The Navajo Code Talkers

During wartime, the most important factors of effective communication are speed and security. However, due to the nature of cryptography, it is difficult to have one of these components without compromising the other. But this was achieved with great success on one occasion during World War II, with a code that was based not on mathematics and substitution, as was the general custom, but on language. This system was referred to as the Navajo code, and was the fastest and most secure means of communication to date.

The man who came up with the idea to use the Navajo language as a code was Philip Johnston. The son of a missionary to the Navajos, Johnston grew up playing with young Navajo children. He became one of the few non-Navajo people able to fluently speak the language. Having served in WWI, he understood the importance of secure communications, and realized that the Navajo language could be a code within itself. Similar attempts to use American Indian languages as code had failed in the past, largely due to the fact that the Indian language had no equivalent for modern military terms, such as ‘airplane’, ‘tank’, or ‘admiral’.¹ But Johnston came up with the idea to replace these military terms with common Navajo words for natural things, such as bird for plane, and turtle for tank. Having solved the only problem with the Navajo code, Johnston presented his idea to Colonel James E. Jones,

proposing that using this code in verbal transmissions could guarantee communications security. Soon, Johnston presented a practical demonstration of the code to General Vogel and Colonel Wethered Woodward, in which four Navajos were given simulated combat messages and had to transmit them to each other, translating them from English to Navajo and back. It was determined that the Navajos could encode, transmit, and decode a three-line English message in 20 seconds, a task which required up to 30 minutes using other methods involving cipher machines. Clearly, the demonstration was a complete success, and before long the order was given to begin recruiting Navajo men for the program.

In May of 1942, the Marines opened a recruitment office at Window Rock, Arizona. Shortly after, the first group of 29 Navajo recruits attended boot camp at the San Diego Marine Corps Recruit Depot. Here, they underwent all the standard rigors of Marine boot camp before being sent to the Field Signal Battalion Training Center at Camp Pendleton in Oceanside, California. While at Camp Pendleton, they were instructed on basic communications procedures, which consisted of 176 hours of courses in “printing and message writing, the Navajo vocabulary, voice procedure, Navajo message transmission, wire laying, pole climbing, and organization of a Marine infantry regiment, among other things.”

After completing their training, this first group of 29 code talkers was sent to the Pacific, to be assigned to Marine regiments already in combat on islands such as

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2 Ibid., p. 3.
4 Kawano, p. 9.
Guadalcanal. Almost immediately, Marine commanders sent back messages to the Commandant of the Marine Corps to request more Navajos, praising them for their performance in combat. By the end of the war, there were roughly 420 Navajo code talkers. The Marine III Amphibious Corps reported that the use of code talkers in the Guam and Peleliu landings “was considered indispensable for the rapid transmission of classified dispatches. [Traditional] enciphering and deciphering time would have prevented vital operational information from being dispatched or delivered to staff sections with any degree of speed.” The effect of the code talkers was also noted at Iwo Jima, where six Navajo worked around the clock during the first 48 hours of the battle, sending and receiving over 800 messages without a single error. Major Howard Connor, the Signal Officer in command of these code talkers, declared, “Were it not for the Navajos, the Marines would never have taken Iwo Jima.” Unfortunately, due to the top-secret classification of the code talker program, there are not many other detailed reports of their accomplishments on the battlefield. However, they were definitely there. Assigned to all six Marine divisions deployed in the Pacific, the code talkers took part in every major Marine assault from Guadalcanal in 1942 until Okinawa in 1945. The critical element in the success of the code talkers was the impenetrability of their code. The Japanese had managed to crack nearly every Navy and Army code used so far in the war. The

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6 Ibid., p. 10-11.
8 Kawano, p. 11.
principle difference between all of these codes and the Navajo code lay in the language itself.

Unlike other codes and ciphers, which are generally based on different ways of scrambling and replacing letters, the Navajo code translates the message into a completely different language that only a few thousand people in the world can understand, most of them living on Navajo reservations in the United States. Navajo is part of the Na-Dene family of languages, which shares no links with any Asian or European languages. In Navajo, verbs are conjugated according to their object as well as their subject, and their endings vary depending on the category of its object. Verbs also incorporate adverbs and personal experience with the subject. It is therefore easy to see how it is so difficult for non-speakers to understand Navajo, as a single verb can induce the meaning of an entire sentence. To typify its idyllic nature as a code, Navajo didn’t, at that point, have a written form; it was a completely verbal language (a written form has since been developed). When Japanese soldiers intercepted Marine radio transmissions, all they heard was a jumble of unintelligible syllables and guttural sounds. This makes transcription, let alone decryption, nearly impossible. To combat the issue that there were no Navajo equivalents for many modern military terms, a lexicon containing over 250 words code words was created. Later, another 234 terms were added, bringing the total to over 500 code words that had to be memorized by every code talker. To try to ease the process, these terms generally made intuitive sense: tortoise=tank, bird=plane, etc. In addition to these 500 or so code words, the Navajo had to

9 Singh, p. 199.
10 Singh, p. 196.
memorize nearly 80 alternate forms for the 26 letters of the English alphabet, so that words not in the Navajo language or the lexicon could be spelled out. Each letter would have three forms, such as badger, bear, and barrel, for B. Consequently, the process of using this code was fairly complicated. The code talkers would have to read the English word, recall the forms for each letter, translate these into Navajo, and speak each letter-codeword through the radio. On the receiving side the process would be reversed, and neither operator had a codebook or dictionary. This took a lot of memorization and practice, but due to their background in Navajo culture, in which everything from stories to songs to history must be committed to memory, this seemingly daunting task was rendered trivial.

The necessity for having three forms of each letter instead of one is simple: Applied correctly, one of the only weaknesses of the Navajo code would occur if the Japanese figured out that they were consistently spelling out a certain set of words. They could then apply frequency analysis, and determine which Navajo words stood for each English letter. Having three distinct forms of each letter would reduce the amount of repeated material for the Japanese to utilize in decryption.

All of these features combined to create one of the strongest military codes ever known, and one of the few that were never broken during their use. It enabled the United States to take control of the Pacific, fighting back against the Japanese. Despite their huge success and impact on the war, the code talker program was considered top secret, and no one outside the Marine commanders and the code talkers themselves knew about it. It wasn’t until 1969 that those Navajo men were

11 Kawano, p. 9.
nationally recognized for their service at the reunion of the 4th Marine Division Association in Chicago. The association invited a group of code talkers to the reunion and presented them with medallions specially minted in commemoration of their services. Two years later, the surviving code talkers had their first official reunion at Window Rock in July 1971. Finally, after nearly 30 years, the code talkers could share their stories with each other and the world.

Bibliography:


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12 Kawano, p. 12.
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Image of code talkers:
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