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JAPANESE OPERATIONAL ART IN THE BATTLE OF CORAL SEA

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Operations.

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.

Signature: Jonathan E. Will

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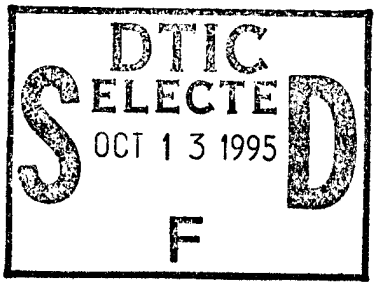
Paper directed by Captain D. Watson
Chairman, Joint Military Operations Department



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Abstract of

JAPANESE OPERATIONAL ART IN THE BATTLE OF CORAL SEA

The Battle of Coral Sea is known primarily as the first major sea battle in which opposing ships never sighted each other because all actions were by aircraft. But a study of Japanese operational planning for the battle and subsequent decisionmaking during the battle yields lessons applicable to future operational planners and commanders. Principal lessons in operational planning include the need to consider enemy capabilities, the value of flexibility resulting from designed branches in plans, the danger of overconfidence, the need for cost and risk assessment and the importance of logistics planning for all consumable military resources. Principal lessons in operational decisionmaking include the value of objective decisionmaking by operational commanders, the necessity for commanders to focus on campaign objectives, the value of swift, reliable communications and the importance of considering the effects of weather.

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Chapter 1: Introduction

The Battle of Coral Sea, 4-8 May 1942, was the first major sea battle in history in which the opposing naval surface forces never sighted each other--aircraft conducted all reconnaissance and attacks. The battle occurred because of a Japanese attempt to capture Port Moresby, New Guinea as a base in their expansion south through the Pacific toward Australia. This paper, based on secondary sources from Japanese and western authors, examines Japanese planning and operational decisionmaking in the Battle of Coral Sea and seeks to identify enduring lessons which may be useful for future operational planners and commanders.

Strategic Background

Following the Japanese attack at Pearl Harbor on 7 December 1941, the Japanese rapidly conquered the Philippines, Malaya, Singapore and the Netherlands East Indies to secure military bases and natural resources considered vital for national security. The Japanese crushed all Allied forces in their path from Pearl Harbor to Ceylon. The pace of victories exceeded even the most optimistic prewar estimates, and euphoria swept Japan. The easy conquests resulted in "victory disease," overconfidence bordering on arrogance and a feeling of invincibility which affected nearly everyone in the country.[1] The Japanese overlooked the fact that they had

overwhelmed numerically and qualitatively inferior Allied forces in each of these early battles.

Doolittle's U.S. carrier-based bomber raid on Tokyo on 18 April 1942 caused little physical damage but embarrassed the Japanese Navy in this period of elation. The raid came at a time when there was vigorous debate in Tokyo about which direction the war should take. The Army wanted to press the offensive in China and southeast Asia. The Naval General Staff wanted to attack in the south Pacific to cut the lines of communication between Australia and America. Admiral Isoruku Yamamoto, Commander of the Japanese Combined Fleet, wanted to force a showdown battle with the U.S. aircraft carriers--the Allied center of gravity. Doolittle's raid, highlighting the danger of the U.S. carriers, precipitated an agreement about the next thrusts of the war. First, the Japanese would capture Port Moresby; then, they would capture Midway Island and draw out the U.S. carriers for a decisive battle.[2]

Theater of Operations

The theater of operations (see Appendix) was immature, with few developed ports or airfields among the many islands. The Japanese had previously captured Truk and Rabaul and quickly developed both as forward ports and airbases. They had also captured Lae and Salamaua, on the northeastern coast of New Guinea, for use as airfields. Across a rugged mountain

range on the southeast coast of New Guinea lay Port Moresby, a key Allied base.

The weather in the theater is tropical, with prevailing southeast winds. An occasional cold front off Australia produces heavy clouds, squalls and gusting winds. These cold fronts may exist as a narrow, moving band of storms or as a wider, almost stationary area of poor weather.[3] The latter type of front was a significant factor in the battle.

Chapter 2: The Japanese Plan and its Execution

The Operation MO Plan

Given a strategic objective, the first of three tasks of an operational planner is to determine what military conditions to achieve in order to attain the objective.[4] Operation MO was the Japanese plan to capture Port Moresby, the desired strategic objective in the effort to isolate Australia. The Japanese determined that the required military conditions for success were gaining naval and air superiority in the Coral Sea in order to land forces to capture Port Moresby.

The second task of the operational planner is to determine the sequence of actions necessary to create the desired military conditions.[5] The Japanese determined that a sequence of three phases was necessary. The first phase was capturing Tulagi Island (in the Solomons) for reconnaissance

in the Coral Sea. In the second phase, Japanese forces would destroy Allied forces in the Coral Sea to allow landing troops at Port Moresby. The third phase was to facilitate isolating Australia by seizing the islands of Ocean and Nauru to the northeast of the Solomons and to conduct air raids on Allied bases in northeast Australia.

The third task for the operational planner is to determine how to apply given military resources to carry out the desired sequence of actions.[6] The resources for Operation MO included Vice Admiral Shigeyoshi Inouye's Fourth Fleet, an area defense fleet based at Truk. Japanese intelligence believed a single U.S. carrier was operating in the southwest Pacific. Based on this assumption and the recognition of Operation MO as an effort of economy relative to the subsequent Midway operation, the Combined Fleet augmented the Fourth Fleet with two large aircraft carriers and one light carrier to ensure decisive mass of force. The four other large carriers of the Combined Fleet would prepare for Midway in home waters.

Operation MO was elaborate, dividing the above military resources into five groups (see Appendix). The aircraft carriers split into two groups--the Striking Force (including the two large carriers), and the Covering Force, with the light carrier. The plan envisioned the separated Covering and Striking Forces using maneuver to entrap Allied ships. The Covering Force would escort the Tulagi Invasion Force on its mission, then enter the Coral Sea ahead of the Port Moresby

Invasion Force while the Support Force established a seaplane base on Deboyne Island. The Japanese reasoned that the Allies would detect the Invasion Force, the Covering Force and the Support Force enroute to their destinations around New Guinea. Meanwhile, the Striking Force would transit covertly east of the Solomon Islands. This route was out of range of Allied land-based air search and out of sight of coastwatchers. The Striking Force would enter the Coral Sea as soon as an Allied response to the other forces developed. The Japanese reasoned that the Allied defensive force would head in a group through the Coral Sea toward New Guinea. The Striking Force would then surprise the Allies from behind, trapping them between the two Japanese carrier forces. Submarines, land-based naval aircraft and cruiser float planes would provide reconnaissance to allow the use of all carrier aircraft for strike purposes.[7]

Following the destruction of the U.S. aircraft carrier and its escorts by double envelopment, the Port Moresby landing would occur. Finally, the Tulagi Invasion Force would capture Ocean and Nauru Islands, and the carriers could attack Allied bases in northeastern Australia by air.

Vice Admiral Inouye would command all ships, submarines and aircraft (both carrier-based and land-based) in the operation. Land-based aircraft were all naval planes. The only Army unit involved was the landing force. Six subordinate Japanese flag officers commanded various forces, including Vice Admiral Takeo Takagi (Strike Force Commander) and Rear Admiral Chuichi Hara (Strike Force Carrier

Commander). In this way the Japanese designed unity of effort into their plan.

Tankers at sea and a forward fuel depot at Shortland Island would provide fuel replenishment for the Japanese forces.

Discussion of the Operation MO Plan

Operation MO kept the initiative in Japanese hands with a spirit of offense consistent with the Japanese war effort, but the plan lacked simplicity because of its complex division of forces. Success with sequenced objectives and widespread forces depended on good communications and synchronization. The division of forces allowed the Allies to attack individual Japanese forces. The plan lacked flexibility: there were no branches to account for possible Allied actions beyond entrapment between the two Japanese carrier forces. There was no consideration for a possible Allied attack on Tulagi after the Japanese landing.[8]

The Japanese did not consider the potential risks or costs to their forces, apparently due to the effects of "victory disease."

Several assumptions were implicit in Operation MO. The Japanese plan assumed that the Allies would spot the Port Moresby Invasion Force and would react accordingly. The Japanese assumed that there would be one U.S. carrier and possibly one or more battleships in opposition: they did not consider the enemy capability to have up to four aircraft

carriers in the area. The Japanese also assumed the Allies would not detect the Striking Force and that the Striking Force would surprise the U.S. carrier. The Japanese therefore made no explicit efforts in operational deception or operational security measures. The Japanese considered only one enemy course of action; "the war had gone so well for Japan up to the spring of 1942 that . . . planners seemed to work entirely on the basis of what the enemy would *probably* do, rather than of what he might possibly do or what he was capable of doing."[9] The sequel to Operation MO was the Midway operation, and plans for Midway utilized the two large carriers from Operation MO, assuming that they would be unharmed.[10]

Unknown to the Japanese, some of their assumptions were invalid. Through Allied intelligence efforts, some details of Operation MO were known to the Allies.[11] This loss of security gave the Japanese enemy an unexpected advantage and reduced the Japanese edge in surprise. Allied commanders placed two carriers with escorts in the Coral Sea to oppose the attack on Port Moresby. Yet Japanese commanders, cocky from their recent flood of victories, were confident of success in Operation MO.[12]

Execution of the Operation MO Plan

The Japanese took Tulagi on 3 May 1942, achieving their first objective. One of the two U.S. aircraft carriers in the Coral Sea awaiting the Japanese operation attacked Japanese

forces by air on 4 May several times--a surprise to the Japanese. This Allied response was inconsistent with Japanese expectations. The Striking Force, with its two large carriers, was north of the Solomons refueling and ferrying aircraft to Truk. Its carriers could not engage the enemy because of the distance. The Striking Force raised speed and headed for the Coral Sea, arriving early on 6 May. But a weather front hindered air reconnaissance, and the Japanese communication system was unable to deliver some initial sighting reports of Allied ships to the appropriate Japanese forces in a timely manner.[13]

On the morning of 7 May, Japanese aircraft located three different groups of Allied ships and attacked two of these forces. Japanese pilots reported sinking one battleship and damaging another, and sinking an oiler. These engagements undoubtedly evoked memories in the Japanese pilots of an air attack off Malaya in which the Japanese sank two British battleships. The only actual damage, however, was the sinking of the oiler and one destroyer.

On that same day, American planes sank the light aircraft carrier. This carrier was the only warship larger than a destroyer that the Japanese had lost in the war to this point.[14] The Japanese had not previously considered possible costs of the operation, so news of the carrier's destruction was a shock. "A dream of great success has been shattered,"[15] wrote Admiral Yamamoto's Chief of Staff, Rear Admiral Matome Ugaki, monitoring the progress of the operation in home

waters. Vice Admiral Inouye's reaction to the loss of the carrier was similar.[16]

The Japanese carrier strike returned in the afternoon. Anxious to hit the U.S. carrier before it found the Japanese carriers, the Striking Force commanders decided to conduct a high-risk twilight air attack. The key risks were locating the target in the weather front at twilight and returning to the carriers at night (the aircraft had neither radar nor homing devices). The most skilled Japanese aircrews would conduct the strike.

The strike was unable to locate its target, and only six of the original 27 aircraft landed safely. Many of the best Japanese aircrews perished. The Japanese operational commanders considered the day's loss of one carrier and failure to attack the U.S. carrier as a disaster; Rear Admiral Hara said "they were so unlucky on the seventh that he felt like quitting the navy."[17]

That night, Vice Admiral Takagi considered using his two escorting heavy cruisers to conduct a night surface attack on the Allied force, wanting "to retrieve the 'disgrace' of his failure so far."[18] Before making a decision, he received a request from the Invasion Force Commander asking for closer support for the transports. He acceded to this request, rendering a surface attack moot.

On the next morning (8 May), the Japanese finally located and attacked the U.S. carriers, which had steamed out of the weather front during the night and were under clear skies.

The attack damaged both U.S. carriers, one of which sank later that day. Once again, however, battle damage assessment was inaccurate: returning pilots reported sinking two carriers and a battleship. No one questioned the reports of these pilots fresh from battle.

> This ready acceptance of his [Rear Admiral Hara's] aviators' reports appears to have been partially based upon overconfidence. He seemed to feel that his aviators were superior to those of the Allies; hence their reported sinking of both carriers was not unexpected.[19]

On that same day, U.S. carrier aircraft damaged one Japanese carrier. Vice Admiral Takagi detached this carrier to return to Japan for repairs because it was unable to continue air operations.

The situation as it then appeared to Vice Admiral Inouye was this: the Japanese had sunk two U.S. carriers and two battleships in exchange for the loss of one light aircraft carrier and the damage to a large carrier. In view of early war victories and the neglect of cost assessment for Operation MO, however, their own losses loomed large to the Japanese. It was easier for Inouye to claim a tactical victory and downplay his losses than to press on to the objective and suffer further embarrassment with additional losses. The potential strength of Allied land-based air in Australia operating against his one remaining carrier concerned him. Vice Admiral Inouye therefore canceled Operation MO on the evening of 8 May, ordering all forces to return to Truk or Rabaul.

Rear Admiral Hara was in a similar state of mind, having lost his confidence in sure victory. He said later that "he could decide nothing by his own will. When ordered to go north [to Truk] he was glad to do so. . . . Though he had the enlargement of the war result in his mind, he had no confidence that he could do so."[20]

The cancellation of Operation MO angered Yamamoto's Combined Fleet Staff, who felt that Inouye had "fallen into defeatism after losing *Shoho* [the light carrier]."[21] His staff immediately transmitted a message to the Fourth Fleet Staff demanding the reason for this order and encouraging an attack on the Allied remnant, but they received no reply. A disappointed Yamamoto acquiesced in Inouye's decision, and the Imperial Headquarters publicly announced a great victory that same day.[22]

After the battle, the Japanese repaired their damaged carrier in two months at a routine pace. The Japanese also judged that the undamaged carrier required lengthy training to replace its decimated air wing. Consequently, neither of these carriers participated in the Midway operation in June.

Chapter 3: Conclusions and Lessons for the Future

Conclusions

Japanese plans for Operation MO considered Allied intentions, not capabilities. In their overconfidence, the Japanese assumed only one U.S. carrier in opposition, decided its single most likely course of action, and failed to consider any other Allied ways or means of defending Port Moresby.

Complicated as it was, the Japanese plan contained neither branches to react flexibly to unforeseen events nor an assessment of risks. When the Allies did not conform to the Japanese plan and then sank the light carrier, the Japanese operational commanders found themselves in "uncharted waters." Once it became apparent that this battle would not be the easy Japanese victory typical of the war to this point, fear of failure and embarrassment appear to have become significant motivators for Japanese operational commanders. Japanese commanders chose to terminate Operation MO with an apparent tactical victory in hand rather than risk additional losses in attempting to capture Port Moresby.

Japanese logistics planning for fuel replenishment was excellent, but the Japanese did not consider the possibility of significant carrier aircraft attrition. This is probably due to the light aircraft losses suffered earlier in the war. Staging replacement carrier aircraft and crews at Rabaul prior to the battle could have enabled the Japanese to sustain the

operation and achieve their main objective. The two large carriers had ferried aircraft to Rabaul just prior to the battle, but these aircraft were for the land-based naval air force there.

The Japanese considered their center of gravity to be their aircraft carriers, but their actual center of gravity was the highly experienced and irreplaceable pilots. Consequently, the Japanese expended much of their most precious military resource in a high risk twilight attack.

The Japanese had unity of command, but their dispersed forces and complex operation plan reduced some of the benefits of unity because their communications were neither reliable nor fast enough to coordinate their many forces.

The Japanese did not consider weather as a significant factor in their planning or decisionmaking. The fact that a weather front hid the Japanese Striking Force for two days was by chance, not design.

Japanese battle damage assessment consisted solely of reports of pilots returning from air strikes. Reliance on a single (and not impartial) source resulted in inflated evaluations of air attacks and invalid decisions by operational commanders.

In their overconfidence, the Japanese assumed that they had both surprise and security, but inadequate security led to a loss of surprise and greatly reduced the plan's chances of success from the start.

Japanese commanders permitted a routine tempo of repair operations after this battle when preparing for its sequel, the Midway operation. In contrast, the U.S. repaired their damaged carrier in just two days in a remarkable effort, enabling that carrier to participate in Midway. One can only wonder about the possible effects on the Battle of Midway if Japanese commanders had felt the same sense of urgency as their American counterparts.

The Japanese had not learned from their previous easy victories in the war; they just assumed that they would win as before. They did not recognize that some underlying battle conditions--superior Japanese forces in number and quality--had changed. Enemy forces had improved significantly through training and wartime experience.

Lessons for the Future

Operation plans must consider enemy capabilities, not just intentions. Plans must be flexible, with built-in branches to allow response to unforeseen events. Prior evaluation of the potential costs and risks of an operation is necessary in making objective operational decisions, and in determining if losses are in an expected range.

Logistics planning must include not only obvious needs such as fuel, ammunition and food, but also other resources that may be subject to attrition, such as aircraft and aircrews. It is necessary to examine potential changes in the

nature of battle to determine if a previously noncritical military resource may become a new limiting factor.

Operational commanders must be aware of factors which may unduly influence their decisions. Such factors are diverse and include overconfidence, a recent "winning streak," and excessive personal pride or fear of failure.

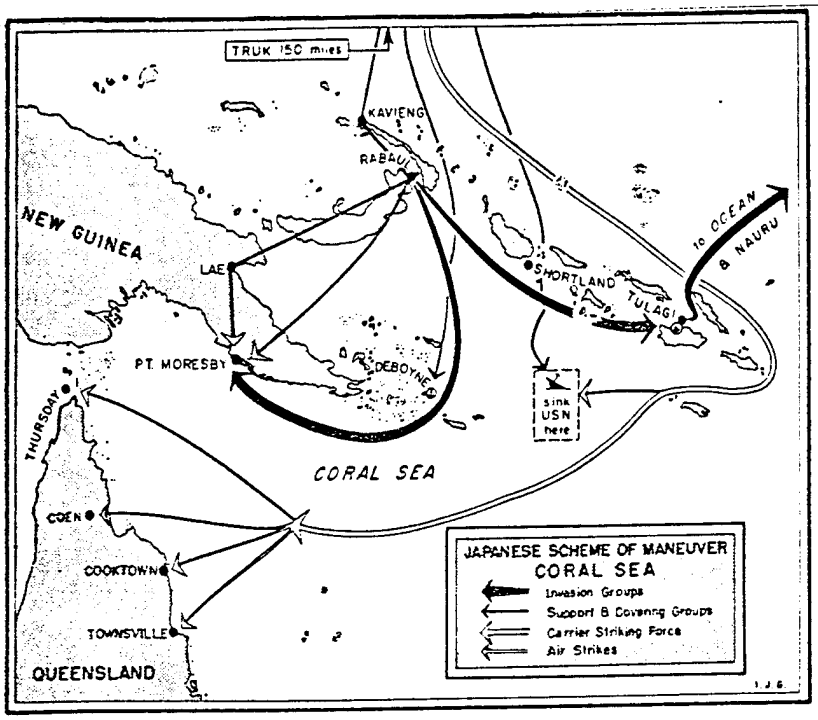
Unity of command is a key factor in achieving maximum effect for a given force, but it does not guarantee success. Rapid and reliable communications are necessary to coordinate divided forces.

Climate and weather must be central factors in both planning and operational decisionmaking, and objective battle damage assessment using multiple sources is a key factor in valid decisions by operational commanders.

Although over fifty years have passed since the Battle of Coral Sea, many lessons from the battle remain valid for the operational planners and commanders of the future.

> What has been will be again,
> what has been done will be done again;
> there is nothing new under the sun.[23]

Appendix[1]



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1. Mitsuo Fuchida and Masatake Okumiya, Midway: The Battle that Doomed Japan (Annapolis, MD: U.S. Naval Institute Press, 1955), p. 245.

2. Bernard A. Millot, The Battle of the Coral Sea (Annapolis, MD: U.S. Naval Institute Press, 1974), p. 27.

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5. Ibid.

6. Ibid.

7. Bates, pp. 11-17.

8. Ibid.

9. Fuchida, p. 245.

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12. David A. Thomas, Japan's War at Sea (London: Andre Deutsch, Ltd., 1978), p. 137.

13. Morison, p. 31.

14. Ibid, p. 5.

15. Masataka Chihaya, trans., Fading Victory: The Diary of Admiral Matome Ugaki, 1941-1945 (Pittsburgh, PA: University of Pittsburgh Press, 1991), p. 122.

16. Millot, p. 72.

17. Chihaya, p. 128.

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20. Chihaya, p. 128.

21. Ibid, p. 124.

22. Ibid.

23. Ecclesiastes 1:9.

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