Allied Victory in the Battle of the Atlantic
A Reappraisal

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Few things are as exciting as the discovery of new facts that threaten to make obsolete established accounts of past events. A good example of this phenomenon was the excitement generated by the revelation during the 1970s that the Allied had successfully broken German codes during the Second World War i.e., the German Enigma code machine, and that Allied commanders thus had access to some of the most secret German communications and plans.[1] Although this new fact certainly made previous accounts of the Second World War incomplete, it did not invalidate them. The intelligence gained from intercepted German communications was only one of many factors that determined the course of the war. This conclusion seems validated by the impact of code-breaking on the Battle of the Atlantic and the allied victory over the German submarines.

I

The British breaking of Germany's naval codes was unquestionably an important factor in the Battle of the Atlantic. Thus provided with access to the communications between the U-boats and German naval headquarters, British Naval forces could learn the location of the U-boats and thus divert allied convoys away from the U-boat patrols.[2] This was the best possible protection for the convoys and, at the same time, meant that the German U-boats used up their precious days on station without an

opportunity to attack any allied shipping. The allies also learned from their Enigma intercepts when and where the U-boats were ordered to meet their tanker submarines and they were thus able to attack and sink many of the U-boats while they were on the surface refueling along with the tanker submarines.[3]

But while it is certainly true that the breaking of the German naval code significantly reduced allied shipping losses and led to the destruction of many U-boats, one should not forget that the Germans sunk 11,656,000 tons of allied ships in the North Atlantic and that the Allies lost a total of 21,543,000 tons of shipping the war with Germany.[4] This success on the part of the German U-boats, to be sure, can be partly explained by the failure of the Allied efforts to break the German naval code during the first two years of the war and the so-called "blackout" periods later in the war when the Allies were unable to read the German transmissions. One might suggest, however, that both the success and the ultimate defeat of the German U-boats are best explained by factors other than allied access to the German naval code.

The inadequate pre-war preparations to wage U-boat warfare on the part of both the Royal Navy and the German Navy, for example, were very important. Both Navies, it seems, discounted the future importance of the submarine during the inter-war. Although the U-boats had sunk 11,153,506 tons of allied shipping and sent 40% of the entire British mercantile fleet to the bottom during the First World war, the German U-boats had ultimately been defeated by the introduction of the convoy system and the development of ASDIC to detect the submerged submarines and the depth charge to destroy them.[5] The conclusion drawn by many naval officers after the war was that the submarine had been a success but submarine warfare a proven failure.

Immediately after the war, to be sure, the British Admiralty did take steps to prepare for dealing with the submarine threat in future wars. It set up an anti-submarine warfare unit to find better ways to deal with submarine attacks and rewarded officers who trained in the unit.[6] During most of the period between the wars, however, the Royal Navy concentrated its training on defense against enemy surface units[7] while the anti-submarine exercises were carried out in unrealistic conditions, i.e., in excellent weather with calm seas and with the initial position of the target submarine known by the destroyer crews. Even under such conditions, the highly trained crews had as many unsuccessful hunts as kills.[8]

Most important, however, was the failure of the Admiralty to construct destroyers before the outbreak of war. In 1918 Great Britain had a fleet of 400 destroyers which, together with those of other allies, gave a total of almost 900 destroyers for use against the U-boat threat. The Royal Navy German the Second World War with a fleet of only 180 destroyers with which to guard its convoys against both the U-boats and German airplanes.[9] Although this failure to construct destroyers had been attributed to the fact that the Admiralty would not have had crews to man them and needed to spend its limited funds to construct larger ships that required longer construction times, the key factor was the Admiralty's conclusion in 1937 that a German U-boat fleet could never again represent a threat to British commerce comparable to that which had been presented twenty years before.[10] Writing in the 1950s, Bernard Brodie thus concluded:

> Before the war began in 1939, the British were overconfident that they had mastered the submarine. They remembered that despite terrible disadvantages they had

mastered the U-boat, and felt they could do so again with much greater ease.[11]

Professor Brodie's view was shared by the World War II commander of the German submarine Fleet, Admiral Karl Doenitz. He wrote in his memoirs, "The development of the convoy system and ASDIC for detecting the U-boat while under water were assumed to mean the end of the U-boat as a weapon against commerce." He then went on to conclude, "Thanks to the possession of these anti-submarine devices which worked under water, the British Navy between the wars really lost sight of the U-boat menace and had underestimated its importance."[12]

The British also, one might add, underestimated the importance of the improved capabilities of the German U-boats. The submarines of the late 1930s had greater endurance, speed, fire-power, range and maneuverability than the U-boats of the First World War. They had stronger hulls and could dive deeper to avoid detection. More powerful engines gave them speeds of from 20 to 22 knots as compared with 12 to 14 knots for their World War I predecessors. Considerable progress had been made in making the submarines quieter in their operation, thus facilitating an undetected approach to enemy ships. Their torpedoes were more destructive and, most important, left no tell-tale air bubbles which revealed the launching of the torpedo and its passage through the water.[13] Against these much improved submarines, the Royal Navy prepared to use depth charges that were essentially the same as those used in 1918 and ASDIC that its officers and men knew could be easily fooled.[14]

The British quickly learned that their pre-war expectation that U-boats would pose no serous threat and their faith in the use of convoys and ASDIC had been a mistake. The German U-boat which located a convoy did

not, under the new tactics, immediately attack. Instead, it reported the convoy's location so that other U-boats could assemble for coordinated attack during the darkness of night and when the U-boats could operate on the surface. The convoy escorts could not use their ASDIC to locate the surfaced U-boats which, in the confusion caused by the coordinated attack, were able to sink many of the merchant ships.

Eventually, of course, the British and Americans were able to find solutions to the problem posed by the U-boats and their new tactics. The development of radar and radar-equipped aircraft allowed the allies to locate the U-boats whenever they surfaced. The building of escort carrier task forces provided air cover for the convoys and exposed the U-boats to air attack.[15] But until the allies created this anti-submarine capability, unfortunately, their merchant ships were at risk of being sunk whenever a U-boat located their convoy.

It has thus been argued that the British breaking of the German naval code in the spring of 1941 was of crucial importance. IT allowed the British to read the German transmissions until February 1, 1942 when the Germans modified their naval Enigma machines causing a "black-out" period that lasted until December 1942. The British were thus able to divert their convoys away from the U-boat patrols during 1941 and, at the end of the 1942 black out, to discover that the Germans had broken the British mercantile codes and were using intercepts to locate the allied convoys.[16]

One might suggest, however, that the view that successful allied codebreaking allowed the Allies to avoid defeat until they had time to develop radar and escort carriers to find and sink the U-boats does not tell the whole story. The German "wolf-pack" tactics required the U-boats to use their radios to report the located convoys. Every time

a U-boat sent a radio message it was at risk to revealing its location to the British who had high-frequency detection finders–the so-called "Huff-Duff"–that were located both on ships at sea and at stations ashore. The Allies, in short, did not require access to the German naval codes to locate U-boats.[17]

Even more important was the fact that the British had not been alone in their failure to prepare for submarine warfare prior to the outbreak of war. The same had been true of the German Navy which began the war with only twenty 500-ton oceangoing U-boats.[18] The Germans also did not quickly start to build U-boats when the war started and it was not until July 1940 that Hitler lifted all the restrictions on submarine construction.[19] Admiral Doenitz termed this failure the "tragedy of the German U-boats in the Second World War" and concluded:

> How different the course of the submarine war and, indeed, of the war as a whole, might have been if, after the abrogation of the Naval agreement in the Government had given us the material and the labour we required to concentrate on the rapid building of a large number of submarines and we had been able to throw them into the fight before it was too late.[20]

There are, of course, several reasons why Hitler did not build the fleet of submarines. His main interest in the German Navy was its political value and, according to the Commander of the German Navy, he thus preferred to build the larger and very impressive capital ships rather than the small, unimpressive submarines which were a symbol of the "weaker navy."[21] Hitler also did not intend to go to war with Britain and, therefore, he decided that a large fleet of U-boats for use against British merchant ships was not

needed.[22] It has also been pointed out that, if Hitler intended to have war with only Russia and France, then the "balanced fleet" under construction in Germany when the war began was the most logical choice.[23]

Hitler's decision not to allow the German Navy to concentrate on building large numbers of U-boats until July 1940 was also a logical one. He expected to win the war through his Army and Air Force and to do it on land. Samuel Eliot Morison wrote in his little book on strategy, "It is almost correct to say that Hitler had no naval strategy. He was *landsinning*, landminded. He thought he could rule the waves by conquering the land..."[24] Only when the German Army and Air Force found themselves unable to defeat the British, did Hitler, like the Kaiser a generation earlier, call upon the U-boats.[25]

Hitler, of course, was not alone responsible for the failure to build U-boats before the outbreak of war or soon thereafter. The German Naval Staff itself believed that the construction of a large fleet of U-boats would not be the best way to allocate its limited resources. The Germans did not know that the "wolfpack" tactics Admiral Doenitz planned to employ would make the U-boats effective against allied convoys. They did know that the U-boats had failed to bring victory in the First World War and that large capital ships required much time and resources to construct. The result was that the German Navy actually began the Second World War with fewer U-boats than it had in 1914.

II

Today it is clear that any history of the Battle of the Atlantic must take into account the fact that the British had, through good luck and hard work, managed to break the German naval code during the war. We know for certain

that convoys were diverted from their planned routes on the basis of intercepts that gave the locations of the U-boat patrols and that these convoys made it safely to England without being attacked. We also know for certain that many of the U-boats which were sunk while refueling met their fate because the Allies knew where and when they were to meet their submarine tankers.

We must, however, be cautious and not give more credit to allied codebreaking than is justified by the overall conduct of the U-boat war. Most Allied convoys crossed the Atlantic without being attacked by German U-boats even when the British were unable to read the German naval codes. Most of the German Navy's communications were never intercepted by the Allies because they were not sent by radio.[26] The Allies, moreover, were only able to read the intercepted messages for as long as the Germans continued to use the broken code. The refusal of the German Naval Command to admit that its codes could be broken by the Allies when there was strong evidence that its transmissions were being read by the enemy was as important as the codebreaking itself.

We should also avoid giving less credit than warranted to what might be called the "fundamentals" of the Battle of the Atlantic. Both the British and the Germans began the war unprepared for U-boat warfare. The British, and later the Americans, paid a heavy price for this failure in terms of shipping losses. They had, however, the resources that allowed them to make good the losses sustained. What Germany lost through its failure to have enough U-boats, on the other hand, was its "widow of opportunity." When the Germans had enough U-boats, it was too late. They could no longer attack the convoys and sink the merchant ships with the effectiveness shown at the outbreak of the war.

Another "fundamental" was the role of science and

technology in the Battle of the Atlantic. The allied development of radar meant that the German U-boats were subject to detection and attack whenever they surfaced to recharge their batteries. The Germans countered this with radar detectors that allowed the U-boats to submerge before they could be attacked and the *Schnorchel* that allowed the U-boats equipped with it to remain submerged at all times. By the time these German technological developments were in place, however, the Battle of the Atlantic was really over and the Allies had won it.

Those who today claim that it was codebreaking that brought the Allied victory in the Battle of the Atlantic have, one might suggest, discounted too many other things in reaching their conclusion. Those who, on the other hand, argue that the Allies would have won the battle even if they had not broken Enigma engage in unnecessary speculation. The rest of us can take the middle ground and argue that the Allied victory against the U-boats was, like most events in history, the result of a number of things that happened both before and during the battle.

NOTES

1. On the breaking of the German codes, see Josef Garlinski, *The Enigma War* (New York: Charles Scribner's Sons, 1979); Thomas Parrish, *The Ultra Americans: The U.S. Role in Breaking the Nazi Codes* (New York: Stein and Day, 1986) and David Kahn, *The Codebreakers: The Story of Secret Writing* (New York: Macmillan, 1967).

2. On the breaking of the German naval codes, see David Kahn, *Seizing the Enigma: The Race to Break the German U-Boat Codes, 1939-1943* (Boston: Houghton Mifflin Company, 1991): John Terraine, *The U-Boat Wars,*