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PEARL HARBOR

WARNING AND DECISION

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FOREWORD

It would be reassuring to believe that Pearl Harbor was just a colossal and extraordinary blunder. What is disquieting is that it was a supremely ordinary blunder. In fact, "blunder" is too specific; our stupendous unreadiness at Pearl Harbor was neither a Sunday-morning, nor a Hawaiian, phenomenon. It was just a dramatic failure of a remarkably well-informed government to call the next enemy move in a cold-war

If we think of the entire U.S. government and its far-flung military and diplomatic establishment, it is not true that we were caught napping at the time of Pearl Harbor. Rarely has a government been more expectant. We just expected wrong. And it was not our warning that was most in fault, but our strategic analysis. We were so busy thinking through some "obvious" Japanese moves that we neglected to hedge against the chance that they actually made.

And it was an "improbable" choice; had we escaped surprise, we might well have been mildly astonished. (Had we not provided the target, though, the attack would have been called off.) But it was not all that improbable. If Pearl Harbor was a long shot for the Japanese, so was war with the United States; assuming the decision on war, the attack hardly appears reckless. There is a tendency in our planning to confuse the unfamiliar with the improbable. The contingency we have not considered seriously looks strange; what looks strange is thought improbable; what is improbable need not be considered seriously.

Furthermore, we made the terrible mistake—one we may have come

close to repeating in the 1950's—of forgetting that a fine deterrent can make a superb target.

Surprise, when it happens to a government, is likely to be a complicated, diffuse, bureaucratic thing. It includes neglect of responsibility but also responsibility so poorly defined or so ambiguously delegated that action gets lost. It includes gaps in intelligence, but also intelligence that, like a string of pearls too precious to wear, is too sensitive to give to those who need it. It includes the alarm that fails to work, but also the alarm that has gone off so often it has been disconnected. It includes the unalert watchman, but also the one who knows he'll be chewed out by his superior if he gets higher authority out of bed. It includes the contingencies that occur to no one, but also those that everyone assumes somebody else is taking care of. It includes straightforward procrastination, but also decisions protracted by internal disagreement. It includes, in addition, the inability of individual human beings to rise to the occasion until they are sure it is the occasion—which is usually too late. (Unlike movies, real life provides no musical background to tip us off at the climax.) Finally, as at Pearl Harbor, surprise may include some measure of genuine novelty introduced by the enemy, and possibly some sheer bad luck.

The results, at Pearl Harbor, were sudden, concentrated, and dramatic. The failure, however, was cumulative, widespread, and rather drearily familiar. This is why surprise, when it happens to a government, cannot be described just in terms of startled people. Whether at Pearl Harbor or at the Berlin Wall, surprise is everything involved in a government (or in an alliance's) failure to anticipate effectively.

Mrs. Wohlstetter's book is a unique physiology of a great nation's failure to anticipate. If she is at pains to show how easy it was to slip into the rut in which the Japanese found us, it can only remind us how likely it is that we are in the same kind of rut right now. The danger is not that we shall read the signals and indicators with too little skill; the danger is in a poverty of expectations—a routine obsession with a few dangers that may be familiar rather than likely. Alliance diplomacy, international service bargaining, appropriations hearings, and public discussion seem to need to focus on a few vivid and oversimplified dangers. The planner should think in subtler and more variegated terms and allow

But, as Mrs. Wohlstetter shows, the "planners" who count are also responsible for alliance diplomacy, international service bargaining, appropriations hearings, and public discussion; they are also very busy. This is a genuine dilemma of government. Some of its consequences are mercilessly displayed in this superb book.

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7 ► SURPRISE

If our intelligence system and all our other channels of information failed to produce an accurate image of Japanese intentions and capabilities, it was not for want of the relevant materials. Never before have we had so complete an intelligence picture of the enemy. And perhaps never again will we have such a magnificent collection of sources at our disposal.

✓ RETROSPECT

To review these sources briefly, an American cryptanalyst, Col. William F. Friedman, had broken the top-priority Japanese diplomatic code, which enabled us to listen to a large proportion of the privileged communications between Tokyo and the major Japanese embassies throughout the world. Not only did we know in advance how the Japanese ambassadors in Washington were advised, and how much they were instructed to say, but we also were listening to top-secret messages on the Tokyo-Berlin and Tokyo-Rome circuits, which gave us information vital for conduct of the war in the Atlantic and Europe. In the Far East this source provided minute details on movements connected with the Japanese program of expansion into Southeast Asia.

Besides the strictly diplomatic codes, our cryptanalysts also had some success in reading codes used by Japanese agents in major American and foreign ports. Those who were on the distribution list for MAGIC had access to much of what these agents were reporting to Tokyo and what Tokyo was demanding of them in the Panama Canal Zone, in cities along the east and west coasts of the Americas from northern Canada as far

south as Brazil, and in ports throughout the Far East, including the Philippines and the Hawaiian Islands. They could determine what installations, what troop and ship movements, and what alert and defense measures were of interest to Tokyo at these points on the globe, as well as approximately how much correct information her agents were sending her.

Our naval leaders also had at their disposal the results of radio traffic analysis. While before the war our naval radio experts could not read the content of any Japanese naval or military coded messages, they were able to deduce from a study of intercepted ship call signs the composition and location of the Japanese Fleet units. After a change in call signs, they might lose sight of some units, and units that went into port in home waters were also lost because the ships in port used frequencies that our radios were unable to intercept. Most of the time, however, our traffic analysts had the various Japanese Fleet units accurately pinpointed on our naval maps.

Extremely competent on-the-spot economic and political analysis was furnished by Ambassador Grew and his staff in Tokyo. Ambassador Grew was himself a most sensitive and accurate observer, as evidenced by his dispatches to the State Department. His observations were supported and supplemented with military detail by frequent reports from American naval attachés and observers in key Far Eastern ports. Navy Intelligence had men with radio equipment located along the coast of China, for example, who reported the convoy movements toward Indochina. There were also naval observers stationed in various high-tension areas in Thailand and Indochina who could fill in the local outlines of Japanese political intrigue and military planning. In Tokyo and other Japanese cities, it is true, Japanese censorship grew more and more rigid during 1941, until Ambassador Grew felt it necessary to disclaim any responsibility for noting or reporting overt military evidence of an imminent outbreak of war. This careful Japanese censorship naturally cut down visual confirmation of the decoded information but very probably never achieved the opaqueness of Russia's Iron Curtain.

During this period the data and interpretations of British intelligence were also available to American officers in Washington and the Far East, though the British and Americans tended to distrust each other's privileged information.

In addition to secret sources, there were some excellent public ones. Foreign correspondents for *The New York Times*, *The Herald Tribune*, and *The Washington Post* were stationed in Tokyo and Shanghai and in Canberra, Australia. Their reporting as well as their predictions on the Japanese political scene were on a very high level. Frequently their access to news was more rapid and their judgment of its significance as reliable as that of our Intelligence officers. This was certainly the case for 1940 and most of 1941. For the last few weeks before the Pearl Harbor strike, however, the public newspaper accounts were not very useful. It was necessary to have secret information in order to know what was happening. Both Tokyo and Washington exercised very tight control over leaks during this crucial period, and the newsmen accordingly had to limit their accounts to speculation and notices of diplomatic meetings with no exact indication of the content of the diplomatic exchanges.

The Japanese press was another important public source. During 1941 it proclaimed with increasing shrillness the Japanese government's determination to pursue its program of expansion into Southeast Asia and the desire of the military to clear the Far East of British and American colonial exploitation. This particular source was rife with explicit signals of aggressive intent.

Finally, an essential part of the intelligence picture for 1941 was both public and privileged information on American policy and activities in the Far East. During the year the pattern of action and interaction between the Japanese and American governments grew more and more complex. At the last, it became especially important for anyone charged with the responsibility of ordering an alert to know what moves the American government was going to make with respect to Japan, as well as to try to guess what Japan's next move would be, since Japan's next move would respond in part to ours. Unfortunately our military leaders, and especially our Intelligence officers, were sometimes as surprised as the Japanese at the moves of the White House and the State Department. They usually had more orderly anticipations about Japanese policy and conduct than they had about America's. On the other hand, it was also true that State Department and White House officials were handicapped in judging Japanese intentions and estimates of risk by an inadequate picture of our own military vulnerability.

All of the public and private sources of information mentioned were available to America's political and military leaders in 1941. It is only fair to remark, however, that no single person or agency ever had at any given moment all the signals existing in this vast information network. The signals lay scattered in a number of different agencies; some were decoded, some were not; some traveled through rapid channels of communication, some were blocked by technical or procedural delays; some never reached a center of decision. But it is legitimate to review again the general sort of picture that emerged during the first week of December from the signals readily at hand. Anyone close to President Roosevelt was likely to have before him the following significant fragments.

There was first of all a picture of gathering troop and ship movements down the China coast and into Indochina. The large dimensions of this movement to the south were established publicly and visually as well as by analysis of ship call signs. Two changes in Japanese naval call signs—one on November 1 and another on December 1—had also been evaluated by Naval Intelligence as extremely unusual and as signs of major preparations for some sort of Japanese offensive. The two changes had interfered with the speed of American radio traffic analysis. Thousands of interceptions after December 1 were necessary before the new call signs could be read. Partly for this reason American radio analysts disagreed about the locations of the Japanese carriers. One group held that all the carriers were near Japan because they had not been able to identify a carrier call sign since the middle of November. Another group believed that they had located one carrier division in the Marshalls. The probability seemed to be that the carriers, wherever they were, had gone into radio silence; and past experience led the analysts to believe that they were therefore in waters near the Japanese homeland, where they could communicate with each other on wavelengths that we could not intercept. However, our inability to locate the carriers exactly, combined with the two changes in call signs, was itself a danger signal.

Our best secret source, MAGIC, was confirming the aggressive intention of the new military cabinet in Tokyo, which had replaced the last moderate cabinet on October 17. In particular, MAGIC provided details of some of the preparations for the move into Southeast Asia. Running counter to this were increased troop shipments to the Manchurian border in October.

(The intelligence picture is never clear-cut.) But withdrawals had begun toward the end of that month. MAGIC also carried explicit instructions to the Japanese ambassadors in Washington to pursue diplomatic negotiations with the United States with increasing energy, but at the same time it announced a deadline for the favorable conclusion of the negotiations, first for November 25, later postponed until November 29. In case of diplomatic failure by that date, the Japanese ambassadors were told, Japanese patience would be exhausted, Japan was determined to pursue her Greater East Asia policy, and on November 29 "things" would automatically begin to happen.

On November 26 Secretary Hull rejected Japan's latest bid for American approval of her policies in China and Indochina. MAGIC had repeatedly characterized this Japanese overture as the "last," and it now revealed the ambassadors' reaction of consternation and despair over the American refusal and also their country's characterization of the American Tenet Point Note as an "ultimatum."

On the basis of this collection of signals, Army and Navy Intelligence experts in Washington tentatively placed D-day for the Japanese South Eastern campaign during the week end of November 30, and when this failed to materialize, during the week end of December 7. They also compiled an accurate list of probable British and Dutch targets and included the Philippines and Guam as possible American targets.

Also available in this mass of information, but long forgotten, was a rumor reported by Ambassador Grew in January, 1941. It came from what was regarded as a not-very-reliable source, the Peruvian embassy, and stated that the Japanese were preparing a surprise air attack on Pearl Harbor. Curiously the date of the report is coincident roughly with what we now know to have been the date of inception of Yamamoto's plan, but the rumor was labeled by everyone, including Ambassador Grew, as quite fantastic and the plan as absurdly impossible. American judgment was consistent with Japanese judgment at this time, since Yamamoto's plan was in direct contradiction to Japanese naval tactical doctrine.

PERSPECTIVE

On the basis of this rapid recapitulation of the highlights in the signal picture, it is apparent that our decisionmakers had at hand an impressive

amount of information on the enemy. They did not have the complete list of targets, since none of the last-minute estimates included Pearl Harbor. They did not know the exact hour and date for opening the attack. They did not have an accurate knowledge of Japanese capabilities or of Japanese ability to accept very high risks. The crucial question then, we repeat, is, If we could enumerate accurately the British and Dutch targets and give credence to a Japanese attack against them either on November 30 or December 7, why were we not expecting a specific danger to ourselves? and by the word "expecting," we mean expecting in the sense of taking specific alert actions to meet the contingencies of attack by land, sea, or air.

There are several answers to this question that have become apparent in the course of this study. First of all, it is much easier after the event to sort the relevant from the irrelevant signals. After the event, of course, a signal is always crystal clear; we can now see what disaster it was signaling, since the disaster has occurred. But before the event it is obscure and pregnant with conflicting meanings. It comes to the observer embedded in an atmosphere of "noise," i.e., in the company of all sorts of information that is useless and irrelevant for predicting the particular disaster. For example, in Washington, Pearl Harbor signals were competing with a vast number of signals from the European theater. These European signals announced danger more frequently and more specifically than any coming from the Far East. The Far Eastern signals were also arriving at a center of decision where they had to compete with the prevailing belief that an unprotected offensive force acts as a deterrent rather than a target. In Honolulu they were competing not with signals from the European theater, but rather with a large number of signals announcing Japanese intentions and preparations to attack Soviet Russia rather than to move southward; here they were also competing with expectations of local sabotage prepared by previous alert situations.

In short, we failed to anticipate Pearl Harbor not for want of the relevant materials, but because of a plethora of irrelevant ones. Much of the appearance of wanton neglect that emerged in various investigations of the disaster resulted from the unconscious suppression of vast congeries of signs pointing in every direction except Pearl Harbor. It was difficult to recall these signs since they had led nowhere. Signals that are

characterized today as absolutely unequivocal warnings of surprise air attack on Pearl Harbor become, on analysis in the context of December 1941, not merely ambiguous but occasionally inconsistent with such an attack. To recall one of the most controversial and publicized examples, the winds code, both General Short and Admiral Kimmel testified that if they had had this information, they would have been prepared on the morning of December 7 for an air attack from without. The messages establishing the winds code are often described in the Pearl Harbor literature as Tokyo's declaration of war against America. If they indeed amounted to such a declaration, obviously the failure to inform Honolulu of this vital news would have been criminal negligence. On examination, however, the messages proved to be instructions for code communication after normal commercial channels had been cut. In one message the recipient was instructed on receipt of an execute to destroy all remaining codes in his possession. In another version the recipient was warned that the execute would be sent out "when relations are becoming dangerous between Japan and three other countries. There was a different code term for each country: England, America, and the Soviet Union.

There is no evidence that an authentic execute of either message was ever intercepted by the United States before December 7. The message ordering code destruction was in any case superseded by a much more explicit code-destruction order from Tokyo that was intercepted on December 2 and translated on December 3. After December 2, the receipt of a winds-code execute for code destruction would therefore have added nothing new to our information, and code destruction in itself cannot be taken as an unambiguous substitute for a formal declaration of war. During the first week of December the United States ordered all American consulates in the Far East to destroy all American codes, yet no one has attempted to prove that this order was equivalent to an American declaration of war against Japan. As for the other winds-code message, provided an execute had been received warning that relations were dangerous between Japan and the United States, there would still have been no way on the basis of this signal alone to determine whether Tokyo was signaling Japanese intent to attack the United States or Japanese fear of an American surprise attack (in reprisal for Japanese aggressive moves against American allies in the Far East). It was only after the event that

"dangerous relations" could be interpreted as "surprise air attack on Pearl Harbor."

There is a difference, then, between having a signal available somewhere in the heap of irrelevancies, and perceiving it as a warning; and there is also a difference between perceiving it as a warning, and acting or getting action on it. These distinctions, simple as they are, illuminate the obscurity shrouding this moment in history.

Many instances of these distinctions have been examined in the course of this study. We shall recall a few of the most dramatic now. To illustrate the difference between having and perceiving a signal, let us return to Colonel Fielder, whom we met in Chapter 1. Though he was an untrained and inexperienced Intelligence officer, he headed Army Intelligence at Pearl Harbor at the time of the attack. He had been on the job for only four months, and he regarded as quite satisfactory his sources of information and his contacts with the Navy locally and with Army Intelligence in Washington. Evidently he was unaware that Army Intelligence in Washington was not allowed to send him any "action" or policy information, and he was therefore not especially concerned about trying to read beyond the obvious meaning of any given communication that came under his eyes. Colonel Bratton, head of Army Far Eastern Intelligence in Washington, however, had a somewhat more realistic view of the extent of Colonel Fielder's knowledge. At the end of November, Colonel Bratton had learned about the winds-code setup and was also apprised that the naval traffic analysis unit under Commander Rochefort in Honolulu was monitoring 24 hours a day for an execute. He was understandably worried about the lack of communication between this unit and Colonel Fielder's office, and by December 5 he finally felt that the matter was urgent enough to warrant sending a message directly to Colonel Fielder about the winds code. Now any information on the winds code, since it belonged to the highest classification of secret information, and since it was therefore automatically evaluated as "action" information, could not be sent through normal G-2 channels. Colonel Bratton had to figure out another way to get the information to Colonel Fielder. He sent this message: "Contact Commander Rochefort immediately thru Commandant Fourteenth Naval District regarding broadcasts from Tokyo reference weather." Signal Corps records establish that Colonel Fielder re-

ceived this message. How did he react to it? He filed it. According to messages to any more refined analysis. An observer assigned to such a job his testimony in 1945, it made no impression on him and he did not attempt to see Rochefort. He could not sense any urgency behind the lines of Tokyo's requests concerning Manila and Pearl Harbor in the last weeks because he was not expecting immediate trouble, and his expectations before the outbreak of war, and he would have noted that Tokyo was not determined what he read. A warning signal was available to him, but he was displaying the same interest in other American ports. These observations, did not perceive it.

Colonel Fielder's lack of experience may make this example seem to be an exception. So let us recall the performance of Captain Wilkinson, the naval officer who headed the Office of Naval Intelligence in Washington in the fall of 1941 and who is unanimously acclaimed for a distinguished and brilliant career. His treatment of a now-famous Pearl Harbor signal does not sound much different in the telling. After the event, the signal in question was labeled "the bomb-plot message." It originated in Tokyo on September 24 and was sent to an agent in Honolulu. It requested the agent to divide Pearl Harbor into five areas and to make his future reports on ships in harbor with reference to those areas. Tokyo was especially interested in the locations of battleships, destroyers, and carriers, and in any information on the anchoring of more than one ship at a single dock.

This message was decoded and translated on October 9 and shortly thereafter distributed to Army, Navy, and State Department recipients. MAGIC. Commander Kramer, a naval expert on MAGIC, had marked the message with an asterisk, signifying that he thought it to be of particular interest. But what was its interest? Both he and Wilkinson agreed that it illustrated the "nicety" of Japanese intelligence, the incredible zeal and efficiency with which they collected detail. The division into areas was interpreted as a device for shortening the reports. Admiral Stark was similarly impressed with Japanese efficiency, and no one felt it necessary to forward the message to Admiral Kimmel. No one read into it a specific danger to ships anchored in Pearl Harbor. At the time, it was a reasonable estimate, since somewhat similar requests for information were going to Japanese agents in Panama, Vancouver, Portland, San Diego, San Francisco, and other places. It should be observed, however, that the estimate was reasonable only on the basis of a very rough check on the quantity of espionage messages passing between Tokyo and the American ports. No one in Far Eastern Intelligence had subjected

while not significant in isolation, might have been useful in the general signal picture.

There is no need, however, to confine our examples to Intelligence personnel. Indeed, the crucial areas where the signals failed to communicate a warning were in the operational branches of the armed services. Let us take Admiral Kimmel and his reaction to the information that the Japanese were destroying most of their codes in major Far Eastern consulates and also in London and Washington. Since the Pearl Harbor attack, this information has frequently been characterized by military experts who were not stationed in Honolulu as an "unmistakable tip-off." As Admiral Ingersoll explained at the congressional hearings, with the acidity characteristic of statements after the event:

If you rupture diplomatic negotiations you do not necessarily have to burn your codes. The diplomats go home and they can pack up their codes with their dolls and take them home. Also, when you rupture diplomatic negotiations, you do not rupture consular relations. The consuls stay on. Now, in this particular set of dispatches that did not mean a rupture of diplomatic negotiations, it meant war, and that information was sent out to the fleets as soon as we got it. . . .¹

The phrase "it meant war" was, of course, pretty vague; war in Manila, Hong Kong, Singapore, and Batavia is not war 5000 miles away in Pearl Harbor. Before the event, for Admiral Kimmel, code burning in major Japanese consulates in the Far East may have "meant war," but it did not signal danger of an air attack on Pearl Harbor. In the first place, the information that he received was not the original MAGIC. He learned from Washington that Japanese consulates were burning "almost all" of their codes, not all of them, and Honolulu was not included on the list. He knew from a local source that the Japanese consulate in Honolulu was burning secret papers (not necessarily codes), and this back yard burning had happened three or four times during the year. In July, 1941, Kimmel

¹Hearings, Part 9, p. 4226.

had been informed that the Japanese consulates in lands neighboring India and China had destroyed codes, and he interpreted the code burning in December as a similar attempt to protect codes in case the Americans or the British and Dutch allies tried to seize the consulates in reprisal for their southern advance. This also was a reasonable interpretation at the time, though not an especially keen one.

Indeed, at the time there was a good deal of evidence available to support all the wrong interpretations of last-minute signals, and the interpretations appeared wrong only *after* the event. There was, for example, a good deal of evidence to support the hypothesis that Japan would attack the Soviet Union from the east while the Russian Army was heavily engaged in the west. Admiral Turner, head of Navy War Plans in Washington, was an enthusiastic adherent of this view and argued the high probability of a Japanese attack on Russia up until the last week of November, when he had to concede that most of Japan's men and supplies were moving south. Richard Sorge, the expert Soviet spy who had direct access to the Japanese Cabinet, had correctly predicted the southern move as early as July, 1941, but even he was deeply alarmed during September and early October by the large number of troop movements to the Manchurian border. He feared that his July advice to the Soviet Union had been in error, and his alarm ultimately led to his capture on October 14. For at this time he increased his radio messages to Moscow to the point where it was possible for the Japanese police to pinpoint the source of the broadcasts.

It is important to emphasize here that most of the men that we have cited in our examples, such as Captain Wilkinson and Admirals Turner and Kimmel—these men and their colleagues who were involved in the Pearl Harbor disaster—were as efficient and loyal a group of men as one could find. Some of them were exceptionally able and dedicated. The fact of surprise at Pearl Harbor has never been persuasively explained by accusing the participants, individually or in groups, of conspiracy or negligence or stupidity. What these examples illustrate is rather the very human tendency to pay attention to the signals that support current expectations about enemy behavior. If no one is listening for signals of an attack against a highly improbable target, then it is very difficult for the signals to be heard.

For every signal that came into the information net in 1941 there were usually several plausible alternative explanations, and it is not surprising that our observers and analysts were inclined to select the explanations that fitted the popular hypotheses. They sometimes set down new contradictory evidence side by side with existing hypotheses, and they also sometimes held two contradictory beliefs at the same time. We have seen this happen in G-2 estimates for the fall of 1941. Apparently human beings have a stubborn attachment to old beliefs and an equally stubborn resistance to new material that will upset them.

Besides the tendency to select whatever was in accord with one's expectations, there were many other blocks to perception that prevented our analysts from making the correct interpretation. We have just mentioned the masses of conflicting evidence that supported alternative and equally reasonable hypotheses. This is the phenomenon of noise in which a signal is embedded. Even at its normal level, noise presents problems in distraction; but in addition to the natural clatter of useless information and competing signals, in 1941 a number of factors combined to raise the usual noise level. First of all, it had been raised, especially in Honolulu, by the background of previous alert situations and false alarms. Earlier alerts, as we have seen, had centered attention on local sabotage and on signals supporting the hypothesis of a probable Japanese attack on Russia. Second, in both Honolulu and Washington, individual reactions to danger had been numbed, or at least dulled, by the continuous international tension.

A third factor that served to increase the natural noise level was the positive effort made by the enemy to keep the relevant signals quiet. The Japanese security system was an important and successful block to perception. It was able to keep the strictest cloak of secrecy around the Pearl Harbor attack and to limit knowledge only to those closely associated with the details of military and naval planning. In the Japanese Cabinet only the Navy Minister and the Army Minister (who was also Prime Minister) knew of the plan before the task force left its final port of departure. In addition to keeping certain signals quiet, the enemy tried to create noise, and sent false signals into our information system by carrying on elaborate "spoofs." False radio traffic made us believe that certain ships were maneuvering near the mainland of Japan. The Japanese also sent to

individual commanders false war plans for Chinese targets, which were changed only at the last moment to bring them into line with the South-eastern movement.

A fifth barrier to accurate perception was the fact that the relevant signals were subject to change, often very sudden change. This was true even of the so-called static intelligence, which included data on capabilities and the composition of military forces. In the case of our 1941 estimates of the infeasibility of torpedo attacks in the shallow waters of Pearl Harbor, or the underestimation of the range and performance of the Japanese Zero, the changes happened too quickly to appear in an intelligence estimate.

Sixth, our own security system sometimes prevented the communication of signals. It confronted our officers with the problem of trying to keep information from the enemy without keeping it from each other, and, as in the case of MAGIC, they were not always successful. As we have seen, only a very few key individuals saw these secret messages, and they saw them only briefly. They had no opportunity or time to make a critical review of the material, and each one assumed that others who had seen it would arrive at identical interpretations. Exactly who those "others" were was not quite clear to any recipient. Admiral Stark, for example, thought Admiral Kimmel was reading all of MAGIC. Those who were not on the list of recipients, but who had learned somehow of the existence of the decodes, were sure that they contained military as well as diplomatic information and believed that the contents were much fuller and more precise than they actually were. The effect of carefully limiting the reading and discussion of MAGIC, which was certainly necessary to safeguard the secret of our knowledge of the code, was thus to reduce this group of signals to the point where they were scarcely heard.

To these barriers of noise and security we must add the fact that the necessarily precarious character of intelligence information and prediction was reflected in the wording of instructions to take action. The warning messages were somewhat vague and ambiguous. Enemy moves are often subject to reversal on short notice, and this was true for the Japanese. They had plans for canceling their attacks on American possessions in the Pacific up to 24 hours before the time set for attack. A full alert in the Hawaiian Islands, for example, was one condition that might have caused

the Pearl Harbor task force to return to Japan on December 5 or 6. The fact that intelligence predictions must be based on moves that are almost always reversible makes understandable the reluctance of the intelligence analyst to make bold assertions. Even if he is willing to risk his reputation in a firm prediction of attack at a definite time and place, no commander will in turn lightly risk the penalties and costs of a full alert. In December, 1941, a full alert required shooting down any unidentified aircraft sighted over the Hawaiian Islands. Yet this might have been interpreted by Japan as the first overt act. At least that was one consideration that influenced General Short to order his lowest degree of alert. While the cautious phrasing in the messages to the theater is certainly understandable, it nevertheless constituted another block on the road to perception. The sentences in the final theater warnings—"A surprise aggressive move in any direction is a possibility" and "Japanese future action unpredictable but hostile action possible at any moment"—could scarcely have been expected to inform the theater commanders of any change in their strategic situation.

Last but not least we must also mention the blocks to perception and communication inherent in any large bureaucratic organization, and those that stemmed from intraservice and interservice rivalries. The most glaring example of rivalry in the Pearl Harbor case was that between Naval War Plans and Naval Intelligence. A general prejudice against intellectuals and specialists, not confined to the military but unfortunately widely held in America, also made it difficult for intelligence experts to be heard. McCollum, Bratton, Sadtler, and a few others who felt that the signal picture was ominous enough to warrant more urgent warnings had no power to influence decision. The Far Eastern code analysts, for example, were believed to be too immersed in the "Oriental point of view." Low budgets for American Intelligence departments reflected the low prestige of this activity, whereas in England, Germany, and Japan, 1941 budgets reached a height that was regarded by the American Congress as quite beyond reason.

* * *

In view of all these limitations to perception and communication, is the fact of surprise at Pearl Harbor, then, really so surprising? Even with these limitations explicitly recognized, there remains the step between per-

ception and action. Let us assume that the first hurdle has been crossed. An available signal has been perceived as an indication of imminent danger. Then how do we resolve the next questions: What specific danger is the signal trying to communicate, and what specific action or preparation should follow?

On November 27, General MacArthur had received a war warning very similar to the one received by General Short in Honolulu. MacArthur's response had been promptly translated into orders designed to protect his bombers from possible air attack from Formosan land bases. But the orders were carried out very slowly. By December 8, Philippine time, only half of the bombers ordered to the south had left the Manila area, and reconnaissance over Formosa had not been undertaken. There was no sense of urgency in preparing for a Japanese air attack, partly because our intelligence estimates had calculated that the Japanese aircraft did not have sufficient range to bomb Manila from Formosa.

The information that Pearl Harbor had been attacked arrived at Manila early in the morning of December 8, giving the Philippine forces some 9 or 10 hours to prepare for an attack. But did an air attack on Pearl Harbor necessarily mean that the Japanese would strike from the air at the Philippines? Did they have enough equipment to mount both air attacks successfully? Would they come from Formosa or from carriers? Intelligence had indicated that they would have to come from carriers, yet the carriers were evidently off Hawaii. MacArthur's headquarters also pointed out that there had been no formal declaration of war against Japan by the United States. Therefore approval could not be granted for a counterattack on Formosan bases. Furthermore there were technical disagreements among airmen as to whether a counterattack should be mounted without advance photographic reconnaissance. While Brereton was arranging permission to undertake photographic reconnaissance there was further disagreement about what to do with the aircraft in the meantime. Should they be sent aloft or should they be dispersed to avoid destruction in case the Japanese reached the airfields? When the Japanese bombers arrived shortly after noon, they found all the American aircraft wingtip to wingtip on the ground. Even the signal of an actual attack on Pearl Harbor was not an unambiguous signal of an attack on the Philippines, and it did not make clear what response was best.

PROSPECT

The history of Pearl Harbor has an interest exceeding by far any tale of an isolated catastrophe that might have been the result of negligence or stupidity or treachery, however lurid. For we have found the roots of this surprise in circumstances that affected honest, dedicated, and intelligent men. The possibility of such surprise at any time lies in the conditions of human perception and stems from uncertainties so basic that they are not likely to be eliminated, though they might be reduced.

It is only to be expected that the relevant signals, so clearly audible after an event, will be partially obscured before the event by surrounding noise. Even past diligence constructs its own background of noise, in the form of false alarms, which make less likely an alarm when the real thing arrives: the old story of "cry wolf" has a permanent relevance. A totalitarian aggressor can draw a tight curtain of secrecy about his actions and thus muffle the signals of attack. The Western democracies must interpret such signals responsibly and cautiously, for the process of commitment to war, except in *extremis*, is hedged about by the requirements of consultation. The precautions of secrecy, which are necessary even in a democracy to keep open privileged sources of information, may hamper the use of that information or may slow its transmission to those who have the power of decision. Moreover, human attention is directed by beliefs as to what is likely to occur, and one cannot always listen for the right sounds. An all-out thermonuclear attack on a Western power would be an unprecedented event, and some little time (which might be vital) would surely have to pass before that power's allies could understand the nature of the event and take appropriate action.

There is a good deal of evidence, some of it quantitative, that in conditions of great uncertainty people tend to predict that events that they want to happen actually will happen. Wishfulness in conditions of uncertainty is natural and is hard to banish simply by exhortation—or by wishing. Further, the uncertainty of strategic warning is intrinsic, since an enemy decision to attack might be reversed or the direction of the attack changed; and a defensive action can be taken only at some cost. (For example, at Pearl Harbor, flying a 360-degree reconnaissance would have meant sacrificing training, would have interrupted the high-priority shipment program to the Philippines, and would have exhausted crews and worn out

equipment within a few weeks.) In general, an extraordinary state of alert that brings about a peak in readiness must be followed by a trough at a later date. In some cases the cost of the defensive actions is hard to estimate and their relevance is uncertain. Therefore the choice of action in response to strategic warning must also be uncertain. Finally, the balance of technical and military factors that might make an attack infeasible at one time can change swiftly and without notice to make it feasible at another. In our day such balances are changing with unprecedented speed.

Pearl Harbor is not an isolated catastrophe. It can be matched by many examples of effective surprise attack. The German attack on Russia in the summer of 1941 was preceded by a flood of signals, the massing of troops, and even direct warnings to Russia by the governments of the United States and the United Kingdom, both of whom had been correctly informed about the imminence of the onslaught. Yet it achieved total surprise.² Soviet arguments current today that Stalin and Marshal Zhukov, his Chief of the General Staff, knew and failed to act have obvious parallels with the accusations about President Roosevelt's conspiracy of silence. These Soviet reinterpretations of history aim not only to downgrade Stalin but also to establish that Soviet leaders were not really surprised in 1941, and the Soviet Union can therefore count on adequate warning in any future conflict.³ But the difficulties of discerning a surprise attack on oneself apply equally to totalitarian and democratic states.

The stunning tactical success of the Japanese attack on the British at Singapore was made possible by the deeply held British faith in the impregnability of that fortress. As Captain Grenfell put it, newspapers and statesmen like their fortresses to be impregnable. "Every fortress," he wrote, "that has come into the news in my lifetime—Port Arthur, Tsing Tao, the great French defensive system of the Maginot Line—has been popularly described as impregnable before it has been attacked. . . . One way or another it became a virtually accepted fact in Britain and the

²I am grateful to William W. Kaufmann of the M.I.T. Center for International Studies for permission to read his unpublished paper, "Operation Barbarossa," which deals with the background of the German surprise attack.

³For a recent Russian view of the Pearl Harbor attack and its lessons on the "launching of aggression by imperialist states," see Maj. Gen. N. Pavlenko, "Documents on Pearl Harbor," *Voenno-Istoricheskii Zhurnal (Military-Historical Journal)*, No. 1, January, 1961, pp. 85-105. I am indebted for this reference to John Thomas of the Institute of Defense Analysis and to Arnold Horelick, Soviet analyst of The RAND Corporation.

Dominions that Singapore was an impregnable bastion of Imperial security."⁴ Yet the defenses of Singapore were rendered useless by military surprise in the form of an attack from an unexpected, northerly direction.

More recently, the Korean War provided some striking examples of surprise. The original North Korean attack was preceded by almost weekly maneuvers probing the border. These regular week-end penetrations built up so high a level of noise that on June 25, 1950, the actual initiation of hostilities was not distinguished from the preceding tests and false alarms. The intervention of the Chinese, at a later stage of the Korean War, was preceded by mass movements of Chinese troops and explicit warnings by the Chinese government to our own, by way of India, that this was precisely what they would do if we crossed the 38th parallel. Nonetheless, in important respects, we were surprised by the Chinese Communist forces in November, 1950.⁵

How do matters stand with reference to a future thermonuclear aggression by a totalitarian power? Would such an attack be harder or easier to conceal than the Japanese aggression against Pearl Harbor? There have been many attempts in recent years to cheer us with the thought that the H-bomb has so outmoded general war that this question may appear unimportant. However, such attempts to comfort ourselves really beg the question. The question is, Will it be possible in the future for a totalitarian power so to conceal an impending attack on the forces that we have disposed for retaliation as to have a high probability of virtually eliminating them before they receive warning or have time to respond to it? In this connection it is important to observe that there is no cause for complacency. In spite of the vast increase in expenditures for collecting and analyzing intelligence data and in spite of advances in the art of machine decoding and machine translation, the balance of advantage seems clearly to have shifted since Pearl Harbor in favor of a surprise attacker. The benefits to be expected from achieving surprise have increased enormously and the penalties for losing the initiative in an all-out war have grown correspondingly. In fact, since only by an all-out surprise attack could

⁴Grenfell, *Main Fleet to Singapore*, p. 64.

⁵For a succinct and lucid account, see "Strategic Surprise in the Korean War," an unpublished paper by Harvey DeWeerd of The RAND Corporation and the National Security Studies Program, University of California at Los Angeles.

an attacker hope to prevent retaliation, anything less would be suicidal assuming that some form of attack is contemplated by one major power against another.

In such a surprise attack a major power today would have advantages exceeding those enjoyed by the Japanese in 1941. It is a familiar fact that with the ever-increasing readiness of bomber and missile forces, strategic warning becomes harder and harder to obtain; and with the decrease in the flight time for delivery of massive weapons of destruction, tactical warning times have contracted from weeks to minutes. It is no longer necessary for the aggressor to undertake huge movements of troops and ships in the weeks immediately preceding an all-out war, such as we described in our account of the Japanese war plan. Manned bombers capable of delivering a blow many times more devastating than anything dreamed of by the Japanese might be on their way from bases deep inside their homeland without yielding any substantial intelligence warning; they might conceivably follow routes that, by avoiding detection or at least identification among the friendly and unknown traffic appearing on radars, would be unlikely to give even any considerable tactical warning. Submarines might be kept on station several hundred miles off our coast during years of peace and might launch ballistic missiles on the receipt of a prearranged signal. Finally, intercontinental ballistic missiles might be kept for years at a high degree of readiness, and, if there were enough of them, they might be launched after simply being "counted down" with no further visible preparation. Total flight time for such rockets between continents might be less than fifteen minutes and radar warning less than that. Most important, such blows, unlike those leveled by the Japanese at Pearl Harbor, might determine the outcome not merely of a battle, but of the war itself. In short, the subject of surprise attack continues to be of vital concern. This fact has been suggested by the great debate among the powers on arms control and on the possibilities of using limitation and inspection arrangements to guard against surprise attack. The very little we have said suggests that such arrangements present formidable difficulties.

This study has not been intended as a "how-to-do-it" manual on intelligence, but perhaps one major practical lesson emerges from it. We cannot count on strategic warning. We might get it, and we might be able to

take useful preparatory actions that would be impossible without it. We certainly ought to plan to exploit such a possibility should it occur. However, since we cannot rely on strategic warning, our defenses, if we are to have confidence in them, must be designed to function without it. If we accept the fact that the signal picture for impending attacks is almost sure to be ambiguous, we shall prearrange actions that are right and feasible in response to ambiguous signals, including signs of an attack that might be false. We must be capable of reacting repeatedly to false alarms without committing ourselves or the enemy to wage thermonuclear war.

It is only human to want some unique and univocal signal, to want a guarantee from intelligence, an unambiguous substitute for a formal declaration of war. This is surely the unconscious motivation of all the rewriting of Pearl Harbor history, which sees in such wavering and uncertain sources of information as the winds code and all of the various and much-argued MAGIC texts a clear statement of Japanese intent. But we have seen how drastically such an interpretation oversimplifies the task of the analyst and decisionmaker. If the study of Pearl Harbor has anything to offer for the future, it is this: We have to accept the fact of uncertainty and learn to live with it. No magic, in code or otherwise, will provide certainty. Our plans must work without it.