

Delusions of Intelligence: Enigma, Ultra, and the End of Secure Ciphers, by R.A. Ratcliff. Cambridge, Cambridge University Press, 2006. xvii, 314 pp. \$30.00 US (cloth).

Back in 1998, when revelations of Switzerland's role as Hitler's banker were surfacing, somebody suggested that the world might not understand World War II for yet another century. *Delusions of Intelligence* is a major contribution to that understanding.

The United Kingdom's Ultra programme played an unquestionable role in the Allied victory and Axis defeat of 1945. In 1974, the previously secret Ultra became public knowledge and caused a major re-evaluation of the war in Europe, Africa, and the North Atlantic. Thanks to Ultra, the world discovered, British decrypters could read German diplomatic and military correspondence. That awareness of the enemy's next move enabled British and other Allied strategists to know what the enemy's next move would be and to place their limited numbers of ships, aircraft, and service personnel at the right places at the right time. Arguably Chamberlain's capitulation at Munich was not an unmitigated catastrophe. Although Czechoslovakia's armament factories and soldiers would have been useful to the Allied cause, Poland's reputation as an ally soared. In addition to the heroic Polish soldiers and flight crews, the Allies owed an immeasurable debt to Polish mathematicians who stole and cracked a German Enigma machine, transported it to France when Hitler's forces occupied Poland, and then to the United Kingdom when they occupied France. Brilliant British cryptographers, male and female chess players, historians, linguists, mathematicians, and winners of crossword puzzle contests mastered Enigma's intricacies and ciphers, then enabling Churchill and his associates to monitor what Hitler and Company were doing. Until 1974 (!!!), complacent Germans believed that Enigma was so complex that its messages were secure, and they took remarkably few precautions to be cautious. Such carelessness was understandable. Even the earliest version of the Enigma machine, produced in 1920, allowed more than "fifteen million ... possible substitutions for each letter typed into the machine" (p. 2).

Ratcliff embellishes the above story, whose general outlines have been public knowledge since 1974. With access to American, British, and German sources, which were not available to earlier writers, he makes additions and corrections to earlier accounts. For example, he refutes the earlier report that, when Ultra revealed that the Luftwaffe was about to bomb Coventry, Churchill sacrificed the people of the city rather than warn them to take shelter and thereby alert the enemy to Ultra's existence. With assistance from such authorities in intelligence history as David Kahn and Wesley Wark, Ratcliff explains the physical appearance and intricacies of the Enigma machine, and recounts German mistakes as well as Polish/British achievements.

British intelligence had several advantages over German intelligence. First, Hitler pursued a policy of divide-and-rule, encouraging inter-service rivalry which led to duplication of effort and opportunities for British cryptographers at Bletchley Park to confirm their findings. By contrast, British civilians and mili-

tary worked closely and enthusiastically in a single coordinated effort. They shared their findings with each other and had such a good understanding of the large picture that they knew where best to focus their efforts. Secondly, the British had helpful allies, particularly Poles and Americans, but to a lesser extent French. German intelligence hired few non-Germans and then excluded Jews (entirely), women (except at the lowest levels), and academics. Thirdly, the British used civilians in large numbers; the Germans did not. German intelligence lacked people with foreign language skills and produced flawed reports. Fourthly, Hitler had more faith in his own genius than in what intelligence could offer and failed to provide adequate funding. Successive intelligence failures weakened the credibility of German intelligence and led to further cuts. Some German intelligence officers were assigned to harvest potatoes rather than enemy messages; others were transferred to combat roles.

Ratcliff describes the way British authorities hid Ultra from German authorities. Rather than give early warning to British target cities, they waited until the Luftwaffe was well on its way so that the enemy would think they were reading the electronic beams which guided German aircraft. When Ultra revealed the location of U-boats, an Allied aircraft would overfly the place in question and give the impression that it had made the discovery. So well did the tens of thousands of people engaged in Ultra maintain secrecy that when Edward Travis, head of Ultra, received a knighthood for his role in winning the war, his wife had to ask him why he deserved such an honour.

Ratcliff provides balance. This is not simply a story of Allied successes and German mistakes. On page thirty-six he says, "During the war, the Germans stole American diplomatic codes used from Rome, infiltrated the British embassy in Ankara, Turkey, and regularly read even some of the Soviets' relatively sophisticated ciphers." Ratcliff confirms that the Allies could read the correspondence of Baron Oshima, Japan's Ambassador in Berlin, but notes that Germans could read the ciphers of de Gaulle's Free French and that messages sent from the US consulate in Cairo about British military plans for North Africa were virtually an open book. Successful German cryptographers helped to frustrate British efforts at Narvik, Norway in 1940, as well as the Allied raid on Dieppe.

It would be horribly wrong to minimize the efforts of the young people who served in the Allied forces during World War II. Without their achievements, bravery, dedication, and skills, there would not have been an Allied victory in what was arguably the most significant war of the millennium. Arguably too, cruel necessity, and not Allied betrayal, doomed Poland to Soviet occupation. However, without an understanding of Ultra, one cannot understand the military campaign against the Axis belligerents.

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