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OPERATIONAL INTELLIGENCE AT THE BATTLE OF MIDWAY

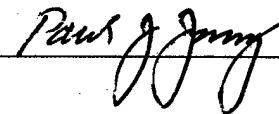
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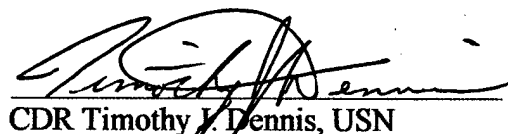
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The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Four main lessons about operational intelligence emerge as a function of operational art:

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The proper, insightful and confident use of fused, finished operational intelligence allowed Admiral Nimitz to extract unambiguous indications of enemy intent and develop an operational plan that capitalized on own force strength and critical enemy weaknesses. In the end, the skillful and effective use of operational art proved that a numerically inferior force can, under enlightened leadership, defeat an otherwise superior foe. It is an enduring lesson that stands the test of time.

OPERATIONAL INTELLIGENCE AT THE BATTLE OF MIDWAY

The operational commander applies operational art to the planning and execution of a campaign or major operation by synchronizing many operational functions. The Battle of Midway showcased the application of operational intelligence—particularly that embodied by code breaking—as a function of operational art. Planning and execution for the Midway operation required fusion of strategic, operational and tactical intelligence by the commanders involved; most notably Admiral Chester Nimitz. Nimitz's skillful and effective use of operational intelligence has provided an enduring lesson that has stood the test of time.

Operational Intelligence Defined¹

In order to discuss the application of intelligence as operational art at the Battle of Midway, one must first understand just what operational intelligence is. Simply stated, operational intelligence is concerned with information required to plan major operations or campaigns. Far from completely distinct in relation to the other two levels of war, operational intelligence is closely intertwined with its strategic and tactical counterparts. In fact, they are often mutually dependent. As a result, operational intelligence is, more often than not, a composite of strategic and tactical intelligence.

Operational intelligence does, however, hold unique ground of its own. In contrast to tactical intelligence, it focuses on collection, identification, location and analysis of the enemy's critical factors—including his strategic and operational centers of gravity. It is used to protect one's own center of gravity, unmask an enemy's deception, and protect one's own plans and intentions from enemy interception. Operational intelligence should also provide adequate indications and warning of potential hostile action focusing both on qualitative and quantitative

differences in the enemy forces over time—information critically important for the operational commander's ability to plan, prepare and execute a major operation or campaign.

In continued contrast to tactical intelligence, which focuses largely on measurable factors, operational intelligence must deal with intangible factors such as morale, discipline, and combat readiness. Patterns of major force employment and the personalities/peculiarities in the command style of enemy operational commanders must also be considered. Finally, operational intelligence must foresee events for several weeks or even months ahead. While a tactical commander can adjust his course of action relatively quickly to unanticipated changes in the battle situation, the operational commander cannot change the employment of his own forces once a major operation or campaign is underway without major problems and high risks.

Code Breaking as the Strategic and Operational Centerpiece

To be effective, operational intelligence requires the existence, in peacetime, of a theater-wide system for collecting, processing, evaluating and disseminating intelligence information to the operational commander. Without its existence in peacetime, the intelligence system contribution in war will almost certainly be a critical weakness. Numerous methods of producing intelligence have been practiced throughout history and are as relevant today as ever before. It is safe to assume that the synergistic fusion of multiple methods from multiple sources will produce the clearest picture of the real or potential battlefield. Dependent on the situation though, one particular method may dominate. During World War II, the intentional intercept of enemy communications (referred to as radio intelligence then, and more broadly as signals intelligence today) is such an example. Though certainly not an end unto itself, code breaking—a process closely associated with radio intelligence—was an integral part of the theater-wide intelligence system; a part that would play a predominant role in the planning, preparation and

execution of the Midway operation. Prior to World War II, the principal source of intelligence on the Japanese navy was the intercept of their radio traffic made by a network of listening posts and then processed in three cryptanalysis centers. American insight into the Japanese navy was further strengthened by information garnered through attachés and spies. Radio intelligence, however, remained the principal source throughout the war.

The Navy's Combat Intelligence Unit at Pearl Harbor was the nerve center for code breaking activity. Known as Station "Hypo", it listened to Japanese radio traffic along with its sister sites "Cast" in the Philippines (first in Cavite and later in Corregidor; Cast was replaced by Station Belconnen—a site in Melbourne, Australia after the fall of the Philippines), and "Negat" in Washington, DC. They intercepted enemy radio communications, analyzed traffic, located and tracked transmitters, and decoded messages through cryptanalysis. The three stations generally operated as a unit; sharing insights, breakthroughs and recoveries related to the top Japanese naval code: JN-25. In the Pacific area, the system included subsidiary receiving stations with high-frequency direction finders. These stations were situated in a great arc from Dutch Harbor in the Aleutians, through Hawaii, to the Philippines. They listened continually, pinpointed transmitters, and reported directly to Station Hypo. The actual process of code breaking rarely yielded more than 10-15 percent of a message. Detailed analysis conducted by men who had worked together for years and understood their target both inside and out produced the rest. These men were often described as sailors, linguists and puzzle fiends all wrapped up in one. Often, the name of a particular ship suggested that another ship was in company with it. Place names from a previous operation would surface again in a subsequent transmission. Most often, a familiar operator's touch would give the source away; the unit's call letters could

change, but the operator's "fist"—as unique as a fingerprint to a trained ear—would never change.²

The fruits of code breaking served not only operational level commanders, but strategic and tactical commanders as well. The strategic value of code breaking and the tactical utility that can come from it was clearly seen in 1936 when radio intercepts of the post-modernization trials of the Japanese battleship NAGATO revealed that the rehabilitated World War I dreadnought had made better than 26 knots with her rebuilt turbines—an increase of 2 ½ knots over others in her ship class. As a result, the design specification of our NORTH CAROLINA-class battleships was changed from a top speed of 24 knots to one of 27 knots. That single piece of strategic intelligence would ultimately give our new battleships a one-knot superiority over their Japanese opponents—an important wartime tactical advantage.³

Giving credence to the belief that strategic and operational intelligence are intertwined and mutually dependent, in April, 1942, with the Japanese clearly on the offensive and directly on the heels of a Japanese raid in Ceylon, Admiral Ernest King, Commander in Chief, U.S. Fleet (CominCh), communicated directly with Commander Joseph J. Rochefort, Jr., commander of station "Hypo." King wanted a long range estimate of Japanese naval intentions based on the current flow of radio intercepts. Rochefort's response stated: 1) Japanese operations in the Indian Ocean were over; the fleet was on its way home, 2) they weren't going to attack Australia, 3) an operation south of Rabaul was being planned, and 4) signs of something else were brewing in the Pacific.⁴ His conclusions—serving both the strategic commander (King) and the operational commander (Nimitz)—were remarkably accurate. The "something else" turned out to be Midway.

Convincing the Operational Commander

The value placed on intelligence has varied greatly throughout history. Historians can point to Clausewitz and Sun Tsu to draw drastically different conclusions. When all is said and done, the ultimate value of intelligence will likely be proportional to the operational commander's confidence that it will have a positive impact on his unique situation. To be effective, operational intelligence must be believed and espoused by the operational commander and his staff. It must compete with the preconceived ideas (good and bad) of its users. To compound matters, because of its composite strategic/operational/tactical nature, many elements of the intelligence system will not be under the operational commander's immediate or indirect control. It is therefore not uncommon for commanders and staffs to misapply previous experience or ignore valuable intelligence.⁵

In Admiral Nimitz's case, his first impression with the code breaking aspect of operational intelligence was not a good one. Shortly after his arrival at Pearl Harbor, he inspected Station Hypo. He had shown polite interest, asked a few questions, and departed. He was not impressed. If the radio intelligence units could do what they were set up to do and do it efficiently, why had they not warned of the impending attack on Pearl Harbor?⁶ The outwardly disheveled appearance of Rochefort's crew certainly would not have helped sway the admiral's opinion. Nimitz's own preconceived idea of an intelligence failure would have to be won over. That was the task confronting Commander Edwin Layton, the Pacific Fleet intelligence officer.

From their first meeting, Layton, a holdover from Admiral Kimmel's staff, began to impress Nimitz with both his detailed knowledge of the location and movements of Japanese naval forces and a remarkable understanding of Japanese psychology. Nimitz had been prophetic when, having been asked by Layton for transfer to a sea billet, replied, "You can kill

more Japs here than you could ever kill in command of a destroyer flotilla.”⁷ Using decrypted messages when preparing his daily intelligence brief for Nimitz, Layton continued to accurately predict enemy moves, gained yet more of the admiral’s confidence, and, together with Rochefort, was able to overcome the admiral’s preconceived notion of Station Hypo. By April, 1942, four months after his arrival as Commander-in-Chief Pacific (CincPac), Nimitz had come to trust the radio intelligence and became very cooperative and understanding. Nimitz was a “thinking leader, a real intellectual”, who comprehended the intelligence mentality. Having come to appreciate the value of Hypo’s work, he insisted that Rochefort have complete freedom to carry on his essential, if off-beat activity. “You are supposed to tell us what the Japanese are going to do,” he told Rochefort, “and I will then decide whether it is good or bad and act accordingly.”⁸ In fact, by the onset of the Battle of the Coral Sea, Nimitz viewed Station Hypo’s product as so essential that he made a request to CominCh that Rochefort’s team concentrate on reading “today’s traffic today while it is of value to forces afloat” while Station Negat’s cryptanalysts in Washington “undertake code recovery on back traffic.” King concurred. Subsequently, Rochefort and Hypo’s accuracy at predicting and monitoring of the events at the Coral Sea persuaded Nimitz to trust Rochefort over and above the often conflicting assessments being made by naval intelligence in Washington—a confidence critical to success at Midway.⁹

The trust Nimitz developed in Layton and Rochefort was instrumental to his ability to use intelligence in his operational planning. The value put on operational intelligence in the Pacific had come a long way in the past fifteen months. Had Nimitz conducted “business as usual” upon his arrival, the information gleaned by Hypo may never have even come into play. Indicative of the sad state of operational intelligence immediately preceding World War II, when Layton reported aboard the Pacific Fleet flagship in December, 1940, the fleet had never had a full-time

intelligence officer. The job had always been assigned as an additional duty to a member of the staff. To Layton's astonishment, he found that the safe placed into the bulkhead of battleship PENNSYLVANIA to house the fleet's most secret documents contained just eighteen file folders; most of them empty. Next to newspaper clippings from the 1920's on South Africa and three military dossiers about France (totally unrelated to the Pacific) was a single monograph giving only the broadest of generalities about the Japanese navy. Layton, who served two tours in Japan—three years of language study from 1929 to 1932 and as assistant naval attaché from 1937 to 1939—was personally aware of numerous intelligence reports that would have shed significant light on Japanese capabilities. To find such an austere compilation of intelligence on the flagship shed a poor light on the existing status of intelligence integration within the operating forces.¹⁰

Nimitz, however, understood and appreciated the operational intelligence perspective. In addition to his daily 0800 intelligence brief, he encouraged Layton to go to his office at any time with new bits of information on a priority basis—the only member of his staff, aside from the flag secretary, afforded that privilege. Nimitz clearly demonstrated an appreciation that operational intelligence was essential to sound decision making when he told Layton:

“I want you to be the Admiral Nagumo of my staff. I want your every thought, every instinct as you believe Admiral Nagumo might have them. You are to see the war, their operations, their aims, from the Japanese viewpoint and keep me advised what you are thinking about, what you are doing, and what purpose, what strategy, motivates your operations. If you can do this, you will give me the kind of information needed to win this war.”¹¹

Through this task, Nimitz demonstrated that the personalities and peculiarities in the command style of his enemy counterpart would figure into his own decision making.

Of note, though he was not an operational commander, Admiral King too appreciated the value of American code breaking operations; and also the dire consequences of what the compromise of code breaking activities would cause. As the Japanese closed in on American forces in the Philippines, he personally ordered the evacuation of Station Cast lest capture and subsequent torture reveal the secrets of American radio intelligence exploitation.¹²

Employing Operational Intelligence to Conceive the Plan

Planning for the Midway operation began long before the actual event and showed the direct influence of operational intelligence. Armed with Rochefort's estimate of upcoming Japanese operations in the vicinity of New Guinea/Rabaul and later in the Pacific Ocean, Nimitz thought it unlikely that the Japanese would bypass Midway, the westernmost fortified U.S. outpost in the central Pacific. Prior to action in the Coral Sea, he understood that he could not risk such losses in defending New Guinea that he would be helpless to counter the later Pacific Ocean offensive. If the Japanese would act as Rochefort was predicting, they would either have to seize or bypass Midway—and thus far the Japanese had shown no tendency to bypass strong points.¹³ Reviewing the patterns of enemy force employment is a key tenet of operational intelligence. If the central Pacific was a Japanese objective, then seizing Midway was a likely course of action.

Piecing together a “code within a code” (the infamous AF equating to Midway), Rochefort's Combat Intelligence Unit concluded that Midway was indeed the probable target and began publishing estimates stressing it as such.¹⁴ By mid-May, Nimitz had assumed for planning purposes that the Japanese would attack Midway and that this blow would be preceded by a secondary attack on the Aleutians.¹⁵

Many high ranking decision makers were not convinced. In fact, since the same intercepts used to conclude Midway was the target also referred to Aleutian area targets, many officers believed either Hawaii or the West Coast was the real objective.¹⁶ The Army Air Force was expecting a raid on San Francisco and General Delos Emmons, head of the Hawaii Department, went so far as to provide an elementary lesson in intelligence procedures, stating that it would be more prudent to plan on the basis of everything the enemy was *capable* of doing rather than basing an estimate on the enemy's probable *intentions*. In response to Emmons' warning, Nimitz assigned one of his staff officers, CAPT James Steele, to reassess the findings of fleet intelligence by challenging every bit of information put forward by Layton, Rochefort, and their assistants.¹⁷ Whether or not Nimitz's task to Steele is viewed as placating Emmons (probable) or as a final confirmation of his trust in the code breakers' estimate is immaterial. In doing so, Nimitz quite rightly allowed room to challenge legitimate differences in interpretation.

What Nimitz did not do, and had no intention of doing, was to diffuse his efforts and scatter his limited forces trying to defend every conceivable Japanese attack. The situation was desperate and he knew it.¹⁸ After Coral Sea, it was evident that Japan was concentrating her fleet for movements of major importance against the Aleutians and Midway. Station Cast revealed that the Japanese had canceled their plan to take Port Moresby in New Guinea by amphibious assault. To Nimitz, that meant practically every Japanese warship, including all the carriers, would be available for the attack on Midway. Station Hypo pieced together a remarkably complete intelligence estimate indicating that the Midway expedition was composed of a striking force centered around four front-line carriers, a support force and an occupation force. The accuracy of this intelligence estimate was essential to operational planning since U.S. forces were not only inferior in number, but also tired, hurt, and potentially late in arriving.

(LEXINGTON had been sunk, YORKTOWN badly damaged; remainders of the air groups urgently required reorganization and rest.) In Nimitz's own words: "It was evident, if estimates of the enemy's strength and intentions were true, that the situation was most serious."¹⁹

Eleven days short of the eventual engagement, Rochefort reported an immense breakthrough—they had intercepted and broken 80-85% of the Combined Fleet operation order. Not only were they now aware of Japan's broad intention for her Combined Fleet, but the Combat Intelligence Unit had broken the date-time cipher to the point where they could predict that enemy operations would begin against the Aleutians on 3 June and against Midway on 4 June. But, rather than convincing the skeptics at CincPac headquarters, the precise details of this intercept only deepened the skeptics' suspicions. Rhetorical questions abounded. Why would the whole Combined Fleet be assigned to capture one tiny Central Pacific atoll and a couple of useless islands in the Aleutians? Where these messages fakes, intended to deceive? Why would Japan transmit such critically sensitive information on radio in the first place? Even with the securest of codes, this type of information would not normally be sent via radio where it could be recorded, scrutinized and perhaps cryptanalyzed.²⁰ In the minds of those yet unconvinced, the potentially disastrous problem of "mirror imaging" was real.

To Nimitz's credit, he pointed out that the Japanese could be operating in strength in order to meet any American opposition or that their main objective might even be to draw out the inferior U.S. Pacific Fleet and destroy it (classic Mahanian strategy). Transmission by radio could also mean that the Japanese were operating on so tight a schedule that they couldn't get orders distributed in time by any other means. As a final check, he tasked Layton to review all the data he had from radio intercept and from all other sources to derive as precise a forecast of the coming attack as was possible. Nimitz reminded him: "I want you to be specific. After all,

that is the job I have given you—to be the admiral commanding the Japanese forces and tell us what you’re going to do.” The precision with which Layton responded: “...the carriers will probably attack Midway on the morning of the 4th of June... they’ll come in from the northwest on bearing of 325 degrees and they will be sighted at about 175 miles from Midway, and the time will be about 0600 Midway time”, and the belief that our code breaking successes were unknown to the Japanese, convinced Nimitz to base his plans on the assumption that the intelligence estimates were correct.²¹

In the end, Nimitz chose the exception to the implied rule: when deciding to plan against either capabilities or intentions, rely on enemy intentions only when you possess absolutely reliable information. Reliance on intentions is always risky since operational intelligence—more so than either strategic or tactical intelligence—is very susceptible to deception. Had the Japanese been aware that we were reading their encrypted traffic and used that knowledge to deceive and ambush the U.S. Pacific Fleet, the outcome at Midway would certainly have been very different.

Fusing the Pieces to Execute the Plan

Nimitz knew that carrier-borne air power was the decisive naval weapon in the vast Pacific theater and that the Japanese navy’s operational center of gravity was their carrier force.²² Using the insight gleaned from intercept of the operations order, it was clear to Nimitz that in Japanese disposition of forces, the crucial elements were Nagumo’s four carriers. Without the carriers, Nagumo could not knock out Midway’s ground and air defenses, nor could he provide a concentration of air power great enough to cover the other components of his fleet. Nimitz knew he would have to plan to destroy the Japanese carriers.²³

Execution of the Midway operation was dependent on a plan that took into account the critical factors affecting both his own and the enemy forces. Fusion of strategic and operational intelligence had gotten him to the brink of the battle; continued fusion of operational and tactical intelligence would allow him to place his own forces into the advantageous position he so desperately needed. From there, the tactical proficiency of his subordinate commanders would win or lose the battle.

Admiral Raymond Spruance was a first rate organizer and strategist who Nimitz was confident would calculate coolly under stress. Pressed into command of Task Force 16 when it's normal commander, Admiral William Halsey was taken ill, he saw at once the advantage of placing his force on Nagumo's flank and the possibility of attacking the Japanese carriers while their planes were raiding Midway. Spruance also made the prudent observation that the U.S. carrier forces should not proceed west of Midway in search of the enemy before the enemy carriers were substantially disabled. If they did, the Japanese might alter their plans and head for Pearl Harbor—leaving American forces bypassed and unable to intervene.²⁴

By acting on the operational intelligence available to them, the combined assets of Task Forces 16 and 17 (commanded by Rear Admiral Frank Jack Fletcher) could achieve surprise and catch the enemy carriers in a vulnerable state. Assuming the Japanese Striking Force would begin launching toward Midway at dawn, the U.S. task forces would launch a strike at the carriers upon first report of enemy location, course, and speed from U.S. search planes. With good timing and good luck, they would catch the Japanese carriers with half their planes away attacking Midway. With better luck and better timing, they might catch the enemy carriers while they were recovering the Midway attack group—or even better yet, while rearming and refueling the recovered planes.²⁵

The U.S. would need every carrier it had to engage the superior Japanese forces, but unfortunately, after Coral Sea, LEXINGTON had been sunk and YORKTOWN was badly damaged. Arriving at Pearl Harbor on 27 May, the estimated repair time for YORKTOWN was 90 days. Armed with a precise timetable of Japanese intentions though, Nimitz was able to accurately bound the repair time available. Since it only needed to be battleworthy in order to participate in the Midway operation, Herculean efforts over three days would prove to be just enough.²⁶

Armed with the knowledge from radio intercept that Japanese sea planes and submarines were enroute to scout Pearl Harbor, Nimitz pre-stationed a vessel in the lagoon at French Frigate Shoals. Since sea planes could not complete the long flight from the Marshall Islands to Hawaii without refueling from tanker-submarines, failure to establish the rendezvous point at French Frigate Shoals meant the sea planes never got to their destination. By the time the subs reached Pearl Harbor, Task Forces 16 and 17 had already departed. Complementing the operational intelligence held on enemy forces and neutralization of the aerial reconnaissance threat to Pearl Harbor, Nimitz issued a deception plan to confuse the Japanese. He instructed a U.S. cruiser in the Coral Sea and a seaplane tender in the New Hebrides to begin broadcasting on frequencies normally assigned to carrier air groups. Nimitz was sure that Japanese listening stations would pick up the transmissions and hoped they would be deceived into believing that U.S. carriers were still operating off the Solomons. If so, the Combined Fleet might be lulled into overconfidence as they approached Midway believing that no U.S. carriers would be in the area.²⁷

Intelligence, surveillance and reconnaissance (ISR) were closely intertwined. Long-range reconnaissance is often the trigger that commences hostilities. Nimitz considered it "most

important that the enemy be discovered at a distance and promptly attacked.”²⁸ He was never comfortable with the number of reconnaissance assets available and feared having his own striking force decimated prior to landing a decisive blow on the enemy. As a result, he stationed 13 submarines on the 200 and 150 mile circles covering the predicted western and northern approach axes to Midway. All submarines that could reach the Oahu/Midway area were employed—at the cost of ceasing offensive operations. Along with the submarines, daily air searches were conducted to a distance of 700 miles within the expected threat axis.²⁹

The first piece of tactical intelligence that reflected successful planning for the Midway operation was received at 0700, 3 June from a Midway-based PBY reconnaissance plane: “Main body... bearing 262, distance 700 miles... eleven ships, course 090, speed 19 knots.” The invasion force had been spotted exactly where expected. Exercising his command and control responsibilities as operational commander and to avoid any chance that Fletcher and Spruance would be confused, Nimitz immediately sent them an urgent dispatch: “Main body... that is not, repeat not, the enemy striking force.”³⁰

The following morning, in anticipation of locating the enemy strike force, Fletcher’s scouts flew off to the west to concentrate their search for the Japanese in the area northwest of Midway that the CincPac operations order had predicted they’d be. The same patch of water was also being scoured by patrol planes from Midway. At 0545, initial contact was made with Nagumo’s carrier strike force.³¹ Throughout the course of that day and, to a lesser extent, over the next two days, the most pivotal battle in the Pacific theater of war was fought in the waters off Midway.

What Did the Japanese Do Differently?

The Japanese were guilty of the worst sort of intelligence estimate mistakes—script writing. As plans for the invasion and capture of Midway progressed, the Japanese were so confident of total victory and so certain of America's response to their challenge that when the actual battle occurred, the American course of action caught them totally by surprise. Immediately preceding launch of the operation, Imperial General Order No. 94 had stated flatly: "We will destroy the enemy fleet which will appear when our operation is underway." Admiral Nagumo's own intelligence estimate of the situation declared: "The enemy is not aware of our plans."³²

Of note, it wasn't until after the loss at Midway that Admiral Yamamoto appointed the first full-time intelligence specialist to the staff of the Japanese Combined Fleet. Up to that point, he relied on estimates made by commanders on the spot.³³

Lessons Learned

"Intelligence is a perishable commodity. Battle are won and lost and campaigns decided often on the basis of which side is most proficient in the use of intelligence—that is, the acquisition, evaluation, *and* dissemination of military information in time for commanders to act upon it. No matter how accurate the information, it is militarily useless if it is not *made available* soon enough for command decisions."³⁴

If the Battle of Midway is remembered solely as the pivotal naval engagement of World War II where the tide of strategic momentum changed, then a great opportunity has been squandered. Four main lessons about operational intelligence emerge as a function of operational art:

- 1) To be effective, operational intelligence requires the existence, in peacetime, of a theater-wide system for collecting, processing, evaluating and disseminating intelligence information to the operational commander. Without Station Hypo and its sister sites already

established as nerve centers for cryptanalytic attack with a system of subsidiary receiving stations to feed them raw intercept, the secrets of JN-25 may never have been broken and a superior Japanese naval force may have imposed its will on an alliance focused on the war in Europe.

2) Integration of strategic/operational/tactical level intelligence is key to victory. The “granularity” of strategic and operational intelligence seldom, if ever, paints a picture as clear as tactical “eyeballs on the target”. Even with the foreknowledge of enemy intent produced by analysis of strategic and operational information, the potential for decisive engagement can be squandered if the enemy is not located early and promptly attacked. Particularly with today’s dependence on synergistic national, theater, and organic level ISR systems to provide indications and warning, tactical surprise remains the great leveler of quantitative and qualitative differences in opposing forces at the decisive point in time.

3) Operational planning based on enemy intent rather than enemy capability treads on dangerous ground. Nimitz based his planning on intent for two distinct reasons: first, he was confident the information was absolutely reliable; and second, because the situation was desperate. Considering his limited forces, by defending against every conceivable Japanese attack, he defended nothing. Reliance on intentions brings with it susceptibility to deception. The operational commander must be certain that the potential gain outweighs the risk.

4) The operational commander must have vision to see where intelligence can help his decision-making. Though it is often technologically dependent, intelligence is not science and it is seldom certain. Occasions will arise when no independent backup confirmation is available, yet the consequences of an estimate can be profound. At times like these, the trust and loyalty developed between an operational commander and his intelligence team will be tested.

Conclusion

Is today's operational environment any different? Certainly the numerous technological innovations of the past 50-plus years have brought newer, faster and more capable means of collection, processing, analysis and reporting. But when viewing operational intelligence as a critical function, the concepts persevere. As Layton reminds us, "Information can be acquired and evaluated until hell freezes over, but it does not become intelligence until delivered to the commanders who can make proper use of it."³⁵ It is then, and only then, when finished intelligence is in the hands of the operational commander—a commander that understands it and knows how to employ it as a critical part of his decision-making process—that operational art is demonstrated.

The victory obtained by the United States at Midway was truly the turning point of war in the Pacific. With the loss of Japan's four finest front-line carriers, initiative and momentum had been transferred to the Americans; Japan would fight the remainder of the war on the strategic and operational defensive. Code breaking at the operational and strategic level, combined with operational deception and tactical reconnaissance had proven a critical enabler. The proper, insightful and confident use of fused, finished operational intelligence allowed Admiral Nimitz to extract unambiguous indications of enemy intent and develop an operational plan that capitalized on own force strength and critical enemy weaknesses. In the end, the skillful and effective use of operational art proved that a numerically inferior force can, under enlightened leadership, defeat an otherwise superior foe. It is an enduring lesson that stands the test of time.

NOTES

¹ Milan Vego, "On Operational Art (2nd Draft)," (Collection of Articles and Notes, U.S. Naval War College, Newport, RI: 1998), 161-163.

² Walter Lord, Incredible Victory (New York: Harper & Row, 1967), 18 and E.B. Potter, Nimitz, (Annapolis: U.S. Naval Institute Press, 1976), 63. [Lord refers to the Combat Intelligence Unit in the Philippines as "Cash" (vice "Cast")] Potter locates it at Corregidor (vice Cavite)] [In the interest of security, Hypo's official designation was changed from "Communications" to "Combat" Intelligence Unit in 1941.]

³ Edwin Layton, Roger Pineau and John Costello., "And I Was There", (New York: William Morrow and Company, 1985), 58.

⁴ Lord, 18-19 and Potter, 66. [Potter more specifically describes response #3 as an operation to seize the eastern end of New Guinea and #4 as a much bigger follow-on operation in the Pacific involving most of the Combined Fleet]

⁵ Vego, 164.

⁶ Potter, 64.

⁷ Layton, 354.

⁸ Gordon Prange, Miracle at Midway, (New York: McGraw-Hill, 1982), 20 and Layton, p.354 and Potter, p.65. [Layton later belied Nimitz's skepticism about the Pearl Harbor attack by explaining that if the Japanese confided anything about the attack to radio, they had used no code the Americans had broken and, additionally, the Nagumo force had kept complete radio silence.]

⁹ Layton, 394, 405.

¹⁰ Ibid. 38, 66.

¹¹ Ibid. 357.

¹² Ibid, 379.

¹³ Potter, 66-67, 78.

¹⁴ Lord, 20-21.

¹⁵ Potter, 79.

¹⁶ Lord, 20-21.

¹⁷ Potter, 79-80. [author's emphasis added]

¹⁸ Ibid. 80.

¹⁹ U.S. Office of the Chief of Naval Operations, Battle Experience from Pearl Harbor to Midway, Information Bulletin No. 1 (Washington, DC: February 15, 1943), 8-1 and Potter, 81.

²⁰ Potter, 83.

²¹ Ibid.

²² Layton, 391.

²³ Potter, 83.

²⁴ Ibid. 84-85.

²⁵ Potter, 87.

²⁶ Ibid, 85.

²⁷ Potter, 88 and Layton, 433.

²⁸ Battle Experience, 8-2.

²⁹ Ibid. 8-2, 8-3.

³⁰ RG 181: Com14 Midway battle dispatches, quoted in Layton, 436.

³¹ Layton, 437-438.

³² Lord, 15.

³³ Layton, 361.

³⁴ Ibid. 22. [emphasis in the original]

³⁵ Ibid. 55.

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