THE INFLUENCE OF ULTRA ON WORLD WAR II

by

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In the last half decade, intelligence, once a stepchild in World War II history, has assured itself a place among more fully covered aspects of the conflict. A flood of new information and insights was set off by revelations on the ULTRA secret initiated by Gustave Bertrand and F. W. Winterbotham.[1] The cloud of mystery once dispelled, the door was open to further disclosures on ULTRA itself and the unique role claimed for it in influencing the course of the war and, conceivably, its final outcome. With so much brought to the light of day, the remaining aspects of the clandestine sides of the conflict scarcely seemed worth the trouble of keeping them in obscurity. British Secret Service files, which remained closed in the late 60's when the reduction of the traditional waiting period on the release of public records to 30 years offered so many windfalls to World War II scholars, have become increasingly accessible.[2]

This essay will assume a broad familiarity with the epic tale of how Polish, French, and British scientists and cryptologists unraveled the mysteries of the German Enigma machine and, eventually, of most of the codes in which its messages were transmitted. A similar acquaintance is assumed for how ULTRA came to be the central element in first British and then Anglo-American intelligence gathering and appraisal and for innumerable operational decisions. What will be attempted here is a rather far-reaching and risk-taking assessment of the part ULTRA played in the war's Western theaters. Factors which underlined or detracted from its impact on events, estimates of its influence on strategy, and evaluation of its contribution to the outcome of the war will be reviewed.

Aside from blanket claims which usually had little dialectical or evidential underpinning, this goes somewhat beyond what has been essayed in previous studies and may appear to some, at this stage of investigation and analysis, as a daring undertaking. Justification for such a course lies in the plea that debate on this complex of problems will be advanced constructively by sharpening the focus on fundamental and longer-range issues as well as offering targets for critical discussion.

The more attention is demanded by problems derived from disclosures about ULTRA, the greater must be awareness of their complexity, especially in any effort to reach clear-cut answers. Having to start somewhere, the tendency has been to simplify by concentrating on ULTRA's place in well-defined phases or during closely associated operations in order to stake out the part it may be presumed to have played.[3]

A degree of this tendency toward compartmentalization is reflected also in the masterly *Ultra Goes to War* of Ronald Lewin, a pioneering tracing of ULTRA's role in the war from start to finish. Outstanding chapters on the various battle areas follow one another without extensive analysis of interrelations or summarizing estimate of ULTRA's influence on the total war picture.[4]

Reversing the order in which aspects of the

ULTRA story are usually presented, stress will here be laid initially on a complex of not easily definable factors which day-by-day and month-after-month gave the Western sectors of the Grand Alliance an edge in all areas of military confrontation. At critical junctures this edge may have proved either decisive or the single most significant factor in determining victory.

ULTRA AS MOTHER OF DECEPTIONS

If one were forced to select a single form of activity in which ULTRA was unceasingly and completely essential, it would have to be that of deception. There is reason for the generalization that, after the move into Norway and the triumph in the West, the Germans, with two or three exceptions, consistently failed to achieve either tactical or strategic surprise. This picture is in marked contrast to the experience of World War I. The writer recalls a boast made to him in 1938 by the famed chief of German intelligence, Colonel Walter Nicolai. Until July 1918, he said, the Germans had never failed to score some measure of surprise in their offensive moves, as well as, of course, in their brilliant defensive maneuver of the retreat to the Hindenburg Line. They themselves, he claimed, had discerned the more essential features of every Allied stroke before it was launched.[5]

However one may be inclined to discount Nicolai's assertion, the World War II scene is assuredly a profoundly different one. Only in the case of some of Rommel's offensives in Africa and in the Battle of the Bulge did the Allies suffer unexpected attacks. But it was not ULTRA which fooled the British in Libya. It was the action of an unpredictable general who did not always obey orders that were dutifully recorded by ULTRA and who sometimes went back on his own official statement of intentions when an improvisation suggested itself to him. The Ardennes offensive tumbled back the self-deluded Allies when Hitler unwittingly had cancelled out ULTRA by a radio ban, a silence of the medium which ought in itself to have been ample warning that something unusual was afoot.

The principal and often fantastically successful deceptions perpetrated by the Allies have been reviewed by Lewin and others and need not again be paraded here. They reached into every facet of land, sea, and air warfare, and they spawned a long string of triumphs in the secret war. Far ahead in high drama and consequence, as well as a leading candidate for a special niche in history, is the befuddlement of the German leadership on Overlord and all that followed it through the breakout in Normandy. Strategy and other implications will be dealt with elsewhere. Deception has never more fully steered a sequence of events nor done more to determine the issue of a tremendous enterprise.

Among the more conspicuous challenges to historians in tracing the footprints of ULTRA, once all relevant documents are in our hands, must be counted establishing more exactly the interworking between it and the Double Cross system—the takeover and manipulation of the entire German espionage network in Britain. What Sir John Masterman published in 1972 was but the report he had composed immediately after the war.[6] At that time, the role of ULTRA could not be alluded to even in classified documents available to intelligence personnel, many of whom were not initiated into its mysteries.

Enough has now come to light to authenticate an intimate relationship between ULTRA and both the inception and course of this remarkable operation, which thoroughly hamstrung German intelligence within Britain and at various points on the Continent. ULTRA was linked with or actually inspired what year after year misled the enemy. It not only deceived him on situations behind Allied lines but it also reassured him on the effectiveness and trustworthiness of his agents, so that there was no motive for overhauling his operation. The chapter and verse on this, and a more exact estimate of ULTRA's total contribution

here, demand investigation which awaits only release of the pertinent documents. However, even with our current knowledge, it appears legitimate to conclude that in its broadest compass Double Cross would have been inconceivable but for the ability to lean on ULTRA; indeed, without ULTRA it might have broken down at one or another critical point.[7]

Inspirations derived from ULTRA for the construction, maintenance, and functioning of the Double Cross system also meshed well with other instrumentalities engaged in deception. Doctored transmissions in codes suspected or known to have been broken by the Axis, misleading data planted by Allied agents or resistance elements, stories fed German diplomatic or consular representatives, and rumors spread in neutral countries are but a few of the devices employed for deception. The Germans naturally had their own bag of tricks, and intercepts often served to aid in their employment. But they could never count on an unfailing source of inspiration, checking, and guidance remotely comparable with the treasury their opponents could draw upon in ULTRA.

In fact, not least among the gifts that poured in an inexhaustible stream from ULTRA's cornucopia was the crippling of most German measures for deception. Insofar as these programs were directed against the Western Allies, the record after June 1940 is a dismal one and cannot count a single major triumph in the secret war generally. For this ULTRA deserves most of the credit. As usual when measuring its tracks, the lighter footprints of other intelligence media also appear and occasionally may even obscure ULTRA's central role. But ULTRA alone could be counted upon unfailingly. It was the sole intelligence medium where, despite occasional doubts and qualms, there was never serious reason to fear its becoming a German tool of deception. Usually the qualms themselves arose because it all seemed too good to be true. Most remarkable, perhaps, was that at times its silence could be as eloquent as when it sputtered detailed information. It testified that all was proceeding well with Allied deceptive moves. More often, its utterances enabled one to monitor constantly the effect of such moves. On the few occasions when German suspicions were indicated, they could be dispelled in ways tailored to their doubts.

ORDER OF BATTLE

Far more difficult to measure with accuracy than the easily identifiable results of deception is the cumulative advantage gained from daily accounts of the state and fluctuations of the German order of battle. In general, when ULTRA was fully operative (an uncertain state at which we must look again in due course) the Western Allies knew much and frequently about all there was to know about the state and distribution of Hitler's forces. At times they must have enjoyed a more thorough oversight of these situations than did the dictator himself. All

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too often for his own clear thinking, he found facts distasteful and would, especially in the final months of the conflict, have pins moved on his war maps representing divisions that had all but ceased to exist.

ULTRA delivered similar awareness of Axis situations with respect to logistics. Weekly charts graphically displayed their status at Bletchley. By comparing them for successive weeks it was possible to spot trends and anticipate dips or lifts of the curve. Similar logs displayed what the Germans knew or thought they knew about the Allied order of battle. These were particularly useful to the air forces and were invaluable to counterintelligence, which could plug leaks or eliminate incompetent or suspected agents. Unfortunately for the historians, these and other logs alluded to here were periodically destroyed. Vital material for detailed study has thus been lost.

The air forces had their task lightened by the insight ULTRA gained from the garrulous habits of *Luftwaffe* communications. Familiarity with the order of battle of the German air defense system—the location, strength, and plans for nightfighters and deployment of the radar system—was a lifesaver for the Royal Air Force. ULTRA similarly gave information vital for the American dayfighters; both air forces drew dividends for target selection and damage assessment. Perhaps the most substantial contribution of ULTRA to air warfare occurred during and after the invasion, when the principal targets were German airfields. Attacks against them could be directed on the basis of what was reported on plane strengths and air defense. After an attack, ULTRA would spew out information on destruction of planes, runways and installations damaged, the rate and state of repair, and the bringing in of replacements. Then, once more, at the psychological moment—Allied lightning struck again!

While looking at air warfare, we can now see how a related element tied in and afforded similar advantages to the Allies in the war on land and at sea. Who, again, would venture to estimate in any concrete fashion the contribution to the total war picture of the benefits from ULTRA as an inside track on weather information? German vessels monitoring weather trends in far northern seas were located and captured, and a Greenland weather station was eliminated. As long as these were in operation, the British could share in their reports. Especially valuable was the ability to listen in on German reports concerning weather systems moving from the east. An incidental bonus ULTRA drew from German weather reporting was that their routine formulation gave clues for the breaking of additional codes.

ULTRA AND "HIGHER" EDUCATION

Intercepting and decoding Enigma-borne messages, the most extraordinary feats in the ULTRA chain, were but the first links in an intricate process of orientation and decisionmaking that eventuated in action at higher levels of government and military command. The steps in between could be taken in a variety of ways, but everything was built up on these two.

Despite the amazing performance in these first stages, it was here that breaks in the chain largely occurred. Signals, especially those originating within and addressed to other points of Germany, might be too weak or garbled for clear reception. Many times before the summer of 1943, Enigma settings were solved too late for timely reaction. Blackouts in one line of communication might prevail for months when codes were altered.

For long periods, ULTRA could only operate on a hit-or-miss basis, a fact which will ever confront the historian with pitfalls. One line of German war activity might become obscured at the very moment that another was coming into sharper focus. The sloppiness of *Luftwaffe* communications might give insights into land operations on which the Army itself was circumspect or used less easily breakable codes. Therefore, the role of ULTRA in any given situation must initially be considered by itself, a main reason for the frequent episodal treatment

mentioned earlier. Within such limits, it is already difficult to reach a sum total of ULTRA's influence; precise estimates are even more ruled out when the course of events constitutes a principal phase of the war.

So much has already been written about the centrality of the time factor that the basic features of that element need not again be delineated here. It is obvious that reception, decoding, translation, interpretation, and transmission to users had to be accomplished within a certain time frame if commanders were to be alerted while there was still time to react effectively. The dramatic and fateful examples advanced by other writers of how delays or information coming in "just under the wire" affected events also do not require reiteration. Against this, very little stress has thus far been given to the residual value of information processed too late to bear directly on events. The point is perhaps best illustrated by the hypothetical case of an Allied commander condemned always to receive his ULTRA data several months late. Should one conclude from this that, for all it mattered to him, Bletchley Park might as well have been dismantled?

To reply in the affirmative would imply that ULTRA's "educational" value was virtually negligible. It would argue that commanders who knew as much as or more than we do now about wartime situations on the other side of the hill down to a few months earlier derived little benefit from this for their conduct of the war. Instead, the drift of the argument here is that ULTRA's product, completely aside from the guidance it could give in hours of pressing decision, gradually and unfailingly deepened the understanding and widened the horizons of Allied military leaders. Their sophistication must have grown apace with respect to everything that went on behind enemy lines. The same formative process may be assumed for the initiated members of their staffs, the men of the liaison units who did the final processing and briefing, and all those at Bletchley who were charged with interpretation and evaluation. Much of this, without information as to source, must have rubbed off even upon the uninitiated with whom such men were in close contact. For all who were reached in some fashion, this was a continuing learning experience that gave insights that could not have been acquired to this degree in *any* other way. Among those "immeasurable" factors thus far reviewed in attempting to assess ULTRA's contributions, this one certainly merits a prominent, and conceivably the first, place.

ULTRA, it has been noted, never failed to mirror precisely what the Germans were saying officially among themselves. Experience, however, as in the case of Rommel's disobedience of Enigma-carried orders, taught the error of habitually mistaking word for deed. With the passage of time, it became easier to judge when deciphered signals could be taken at face value. To determine the full validity of the contents of a message, it was always useful and sometimes imperative to know as much as could be learned about persons and situations in any way associated with its origination. Thus, one could be equally sure that Hermann Goering would never understate the capabilities of his *Luftwaffe* and that Erwin Rommel would never exaggerate the extent of his resources.

Aside from uncertainties inherent in the human equation on the German side, many other uncertainties regarding links in the ULTRA chain will bedevil historians. They can never assume that what was read at any particular time could count absolutely on the enlightened consideration of those to whom, in retrospect, it so clearly was of value. This is not to say that at some future date history is likely to place ULTRA among the great might-have-beens of World War II. Despite slips, from time to time, between the cup and the lip, such occasions seem to have been too rare and too trivial to prolong the war to any extent. Broadly speaking, the historical verdict appears likely to be that the actual contributions of ULTRA toward the outcome of the war corresponded very closely to its capabilities.

CHURCHILL AS FATHER AND CLIENT IN CHIEF

Such a verdict would scarcely be conceivable had it not been for the supportive interventions of Winston Churchill. Future estimates of ULTRA's contributions seem sure to be reflected in corresponding allotments of credit to him. Without his sustained resolve, the scale on which interception, decoding, and processing of Enigma messages was organized could never have reached even remotely the elaboration it actually achieved. The 10,000-person establishment at Bletchley and the extension of its ubiquitous tentacles into military and government quarters would otherwise have been unthinkable.

Hardly less great was the weight of the Prime Minister's authority in quashing the distaste of some soldiers for the products of cryptanalysis or, for that matter, for intelligence generally. One is reminded of the mule who had to be cracked over the head with a two-by-four if one were to gain its attention. Not many commanders or staff figures entertained a phobia so ferocious as that of the Royal Navy's Director of Operations in World War I, Rear Admiral Sir Thomas Jackson, who greeted a blackout on decoded messages with a gleeful: "Thank heavens, I shan't have any more of that damned stuff." But enough of such a pose, if pose it was, carried over in some quarters to make something compelling out of the realization that one's professional life depended on falling into step. The prod was ever there: All those on the ULTRA list knew that the Prime Minister routinely received whatever came to them and was eternally on the alert to what they did by way of follow-up.

For a man of Churchill's imagination and romantic temperament, something so glamorous as ULTRA exercised irresistible fascination. Aside from appreciating its inherent values, he enjoyed leaning on it for the higher conduct of the war. No doubt he was also aware that his dominance over the military professionals was enhanced by his knowing as much as they did from their most reliable intelligence source. To top this, he had, as most of them did not, an overall access to ULTRA data on the broader war picture. To commanders and staff figures it was a warning against adopting that air of superiority which professionals sometimes tend to assume toward those they regard as amateurs.

Admittedly, there was also a negative side to this. It encouraged that excessive meddling in military matters to which Churchill was addicted. In his boyish enthusiasm for ULTRA, he also was led at times to consider its products too much by themselves. Notably in distant Africa, where he could not adequately oversee all aspects of the situation, he too often bullied his generals to expedite operations for which, with some justice, they did not as yet feel adequately prepared. Reading Rommel's loud laments on shortfalls in supplies and manpower and knowing from other intercepts, such as on the shipping situation, that there was scant prospect of improvement for the Axis, he found the hesitations of his commanders incomprehensible. He did not sufficiently realize Rommel's ability to accomplish wonders with slender means, and he lost confidence successively in Wavell and Auchinleck for not dealing with Rommel more aggressively.

Another side of Churchill's absorption with ULTRA is the boost it gave him in striving to maintain some sort of equilibrium in relations with Roosevelt and Stalin. Roosevelt, though far from uninterested, never attempted to match Churchill's close daily contact; Stalin, of course, had no access at all. This firmer mastery over the broad war picture insofar as Europe was concerned gave his word somewhat greater weight in the councils of the Grand Alliance.

PROCESSORS AND CLIENTS

If it is correct to assume that ULTRA had just about that influence on the course and outcome of the war that it was capable of exercising, credit must be assigned all along the chain to those who processed messages once they had been intercepted, decoded, and

translated. Such data, of course, would have been worthless if those at the far end of the chain had not given the deserved attention. The teams that manned the 24-hour watches in Bletchley's Hut 3, ably seconded by the developers and custodians of vast reference files, appear to have performed their analytical functions brilliantly. Perhaps even greater, because they relied on individual rather than collective insights, were the challenges to British and American briefing officers at army and army group headquarters. It was they to whom were entrusted the final tasks of interpretation and of counselling their superiors. What ULTRA supplied had to be correlated with what was derived from other intelligence and the relevance to situations on the particular front sector established. Last, but by no means least, there was the highly delicate duty of advising commanders on how operational use could be made of this information without endangering the source.

Rarely has a group of captains and majors been entrusted with so critical a range of responsibilities. The young, sharp, imaginative officers handpicked for these assignments seem to have performed them with a patience, tact, and skill which deserves more recognition than they appear to have received.

Among the complex tasks faced by historians in tracing how ULTRA affected strategy and operations is determining what occurred at the end of the chain—the process of decisionmaking within the forward staff. Looking back with the wisdom of hindsight, the conclusions that should have been drawn from what ULTRA provided often appear absurdly simple and should have required no agonizing appraisals. This frequently was far from the case. Thus, the logic on which decisions had to rest had to be based not only on what was known about enemy intentions and capabilities but also on the state of one's own resources.

It need not be reiterated how worthless the most accurate intelligence about the opponent can be when there simply is not the wherewithal to exploit such insights.[8] Of course, between such frustrating helplessness and the ability to react promptly and forcefully there often was a wide range of more balanced situations. Where the pros and cons seemed fairly evenly drawn, most British and American commanders tended to opt for the less venturesome courses and were not perpetually on the *qui vive* for sudden opportunities for improvised strokes. On the British side, bitter memories of World War I holocausts plus a built-in preference, notably on the side of Montgomery, for the "set battle" did not make for dynamic day-to-day reactions. Americans were believed more temperamentally attuned to risk-taking and were far more enamored with concepts of offensive strategy. Yet, to the amazement of their German opponents—who had expected them to be, if anything, overly daring—they usually favored the less hazardous approach.[9] Though few might have admitted it, even to and among themselves, they may have been somewhat awed by opponents who had far greater experience in war, fully blooded troops, and a prestigious tradition.

Given this disposition to play it safe, there may have been, at least on occasion, a tendency to give the benefit to countervailing arguments against the most vigorous possible exploitation of opportunities offered by ULTRA. With this may have gone a disposition to allow oneself to be more easily distracted by "noise" such as, in this case, ingrained inhibitions and preconceptions that furthered doubts and clouded judgment, or the inability to hear clearly a message demanding action from which one perhaps instinctively shrank.[10] More visible, though probably actually less intrusive than such imponderables, were competing considerations of both personal and substantive types, side events, or other contemporary distractions which presented their own claims for attention. Tangibles and intangibles together, however, in this case have about them a flavor of rationalization and, especially when advanced in retrospect, of alibi.

At least in relation to one major operation, the concept of alibi may be argued to extend to appeals to ULTRA's own authority. This refers to the failure, as

many then and since have conceived it, to extend vigorously the beachhead at Anzio before any German counteraction could take hold. That and neglect in closing the Falaise pocket rank most prominently among the hotly disputed Allied might-have-beens of World War II. In extenuation of his own disinclination to push General Lucas to thrust vigorously inland as projected and to threaten the rear of the Gustav Line by seizure of the Alban Hills, Mark Clark bases his case on ULTRA. It was these intercepts, he claims, which persuaded him to back Lucas. They revealed, he alleges, no doubt correctly, that Hitler was moving in divisions from Northern Italy, Southern France, the Balkans, and Germany itself: all with the purpose of sealing off the beachhead and throwing the invaders into the sea. This information is taken to vindicate the decision not to go beyond digging in and consolidating the beachhead.

The issue has been much debated in military and scholarly quarters and is likely always to maintain a controversial character.[11] Comment here will be restricted to a few central points. If there is anything at this stage of the war about which ULTRA was thoroughly orienting the Allies it was the German order of battle. It is, in fact, known that General Airey and his intelligence staff at Caserta had foretold precisely the extent of the German buildup from forces already in Italy, and there was assuredly no mystery about what could be drawn upon for reinforcement from the outside territories mentioned. All this was accounted for in the calculations which entered into drawing up the plans for the operation. Indeed, if one had not expected to deal with something like the eventual German response, what would have been the sense of putting ashore the 100,000 men assembled for the enterprise? No new or really surprising factors could have been revealed by the ULTRA intercepts cited by Clark. How little immediate the threat actually was and how much time was available to develop the beachhead may be deduced by the fact that the German troops from outside Italy *began* detraining at the level of Florence-Pisa close to a full week after the landing had commenced. It was the first 48 hours, before the "local" forces (Gustav Line defenders and other nearby troops) could get into the act, which are claimed by Clark's critics to have been crucial. The order to Lucas to dig in came *eight days later*.

The ultimate verdict may well be that the ULTRA information reaching Clark and cited defensively by him, by stressing the need for hurry in exploiting the respite the surprise effect of the landing had gained, detracts from rather than underpins Clark's argument.[12] It will be interesting how, in other instances, ULTRA can provide cover for controversial decisions of Allied leadership.

How does the drift of the discussion here (that Allied leaders were, most of them, rather too careful in extracting maximum benefits from ULTRA) jibe with earlier stated opinions that it probably did as much to win the war as it was capable of doing? The best answer may be that if they were somewhat laggard in making fullest use of ULTRA for risky offensive operations and thus sold victory short on certain occasions, it can also be plausibly asserted that, in sum total, their caution paid dividends. For both British and Americans, the restraining motives had something to say for them. One Patton was a valuable leavening influence; a half dozen, especially in days of feeling one's way with unblooded troops, might quickly have run the Allied war machines into the ground.

INFLUENCES ON OPERATIONS AND STRATEGY

There is small need to dwell on the value of ULTRA as tactical or, more broadly defined, operational intelligence. Day-to-day aspects and interventions in steering the course of larger military affairs have each received intensive treatment in publications of the last half decade. Specific examples should multiply endlessly as additional files of documents are released and available, in duplicate form, for deposit in strategically located archives or institutes.[13]

ULTRA's relation to strategic calculations is quite another matter. So much remains obscure in critical instances where it could have played a decisive role that some have wondered whether such a role existed. The fact that the nature and limitations of strategy itself have never been capsulated into universally accepted definitions makes more comprehensible the complexities confronting us in determining ULTRA's influence. In the view of the writer, much of the prevailing confusion on the issue must be ascribed to the search for specific items of information furnished by ULTRA that can be linked to strategic decisions. Actually, there is something absurd about a notion that strategic resolves could be determined in this fashion. Their very nature forbids their being the fruit of snap judgments based on a newly discovered angle of a situation. The broad and wide-ranging implications of strategy prohibit such decisions being dictated by anything other than the totality of the prevailing scene. The significance of ULTRA insofar as strategy is concerned thus rarely if ever lay in providing a single, all-important item of information, but in painstakingly producing the essential pieces of a composite picture.

To say ULTRA did not greatly influence strategy, at times decisively, would be to advance the ultimate absurdity that enemy order of battle, exact capabilities, known intentions, and anticipations—items of information in which ULTRA was consistently rich—all had no bearing on strategic thinking. At the very least, ULTRA was a guidepost and handmaiden for those concerned with strategy. It indicated options and, often, the relevant advantages and hazards of each. Its availability and specific potencies as a prospective support could open or close the door to a course under consideration. Further, and far less vulnerable to contrary argument, the ability to persist in strategic decisions depended largely on what could be ascertained about the enemy's degree of awareness and counterpreparations.

Let us consider in this light—briefly because of detailed treatments in various works—the case of Normandy. What was known about the German defensive posture—such as one army in the Pas de Calais, a second in Normandy, and absurdly large forces in Norway and Denmark (nearly 20 divisions)—had to be essential features of Allied planning. Similarly relevant were the state of Atlantic wall defenses and German strategic thinking.

Given the vital resource of a unique program of deception, there was a strong bias for a Normandy landing. To have opted for the narrows of the English Channel while focusing German apprehensions on Normandy would have had scant purpose beyond the initial diversion of forces westward and the obvious advantages of "the shortest road." Once the landing was accomplished, little motivation would have remained for the Germans to keep formidable forces west of the Seine. A "second invasion," which seemed so plausible for the channel area as long as the Germans believed a wholly imaginary American First Army Group (FUSAG) to remain poised in Britain, could scarcely have been made believable for Normandy. In contrast, therefore, to what the Germans failed to do in Normandy, they assuredly would have concentrated all available resources against a channel beachhead, leaving only token forces in the west of France.

If this line of reasoning is accepted, the infinitely greater chance of deception for keeping the German forces divided favored the Normandy operation many times over. Thus, the array of instrumentalities of deception—all of them nourished by and dependent on ULTRA—practically dictated the outlines of Overlord. How vital they were to the plan is perhaps best summed up in the safe assumption that the Normandy landing would have to have been called off if the deceptive cover had been blown. The relevance of that cover for this area *only* was the compelling argument against an invasion farther east.

Does the record of Allied pre-invasion discussions bear out such a train of calculations? That record, insofar as ULTRA is concerned, is still too incomplete for a safe

answer. Also, it appears unlikely that chapter and verse will be entirely spelled out in the documents even when they are in our hands. Largely unspoken awareness of fundamental facts rather than finespun argumentation probably dominated Allied planning. Similarly, as the months passed and the evidence all underlined the preservation of German illusions on the landing site, little of this may have been recorded in the minutes. ULTRA was the infallible check on whether the opponent stayed fooled, but it could not be discussed in full Allied councils.

Normandy, though by far the most fateful, was not the most dramatic illustration of how strategy depended on strategic deception. The background of the Sicilian invasion includes an even more sensational deception in Operation Mincemeat: "the man who never was." Parallel though less humanly fascinating examples can be culled from the story of the war in Africa. The conflict in the Dark Continent also provided the clearest instances of a more direct relation between ULTRA and strategy. Certainly Montgomery's plans for Alam el Halfa, El Alamein, and Médinine were dominated by what he had learned from it. To hold that it did not materially influence his strategy is to say that his dispositions for these encounters had no strategic content!

HOW MUCH DID ULTRA AFFECT THE OUTCOME?

Historians, it has been emphasized, have thus far exercised restraint in passing strong judgments on just how much or how little ULTRA helped to win the war. The verdict of history is still far from in, advising against rushing forward too quickly with assumedly conclusive estimates of the place of a newly discovered factor in World War II. Notes of acrimony continue to surface, notably in the letter columns of the London *Times*.

A significant part of this picture is ambivalence in both the military and historical professions on ULTRA assessments that derives in part from personal equations. Still-living Allied commanders must feel uncomfortable when critics imply that whatever triumphs they may claim should be ascribed to leaning on an ULTRA crutch. Though they have said little to date and will hesitate to risk accusations of seizing on a universal alibi for failures, their German rivals can only be gratified by stress on handicaps with which they unknowingly contended.

Among historians there is distress for those whose works may seem on the way to becoming outdated. Everywhere supposedly well-anchored theories and interpretations are once more under scrutiny. For aspiring younger scholars, the outlook is a golden one. They can look forward to a productive replowing of fields that had been thought worked out. No doubt many will expect too much, searching for footprints where ULTRA never passed or trod only lightly. Most types of Enigma signals, it has been noted, could be read only some of the time during the earlier years. This means many blank pages that, when he comes upon them, will dismay the historian as it did the good folk at Bletchley. Then there are the many, in some cases still unidentified, records that were destroyed during the course of or soon after the war.

ULTRA thus cannot furnish answers to all that remains puzzling about the war in Europe and the Atlantic. It was certainly not omniscient in determining its course. Juergen Rohwer has helped put things in perspective with his exclamatory query: "If the allies knew everything in advance why, in God's name, did the damned war last so long?"[14] The obvious answer is that ULTRA was not that much of a miracle worker; even if it should ultimately be judged indispensable to victory when it came, ULTRA could only gradually, by inexorable erosion of Axis capabilities, assert its influence. Many who are inclined to believe this, however, are hesitant to commit themselves to such a view. That reluctance often extends to stating as much about a particular phase or even a single encounter. In the present essay, we have engaged to go further and to attempt something like a summary position on what ULTRA's share in winning the war may have been.

Could the war have been won without ULTRA? Russians would resent this as an egocentric Western question and, however guilty of their own egocentricities on the "where-should-the-credit-for-victory-go" issue, would have some reason for complaint. It is a point to be held in mind in estimates of ULTRA, that these must be made consciously in the Western context, measuring only against what the West may be judged to have contributed to victory generally. That limitation must hold, at least, until we know a great deal more about how much and just what ULTRA data was transmitted, of course anonymously, to Moscow. If we are to judge from one major known case (Stalin's contemptuous treatment of warnings of German attack in 1941) it probably did the Soviets little good. He was supicious of Westerners regardless of whether they came bearing gifts. Here is another ULTRA problem that awaits careful study.

Returning to consideration of ULTRA's share in the Western contribution to victory, there are two measuring sticks that have thus far received little applicaton. One of these involves noting how drastically the story of the war must be rewritten whenever a flood of new ULTRA documents threatens to alter the contours of the historical landscape of World War II. To date, this has notably been the case for the Battle of the Atlantic. Juergen Rohwer's penetrating study of its convoy battles and Patrick Beesly's clarifying spotlight on the British side of the story are dramatic evidence of how much at least the history of particular aspects of the war will have to be rewritten. Drawing, as Beesly does, on his own vast personal experience, R. V. Jones has done as much for some of the most vital aspects of the secret war. Many pages on the great intelligence duel would be blank except for his *Wizard War*.[15] In strong contrast, much remains to be learned about Operation Market Garden (the Arnhem venture), concerning which ULTRA files have not yet been processed.

The second measuring device that needs more extensive application involves review—here only in the most summary form—of the innumerable instances of misfortunes visited upon the Allies when ULTRA broke down or was not available for one reason or another. Only three items from this long and growing list will be mentioned here. There is the story behind the Battle of the Bulge, already cited, when Hitler's radio ban immobilized ULTRA. There are the ups and downs in the Battle of the Atlantic, corresponding so closely to ULTRA's own fortunes and carrying with them the specter of total Allied defeat. A third example is of a special significance in that it illustrates how misfortunes in one aspect of the conflict could claim resources from another. It was strains in the Battle of the Atlantic which obliged General Eisenhower in the second half of 1942 to divert his air forces from their primary mission of carrying the war into the heart of Germany. For a time, the submarine pens on the Atlantic coast demanded priority. The sensational solution of the intricate Triton cipher in December of that year led in time to the release of the American air arm to do the work for which it had largely been designed.

What perhaps most needs doing at the current juncture of ULTRA studies is weaving together the often stray threads of its story in order to trace more coherently its role in the buildup to victory.[16] Except for disputes concerning Lord Gort's retreat to Dunkirk, there has been no claim thus far that it had any real influence on events prior to June 1940. It was in preparations for what became the Battle of Britain that ULTRA achieved impact, though in a measure that remains in dispute. Its first intervention was not only fateful, but illustrates a feature that deserves more attention than it has yet received. This is the way in which other instrumentalities that receive high ratings themselves may be children, or at least beneficiaries, of ULTRA. The reference in this case is to the discovery and neutralization of *Knickebein*, *Luftwaffe* navigation via intersecting radio beams. Together with radar and ULTRA itself, this counts among the more basic contributors to victory in this critical battle. Yet awareness of

Knickebein led from an ULTRA intercept of 5 June that gave R. V. Jones the clue from which all else followed.[17] Whatever credit the solution of *Knickebein* is assigned in winning the Battle of Britain thus demands a corresponding addition to the ULTRA account.

Even within the confines of this essay, much else deserves attention concerning ULTRA's part in the Battle of Britain. There is the illustration of "Eagle Day" (15 August), the first big encounter, when Air Marshal Dowding was enabled to dole out his fighters in miserly fashion to defend the seven airfields ULTRA had pinpointed as threatened. Let it be noted that ULTRA's help in the Battle of Britain went so far beyond its then-general state of development because *Luftwaffe* signals, duck soup for British cryptographers, were God-sent when air warfare was the full story.

Some have made much of the fact that highly placed witnesses, such as Air Chief Marshal Sir John Slessor and Vice Admiral Sir Norman Denning, have declined to say flatly on direct question that without ULTRA the Battle of Britain would have been lost. This has been taken by ULTRA detractors to mean the reverse, that the battle could have been won *without* ULTRA—something they surely did not mean to say.

It was ULTRA, too, which told Churchill when Hitler decided to conclude the battle, enabling him to throw Britain's still meager and jealously husbanded weight into North Africa. Thus, even the transition from one phase of the war to another was eased by ULTRA, quite aside from the fact that victory on her home grounds alone permitted Britain to transfer the war there.

Intercepts played a great role for both sides in the war in Libya, and it is rarely more easy to trace their close relation to events. In the intermediate and later stages, ULTRA won the game hands down over its German rivals. Its intimate relation to Montgomery's three resounding victories has been stressed. Yet Rommel's resources were so overstrained that, ULTRA or no ULTRA, he would scarcely have succeeded in reaching the delta or Suez. If he had effected a surprise at Médinine, it is also improbable that this would have meant more than an additional respite for the Axis in Africa. Everywhere ULTRA acted as the clincher, but the basic development was probably much in the books.

No doubt British successes in Libya paved the way for the American entry and big-scale Allied counteroffensive in the Mediterranean. Libya led to Tunis, Tunis to Sicily, and Sicily to the landing at Salerno. ULTRA acted as conductor along the way and helped pave the way to Alexander's drive in Eastern Italy that unhinged the Gustav Line.

All this together, however, hardly equalled the impact on the fortunes of war of the outcome of the Battle of the Atlantic. As in Africa, this was long a battle of intercepts, a series of confrontations that can be traced virtually on a day-to-day basis. It was ULTRA which, despite a shaky record, not only perfected its own performance into a smooth operation by the summer of 1943, but wrote *finis* to the feats of a worthy rival, the German *B-Dienst*.

With respect to winning the battle, no one would argue that ULTRA did it single-handedly; a whole string of naval and scientific achievements did their share. That the battle could not have been won in the way it was without ULTRA can be argued with much force. It is noteworthy that Slessor, who evaded such a commitment on the Battle of Britain, here had no such hesitations: "I have the best of reasons to know that ULTRA was a real war-winner [here]."

Assuredly, without the victory in the Battle of the Atlantic, or something very near it, there could have been no invasion in 1944. Beyond this, there is still the story of Normandy itself, an invasion that, if it had failed, would probably have been the only such effort. Enough has already been said about the central role of ULTRA in that operation. In sum, by spring of 1945, successive stages of the war in the West—each dependent upon the safe traversal of

dangerous waters in the previous phase—paved the road to victory. At many critical points a successful outcome would have been highly questionable in the absence of ULTRA. There is room for a sweeping statement: ULTRA was essential to victory in the Battles of Britain and the Atlantic, the war in Africa, and the landings in Sicily and Normandy. In innumerable not easily measurable ways it impacted on the war efforts of the rival coalitions in such fashion that Allied performances steadily improved whereas those of the Axis underwent an inexorable process of erosion. Without ULTRA, victory in the spring of 1945 would have been unthinkable.

To speculate on the probable state of affairs at that time and their future course is to enter too far into the realm of the hypothetical. It should give food for thought that the V-weapons probably would still have been operating from their emplacements on the English Channel, and that the mass introduction of the Messerschmidt 262 and the several types of new deadly U-boats was just around the corner. Also, would Stalin, who pointedly waited until the Germans had been swept from France (September 1944) to commit himself to unconditional surrender, have leaned toward a separate peace under such circumstances?

What has been said in this essay underlines but a few of the manifold problems, some of them fundamental for the history of the World War II era, that confront students of that epoch. Many tested interpretations must be reviewed under the glare of the ULTRA spotlight. It will not always be easy for historians to act as honest brokers, holding the balance between contending interests, some of which have been indicated. Much cluttered ground will have to be swept clean before some of the larger issues can be tackled most effectively. For example, since ULTRA required that every intelligence coup to which it gave birth must have some explanation plausible to the enemy other than its own performance, this necessitated feeding its victims with cover stories of many kinds. Unfortunately, since the same explanations were needed to curb the curiosity of the uninitiated in Allied ranks, such stories were also imprinted heavily on the historical records. What thus is needed is a grand and extended housecleaning in which such misleading rubbish is cleared away.

In these labors, one will not always find it simple to distinguish fact from fiction. There are also the larger and more serious legends to be spotted and cleared up. No doubt this will spawn new legends. Thus, writers on intelligence topics have a strong temptation somehow to get under the ULTRA umbrella. In the unraveling of so many tangled skeins, there should be something for everybody in the field of World War II history.

NOTES

1. Gustave Bertrand, *Enigma ou la plus grande enigme de la guerre 1939-1945* (Paris: Plon, 1973); F. W. Winterbotham, *The Ultra Secret* (New York: Harper and Row, 1974).

2. Before the last few years, even items in Foreign Office records that had some relation to clandestine activities were likely to be held back. Thus the present writer in 1970 met a blank page in place of a document actually listed in the printed index of the Public Record Office and whose omission from among the released documents appears to have been an afterthought. In its place was only a laconic: "Not to be released until 2015."

3. Examples of this approach are John P. Campbell, "The ULTRA Revelations: The Dieppe Raid in a New Light As an Example of Now Inevitable Revisions in Second World War Historiography," *Canadian Defense Quarterly*, 6 (Summer 1976), 36-42; Martin Blumenson, "Will 'Ultra' Rewrite History?" *Army*, 28 (August 1978), 43-48; and Adolf G. Rosengarten, Jr., "With Ultra from Omaha Beach to Weimar, Germany—A Personal View," *Military Affairs*, 42 (October 1978), 127-32.

4. Ronald Lewin, *Ultra Goes to War* (New York: McGraw-Hill, 1978).

5. Interview in August 1938. Nicolai, of course, needed no reminder of the reversal of this picture in the July stage of the German 1918 offensive. On that occasion, the Germans launched their attack against fully alerted defenders and immediately thereafter were caught flat-footed by the French counterblow.

6. Sir John Masterman, *The Double Cross System in the War of 1939 to 1945* (New Haven: Yale University Press, 1978).

7. A perceptive discussion of this complex of problems is presented by Lewin, pp. 307-08.

8. Perhaps the saddest examples on the Allied side were British operations in Norway and Greece. In both instances, the enemy's order of battle was available daily but, for all the good it did the British commanders, it might as well have been absent.

9. The experience of the present writer in questioning German military figures in 1945, as well as in conversations of

later years, ran parallel to that of other American interrogators with whom he compared notes. Almost to a man, German commanders, when asked to comment frankly on American leadership, expressed their astonishment about it being so little venturesome. Patton was often cited as being an exception.

10. This concept, which goes far to explain strange examples of obtuseness on the part of government and military decisionmakers at critical junctures, was first developed by Roberta Wohlstetter in her study, *Pearl Harbor: Warning and Decision* (Stanford: Stanford University Press, 1962), p. 3 and *passim*.

11. Diametrically opposite evaluations of Clark's leadership in this instance are presented in the cited studies of Blumenson and Lewin. Blumenson (p. 47) upholds Clark's decision. Lewin, always tactful and usually circumspect in criticism of American leadership, here employs strong language and makes no bones about his total rejection of Clark's argumentation. The viewpoints here expressed largely conform with his version of the problem. See Lewin, pp. 285-87.

12. With respect to Clark, Winterbotham clearly is a prejudiced witness, having been offended by the general's lack of interest and, he seems to feel, even of courtesy during Clark's first ULTRA briefing. Whether, as Winterbotham infers, Clark habitually made lackadaisical and ineffective use of ULTRA can be determined only after detailed study once all pertinent documents are at hand.

13. Interest is so great and universal that it appears likely that both British and American ULTRA files will be duplicated for strategically placed repositories.

14. Juergen Rohwer, address at a meeting of the American Historical Association, Washington, 29 December 1976.

15. Juergen Rohwer, *The Critical Convoy Battles of March 1943* (Annapolis: Naval Institute Press, 1977); Patrick Beesly, *Very Special Intelligence: The Story of the Admiralty's Operational Intelligence Centre, 1939-1945* (London: Hamish Hamilton, 1977); R. V. Jones, *The Wizard War: British Scientific Intelligence* (New York: Coward, McCann and Geoghegan, 1978).

16. A somewhat less summary analysis of developments in the phases of the war alluded to here is to be found in the writer's "The Historical Impact of Revealing the ULTRA Secret," *Parameters*, 7, No. 3 (1977), 16-32.

17. Campbell (p. 37) maintains that *Knickebein* was a "more reliable guide to the *Luftwaffe*'s intentions . . . than anything else," thus not excepting radar.