

Advice for New Analysts

Intelligence Lessons From Pearl Harbor (U)

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In early August 2000, the Sherman Kent School for Intelligence Analysis took [redacted] new analysts in the pilot running of its [redacted] (b)(3)(c) Career Analyst Program (CAP) to a little-known location in Hawaii, known locally as Kahuku Point. The visit was part of a weeklong TDY by the class that included meetings with a number of Pacific Area Command (PACOM) personnel, including the CINC, Admiral Blair, [redacted] (b)(3)(c) [redacted]. The purpose of the trip was to give new analysts the opportunity to learn firsthand about how US military commands perform their missions; what command intelligence needs are; how the Agency provides support to the military; how [redacted]

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[redacted] Directorate of Intelligence (DI) officers play a key role in support for military operations; and how technical collection and communication sites are critical to intelligence analysis. It also allowed them to visit places of significance in the history of intelligence. (U)

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Opana is important in the history of American technology and in the history of US intelligence. The site is listed in Hawaii's State Register of Historical Places, the National Register of Historical Places, and it has been designated a National Historic Landmark. On 23 February 2000, a plaque was dedicated at the nearby Turtle Bay resort identifying Opana as the site of an electrical engineering milestone. It then joined a select list of milestones similarly recognized by the 350,000-member American Institute of Electrical and Electronic Engineers that includes Volta's electrical battery invented in 1799; the 1861 transcontinental telegraph; Hidetsugu Yagi's short antenna invented in 1924; and the first wearable car-

diac pacemaker developed in 1957-58. (U)

On 7 December 1941, Opana became the first place where the United States used radar successfully to detect and track unknown aircraft. At 0702 on that day, two privates in the the US Army Signal Corps manning the new, mobile SCR-270B radar spotted 183 aircraft some 137 miles north of Oahu—the extreme range of the infant radar. The planes had just taken off from six Japanese aircraft carriers; 53 minutes later, they began the attack on Pearl Harbor. (U)

Anyone only generally familiar with the well-documented history of the attack on Pearl Harbor knows that the inability of the Opana radar to provide an alert that Sunday morning cannot be singled out as the most important intelligence failure. There were other earlier occasions, arguably more significant, when American vigilance was inadequate. Nonetheless, the 0702 sighting of the first wave of Japanese aircraft was *the last* real opportunity US intelligence had to alert the fleet and airfields in Hawaii. An alert at the last moment might have allowed US forces to inflict some damage on the attackers, and some vessels and facilities might have sustained less severe damage. Moreover, the attack itself might not have occurred. Admiral Nagumo, commander of the Japanese strike force, had orders to call off the attack and preserve Japan's vital aircraft carriers and pilots if the Americans were found to be on alert and ready. (U)

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What happened at Opana reflected the weaknesses of US intelligence work in its infancy. The mistakes at Opana reflected persistent problems in the collection, analysis, and dissemination of intelligence. It would be wrong to assume that these mistakes could not happen again because we now work in a more highly technical and well-developed intelligence environment. (U)

Key Lessons

The Opana story contains a number of lessons that today's intelligence officers would do well to remember. The first lesson is that connectivity is crucial. In August 1941, when the US Army deployed SCR-270B radars at six sites covering the entire circumference of Oahu to provide early warning, little provision was made for how those sites would report their intelligence for subsequent analysis and dissemination to operational forces. Radio communication from Opana back to bases on the south side of Oahu was unreliable because of the mountainous terrain and climate. (U)

Tests in November determined that direct radio contact with fighters in the air was difficult and often limited to a 5-mile range. The Aircraft Warning Service (AWS), a new organization created by the Signal Corps to run the radar sites, therefore fell back on a single commercial phone line laid between each of the radar sites and an AWS Information Center that was set up at Fort Shafter. Commercial phones of the day required a switchboard operator to actually link a caller with his destination. The Information Center was similarly linked by commercial line to one critical intelligence consumer—the Army Air Force Operations Center at Hickam Airfield two miles or so away. This operations center in turn was linked by commercial lines to other airfields on the island, and also to the Operations Office of the US Navy's 14th Naval District. Each operations center then had local links using runners, phones, or radios to the actual aircraft and ships that might do something with a warning of unknown aircraft. (U)

This daisy chain of connectivity meant that the highest technology intelligence collectors of the day—the SCR 270B radars—had the flimsiest of systems for delivering their reports to key users. There was no dedicated system to disseminate reporting that needed to be time sensitive on some occasions. When Privates Joe Lockard and George Elliott detected the unknown aircraft at 0702 on 7 December, the evidence suggests that between 5 and 15 minutes were expended simply trying to get through to the AWS Information Center at Fort

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Shafter. The Center did not try to make any phone calls to other sites that needed warning; if it had, similar connectivity problems probably would have prevented any significant action in response to warning. (U)

Today, operations centers around the entire Intelligence Community (IC) are linked by reliable, dedicated lines. But there remains the question of how well connected we are to key customers and users of intelligence in Washington and in the field. It has only been in the last decade that we have developed teams of briefers and other officers to deliver intelligence to policymaking agencies in a timely fashion. Moreover, a fair amount of our other work is still delivered in pouches via courier systems, or as former Director of Central Intelligence (DCI) Robert Gates once said, “A 19th century-delivery system carrying 20th century-quality analysis, derived from 21st century-collection systems.” (U)

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Impact of Bureaucratic Conflicts

A major reason why connectivity was a problem in 1941 involved the unwillingness of organizations to cooperate in streamlining the information-sharing process. There was no joint command in Hawaii encompassing both Army and Navy because there was no Defense Department. There was no JICPAC in Hawaii or CIA in Washington to receive all key intelligence directly and then disseminate it to their respective consumers. The layers of phone lines that Opana reporting relied on would have been reduced by at least half if such consolidated command and intelligence arrangements had existed. (U)

These shortcomings were due essentially to the pride and carefully guarded independence of the military services and their opposition to any element that might oversee or demand access to their information. The Office of the Coordinator of Information, the precursor of the CIA created by President Roosevelt in June 1941 to try to bring some order to the intelligence sent to him, was limited in what it could collect, analyze, or receive from other departmental intelligence services. (U)

The absence of centralized collation and analysis of intelligence, either in Hawaii or Washington, was a key reason why the Opana radar warning was ignored. A centralized intelligence analysis capability would have had many pieces of information in the hours leading up to the Pearl Harbor attack. The scattered information included reports from the FBI, intercepts of Japanese diplomatic traffic, and action reports from US Navy ships and aircraft.

Bureaucratic problems of a more mundane nature also degraded the warning from Opana. In the US Army in Hawaii, a turf battle between the Signal Corps and the Hawaiian Interceptor Command was going on over control of the AWS and its radar sites. The development of a more effective system for using radar information depended in part on moving the AWS from a training to an operational status. On 7 December, four months after initial deployment, the sites were still in a training mode, under the initial control of the local Signal Corps commander. The commander of the Hawaiian Interceptor Command in November argued that the AWS was ready to become operational under his control, but the Signal Corps commander did not want to give up control. They engaged in a battle of memos to Army Commander Short in the week before the attack on Pearl Harbor. (U)

This turf battle had a significant effect on Opana's performance. One link of the weak, daisy-chain of connectivity remained in place. The Signal Corps kept operating

the radar sites as a "training only" function on reduced hours. And the turf battle prevented the introduction of expertise from the Air Corps on how to identify unknown aircraft, create linkages to US aircraft operations that actually could act on radar sightings, and allow some attention to the "identify friend or foe" problem that posed a challenge to early radar-tracking efforts. Ironically, the first move toward Signal Corps-Air Corps cooperation began on 3 December, when Lt. Kermit Tyler, an officer in training with the Interceptor Command, was assigned to the AWS Information Center at Fort Shafter. His orders were to explore how to build a liaison with the Signal Corps operation. To learn the ropes, he pulled his first stand-alone watch as a duty officer on what was expected to be a quiet Sunday morning on 7 December. (U)

Today, operations centers and analytic units in Washington and Hawaii and advanced communications systems increase the likelihood that vital information would be available on a timely basis. Although there is a substantial amount of cooperation occurs among the CIA and other IC agencies, all experienced intelligence professionals can still cite recent examples of information or finished analysis that has not flowed in a timely manner, if at all, across the IC. Sometimes concerns about information security are the reason; other times, it reflects a habit of not cooperating and sharing, reinforced by the lack of good connectivity. (U)

Murky Guidance to Intelligence Officers

On 26 November 1941, Secretary of State Cordell Hull rejected Japan's last demand for US acquiescence in Tokyo's expansionist ambitions in China and Indochina. Simultaneously, US decrypts of Japanese diplomatic messages told Washington that Tokyo saw time running out rapidly on a peaceful outcome if the United States rejected Japan's entreaties. Recognizing the seriousness of the US diplomatic move, both the Navy and Army commanders in Washington sent out on 27 November separate alert messages to all US commanders in the Pacific. This action should have provided unambiguous warning of war, but it did not. The messages sent via each service's channels were not identical, and, when compared in Hawaii by Admiral Kimmel and General Short, did not have the intended effect. It is instructive to compare the verbatim texts. The Navy Department dispatch stated:

This dispatch is to be considered a war warning. Negotiations with Japan looking toward stabilization of conditions in the Pacific have ceased and an aggressive move is expected within the next few days. The number and equipment of Japanese troops and the organization of the naval task forces indicates an amphibious expedition against either the Philippines, Thai, Kra Peninsula, or possibly Borneo. Execute an appropriate defensive deployment preparatory to carrying out the tasks assigned in War Plan 46 [The Navy's war plan]. Inform dis-

trict and army authorities. A similar warning is being sent by War Department. (U)

The Army Department dispatch stated:

Negotiations with Japan appear to be terminated to all practical purposes, with only the barest possibilities that the Japanese Government might come back and offer to continue. Japanese future action unpredictable, but hostile action possible at any moment. If hostilities cannot, repeat, cannot be avoided, the United States desires that Japan commit the first overt act. This policy should not, repeat, not, be construed as restricting you to a course of action that might jeopardize your defense. Prior to hostile Japanese action you are directed to undertake such reconnaissance and other measures as you deem necessary, but these measures should be carried out so as not, repeat, not to alarm civil population or disclose intent. Report measures taken. Should hostilities occur, you will carry out the tasks assigned in Rainbow Five [the Army's war plan] so far as they pertain to Japan. Limit dissemination of this highly secret information to minimum essential officers. (U)

Both Colonel Bratton and Admiral Turner, the Army and Navy chiefs of intelligence in Washington, testified to the subsequent Congressional investigation of Pearl Harbor that they thought these warnings would lead to a full alert of forces in Hawaii and the Philippines. But the ambiguity as to the nature of the threat and inconsis-

tencies in the tone of the two dispatches bedeviled Kimmel and Short. (U)

Despite Turner's stated belief that the message would lead to active patrolling and deployment of major fleet elements outside Pearl Harbor at all times, Kimmel saw the message's focus on Southeast Asia as relieving him from any immediate obligation. Strong evidently was confused by the Army message, which was much harder to interpret than its Navy counterpart. He seized on the guidance not to alarm the local population and not to disseminate the risk of war concern to others as the key aspect because it was consistent with his previous concern about an initial threat from Japanese sabotage against his installations. The net effect of these ambiguities was that neither field commander in Hawaii, after consulting with each other, saw any need to strengthen Army-Navy sharing of intelligence and operational alert plans. Both testified that they assumed the other was putting into effect readiness levels to guard against threats that each believed, on the basis of the warning messages from Washington, were of more immediate concern to the other! (U)

The lack of impact of this fuzzy warning from Washington on the overall readiness and intelligence watchfulness of the Hawaiian commands specifically contributed to the Opana intelligence failure. On 28 November, General Short responded to the warning from Washington by ordering the AWS to adjust its training hours from 0630-1130 to 0400-0700. He did so because he correctly anticipated that the maximum danger of air

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attack was around dawn. To obey the warning's caution to avoid raising local alarm and to limit dissemination of the warning to essential officers, however, Short gave no reason for the change in operating time to the Signal Corps. Because the Signal Corps operators previously had expressed concern about growing wear and tear on the new equipment, all assumed that General Short was responding to that concern by reducing operating hours. (U)

For the next two weeks, the operators were happy to begin work earlier and depart sooner. On 7 December, the eight enlisted personnel in the AWS Information Center with experience since August in plotting and assessing radar reports left for home at 0700, and the officer in charge left two minutes later. This episode shows how unclear directions provided by senior leaders can degrade the performance of intelligence and create risks of failure. This will be particularly true for intelligence reports and analysis in the new and more decentralized [] environment.

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Specificity and Accuracy in Intelligence Reports

Fortunately, the Opana radar site did not shut down immediately at 0700, as ordered. Opana was the only one of six radar sites still on line after that time because Private Elliott wanted a bit more practice working the oscilloscope. Thus, at 0702, he detected what he and his co-operator described as "something completely out of the ordinary on the screen," an enormous mass of more than 50 planes approaching from the north 137 miles out. (U)

After connectivity with the Information Center was achieved, a few more minutes of delay occurred as the switchboard operator, impressed by the description provided from Opana, looked for someone at the closing Information Center. Lieutenant Tyler was located, and he got on the phone. The Opana privates provided the inexperienced Tyler with the distance, the general direction of flight, and their characterization of the sighting as "the biggest sighting ever seen." Two fatal errors of intelligence reporting had just occurred:

- The specific azimuth of flight apparently was not provided.
- The estimate by the privates of a mass of more than 50 planes was not given. (U)

Intelligence collectors who fail to note and report the specifics of what they have obtained may deny analysts and policymakers critical information that will help construct a mosaic, when combined with other sources. Ambiguously

phrased reporting that fails to provide available details or fudges what in fact may be unknown will create increased dangers of misinterpretation by analysts. Analysts who do not make clear to policy-makers to what is known, what is unknown, and what is judged to be the case will create equivalent dangers of policy missteps. And that is what happened at Pearl Harbor. (U)

Overreliance on Mindsets

Lieutenant Tyler was not a trained intelligence officer or functioning in that capacity. He was the low-level decisionmaker on the spot who had to make the call for the Hawaiian Interceptor Command and, by extension, for the entire US Army Command in Hawaii. He made two key mistakes that clinched the certainty of failure, mistakes that Richards Heuer in his recent book on the *Psychology of Intelligence Analysis* has helped make clear. As Heuer points out, all analysts facing an ambiguous and complex reality have to create hypotheses and construct working assumptions he calls mindsets to make sense of new information. (U)

Tyler viewed the ambiguous information from Opana through the lens of a mindset that he testified had come into being only that morning on the way to work. He had listened to some Hawaiian music on the way in, and he recalled that, according to a friend who was a bomber pilot, the station played this music all night whenever B-17s flew from the mainland to Hawaii, acting as a beam for the navigators. Tyler also apparently recalled hearing that

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some B-17s were expected from the mainland that day—in fact a flight of six B-17s was arriving just as the Japanese attack began, and several were shot down as they tried to land. (U)

Based on this mindset, Tyler told the Opana radar operators to forget it, without even telling them why. Lockhard and Elliott nevertheless continued tracking the Japanese aircraft until they were 30 miles from Oahu because it was a “fine problem.” According to one estimate, 45 minutes of warning for the US Army and 30 minutes of warning for the Navy at Pearl Harbor were lost as a result of Tyler’s order to “forget it.” (U)

Tyler’s mindset may have reflected at least in part his overall inexperience and unfamiliarity with radar. His assumption that the detection had to be the B-17s was based solely on a few recently obtained tidbits of information. He also failed to recognize the ambiguity of the report he had received from Opana; he later testified that had he known that the radar had detected 50 or more planes, he would have reached a different conclusion. That question, however, apparently was never asked of the radar site. The actual azimuth of the oncoming Japanese attack would also have appeared inconsistent with the B-17 hypothesis, if it had been plotted. The probability of alternative expla-

nations to the B-17 hypothesis would have increased if such analysis had been pursued more aggressively. In Tyler’s defense, orders from higher command had not suggested any need for more vigilance, and the plotter staff had left for the day. (U)

To reduce the danger of a mindset failure, analysts have to admit what they do not know and where their own expertise may fall short. Tyler had limited experience and expertise to make the call that he did, and he should have tried to consult with either higher authority for guidance or with other experts at the Hickam Field Ops Center. Alternative views from people with other perspectives, knowledge, or experience should always be sought when a tough, important judgment has to be made. Part of the Sherman Kent School’s mission is to help its officers study and develop skill in using rigorous techniques of analysis that reduce the chances for such failure. (U)

Perils of Complacency

The Army and Navy high command had sent alert orders to Hawaii three times before the 27 November warning, when the danger of war with Japan appeared to increase. The first was on 17 June 1940, as France fell to Hitler, and Japan was encouraged by Germany to take French Indochina and other parts of Southeast Asia held by the greatly weakened British. The second was on 25 July 1941, after Germany forced Vichy France to allow Japan to occupy Indochina, and Tokyo appeared ready to take additional aggressive action

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against Russia or against other parts of Southeast Asia. The last was on 16 October 1941, when the Prince Konoye cabinet fell in Tokyo after failing to negotiate a relaxation of the US oil and scrap iron embargo, opening the way for a more militarist leadership to take control. (U)

The warnings received in Hawaii from Washington were similar in gravity to the one sent on 27 November; albeit not quite as stark. Alert actions taken by our forces in Hawaii on each successive occasion, however, tended to decline in their thoroughness. And, of course, no attack had come after the first three alerts. (U)

At the level of intelligence assessment, after the successful British surprise attack on 12 November 1940 against Italian battleships in Taranto harbor using obsolete Swordfish torpedo bombers, the commander of the Pacific fleet, Admiral Richardson, commissioned a study by his intelligence chief, Rear Admiral Bloch, that was completed in January 1941. Remarkably, it was entitled "Situation Concerning the Security of the Fleet and the Present Ability of Local Defense Forces To Meet Surprise Attacks." The study, which in modern intelligence parlance was a combination "red team" and "net assessment" study, listed air bombing and air torpedo attacks from planes launched off several Japanese carriers as the major threat and described a Japanese attack plan that was eerily similar to what transpired. (U)

While the study sparked intensive discussion and debate in Washington and stimulated recommen-

dations on ways to strengthen the fleet's position, little happened, and the study was forgotten. But the preparation of the controversial report, along with Admiral Richardson's continued opposition to the permanent deployment of the fleet at Pearl Harbor, displeased President Roosevelt and contributed to the decision to replace Richardson in January 1941 with Admiral Kimmel as fleet commander, one year earlier than Richardson's tour was due to end. The fundamental debate over when a vulnerable deterrent may become a tempting target was lost in the shuffle. (U)

Complacency will erode the impact of even the most significant intelligence, and if that happens, as was partially the case at Pearl Harbor, the costs can be very high. Every intelligence professional should

start with that as the most personal lesson of Opana. (U)

We took the new analysts to Opana to help etch this and other enduring lessons from that site into their thinking, thereby increasing the odds that CIA's next generation of intelligence professionals will be able to detect and avoid the kinds of problems that made any warning on 7 December 1941 impossible. (U)

NOTE

1. The background details in this article are drawn from Roberta Wohlstetter, *Pearl Harbor: Warning and Decision* (Stanford, CA: Stanford University Press, 1962); and Gordon Prange, *At Dawn We Slept: The Untold Story of Pearl Harbor* (New York: McGraw Hill, 1981).

