

To what extent did US intelligence and codebreaking determine the outcome of the Battle of Midway in June 1942?



Table of Contents

1. Identification and Evaluation of Sources	3	
2. Investigation		4
3. Reflection		8
4. Bibliography		9



Section 1: Identification and Evaluation of sources

This investigation will explore the following question: “*To what extent did US intelligence and codebreaking determine the outcome of the Battle of Midway in June 1942?*” The battle is deemed a crucial engagement in the war in the Pacific, however, Midway was not a forgone conclusion, as the US were outnumbered by a more experienced Japanese force.

The Battle of Midway, by Craig L. Symonds, was published in 2011 and is a key source as it provides a detailed description of how the battle of Midway developed, as well as in depth analysis of key events. *Fading Victory*, by Admiral Matome Ugaki, was published in 2008 and is relevant to the topic it is the diary and eyewitness perspective of a Japanese Admiral during the Battle of Midway.

A value of the origin of *The Battle of Midway* is that the author, Symonds, is an emeritus Professor of History at the US Naval Academy.¹ Furthermore, Symonds benefitted from hindsight and access to declassified US military documents.² A value of the purpose is that the book was written for educational purposes and may attempt to create an objective account of the battle. A value of the content is that it contains great depth of detail often omitted in other works, and the language used suggests a neutral tone. For example, Symonds describes the Kido Butai as “the most powerful concentration of air power in the world,” a description which is based on numerical figures and uses no connotative words.³ A limitation of the origin is that the author relies predominantly on American sources and accounts,⁴ which suggests a lack of balance in his evidence. Indeed, the content has a great deal of evidence from the US perspective but lacks depth on the Japanese perspective.

A value of the origin of *Fading Victory* is that it is the diary of an eyewitness to events in the battle, and held a senior position in the Japanese navy. A value of the purpose is that it offers potentially honest opinions of its author, thus providing insight into the Japanese perspective. A value of the content is that it includes details of Japanese actions not included in most western accounts. A limitation of the origin is that the diary was written during the battle and therefore the writer cannot assess the impact of events in a broader context. The purpose of the diary was to keep a record of events, however only events experienced and selected by the author would be included. Additionally, the diary only offers insight into the perspective of one of the Japanese Admirals at Midway. A limitation of the content is that the detail has a narrow focus, and may be influenced by Ugaki’s emotional response to the battle.

¹ “Q&A with Author Craig L. Symonds,” *Oxford University Press Blog*, entry posted November 3, 2013, accessed September 9, 2016, <http://blog.oup.com/2013/11/q-and-a-with-author-craig-l-symonds/>.

² Craig L. Symonds, *The Battle of Midway* (New York, NY: Oxford University Press, 2011), 437.

³ Symonds, *The Battle of Midway*, 25.

⁴ Symonds, *The Battle of Midway*, 435-442.

Section 2: Investigation

The Battle of Midway was a pivotal battle in the Second World War, and its result turned the tides of war in the favor of the Americans. The American fleet, led by Chester W. Nimitz, comprised of 26 ships.⁵ Meanwhile, the Japanese fleet, led by Isoroku Yamamoto, consisted of 67 ships.⁶ This essay investigates firstly, the extent to which US intelligence and codebreaking accounted for the US victory, including how superior US technology enhanced their offensive capabilities. Then, the role of effective US leadership, the limitations of the Japanese admirals, and the effect of the Japanese navy's inferior technology in negating the Japanese numerical advantage will be explored.

Codebreaking and intelligence are regarded by many historians as key to the US victory at Midway. Historians Richard Overy and Andrew Roberts support this view, with Overy arguing victory was due to "sound intelligence"⁷ and Roberts similarly claiming that "intelligence was key to American victory at Midway."⁸ Successful codebreaking allowed the Americans to uncover key details of Yamamoto's invasion plan, including a diversionary attack⁹ on the Islands of Attu and Kiska¹⁰ and that Midway was the focus of the invasion.¹¹ On May 9th, the US navy first learned of a potential Japanese offensive in the Central Pacific, but the precise location was unknown.¹² The Americans had intercepted a message using the code "AF" in reference to a target, and suspected it referred to Midway. To test this, an unencrypted message was sent from Midway to Hawaii, and a later intercept confirmed that Midway was the next Japanese target.¹³ This intelligence enabled the US to send three aircraft carriers to Midway in time to fight the Japanese. Furthermore, intelligence regarding the Japanese fleet's course allowed admirals Frank Fletcher and Raymond Spruance to position their carriers on the Japanese fleet's northern flank, meaning they were better positioned to engage the Japanese forces.¹⁴

⁵ Richard Overy, *Why the Allies Won* (London, UK: Pimlico, 2006), 47.

⁶ Overy, *Why the Allies Won*, 47.

⁷ Overy, *Why the Allies Won*, 52.

⁸ Andrew Roberts, *The Storm of War* (London, UK: Penguin Books, 2009), 252.

⁹ Roberts, *The Storm of War*, 256.

¹⁰ Jack Greene, *The Midway Campaign, December 7, 1941-June 6, 1942* (Conshohocken, PA: Combined Books, 1995), 196.

¹¹ John Keegan, *Intelligence in War* (London, UK: Pimlico, 2004), 249.

¹² Jonathan Parshall and Anthony Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Lincoln, NE: Potomac Books, 2007), 92.

¹³ Jeffrey T. Richelson, *A Century of Spies: Intelligence in the Twentieth Century* (New York, NY: Oxford University Press, 1997), 182.

¹⁴ Overy, *Why the Allies Won*, 49.

Technological advantages also played a role in securing US victory. Firstly, a telegraph cable laid from Hawaii to Midway in the early 1900's served as a secure form of communication between the codebreaking team (in Hawaii) and the Navy at Midway.¹⁵ Secondly, the US possessed radar, which was crucial in defending the *Yorktown*. On June 4th, at 11:59, radar detected 30 to 40¹⁶ Japanese bombers headed towards the *Yorktown*, and this prevented the *Yorktown* from being attacked whilst recovering returning US airplanes.¹⁷ Similarly, radar allowed the detection of bombers headed for Midway itself, again allowing airfields to be cleared and fighters to be sent to intercept the Japanese bombers.¹⁸ It was radar that enabled the US to detect 10 enemy ships 500 miles outside Midway on the morning of June 4th.¹⁹ Thus, radar helped to remove the Japanese fleet's element of surprise, and boosted American defensive capabilities. Additionally, US air technology was important as dive-bombers were highly effective and accounted for the destruction of all four Japanese carriers.²⁰ The "dive-bombing" capability made the planes harder to shoot down²¹ and enabled them to drop bombs from a low altitude of 1,500 to 2,000 feet.²² The success of dive-bombers was highlighted by pilot Richard Best's direct hit on the *Akagi*, where a single bomb disabled the carrier on June 4th.²³

However, the leadership of Admirals Nimitz and Spruance was also crucial to US victory. Prior to the engagement, Nimitz positioned the US carriers such that they were close enough to engage the Japanese, while remaining outside Japanese reconnaissance range.²⁴ Upon detection of two enemy carriers, Spruance launched a calculated attack,²⁵ and the US bombers reached the Japanese carriers just as their bombers were rearming and refuelling.²⁶ During this attack, 54 dive-bombers passed

¹⁵ Overy, *Why the Allies Won*, 46.

¹⁶ "The Attack on the Yorktown," United States Navy, last modified March 1, 2003, accessed November 3, 2016, <http://www.ibiblio.org/hyperwar/USN/USN-CN-Midway/USN-CN-Midway-8.html>.

¹⁷ Craig L. Symonds, *The Battle of Midway* (New York, NY: Oxford University Press, 2011), 313.

¹⁸ "The Enemy Attack on Midway," United States Navy, last modified March 1, 2003, accessed May 8, 2016, <http://ibiblio.org/hyperwar/USN/USN-CN-Midway/USN-CN-Midway-5.html>.

¹⁹ "First Contact with the Enemy," United States Navy, last modified February 28, 2003, accessed November 3, 2016, <http://ibiblio.org/hyperwar/USN/USN-CN-Midway/USN-CN-Midway-4.html>.

²⁰ Ronald Andidora, *Iron Admirals: Naval Leadership in the Twentieth Century* (Westport, CT: Greenwood Press, 2000), 107-108.

²¹ Earle Rice, Jr., *The Battle of Midway* (San Diego, CA: Lucent Books, 1996), 54.

²² Craig L. Symonds, *The Battle of Midway* (New York, NY: Oxford University Press, 2011), 52.

²³ David W. Jourdan, *The Search for the Japanese Fleet: USS Nautilus and the Battle of Midway* (Lincoln, NE: Potomac Books, 2015), 154.

²⁴ Richard Overy, *Why the Allies Won* (London, UK: Pimlico, 2006), 47.

²⁵ Andidora, *Iron Admirals: Naval Leadership*, 106.

²⁶ Overy, *Why the Allies Won*, 50.



undetected and then incapacitated the *Kaga*, *Akagi* and *Soryu*²⁷ within a space of 5 minutes.²⁸ Spruance further demonstrated his strategic prowess in withdrawing his forces to avoid a night engagement. This was crucial, as the US fleet would have lost in a direct surface battle, due to being outnumbered. Yamamoto had indeed intended to attack at night, and thus the retreat “saved” the US fleet.²⁹ Ronald Andidora, an independent researcher, attributes the US victory to “the balanced and decisive leadership of Admiral Spruance.”³⁰ Nevertheless, historian John Keegan argues that “contingencies and chance were critical determinants of the victory.”³¹ Firstly, Keegan points out that the dive-bombers which destroyed the carriers only located the enemy because they spotted the *Arashi* (a Japanese destroyer) returning from a failed mission to sink the *Nautilus* (an American submarine) and followed it back to the Kido Butai.³² Secondly, the Zeroes were unable to intercept the dive-bombers because they were at too low of an altitude, after having engaged US torpedo-bombers.³³ Had the dive-bombing squadrons not been “lucky,” the Japanese carriers may have remained unscathed.

Nevertheless the US victory at Midway could be attributed to the limitations of the Japanese forces. Admiral Nagumo made many miscalculations during the battle, the most significant of which was hesitation when informed of the presence of American carriers at 08:20.³⁴ Nagumo did not make his decision to attack until 08:35, by which time US planes had already been flying for half an hour.³⁵ Nagumo further delayed to rearm the planes used for the attack on Midway with torpedoes,³⁶ and did not immediately send out the reserve torpedo-bombers.³⁷ This resulted in US dive-bombers bombing an airfield covered in plane fuel and ammunition.³⁸ Another error made by Nagumo was poor conduct of air reconnaissance, resulting in the discovery of American carriers coming too late.³⁹ Nagumo sent

²⁷ Overy, *Why the Allies Won*, 50.

²⁸ Symonds, *The Battle of Midway*, 301-306.

²⁹ Andidora, *Iron Admirals: Naval Leadership*, 108.

³⁰ Andidora, *Iron Admirals: Naval Leadership*, 110.

³¹ John Keegan, *Intelligence in War* (London, UK: Pimlico, 2004), 250.

³² Keegan, *Intelligence in War*, 251.

³³ John Keegan, *Intelligence in War* (London, UK: Pimlico, 2004), 251.

³⁴ Craig L. Symonds, *The Battle of Midway* (New York, NY: Oxford University Press, 2011), 243

³⁵ Symonds, *The Battle of Midway*, 244.

³⁶ Andrew Roberts, *The Storm of War* (London, UK: Penguin Books, 2009), 253.

³⁷ Roberts, *The Storm of War*, 254.

³⁸ Richard Overy, *Why the Allies Won* (London, UK: Pimlico, 2006), 50.

³⁹ Max Hastings, *All Hell Let Loose* (London, UK: Harper Press, 2011), 247.

out a single-phase search with only seven planes, and the two planes covering the area containing US forces took off late.⁴⁰ This was likely due to Nagumo's assumption that the US was focusing on diversionary attacks at Attu and Kiska.⁴¹ Furthermore he continued to follow the premise that the US had no carriers despite Admiral Kusaka's warning to the contrary.⁴² Finally, although Yamamoto had declared that the priority was to sink the American fleet, Nagumo failed to coherently focus on this objective.⁴³

Additionally, Admiral Yamamoto made several key errors. Firstly, his invasion plan ignored the possibility that the US was aware of their approach.⁴⁴ Yamamoto's plan also split the force into three sections, which were too far apart to support each other effectively.⁴⁵ Furthermore, Yamamoto calculated that US carriers would not arrive until after the invasion had begun, and only began surveillance on June 3rd, after the American fleet had arrived.⁴⁶

Overconfidence was also a reason for the Japanese defeat. Firstly, the Japanese expected to have the element of surprise on their side,⁴⁷ which they did not, and Japanese successes prior to Midway led to a lack of caution and careful reconnaissance.⁴⁸ Furthermore, the plan was drawn up before the Battle of the Coral sea, in which two Japanese carriers were disabled, but was not revised to compensate for these disabled units.⁴⁹ In his journal, Admiral Matome Ugaki argues that overconfidence was a key issue, and stated that "[the Japanese] had become conceited because of past success."⁵⁰

⁴⁰ Ronald Andidora, *Iron Admirals: Naval Leadership in the Twentieth Century* (Westport, CT: Greenwood Press, 2000), 105.

⁴¹ Roberts, *The Storm of War*, 256.

⁴² Earle Rice, Jr., *The Battle of Midway* (San Diego, CA: Lucent Books, 1996), 55.

⁴³ Rice, *The Battle of Midway*, 51.

⁴⁴ Hastings, *All Hell Let Loose*, 244.

⁴⁵ Roberts, *The Storm of War*, 253.

⁴⁶ Jeffrey T. Richelson, *A Century of Spies: Intelligence in the Twentieth Century* (New York, NY: Oxford University Press, 1997), 183.

⁴⁷ Edwin P. Hoyt, *The Last Kamikaze: The Story of Admiral Matome Ugaki* (Westport, CT: Praeger Publishers, 1993), 57.

⁴⁸ Andidora, *Iron Admirals: Naval Leadership*, 110.

⁴⁹ Matome Ugaki, *Fading Victory: The Diary of Admiral Matome Ugaki 1941-1945*, trans. Masataka Chihaya, ed. Donald M. Goldstein and Katherine V. Dillon (Annapolis, MD: Naval Institute Press, 2008), 144.

⁵⁰ Jonathan Parshall and Anthony Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Lincoln, NE: Potomac Books, 2007), 398.

Unlike the US, the Japanese navy suffered from inadequate intelligence, both prior to and during the battle. Japanese codebreakers could not decode US messages,⁵¹ due to which Japanese admirals incorrectly believed the *Yorktown* had been sunk and the *Hornet* and *Enterprise* were in the Solomons.⁵² This severely weakened the Japanese admirals' ability to effectively prepare for the battle. The Japanese also failed to switch the naval code from JN25b to JN25c⁵³ until May 28th, by which time the US had uncovered the plan for Midway.⁵⁴ During the battle, without radar, the Japanese had to rely on lookouts for sighting enemy aircraft.⁵⁵ Consequently, US dive-bombers remained undetected due to cloud cover at 3,000 feet.⁵⁶ Thus, the lack of radar was detrimental to the Kido Butai's defensive capabilities. Moreover, Japanese reconnaissance failed due to a lack of search aircraft and submarines,⁵⁷ a factor that Admiral Ugaki saw as key to the defeat at Midway.⁵⁸

In conclusion, intelligence and codebreaking gave the US the edge, but were not the sole determinants of the outcome of the Battle of Midway. It seems clear that the failures of Admirals Nagumo and Yamamoto, in terms of decision making and overconfidence, played an important role in the Japanese defeat in June 1942. However, US technological advantages and the effective leadership of the US Admirals were more significant than Japanese limitations and ultimately allowed the US to defeat the larger and more experienced Kido Butai.

⁵¹ Richard Overy, *Why the Allies Won* (London, UK: Pimlico, 2006), 46.

⁵² Max Hastings, *All Hell Let Loose* (London, UK: Harper Press, 2011), 244.

⁵³ Jeffrey T. Richelson, *A Century of Spies: Intelligence in the Twentieth Century* (New York, NY: Oxford University Press, 1997), 183.

⁵⁴ Hastings, *All Hell Let Loose*, 244.

⁵⁵ Craig L. Symonds, *The Battle of Midway* (New York, NY: Oxford University Press, 2011), 301.

⁵⁶ Andrew Roberts, *The Storm of War* (London, UK: Penguin Books, 2009), 254.

⁵⁷ Ugaki, *Fading Victory: The Diary*, 139.

⁵⁸ Edwin P. Hoyt, *The Last Kamikaze: The Story of Admiral Matome Ugaki* (Westport, CT: Praeger Publishers, 1993), 60.

Section 3: Reflection

This investigation has given me insight into the challenges faced by historians. Firstly, accessing primary sources specific to the Battle of Midway was difficult, as newspaper articles from the time lacked depth, and primary sources from the Japanese perspective were not readily accessible. The diary of Admiral Ugaki was an important find, however as it had been translated from Japanese to English, I was aware that potential nuances of the language may have been lost. Most of my sources were western historians, and these tended to focus on US strengths rather than Japanese limitations. Thus “Fading Victory” became a significant source for my investigation as it offered a distinct Japanese view on the battle, and the insight of personal experience. The research process revealed the challenge historians face in finding a range of authentic sources to build a balanced perspective that draws on evidence from different perspectives.

I also learned about the “selective” nature of historical research, as I had to select evidence to use in developing my arguments. The perhaps unintentional subjectivity of this selection process may impact the tone of this investigation and was something I had not considered before, for example I focused on finding evidence of the role of code-breaking. Additionally, in researching what the “key factor” was in determining the outcome of Midway, I found that historians often reach different conclusions, even when citing the same sources. Andrew Roberts and John Keegan cite *Very Special Intelligence* by Beesly Patrick,⁵⁹⁶⁰ yet Roberts claimed intelligence was key, whereas Keegan disputed this and argued “chance” and “luck” were more important. Both authors had access to government and military archives and documents declassified after the 50-year-rule yet they drew different conclusions; this suggests challenges maybe the personal context of the historian themselves, and their use *imagination* to develop a coherent account.

A method I used during my research was cross-checking information across multiple sources. When developing my analysis, I would attempt to corroborate evidence and consider the origin and purpose of each source. This revealed an important component of the historians’ methods in regard to finding reliable detailed evidence as I needed to know the exact information the US codebreakers decoded in order to assess the role of intelligence I determining the outcome of the battle.

⁵⁹ Andrew Roberts, *The Storm of War* (London, UK: Penguin Books, 2009), 651.

⁶⁰ John Keegan, *Intelligence in War* (London, UK: Pimlico, 2004), 413.

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Bibliography

Andidora, Ronald. *Iron Admirals: Naval Leadership in the Twentieth Century*. Westport, CT: Greenwood Press, 2000.

"The Attack on the Yorktown." United States Navy. Last modified March 1, 2003. Accessed November 3, 2016. <http://www.ibiblio.org/hyperwar/USN/USN-CN-Midway/USN-CN-Midway-8.html>.

"The Enemy Attack on Midway." United States Navy. Last modified March 1, 2003. Accessed May 8, 2016. <http://ibiblio.org/hyperwar/USN/USN-CN-Midway/USN-CN-Midway-5.html>.

"First Contact with the Enemy." United States Navy. Last modified February 28, 2003. Accessed November 3, 2016. <http://ibiblio.org/hyperwar/USN/USN-CN-Midway/USN-CN-Midway-4.html>.

Greene, Jack. *The Midway Campaign, December 7, 1941-June 6, 1942*. Conshohocken, PA: Combined Books, 1995.

Hastings, Max. *All Hell Let Loose*. London, UK: Harper Press, 2011.

Hoyt, Edwin P. *The Last Kamikaze: The Story of Admiral Matome Ugaki*. Westport, CT: Praeger Publishers, 1993.

Jourdan, David W. *The Search for the Japanese Fleet: USS Nautilus and the Battle of Midway*. Lincoln, NE: Potomac Books, 2015.

Keegan, John. *Intelligence in War*. London, UK: Pimlico, 2004.



Overy, Richard. *Why the Allies Won*. London, UK: Pimlico, 2006.

Parshall, Jonathan, and Anthony Tully. *Shattered Sword: The Untold Story of the Battle of Midway*. Lincoln, NE: Potomac Books, 2007.

"Q&A with Author Craig L. Symonds." *Oxford University Press Blog*. Entry posted November 3, 2013. Accessed September 9, 2016. <http://blog.oup.com/2013/11/q-and-a-with-author-craig-l-symonds/>.

Rice, Earle, Jr. *The Battle of Midway*. San Diego, CA: Lucent Books, 1996.

Richelson, Jeffrey T. *A Century of Spies: Intelligence in the Twentieth Century*. New York, NY: Oxford University Press, 1997.

Roberts, Andrew. *The Storm of War*. London, UK: Penguin Books, 2009.

Symonds, Craig L. *The Battle of Midway*. New York, NY: Oxford University Press, 2011.

Ugaki, Matome. *Fading Victory: The Diary of Admiral Matome Ugaki 1941-1945*. Translated by Masataka Chihaya. Edited by Donald M. Goldstein and Katherine V. Dillon. Annapolis, MD: Naval Institute Press, 2008.