture's success. Although operational security was vital, TORCH's success was more than simply the "triumph of security" hailed by some World War II historians.<sup>57</sup> The steady flow of special intelligence to the London Controlling Station (LCS, the British strategic deception center) let that organization assess the efficacy of its measures to confuse the enemy. This first Allied marriage of special intelligence and strategic deception was vital to TORCH's success.

To begin with, detailed knowledge of Axis capabilities, intentions, and anxieties provided an excellent framework within which invasion planners could develop a viable deception plan. The deception stratagem involved multiple scenarios and substantial resources, with the prime objective of achieving surprise in the North Africa invasion. Though the value of deception has been

stressed since the age of Sun Tzu, stratagems on the scale of those managed by LCS were unprecedented. The task of hiding the buildup and movement of the vast TORCH forces from enemy eyes was daunting indeed. Prime Minister Winston Churchill was to describe in his memoirs his personal concern at the scope and complexity of the problem.<sup>58</sup> The fundamental precept of the preinvasion deception plan was to cause Germany to disperse forces to prevent concentration at the place and time of greatest Allied vulnerability—with surprise as a guarantee of safe maritime passage, not a force multiplier.<sup>59</sup>

From this precept flowed other deception tasks. Playing on German apprehension about potential Allied offensives in Norway, the Aegean, or North Africa or across the English Channel, LCS established three supporting objectives: to tie down European Axis forces while TORCH convoys made the passage, to discourage Axis and Vichy defensive preparations in French North Africa, and most important, to conceal the destination of the expedition even past Gibraltar.<sup>60</sup> In the event, intimate knowledge of German perceptions allowed LCS to formulate a scheme that fed the expectations of the German intelligence services and General Staff.

The Allies exploited varied means to broadcast false information to Axis intelligence services. The British painstakingly established a network of “turned” foreign agents that not only provided intelligence but disseminated false intelligence amid carefully selected bits of truth. The highly secret “XX Committee,” charged with feeding Berlin misleading information on Allied order of battle, controlled these agents, unbeknownst to their Axis handlers. Berlin relied upon this spy network, which ringed the Mediterranean, as a prime source of military intelligence, particularly due to the dearth of German cryptanalytic breakthroughs. The closely managed double operatives selectively planted just enough bogus information to be believable, often disclosing noncritical or time-late information on classified Allied activity to maintain credibility. Physical evidence, other agents’ reports, or various other means usually were arranged for to corroborate Allied deception themes. The XX Committee also occasionally dabbled in cryptologic methods, such as the transmission on several occasions of fraudulent intelligence via ciphers known to be compromised, contributing to the authenticity in enemy eyes of TORCH deception schemes.<sup>61</sup>

The Americans were far less adept at the counterintelligence game, relying heavily on London, but they too took certain measures to contribute to the mystery surrounding the huge buildup across the Atlantic. The United States dispersed its forces along the East Coast so as not to arouse suspicion, even sending the air group to Bermuda to embark once the fleet was under way from Hampton Roads, and dispatching the covering group to the Caribbean to await the main sailings. Shipping also steered false courses when near land to simulate

convoys to the West Indies or on North Atlantic routes to England. The fleets maintained strict operational security in transit, to the extent of boarding and commandeering any vessels encountered and shooting down aircraft on sight.<sup>62</sup>

LCS, however, controlled the brunt of the strategic deception effort particular to Europe. During mid-August, LCS put into effect Operation OVERTHROW, the first component of the three-tiered TORCH deception and cover plan, specifically designed to mislead the enemy on the reason behind the extensive buildup of Allied shipping in Britain. This was an attempt to convince Berlin that it was seeing a prelude to the long-awaited Allied thrust into the European continent to push the Axis out of France.<sup>63</sup> LCS used the extensive double-agent system to circulate false reports, and Britain staged large numbers of landing craft, barges, and any other shipping not dedicated to TORCH to suggest an imminent amphibious operation. Repeated mention in Luftwaffe ENIGMA decrypts from ubiquitous Luftwaffe photoreconnaissance missions near the channel confirmed enemy awareness of this buildup; LCS measured success by the fact that German forces in northwest Europe remained on alert and that none moved to the western Mediterranean until early November.<sup>64</sup>

LCS designed the next deception phase to deceive the Axis regarding the concentration and subsequent movement of the Allied shipping to the invasion zone from Britain. Operation SOLO I sought to give Germany the impression that a massive naval operation was under way to invade Norway to safeguard the northern flank of the convoy route to the Soviet Union.<sup>65</sup> The capture of the strategic port of Narvik was included in false reports generated by the many turned agents to suggest an Allied attempt to strangle the flow of Swedish iron ore into Germany. These reports, combined with the reality of a large Allied naval force embarking from Britain, clearly had the German high command concerned. The LCS plan also called for Canadian troops not earmarked for TORCH to conduct conspicuous amphibious exercises in the northern United Kingdom just before the sailings to suggest rehearsals for cold-weather operations. Moreover, fast invasion convoys were to remain in port until only eight days before the landings, and the follow-up convoys until four days prior, in hope of keeping Berlin in suspense over a possible Norway offensive even after the bulk of the TORCH fleet had turned south.<sup>66</sup> Last, spurious wireless transmissions reported the arrival of fighter-bombers and other aircraft in a Scottish assembly area.<sup>67</sup> The first two parts of the overall deception plan, then, complemented one another and used many of the same assets to obfuscate Berlin's assessment of Allied intentions. Once Germany discovered the convoys were en route to the Mediterranean, however, LCS had to implement the next phase of the deception scenario.

Events unfolding in northeast Africa—the British Eighth Army offensive near El Alamein—also contributed to Axis confusion before and after the British

sailings. British tactical teams were busy launching a related deception scheme, code name BERTRAM, from the Middle East headquarters in support of Montgomery.<sup>68</sup> The ubiquitous British agents disseminated an array of false information on troop movements, force dispositions, and concentrations in Syria and Cyprus, as well as counterfeit reports of poor readiness among British Middle East forces. Backed up with extensive visual evidence from Luftwaffe photoreconnaissance, these “plants” misled the Germans into a preoccupation with a possible Allied offensive against Crete, causing them to transfer an entire air-landing division there instead of to the Afrika Korps.<sup>69</sup> This shift of attention away from Malta allowed both renewed resupply via submarines and fast convoys and continued air assaults on the Italian supply lines to Rommel. Last, offshore barges loaded with flares, smoke pots, burning drums of diesel fuel, and amplified recordings of gunfire and explosions were employed as a tactical ruse suggesting an impending amphibious assault near Marsa Matruh; supported by planted British media stories, this evidence of a nonexistent assault temporarily distracted Kesselring’s staff, as illustrated in a 25 October decrypt.<sup>70</sup> Thus, a collective of exaggerated and false activity reports in the eastern Mediterranean contributed to the Axis intelligence quandary surrounding TORCH.

The final phase of the LCS deception plan, called SOLO II, reinforced German misperceptions on the purpose of the massed Allied forces. First, it called for the misinformation of British personnel that their ultimate destination was Malta, by way of the Cape of Good Hope. Second, agents disseminated false reports that the Gibraltar fleet buildup was associated with a massive Malta resupply effort from the east, to be made after the Cape expedition made its way northward through the Suez Canal.<sup>71</sup> This attempted to capitalize on German impressions that Malta was in a desperate plight about food, fuel, and ammunition—a situation that had in fact existed but was reversed just before the invasion by tactical deception operations and dogged Royal Navy resupply from Egypt. SOLO II appears, based on German high command presuppositions revealed by consistent signals intelligence, to have enjoyed the success of other such deception efforts. Decrypts as late as 6 November revealed German ignorance as to the objective of the convoys entering the Mediterranean, relating that the “strength and composition of British forces were such that, apart from supplying Malta, [the] possibility of landing in Tripoli–Benghazi area or in Sardinia or Sicily had to be taken into account.”<sup>72</sup> Last, Mediterranean TORCH shipping strictly adhered to AFHQ-ordered measures such as deceptive courses meant to dupe Axis air reconnaissance and false wireless transmissions that Kesselring’s staff associated with Malta convoys.

As elements of the Allied armada slipped quietly into the Mediterranean, German reactions, revealed through signals intelligence, allowed for an

extension of the deception plans beyond those earlier planned. For instance, Dennis Wheatley, an LCS operative, later recalled,

When the expedition entered the Strait of Gibraltar we informed the enemy that its objective was the east of Sicily. Kesselring gave orders that no aircraft should go up on Saturday, 7 November, but every plane available should take to the air on Sunday to blow the convoys to hell as they passed through the Straits of Bon. At midnight our ships turned back and the following morning landed at Algiers without opposition.<sup>73</sup>

In late October, Luftwaffe ENIGMA decrypts also had revealed that Rome reported “very heavy W/T [wireless telegraphy] communication of an operational nature between Malta, Gibraltar, and the Admiralty,” which convinced Kesselring that a Gibraltar–Malta convoy was possible.<sup>74</sup> Further, LCS engineered a late development on 6 November, convincing Armed Forces Headquarters to send a bogus unencrypted SOS from the destroyer HMS *Janine* reporting that it was sinking after a bombing attack at coordinates far to the east of TORCH convoys—an attempt to corroborate the German estimate of an eastern Mediterranean destination.<sup>75</sup> Finally, November PORPOISE ciphers began to disclose Kesselring’s concern over British activity in the eastern Mediterranean and his personal conclusion that the convoys were linked with the British offensive under way against Rommel.<sup>76</sup> It is likely this change in focus toward the eastern Mediterranean alerted LCS to increase Allied deceptive activity there to support Kesselring’s conclusions and divert attention and forces from the western Mediterranean. Indeed, after the war Kesselring admitted that on the eve of the assault he had felt that the invasion convoys were “strategically coordinated with the movements of the British Eighth Army in North Africa [and that] therefore a landing on the African west coast was unlikely.”<sup>77</sup> In effect, the sum of intelligence the enemy received gave cause only to reinforce the aircraft in Sardinia and Sicily in preparation to assault the shipping when it passed through “Bomb Alley,” just east of the Sicilian straits.

Analysis of German decrypts during TORCH sailings and landings underscores the effectiveness of Allied deception. Oblique references to actual operations in the eastern Mediterranean designed to divert Axis attention and forces are on record. For example, the final deception and cover plan, dated 20 August, stated, “Further genuine or deception operations with the object of containing Axis Naval and Air Forces in the eastern Mediterranean are under consideration.”<sup>78</sup> Additionally, TORCH naval operational orders of 3 October stipulated that “Mediterranean Fleet (Eastern Mediterranean) will operate as requisite to cause diversion in the Eastern Mediterranean, possibly based on Malta.”<sup>79</sup> Whether or not all this was part of a coordinated Allied deception program remains to be seen, but collectively it drew Axis attention to the eastern

Mediterranean, diverting precious resources (e.g., the U-boats previously stationed in the western Mediterranean) and contributing to the TORCH armada's safe passage. It is intriguing that aside from the British land advance in Egypt, this eastern Mediterranean activity is mentioned only briefly in one secondary historical source.<sup>80</sup> None of the many works on TORCH and deception in World War II mention it.

The evidence, therefore, that Allied forces operated purposefully to draw German attention eastward and away from the invasion lies largely in an amalgam of ENIGMA decrypts viewed collectively. Certain other instances of special intelligence also lend credence to this idea. For example, an Italian admiralty appreciation in a 5 November Luftwaffe report that, along with the flow of Allied shipping through the Strait of Gibraltar, "numerous [Allied] submarines" were on patrol in the central Mediterranean, and that "cruisers and destroyers had been active in eastern Mediterranean during [the] previous night" demonstrates a degree of concern for events there.<sup>81</sup> Hinsley's reference to events in the eastern Mediterranean cites a 6 November PORPOISE decrypt implying that Allied forces in Palestine, Syria, and Cyprus supported operations associated with the Egypt offensive.<sup>82</sup> In another decrypt Rome warned all eastern Mediterranean Italian commands to expect "acts of sabotage, air attacks, and parachutist-landings against naval bases" in view of "present enemy operations."<sup>83</sup> Moreover, a 7 November Luftwaffe ENIGMA decrypt has Kesselring ordering the same day his air force "to give photo recce of Cyprus and Suez precedence over other recce tasks in the eastern Mediterranean," implying Allied activity in the region.<sup>84</sup> An undated decrypt (with a sequence number placing it in the first few days of November) details the refusal of a request to move the Italian destroyer *Hermes* from the Aegean because of "the enemy situation in the eastern Mediterranean."<sup>85</sup> Last, by October, SIGINT revealed that the Afrika Korps faced an extreme predicament regarding fuel and ammunition, largely due to Allied air attacks from Malta, forcing Kesselring to dedicate assets to the protection of Italian resupply shipping.

The most valuable aspect of special intelligence to LCS deception managers, however, was the ability it gave them to measure success by the absence of references to certain TORCH features. It helped confirm that their goals and plans were secure—the lack of references to friendly objectives was useful "negative intelligence." The goal of deception is to divert attention away from friendly objectives, and signals intelligence allowed the Allies to "check and recheck the degree of success of their deception plans and then to modify them accordingly in order to render them even more effective."<sup>86</sup> Abwehr ciphers demonstrated both the progressive dislocation of German intelligence from TORCH's true objective and the failure of cryptanalysis in Berlin to discern the operation's secrets.<sup>87</sup> One

Abwehr decrypt provided compelling assurance of operational security when it reported a failed German attempt to exploit documents retrieved from a crashed Allied aircraft.<sup>88</sup> Special intelligence from ULTRA produced such negative intelligence of the highest value.<sup>89</sup> Doenitz pointed to the deception's effectiveness in his memoirs, where he admitted that German high command knew nothing of TORCH objectives, and "thanks to the conflicting reports deliberately put out by the enemy," precautionary concentration of U-boats had been made effectively impossible.<sup>90</sup>

### SUN TZU WOULD BE PROUD

TORCH planners' and operational commanders' use of signals intelligence served as a model for future Allied operations. Signals intelligence provided insight into the highest levels of Axis leadership decision making and guided Anglo-American military operational decisions in the first successful marriage of combined operations with theater operational deception. The TORCH example shows that an intimate intelligence/operations relationship can be a key to operational success. The Allies repeated this success in later operations, reducing loss of life and shortening the war. The eventual Allied thrust into Sicily during Operation HUSKY proved again that special intelligence could be successfully wedded to operational planning and execution, and in it deception measures again achieved surprise. Indeed, as one historian asserted, Allied employment of signals intelligence in World War II "rendered invalid the theory that intelligence is less necessary to the offence than to the defense."<sup>91</sup>

In the final assessment, a combination of detailed planning, aggressive signals intelligence efforts, a viable deception scheme, a high degree of operational security, and fortuitous events produced operational surprise that in turn facilitated an Allied bridgehead into northwest Africa. This combination not only demonstrated the resolve of the Allies to fight to the finish but hoodwinked the previously undefeated military machine of Hitler's Third Reich. After the landings, intelligence and operational failures reminded the Allies that it was an error to become too comfortable, that Hitler's war machine remained potent and resolute, and that the road to Berlin would be long and tortuous.

Operation TORCH provides relevant contemporary lessons in how effective "intelligence preparation of the environment" provides specific insights into not just enemy order of battle but exploitable adversary perceptions. These are worth briefly listing:

- The art and science of traffic and nodal analysis of adversary information/intelligence networks is as critical as the decrypts themselves.

- Understanding adversary civil-maritime and merchant marine shipping is sometimes as critical as warship order of battle.
- Collaborative allied intelligence is a force multiplier; Washington would never have penetrated the adversary so thoroughly without the masterful intelligence tradecraft and deep European cultural insights of the British.
- Leaders must strategically manage and deeply integrate deception operations with intelligence efforts.
- Grooming the deception stratagem over time requires expert all-source intelligence fusion.
- Operations and deception driven by credible intelligence will fail absent strict operational security.
- Solid intelligence preparation of the environment yields well-sourced local intelligence, providing rapid feedback during tactical operations that support strategic decision making.
- To be effective, deception efforts must target both adversary and friendly forces.
- The value of continuity and consistency that can be expected from a long-service cadre of intelligence, planning, and operations staff cannot be overstated.

Indeed, the TORCH experience reflects most of the tenets of operational deception found in current joint doctrine. The six principles of military deception outlined in U.S. doctrinal publication *Military Deception* are focus, objective, centralized control, security, timeliness, and integration.<sup>92</sup> All of these fundamentals can be found in TORCH planning and execution.

On balance, Sun Tzu would be proud. The invasion's accomplishment of initial objectives without significant loss was an achievement not often repeated. Sadly, there seem to be few post-World War II instances of similar success, based on smoothly integrated intelligence, operations, and deception. Milan Vego, historian and scholar of operational art, argues that deception as an element of the art of war has gone out of fashion in recent decades, that despite its proven historical value, it generates little enthusiasm in the U.S. military today.<sup>93</sup> One must hope that Sun Tzu's countrymen and successors are not the only generals and admirals studying the historical efficacy of artful deception stratagems.

## NOTES

1. F. H. Hinsley et al., *British Intelligence in the Second World War: Its Influence on Strategy and Operations* (New York: Cambridge Univ. Press, 1981), vol. 2, p. 463.
2. *Ibid.*, p. 468. British planners viewed the American perception of the European and Mediterranean theater as one that “paid little regard to intelligence assessments.”
3. *Ibid.*, p. 463.
4. George F. Howe, “American Signal Intelligence in Northwest Africa and Western Europe,” SRH-391, in *Top Secret Studies of U.S. Communications Intelligence during World War II*, part 2, *The European Theater* (Bethesda, Md.: University Publications of America for the Old Dominion University Library, 1989), declassified microfilm, p. 17, reel 5, frame 0839 [hereafter SRH-391, with filing designations in this three-part microfilm series].
5. Hinsley et al., *British Intelligence in the Second World War*, p. 665.
6. J. P. Hobbs, *Dear General: Eisenhower’s War-time Letters to Marshall* (Baltimore: Johns Hopkins Univ. Press, 1971), p. 55.
7. SRH-391, p. 17, reel 5, frame 0839.
8. John Winton, *Ultra at Sea: How Breaking the Nazi Code Affected Allied Naval Strategy during World War II* (New York: William Morrow, 1988), p. 166.
9. Hinsley et al., *British Intelligence in the Second World War*, p. 490. In a book cipher, messages are transmitted as row-and-column references to letter or word tables in identical books held by the sender and addressee.
10. *Ibid.*, p. 668.
11. Peter Calvocoressi, *Top Secret Ultra* (New York: Pantheon, 1980), p. 45.
12. “Reports Received by U.S. War Department on Use of Ultra in the European Theater, World War II,” SRH-037, p. 16, reel 2, frame 0897.
13. Hinsley et al., *British Intelligence in the Second World War*, p. 423.
14. *Ibid.*, p. 667.
15. *Ibid.*, p. 663.
16. *Ibid.*, p. 661.
17. R. H. Humphreys, “The Use of ‘U’ in the Mediterranean and Northwest African Theaters of War,” SRH-037, p. 16, reel 2, frame 0897.
18. *Ibid.*, p. 24, frame 0904.
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20. See Carl Boyd, *Hitler’s Japanese Confidant: General Oshima Hiroshi and Magic Intelligence, 1941–1945* (Lawrence: Univ. Press of Kansas, 1993).
21. Hinsley et al., *British Intelligence in the Second World War*, p. 479.
22. Denis Smyth, “Screening ‘Torch’: Allied Counter-intelligence and the Spanish Threat to the Secrecy of the Allied Invasion of French North Africa in November, 1942,” *Intelligence and National Security* 4, no. 2 (April 1989), p. 352.
23. Hinsley et al., *British Intelligence in the Second World War*, p. 474.
24. Norman Gelb, *Desperate Venture: The Story of Operation Torch, the Allied Invasion of North Africa* (New York: William Morrow, 1992), p. 170.
25. Ronald Lewin, *Ultra Goes to War: The First Account of World War II’s Greatest Secret Based on Official Documents* (New York: McGraw-Hill, 1978), p. 238.
26. Hinsley et al., *British Intelligence in the Second World War*, p. 58.
27. *Ibid.*, p. 464.
28. *Ibid.*, p. 466.
29. Ralph Bennett, *Ultra and the Mediterranean Strategy* (New York: William Morrow, 1989), p. 185.
30. Calvocoressi, *Top Secret Ultra*, p. 109.
31. Hinsley et al., *British Intelligence in the Second World War*, p. 423.
32. *Ibid.*, p. 636.
33. William B. Breuer, *Operation Torch: The Allied Gamble to Invade North Africa* (New York: St. Martin’s, 1985), p. 82.

34. Lewin, *Ultra Goes to War*, p. 210.
35. SRH-391, p. 25, frame 0847.
36. Hinsley et al., *British Intelligence in the Second World War*, p. 476.
37. Great Britain, Ministry of Defense, *German Naval History: The U-boat War in the Atlantic*, vol. 2, *January 1942–May 1943* (London: H.M. Stationery Off., 1989), p. 62.
38. Hinsley et al., *British Intelligence in the Second World War*, p. 481.
39. Hobbs, *Dear General*, p. 54.
40. ZTPGM/2863, 2864, in *ULTRA: Secret German Messages from World War II—Military and Naval Signals* (Bethesda, Md.: University Publications of America for the Old Dominion University Library, 1989), declassified microfilm, pp. 1025–26, reel 156 [hereafter ZTPGM, with filing designations in this one-part microfilm series].
41. CX/MSS/1635/T18, in *ULTRA*, reel 99 [hereafter CX/MSS, with filing designations in this one-part microfilm series; no page numbers on reel 99].
42. CX/MSS/ZTPI/20685 (1639/2), reel 99.
43. ZTPGM/3396, p. 449, reel 156.
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45. Hinsley et al., *British Intelligence in the Second World War*, p. 486.
46. SRH-391, p. 21, frame 0843.
47. David Hunt, *A Don at War* (London: Frank Cass, 1990), p. 144.
48. William Casey, *The Secret War against Hitler* (Washington, D.C.: Regnery Gateway, 1988), p. 17.
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52. *Ibid.*, p. 486.
53. Hunt, *A Don at War*, p. 144.
54. Smyth, “Screening ‘Torch,’” p. 339.
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64. Hinsley et al., *British Intelligence in the Second World War*, p. 478.
65. War Cabinet, “Operation ‘Torch,’” p. 3.
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