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THE CONTRIBUTION OF THE SUBMARINES TO THE AMERICAN VICTORY IN THE PACIFIC

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THE submarine's ability to strike at the arteries of the enemy's economy and industry by its attack on shipping, merchant and naval, was proved though not widely publicised. There is a general impression in the minds of people that the war in the Pacific was won mainly by the spectacular efforts of the aircraft carrier, the U.S. marines and the air bombing of Japan. The part played by the U.S. submarines is not sufficiently known and appreciated. This essay seeks to place the contribution of the U.S. submarines in its proper perspective. The comparative failure of the Japanese submarine arm has also been discussed.

The beginning of World War II found the American Navy with 55 large, 18 medium-sized submarines operating in the Pacific and Asiatic Fleet out of a total of 111, not counting 73 under construction. These were to be one of the most decisive weapons of the Pacific War. Nearly 1/3 of all Japanese combat ships destroyed were their victims and no less than 63% of Japanese shipping accounted for by the American submarines. The U.S. submarine force represented an outlay of just 0.7% of the Navy's total expenditure.

Fleet Admiral Nimitz, while he was still a very junior officer, had predicted that the submarine would play a dominant role in any future war at sea. Admiral Chester Nimitz, who became the Commander-in-Chief of the Pacific Fleet after the Japanese attack on Pearl Harbour, said: "Future students and historians of our naval war in the Pacific will inevitably conclude that the Japanese Commander of the Carrier Task Force, which mis-wrought so much damage at Pearl Harbour on 7th December, 1941 missed a golden opportunity in restricting his attacks to one day's operations and in the limited choice of his objectives. The capital ships he sank or severely damaged could not have operated in the far western Pacific for many months, whereas our submarines began unsupported operations in Japanese home waters immediately after the commencement of the war.

"That the Japanese Naval Command failed to evaluate the worth and potentialities of our submarines, is incredible. They knew of our dependence on dockyard and the fuel supplies, and on the submarine bases all of which were objectives of the first importance. They knew

that all the fuel storage was above ground and very vulnerable. Finally they were aware that only that branch of the Service could operate effectively at once in the critical waters between Japan and the East Indies.

"Fortunately for the United States, our great submarine base in Hawaii with its supplies and facilities and our submarines were undamaged. When I assumed command of the Pacific Fleet on 31st December, 1941, all our submarines were already operating against the enemy, the only unit of the fleet that could come to grips with the Japanese for months to come.

"It was to the submarines that I looked to carry the load until our great industrial activities could produce the weapons which are so sorely needed to carry the war to the enemy. It is to the everlasting honour and glory of our submarines service that they never failed us in our days of great peril".

It is interesting to note that the other two Commanders-in-Chief of the U.S. Navy, Admiral King and Admiral Hark, like Admiral Nimitz, were also submariners.

During the first four months of the war the submarines fought doggedly under great handicaps against a confident and aggressive enemy.

The Pacific Submarines came under "Com. Sub. Pac.",* which was further divided into four operational Commands, North, Central, South and Southwest. Submarines were organised in divisions and squadrons depending on the locale and the type. In the early part of the war, Admiral Nimitz himself directed submarine operations but later transferred them to Com. Sub. Pac.

The U.S. Fleet's basic doctrine was "The primary task of a submarine is to attack enemy heavy ships. A heavy ship is defined as a battleship, battle-cruiser or an aircraft carrier". After unrestricted submarine warfare was ordered, the employment of the submarines to lance the arteries of the enemy trade became of major importance.

The American concept of submarine warfare, dictated by the few and far between bases, required self-sustained long-range cruising submarines. The big 2,000 tonners often doubled as minelayers and troop transports.

American submarines operated from Hawaii, and from Freemantle and were supported by British submarines from the East Indies Station.

Every boat on patrol was a threat and the Japanese who had expected to be able to navigate their home waters in perfect safety were forced

* Com. Sub. Pac.=Commander Submarines Pacific.

to draw precious destroyers from the fleet for escort purposes. Many of the unlucky boats brought back valuable intelligence, and some, by their very failures, saved later patrol boats from wasting time in barren waters.

The sea lanes from Japan south to Truk and thence on to the South Pacific were the logistic link between the Japanese homeland and the front. Here the Central Pacific boats struck telling blows at shipping, at the same time, indirectly supporting fleet operations.

To the 51 submarines fell the unique responsibility of the improvised defence, to them fell the task of intercepting the Japanese naval forces plunging down the Philippines, of slashing the enemy's communication line, of running interference for the Allied naval forces fighting to hold the Malaya Barrier, of dealing with that 4 million tons of shipping allocated to the enemy's war machine and the 2 million tons devoted to the maintenance of Japanese economy. Japan was a body of land completely surrounded by a submarine's favourite element—surface ships.

In the beginning of the war, submarine torpedoes were so faulty that the submarines when they saw torpedoes hitting but not exploding came on the surface and shot with their guns. Just imagine after cruising 8,500 miles and arriving within 800 yards of the enemy ship there were such considerations as that the torpedo might not explode! It was the submariners themselves who suggested the remedy for the defective magnetic pistols of the torpedoes.

In the beginning of the war excessive caution was another deterrent to action. Submarine tactics improved as the war progressed; night attacks on the surface with a combination of radar and periscope attacks, penetration of enemy harbours, counter-attacks on escorts became the common practice. The submarines, their equipment and their torpedoes also improved.

No 1 Mission to Sink Everything Afloat under the Japanese Flag

Immediately after the attack on Pearl Harbour a considerable Japanese force intended to attack Midway. As the force approached U.S.S Argonaut fired her dud torpedoes on the Japanese cruiser and destroyer force, and even though they did not explode the force retired. Here at the outset of the war was an example of the submarines ability to divert surface forces and disrupt an enemy attack. It will seem surprising to read that submarines like the Pollack left Pearl Harbour shortly after 7th December to attack the Tokyo Bay waters. The submarine could count on these waters being heavily guarded.

The American submarines based at Manila also escaped the air attack. The small force of submarines began to be deployed in Darivo

Bay, patrolling off into China, advancing to meet the enemy in Northern Philippine waters — a total of 25 submarines against the titanic Japanese offensive in Philippines.

Undersea Lanes to Victory

The submarine forces "got in there" and fought. The submarines based at Manila diverted the enemy's naval vanguard, harassed the flanks of the Japanese Second Fleet and impeded the drive in Netherlands East Indies. Pearl Harbour submarines joined battle in the Central Pacific, patrolling, cutting shipping lanes to Japan.

With Mid-Pacific bases lost, Manila lost, with air cover lost—the Pacific Fleet immobilised, reinforcements and replacements leagues away, the submarine entered the conflict and kept on going. They kept on going despite the fact that the enemy had the initiative. For about two years the submarines kept on going with defective torpedoes. In spite of all this and other handicaps, the submarines led the U.S. offensive. Through waters blasted by Japanese depth-charges and air bombs, the submarines carried the fight to the enemy.

They aided in the defence of Midway and battled the enemy in the Alutians. They helped to parry the enemy's thrust at Guadalcanal. They blockaded the ports of the Japanese home empire, cut the sealines to the China coast, to Malaya and East Indies, laid mines, reconnoitred for air strikes, struck the Japanese Navy some of the hardest blows that it ever received, and swept the merchant fleet off the Japan from the sea lanes and penetrated the Sea of Japan and finally halted, presumably for lack of wheels, at the beach heads of Kyushu, Shikoku, Hokkaido and Honshu.

Special Missions. Generally the older boats were given these tasks.

Reconnaissance including those of Hokkaido and Honshu, evacuation, transportation of intelligence agents, life-guarding (about 700 American ditched pilots were picked by submarines), minelaying, weather reporting, anti-picket boat sweepers, support of commando raids like the famous Makin Island raid, marker beacons for surface ships in amphibious operations, form special missions carried out by U.S. submarines. Near the end of the war submarines were ready to play the part of aircraft warning radar picket—a role formerly held by the destroyers.

Operation Barney

The Japanese had declared that minefields between Korea and Japan and in the Japan Sea could not be penetrated. The U.S. submarines had

got a new mine-detecting device which would permit them to detect mines in the waters ahead. These submarines came to be known as the Mighty Mine Dodgers. From then on, Japanese shipping with Manchuria and Korea also ceased — the submarine ring round Japan had been completed.

Submarine Support of Fleet Operations

After May, 1942, a small number of submarines functioned as a fleet arm. In the Battle of Midway submarines were deployed to scout and report the location of the Japanese fleet, to intercept and attack. Submarines signalled the presence of Yamamoto's Fleet 600 miles west of Midway. One of the war's famous battles, Midway developed as an air show. Planes did most of the attacking, and there were no blows traded between surface groups. But submarines on both sides dealt deadly blows and throughout the combat their influence was a strong undercurrent on the battle's tide. In particular, U.S.S. Nautilus ended the life of aircraft carrier *Soryu*. Two Japanese cruisers including the *Nogami* were involved in serious collision as they manoeuvred to avoid submarine torpedoes. It was realised at Midway that submarines must be equipped with radar and this was done soon.

In the Battle of Philippine Sea in June, 1944, U.S. submarines sank 2 aircraft carriers, the *Tachio* and the 35 knot *Shokaku* in what is known as the famous Carrier Battle. Total loss on both sides were three carriers lost by Japanese and one American carrier damaged.

Japanese naval bases like Truk were successfully blockaded by submarine before final capture. In the Solomons and Guadalcanal, submarines played a gallant part in strictly amphibious operations.

Submarines Vs. Japanese Navy

When U.S. submarines set out to execute "unrestricted warfare" every Japanese ship afloat was on the submarines extermination list. But public enemy no. 1 was Japanese Man-of-War. The U.S. submarines started a relentless hunt for Japanese warships, and they might have hit harder had they been armed with a dependable torpedo. At the end of the war their score was:—

- 7 Aircraft Carriers
- 1 Battleship
- 10 Cruisers
- 30 Destroyers
- 25 Japanese submarines or 20% of the submarine sinkings.

BLOCKADE OF JAPAN

Blockade of Japan was recognised, early in war, as one of the most effective methods of bringing about her defeat.

Japan's meagre industrial capacity and resources generally rendered it impossible for her to support a long war against a country like U.S.A. which had deep reserves, for example, Japan with Korea and Manchuria produced 9 million tons of steel while the U.S.A. produced 80 million tons of steel annually. Japan was heavily dependent on raw materials specially petroleum, rubber and non-ferrous metals. In fact, without exception, she had to import all raw materials for her industry and 20% of her food requirements. Her economy was based on foreign trade.

The Achilles' heel of Japan was her shipping. The Japanese underestimated their probable war losses and in spite of them never realised that they were doomed as their shipping went down. At the beginning of the war Japan had 6 million tons of shipping, later increased to 8 million tons. Of these submarines accounted for nearly 55 million tons.

War Against Shipping

Attrition war waged by U.S. submarines against Japanese shipping can be seen as a triple purpose operation. Its moves were aimed at three elementary objectives:

- I — The cutting of supply lines between the Japanese outlying bases—a move obviously related to maritime strategy.
- II — The cutting of transportation lines between conquered territories and the home empire—a move to prevent the exploitation of those territories and thus deprive the Japanese homeland of foodstuff and vital raw materials.
- III — The cutting of transportation lines between the home empire and colonial and other foreign markets—a move to liquidate the enemy's overseas commercial enterprises. Summing up they meant the ruination of Japan's economy.

Most of Japan's domestic trade was water-borne. Japan's principal cities were seaports. The life-blood of their war machine was oil. Without oil the Japanese navy would rust at anchor, the army and air force would jolt to halt. Few nations were more dependent on shipping than Japan.

Tourniquet on Tokyo

While the exploits of the Silent Service were not splashed across the front pages of newspapers, the Japanese Emperor's subjects witnessed

the destruction done by the submarines even at their maritime doorstep. Blockade strategy called for a chain of submarine patrols which would embrace the Japanese home confines from Kancho down to Narsu Shot and reach across the East China and Yellow Sea to the East Coast. This was done by submarines.

During 1942 submarines had caused tremendous losses to Japanese merchant and naval ships. Japan's economy had begun to crumble. The enemy's bases were half-starved and the Japanese navy began to limp.

In the light of this war effort (16 submarines employed in the West Pacific) by such a small submarine force, a layman may logically wonder why the United States Navy was not ordered lock, stock, and barrel to the shores of Japan. Why its entire submarine fleet and all its surface and air force were not concentrated *en masse* to blockade and reduce the enemy's homeland?

There were armchair and even editorial chair strategists who made such proposals, forgetting that the submarine's singular ability to operate unseen behind enemy lines was a feature not common to surface ships and aircraft. The undersea blockade could get in where battleships and carriers could not.

The Japanese Submarine Force

The Japanese blamed their submarines failure due to lack of radar, clumsy, shallow diving boats, but it was mainly due to their out-dated concept of submarine warfare that they failed.

After the Pearl Harbour attack the Japanese submarines continued functioning with the fleet and for supporting the army.

Despite the example of German near success in the U-boat attacks on British economy, the Japanese held the function of the ocean-going submarine to be support of fleet operations, particularly the attack of carriers and battleships. They were used for screening the fleet as for Pearl Harbour attack, recce* of harbour and bases as at Midway in June, 1942 and ambushing as in Marianas Operations in July 1944. Aircraft carried by submarines were used for recce. The submarines were rushed from anticipated to actual point of attack, usually too late and exposed to destruction through travelling on the surface. There was natural demoralisation effect on the submarine force. As the war progressed submarines began to be used to support army island bases and this was because the submarine was the only vessel which could move in disputed waters with comparative immunity.

* Reconnaissance

The Japanese submarines did badly at Midway, doing much better in Guadalcanal sniping at aircraft carriers. In the undersea war in the Solomons the Japanese submarine sank the Carrier U.S.S. Saratoga. On 15th June Aircraft Carrier Wasp, Cruiser North Carolina and Destroyer O'Brien were sunk within 10 minutes by Japanese submarine I-19.

The Japanese submarine boats refuelled big sea-planes on ineffective bombing missions, like the one against Oahu in March 1942. They conducted long cruises to carry out nuisance bombardment as in Midway. They carried scouting aircraft great distances to make recce. flights of negative value, like the one to Seattle. Even after a few submarines reached the west coast of America and caused great alarm, they were directed to destroy such worthless objectives as lighthouses. But the mortal blow to a successful undersea warfare was the Japanese army's discovery that the boats could carry supplies to isolated garrisons. They began to be used as sea-going Pack Mules. The navy resented that sort of employment but Tokyo forgot their strategic role and wasted them. Thus while there were many other causes of the comparative failure of the Japanese submarine, one stands out like the rising Sun—the misconception engraved in the topmost minds of the Military and Naval hierarchy. Better submarines doctrine could not have won the war for Japan, but employment of the boats against the vulnerable supply lines, both the trade routes and fleet trains, would have cost the Allies dear in ships, goods and effort, and delayed the final outcome far more than did the fanatical last ditch defence of the indefensible islands.

During 1942 the Japanese Submarine 6th Fleet was a "Fleet in Being" and the Americans expected that enemy submarine would harass their shipping lines. By 1944 they allowed unescorted merchant ships to cross the Pacific, without loss, and the American Logistic Groups operated without fear.

While the Japanese defence perimeter extended to only 3,000 miles from the main island the Americans bases at Pearl Harbour were 4,700 miles away and had to be supplied from the heart of America. Similarly the British base at Singapore was some 6,000 miles away. American bases in Australia were about 7,000 miles distant and it required a shipping effort twice the size necessary for the support of American forces in Europe. The Japanese had the advantage of far-flung net of island bases, and their submarine could reach the patrol areas faster than the American submarines and stay there longer.

The Germans frequently urged the Japanese to use their submarines against enemy shipping in the Indian Ocean and on the America-Australia route. Some half-hearted attempts were made to disrupt the enemy

lines of communication but they were made in insufficient strength to have any result. The Japanese just did not understand what use it was to attack Allied shipping. This seems to be an incomprehensible attitude.

The Japanese submarine force seemed to lack a primary mission, a clearly-defined programme. Japanese Navy leaders sought its services for fleet operations. Generals demanded I-boats for transport and supply. Frequently the submarine came under the control of the army. The result was a dispersal of effort.

The misdirected Japanese force has, however, some heroic special missions and actions to its credit including the sinking of a significant number of Allied naval ships.

CONCLUSION

Neither the Air nor the Mining, singly or in sum, pulled as great a weight in the blockade of Japan as the operations of submarines.

In the Pacific we see the tremendous effect of the naval blockade exercised chiefly by submarines. Japan indeed was facing defeat even before the Allies had reached the geographical position from which attack on and subsequent invasion of the Japanese homeland could be made. Whilst great and spectacular air battles were taking place over the Coral Sea and Midway, whilst advance was being made inch by inch in the South West Pacific and by giant strides in the Central Pacific, U.S. submarines were silently going about their task of sinking Japanese shipping and cutting the Japanese lifelines one by one.

For those who think that Japan capitulated because of the geographical advance by Allied, Naval and Surface units here are some eye-opening figures. By the middle of 1943 Japan was reduced to importing half of what she imported for her normal peace time needs in 1940. Her foreign trade had dropped by 60%. By 1944 her merchant tonnage had been reduced to 16% of what it was in the beginning of the war and her economy had collapsed.

At the time of the Argonaut conference in Washington in January 1943, Allied submarines had greatly reduced the Japanese power to continue the war. In fact, in January 1943 when the final operations against Japanese were decided upon, sinkings had reached such proportion that the Japanese finally abandoned the use of sea lanes and therewith all they had at the beginning of 1942.

The excess of losses over capacity to build quickly set up a vicious cycle. By preventing the exploitation of captured sources

of raw materials it kept the country's economy off balance and created a shortage of raw materials. These in turn limited war production; and deprived the country of oil in such quantities as to bring training of Air Units to a halt and finally immobilise the fleet. Steel was so scarce it could no longer be used for shipbuilding; oil reserves were on the verge of exhaustion and railway transport on the point of being confined to local areas. The food situation had deteriorated beyond control.

The country had been brought, through submarine blockade, to a state in which the air force and the army were powerless to prevent extermination of the nation's economy, industry, communications and thus her final defeat by air attack. The atom-bomb attack was only a *coup-de-grace* to an already defeated enemy. It has been said that the Japanese lost the Pacific War when her forces lost control of the Central and South-West Pacific. Some consider Midway the turning-point, others point to Saipan. But all agree that Japanese conquests could only have been supported and exploited by her merchant fleet. It might be said the Japanese lost the Pacific War when the losses of her merchant fleet exceeded all possibility of replacement.

What was the strategic value of the losses incurred by the enemy due to the submarine? Besides one-third of the Japanese naval ships accounted, how much did the submarine blockade cost the navy and armed forces? One has to calculate in terms of enemy air offensive moves disrupted, defences undermined and battle defeats which were due to inadequate logistic support and irreplaceable equipment and ships.

German Admiral Wenker has done an impartial analysis of the causes of the Japanese defeat:

"Japanese overconfidence, underestimation of the Enemy and overextended lines of supply which could not be protected were basic causes; after that I would say the reason for their defeat could be classed in order of importance—

First—attacks by submarines on Shipping, merchant and naval.

Second—destruction of the Japanese Navy, and

Third—air bombing attack".