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America's Code Breaker

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“There is no limit to what you can do, so long as you don't care who gets the credit.” — Joseph Rochefort, Posted Slogan ¹

Navy cryptanalyst Lt. Cmdr. Joseph John Rochefort gave the Navy High command critical information that completely changed the course of World War II in the Pacific twice. The first information saved Australia from potential Japanese conquest, while the second allowed America to turn the tide of war against Japan at the Battle of Midway. Rochefort's reward for these brilliant successes was not what you would expect. Instead of being praised and given the medal for which he was recommended, he was, in the words of one journalist:

... Speared like a frog and hung out to dry for the rest of the war. ²

In April 1942, U.S. Naval Chief of Operations Ernest King received word that Japan's powerful carrier force, the First Air Fleet, was returning to the Pacific Ocean after attacking the British Eastern Fleet in the Indian Ocean. King was given this information by the brilliant but 'eccentric' American code-breaking genius Lt. Commander Joseph John Rochefort who commanded the Combat Intelligence Unit, Pacific Ocean Areas, 'Station Hypo as it was called,' at Pearl Harbor. Rochefort reported that although the Japanese were not currently going to invade Australia, they were nevertheless planning a major operation. This operation was to be launched from their base at Rabaul, on the island of New Britain, just off the coast of northeast New Guinea.

American cryptanalysts feverishly studied their transcripts of the ever-increasing volume of encoded Japanese radio traffic, trying to determine where Japan would strike next. The Japanese had two distinct goals in the months that followed their attack on Pearl Harbor on December 7, 1941. The first was to capture the rich lands of the Philippines, the Netherlands East Indies and Southeast Asia, while their second goal was to obtain and fortify a string of bases that would be used to keep the Americans away from the territories they were conquering. This second goal was really to turn the Western Pacific Ocean and all its rich lands into a securely defended Japanese empire, an empire to which they had already given the euphemistic name 'Greater Asia Co-Prosperity Sphere.'

The Japanese achieved most of their first goal with terrifying speed after their December 7, 1941, sneak

attack on Pearl Harbor. By December 23rd, they had captured both Guam and Wake islands. Hong Kong fell two days later, and by February 15, 1942, Rangoon and Singapore had been taken. By March 6th, the Japanese captured Batavia (Djakarta), which was then the capitol of the Netherlands East Indies and the captured the Philippines. In the five months between their attack on Pearl Harbor and the capturing the Philippines, the Japanese acquired much of the empire they wanted. Now they were faced with protecting what they had conquered as well as the desire for additional expansion.

By late February 1942, although Rochefort and his staff had by now successfully broken into the Japanese Fleet's principal operational code, JN-25, they could still only decipher a small part of the intercepted mail. Working without sleep and under tremendous tension in a windowless basement room in Building 1 of the 14th District headquarters building at Pearl Harbor, the unkempt Rochefort, pushing himself beyond exhaustion, struggled for twenty hours a day with the maddeningly fragmentary intercepts piled atop his makeshift worktable of planks and sawhorses. He had adapted to his sun-less existence by working in slippers and a red smoking jacket, these being considered the major mark of his "eccentricity" by some spit-and-polish Navy officers. Rochefort, and some of his equally unkempt colleagues, were regarded as bizarre or even worse. However, their knowledge of the Japanese language in a U.S. Navy that boasted only about forty competent speakers of Japanese was indispensable, as was their mastery of the mysteries of cryptanalysis—the magician's art of deciphering the enemy's most carefully guarded communications codes.

A Second Pearl Harbor?

On March 3rd, Rochefort was able to report to his 'customers' (the Navy High Command) that the Japanese were planning a second attack against Pearl Harbor. Luckily, it turned out to be a minor attack, which was just as well because the navy did nothing with Rochefort's warning. Several Japanese seaplanes were sent to reconnoiter Pearl Harbor and bomb the 'Ten Ten Dock,' so nicknamed because of its length, 1010 feet. What the Japanese did not know was that the dock was located next to the building in which Rochefort's Combat Intelligence Unit was housed. A near miss of the dock might have struck Rochefort and his team and could have changed the course of the war, but a rainstorm precluded target visibility and a few Japanese bombs landed harmlessly some six miles off target. A fascinating 'what if' question, is what if this 'second Pearl Harbor' had been a major attack and had succeeded because the Navy high command had done nothing with Rochefort's warning. Rochefort in his 1969 naval 'oral history,' taken by Commander Etta-Belle Kitchen, reported that when he learned no action was taken on his information: "I just threw up my hands and said it might be a good idea to remind everybody that this nation was at war." ³

Joseph John Rochefort was born in Dayton, Ohio, in 1898. In 1918, he enlisted in the United States Naval Reserve and was commissioned an Ensign after graduating from the Stevens Engineering Institute in New Jersey. Originally, he wanted to be a naval aviator but did not pursue flying and became a "ship driving" line officer instead. When asked about his desire to fly, he said:

"As I grew up, I forgot that. I gave it up." ⁴

America was lucky he did. Rochefort stumbled into cryptanalysis by chance. He was serving on the oil tanker USS Cuyama in 1919 where he discovered he shared a strong common interest in Bridge and Crossword Puzzles with his Executive Officer, Commander Jersey. When Jersey was ordered to the

Navy Department, he asked if Rochefort wanted to volunteer to come to Washington on a temporary duty assignment dealing with codes and ciphers. Rochefort agreed. In Washington, Rochefort spent six months in a cryptanalysis 'class,' a unique 'class' with no formal curriculum. Instead, the instructor, Commander Laurence F. Safford, a man later to be considered the father of naval code breaking, gave each student several encoded messages. Using as textbook *The Elements of Cryptanalysis*, written by Bill Friedman, the man in charge of the army cryptanalysis unit, the Navy students struggled to decode the assigned messages; there was a race to see who could decode the messages the quickest. In 1925, Safford was reassigned; Rochefort took over the section and ran it until 1927, when he transferred back to sea duty. In 1929, Rochefort went to the American Embassy in Tokyo to study Japanese and remained in Tokyo until 1932. He then spent time in both intelligence and regular command duties between 1932 and June 1941, at which time Safford, again chief of the Department of Naval Communications Cryptanalytic Organization, Op-20-G, placed him in command of "Station Hypo," the OP-20-G center at Pearl Harbor. He was, therefore, in command of the station when the Japanese attacked.

The causes of the intelligence failure that allowed for the surprise Japanese attack on Pearl Harbor are complex. By failing to do the obvious or the sensible, the Navy made a critically wrong decision by placing its cryptanalytic efforts on decoding Japanese diplomatic messages rather than their naval communications. Rochefort and his team were assigned to work on breaking the Japanese naval code on December 10, three days after the attack on Pearl Harbour. However, from July 1941, onward, Rochefort prepared daily intelligence summaries based on what he could put together with the very limited equipment he had. The equipment he urgently requested was sent to Europe to support a desperate England in its battle against Nazi Germany. He had no teletypes and little in the way of radio equipment. Communication between his headquarters and the radio intercept station, some six to eight miles away, was by jeep, motorcycle or bicycle.

His personal 'failure'

As he said sadly recalled:

"We had a very lousy wire system—I mean by wire system, telephones and that sort of thing...It's like having a million dollar organization with a ten-cent stamp communication system. We lost communications with our direction finders right off the bat on December 7th... Well, what with the army yanking out all the wires and every conduit they could get their hands on, there was just general confusion all over...⁵

However, in spite of his lack of supplies and the fact that no-one in any way blamed Rochefort for the intelligence failure that allowed for the sneak attack on Pearl Harbor, years later he was still haunted by what he considered his 'failure' in not warning his superiors of the forthcoming attack. Kitchen comments that "You find yourself thinking 'but for the Grace of God go I.' You...feel his embarrassment, anguish, sorrow, and disappointment:" "I can offer lots of excuses, but an intelligence officer has one task, one job, one mission. This is to tell his commander, his superior, today, what the [enemies] are going to do tomorrow. This is his job. If he doesn't do this, then he's failed."⁶

The collective US effort to break the Japanese naval code was called 'magic' and by early May 'magic' more than proved its value when Rochefort and his staff were able to supply vital information regarding the Japanese Navy's next move, south toward Australia. Station Hypo and other intelligence units

struggled to fit more of the puzzle together. The large Australian airbase at Port Moresby on New Guinea's south coast was an obvious Japanese target; Rochefort's decoders confirmed this. They also confirmed there was to be a secondary thrust into the Solomon Islands. If these two attacks succeeded, Japan would be in an excellent position to invade Australia. The Japanese initial objectives were the small but important island of Tulagi in the southeastern Solomon Islands on which they could build an airbase, and Port Moresby itself. If successful, the Japanese, in addition to moving south on Australia, could expand into New Caledonia, the New Hebrides, and Fiji, extending their empire eastward.

Hypo learned the Japanese invasion of Tulagi was scheduled for May 3, while the Port Moresby attack, which the Japanese arrogantly and unimaginatively named Operation 'Mo' (after 'Moresby',) was scheduled for May 10. The Japanese attack force was powerful. It contained heavy cruisers, destroyers, and was spearheaded by the light carrier Shoho and the large carriers Shokaku and Ziukaku. These carriers transported some 150 planes between them. Rochefort's intelligence pushed the Americans to move quickly. Admiral Chester Nimitz, the Commander of the Pacific Fleet, hurriedly put together a makeshift naval force, which he ordered to the Coral Sea to stop the Japanese. This led to the Battle of the Coral Sea, the first modern naval battle. On May 7-8, two fleets that neither saw nor fired a single shot at each other fought through the planes on their aircraft carriers. The Americans lost the carrier Lexington, a tanker, and a destroyer while the Japanese lost the light carrier Shoho and one destroyer. However, the battle halted Japan's push toward Australia and was a boost to American home-front morale after the fall of Corregidor on May 6. America had been ready—in an extremely large part thanks to the work of Joe Rochefort and his staff.

Target AF

Rochefort's work was far from finished. Even before the Coral Sea engagement, based on what he was decoding, Rochefort predicted a major Japanese attack in the Central Pacific. On May 12, the American decoders discovered that the letters 'AF' symbolized the Japanese code name for their target. By May 25th, Rochefort and Captain Edwin Layton, Admiral Chester Nimitz's Fleet Intelligence Officer, were convinced that 'AF' stood for Midway Island. Rochefort had even pinpointed the date of the Japanese attack—June 4, 1942 and that a diversionary attack would take place somewhere in or around Alaska around June 3. There was just one problem: Rochefort had to convince the Washington 'planners' who would not believe that Midway could possibly be the target that they were wrong. Commander Jasper Holmes, Rochefort's assistant, devised a plan to prove that 'AF' was indeed Midway, a plan to which Admiral Chester Nimitz agreed. Nimitz instructed Midway to send a clear text message that falsely reported the island was low on fresh water. The Japanese obligingly intercepted the message and promptly and dutifully reported that 'AF' was low on fresh water. That was the proof Nimitz needed; he could take action. Rochefort reported on his meeting with Nimitz and it is easy in reading between the lines of Rochefort's words to sense the tension that must have been in the air when the two men spoke:

"...The atmosphere was very impersonal . . . Admiral Nimitz [would ask] me a question, and I would look over there and I would see four stars, and I would answer his question to the very best of my ability . . . he has the responsibility; along with this responsibility is this horrible thing of making a decision, which people not familiar with military operations never seem to understand. This is an awesome power to give somebody . . . he had bought what we had told him, very fortunately for this country..."⁷

Japan sent a sizable fleet—including four of its nine aircraft carriers—to attack Midway. Admiral

Chester Nimitz dispatched America's only three aircraft carriers and many of the ships that had survived the attack on Pearl Harbor and the Battle of the Coral Sea. Because of Rochefort and the other intelligence personnel, the Americans were ready. The northern diversionary attack began on June 3 and Battle of Midway began on June 4, both exactly as Rochefort predicted. During the ensuing three-day fight, more than 350 Americans were killed and the aircraft carrier USS Yorktown and the destroyer USS Hammann were lost. The Japanese lost four carriers, 291 planes, one cruiser and 4,800 personnel. The Battle of Midway was indeed the turning point of the war against Japan in the Pacific, something made possible by Rochefort, but, ironically, it was also a turning point in his career, a turning point downward.

There are different accounts of what happened. The first states that the Washington planners would neither forgive nor forget Rochefort for proving them wrong about Midway. Cryptologic researcher and writer Philip H. Jacobsen stated that the achievements of Rochefort... "cannot be over-emphasized" but what Rochefort had done for America did not matter to some navy planners. Jacobsen bluntly blames the [then] "newly installed cabal of the Redman brothers."⁷ When Admiral Joseph R. Redman became Director of Naval Communications, Captain Laurence Safford, head of the Communications Security Unit and responsible for the decoding of all Japanese messages intercepted through 'Magic' was ousted and replaced by the admiral's younger brother, John R. Redman, an officer completely untrained in intelligence and code-breaking. After the battle of Midway, the Redman brothers began efforts to remove Rochefort and finally succeeded in October 1942. Nimitz's request for the Distinguished Service Medal for Rochefort was twice denied, but given to Redman supporters in Washington.

Rochefort's banishment

A second account bluntly states that:

Joseph Rochefort [was] caught in the infighting between the director of naval intelligence and the director of naval communications over which directorate should control the production and dissemination of communications intelligence." Rochefort's [career] did not survive the struggle.⁸

In either case, the bottom line in this disgusting affair was that one of America's finest and most dedicated intelligence officers was banished from intelligence work with his career being destroyed in the process. After the Battle of Midway, the man who had given the US Navy the intelligence that changed the course of the war in the Pacific was transferred from the Pacific and spent the rest of the war in meaningless and unimportant posts. A victim of his own brilliance, Rochefort retired from the navy in 1947. He was reactivated in 1950 for the Korean War, and then retired again in 1953.

Those in the navy who knew the truth did not forget Rochefort; efforts were made at preserving the knowledge of what he did. In the 1969 oral history interview, he explained his smoking jacket and slippers: "I started to wear a smoking jacket over the uniform and I wore this darn thing because it had pockets in it and I could get my pipe and my pouch this way. Then my feet got sore...so I started wearing slippers."⁹

He then wryly added:

"If you desire to be a really great cryptanalyst, being a bit nuts helps. A cryptanalyst, from those that I have observed, is usually an odd character."¹⁰

In 1970, he was consultant for the movie *Tora, Tora, Tora* and Hal Holbrook portrayed him in the 1976 film, *Midway*. Sadly, the film was released the same year Rochefort died. In 1986, Rochefort posthumously received the National Defense Service Medal from President Regan for his invaluable service at the Battle of Midway and in 2000, he was inducted into the National Security Administration's Honor Hall of Fame. There were other honors, but unfortunately, Joe Rochefort never lived to see them.

NOTES

Full citations are given in the bibliography. All of Rochefort's quotes are from the 1969 US Navy Oral History interview with him that was conducted by Commander Etta-Belle Kitchen. Peter Azzole's on-line article, which contains many of Rochefort's quotes, was provided with permission by *Cryptolog*, the journal of the U.S. Naval Cryptologic Association. The complete Rochefort interview is available from the History Division of the U.S. Naval Institute, Annapolis, Maryland.

1. Fargo
2. PineauCostello
3. Azzole
4. Ibid.
5. Ibid.
6. Wright, p. 211
7. Jacobsen
8. Clark
9. Azzole
10. Ibid.

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