

MILITARY AND NAVAL FORCES IN ISOLATIONIST AMERICA

AMERICAN ATTITUDES TOWARD FOREIGN AFFAIRS AND NATIONAL DEFENSE

Military and naval forces in the United States, especially the Army, suffered even more during the interwar period than their counterparts in Britain and France. Having saved the world for democracy, the American people reverted to form, dismantled the massive instrument so hastily created after April 1917, and turned their backs on questions of national defense. By June 1919, more than 2,608,000 men and 128,000 officers had been mustered out of the army, leaving only some 130,000 for occupation duty in Germany, for manning overseas garrisons, and for normal peacetime duties in the United States. While naval building continued through 1921, thereafter construction came to a virtual standstill for more than a decade. The American people simply were not concerned with national defense.

The isolationism that eventually characterized America in the interwar period did not surface immediately after the war. Even the Senate's rejection of the League of Nations did not mean political withdrawal from the world community. In addition to maintaining an observer at League headquarters in Geneva and participating in several world conferences, the nation took a leading role in efforts to limit the amount of armaments and the use of force in international relations. Motivated by economic, political, and moral reasons, the United States was the dominant force behind the Washington Naval Conference of 1921-22. (See p. 5) Even more satisfying to those who opposed the use of force was the role of Secretary of State Frank B. Kellogg in the Kellogg-Briand Pact, whose signatories renounced the use of force as an instrument of national police. Regardless of the weaknesses of the pact as a viable

instrument, to many in America, as well as Europe, it provided further evidence that the world had entered a new age, an age in which military force had no place. Few Americans understood the temporary nature of the conditions that permitted the nation to neglect her armed forces or realized that this neglect was a luxury and not a natural right.

Throughout the 1920s, the dominant factor influencing American military policy was the absence of a perceived threat to national security. With the defeat of German militarism and the signing of the Versailles Treaty by the European nations, most Americans saw only peace and prosperity in the future. Even if, by some remote possibility, hostilities occurred elsewhere, America remained secure behind her ocean bastions. What need, then, was there for more than a modicum of military force? Reinforcing this tendency to neglect matters of national defense was the desire to reduce government spending. Seeking a return to "normalcy," successive administrations gave first priority to a balanced budget. Finally, the anti-military strain so much a part of the American tradition continued to influence military policy.

Given this combination of peace, economy, and hostility to a standing army, it was inevitable that the Army would suffer from neglect in the 1920s. The passage and subsequent fate of the National Defense Act of 1920 (NDA1920) reflected this lack of concern with military forces.

THE U.S. ARMY

In 1919 the War Department, incorrectly assuming the nation was ready to accept an enlarged defense establishment, revived the Calhoun-Upton concept of an expansible army. The Army's proposal called for a permanent force of 500,000 regular soldiers to provide the skeletal organization that would be fleshed out by reservists who had been

JOSEPH W. "VINEGAR JOE" STILWELL, General, U.S. Army, 1883-1946

Joe Stilwell was a leader who had the courage and energy to take on any task, no matter what the personal consequences. His drive and determination enabled Stilwell to accomplish what no other western military leader had done since 1863: create an efficient and successful Chinese fighting force. His successes, unfortunately, were diminished by his more negative qualities. His reserved and secretive nature, coupled with his blunt outspokenness, made him unsuited for a position where tact and diplomacy were as important as military skill.

A career military officer, Stilwell earned his reputation in China, where between 1942 and 1944 he served as both Head of the US. Military Mission and Chiang Kai-shek's Chief of Staff in the fight against the Japanese. Overcoming the reluctance of Chinese officials and the neglect of the Allies, Stilwell proved that when properly trained, equipped, and led, the Chinese soldier could be an efficient fighting man. The proof lay in the successful campaign against the Japanese in northern Burma from October 1943 to August 1944. However, his energy, determination and moral courage were not sufficient to overcome the greatest challenge to his efforts in China, the cautiousness of Chiang himself. "Vinegar Joe's" outspoken opposition to the Generalissimo's reluctance to commit his best forces against the Japanese led to his recall by President Roosevelt in October 1944.

Stilwell's imagination, dynamism, and courage made him militarily successful. His verbal indiscretion, grudge bearing, and impatience prevented him from being equally successful in his relations with Chiang Kai-shek. A fighting man's general, Stilwell lacked the personality and-tact required of the soldier who must also be a diplomat. His personality is perhaps best captured by Lord Slim, who said "He had a [moral] courage ... few people have and a determination which, as he usually concentrated it along narrow lines, had a dynamic force."

Captain Charles A. Aldrich, DFH

Best Book: Barbara Tuchman, *Stilwell and the American Experience in China. 1911-1945*

through some form of universal military training. More in touch with national opinion, however, Congress quickly rejected this idea and in 1920 Senator James Wadsworth's Military Affairs Committee, assisted by Colonel John McAuley Palmer, formulated an alternative more compatible with the American tradition and "national genius." The committee recognized the nation would never consent to a permanent force of the size required to make the expansible army concept viable; moreover, reliance on a force composed of skeletal units could not provide adequately for situations requiring immediate action and less than full mobilization. While providing a force-

in-being sufficient to meet an emergency short of full mobilization, Wadsworth and Palmer made the foundation of the new military establishment a reliance on the citizen-soldier. Rather than absorbing civilians into regular army units in an emergency, military units created in peacetime but composed of citizen-soldiers would be mobilized under the command of citizen-officers.

To meet these needs, NDA1920 provided for three components of the Army of the United States: the Regular Army; the National Guard; and the Organized Reserve. The Regular Army, with an authorized strength of 18,000 officers and 280,000 men,

had two missions: to provide an immediate force ready for any emergency, and to train the other components. The National Guard, authorized at 435,000 men and officers, retained its traditional role as a militia within the individual states while serving also as the permanent reserve component of the Regular Army. The Organized Reserve was to consist of officers and men trained on a part-time basis by regular army cadre, with officers passing through either ROTC or summer Citizens' Military Training Camps.

Even this arrangement, however, proved more than the nation would accept in the euphoria of peace and economy. One year after passage of the bill, Congress reduced appropriations so as to provide for only 150,000 men. Further reductions occurred, until by 1927 Regular Army strength had stabilized at about 12,000 officers and 118,500 men, where it remained for the next seven years.¹ National Guard strength hovered around 180,000, while the number of reserve officers remained near the 100,000 mark, and the enlisted reserve was virtually non-existent.

The failure to carry out the provisions of NDA1920 had a serious impact on the organization and capability of the Army. Of the nine field divisions supposedly ready for combat, until the last years of the 1930s only three existed in other than the most skeletal form and each of these only at greatly reduced strength. Because of the need to keep relatively strong forces in the overseas garrisons and of the demands for both officers and NCOs for non-troop duty, the combat field forces in the United States consisted of about 3,000 officers and 60,000 troops. Nor was unit strength and combat effectiveness of the immediate readiness force the only casualty of reduced appropriations. The eighteen National Guard

divisions were even more disabled, and the twenty-seven Organized Reserve divisions existed only on paper. Moreover, lack of funds severely reduced the number of regular officers and NCOs available to train both the Guard and the ROTC. Training of Organized Reserve officers was a farce: aside from two weeks of summer camp every four or five years, almost the only training available to these men was correspondence courses.

While the Army suffered heavily in the decade after the war, it was devastated in the 1930s. As the prosperity and peace of the twenties changed to economic depression and international hostility, mild indifference to the rest of the world changed to aggressive determination to avoid involvement. The growing realization that American participation in the war had neither solved the problems nor eased the hatred of the Old World led to the reassertion that the United States should remain aloof from the world's problems lest she be corrupted by association or destroyed by entanglement. This feeling, in fact, was virtually unanimous. In 1936, a Gallup poll revealed that 95 percent of those queried believed the United States should never again become involved in a European war.

The determination to remain aloof from the world's troubles reinforced the traditional American policy of maintaining the navy as the first line of defense. With the nation committed to a purely *defensive* posture, an aggressor would have to cross thousands of miles of ocean; against such an assault, sea power remained the best bulwark. The Navy, therefore, was able to initiate a limited building program under President Franklin Roosevelt, while the army continued to suffer from reduced appropriations. As late as 1938, almost the only significant funds for new military equipment were earmarked for coastal defense artillery and related equipment. There was not to be another American Expeditionary Force.

¹ In 1940, before the influx of draftees and the call up of the Guard. Regular Army strength would still be considerably less than 250,000.

Compounding the Army's difficulties was the Great Depression. With the nation sinking deeper and deeper into economic stagnation and the government searching frantically for ways to reduce "unnecessary" spending, the

tions and authorized personnel.

As a result of fifteen years of apathy, isolationism, and economy measures, by the middle of the 1930s "the Army ... may have

WILLIAM "BILLY" MITCHELL, Brigadier General. U.S. Army (1879-1936)

Billy Mitchell began his military career by volunteering at the outbreak of the Spanish-American War. His commission as a second lieutenant in the Signal Corps was largely the result of the political influence of his father, a senator from Wisconsin. Mitchell got his first taste of combat in the Philippine Insurrection as the commander of a cavalry troop. After the Philippines, Mitchell spent two years in Alaska supervising the construction of a 1,700 mile telegraph line. At twenty-four he became the youngest captain in the army and an instructor at Fort Leavenworth, Kansas.

While serving on the General Staff in Washington in 1916, he took flying lessons during his off-duty time. In March 1917 the War Department selected Mitchell to go to Europe to observe air operations in the Great War. Before he arrived in Paris, the U.S. declared war on Germany. Mitchell went straight to work. He established an office of aviation and acquainted himself with the Allied air leaders and their operations. Mitchell became the first regular American officer to participate in an attack, the first to cross German lines in an airplane, and the first to be decorated with the French *Croix de Guerre* for gallantry in battle. When General Pershing arrived in mid-1917, Mitchell received the top air command position and directed the air effort supporting the St. Mihiel and the Meuse-Argonne offensives.

Mitchell returned from the war a brigadier general, but, more importantly, as the most experienced and vocal American spokesman on air power. His conviction that air power would be the decisive factor in future wars launched the young general on his crusade for air power — a crusade that eventually cost him his career.

Captain Dennis Hall, DFH

Best Book: Alfred F. Hurley, *Billy Mitchell, Crusader for Air Power*

Army became an open target. Military appropriations plummeted, from \$357,000,000 to \$225,000,000 in 1934. The effect on the Army was devastating. At the very time when usage and obsolescence necessitated extensive replacement of war equipment, modernization and mechanization programs (already limited in scope) were slashed or rejected outright. To provide even minimum funds for the acquisition of the most critical items, the Army had to reduce severely maintenance and upkeep of other equipment. All of the civilian reserve components suffered reductions in appropria-

been less ready to function as a fighting force than at any time in its history." While much of the responsibility can be laid to the American people and their elected representatives on Capitol Hill and in the White House, attitudes and policies of military officials contributed to this condition. To begin with, the army was clearly out of touch with the national mood in 1919 when it advocated an Uptonian expansible army five times that of pre-war days. Even after the passage of NDA1920, many senior officers were not committed to the citizen-soldier

concept. Army policies also contributed to the situation. Convinced that trained people would be more difficult to obtain than materiel in the event of an emergency, the General Staff focused on efforts to increase the size of the standing army rather than on equipment or, even more importantly, research and development.²

The inherent conservatism of the military bureaucracy was reinforced by the depression and the wholesale cuts in military funding. Afraid that any modification in either the doctrine or the organizational composition of the Army would encourage those who sought indiscriminate and possibly detrimental changes, the General Staff became more rigid in its opposition to change, with the result that "the keynote of the general staff was preservation before progress." The commitment to manpower as first priority became even stronger under the pressure to establish rigid priorities.

This man would be invaluable in time of war, but is a disturbing element in time of peace."

OER on Captain George S. Patton, Jr., 1927

As with European military forces, the American Army's attitude toward innovation and change is best demonstrated by its position on mechanized warfare. Throughout the 1920s the Army "remained indifferent" to the possibilities of the tank and the infant tank corps created during the war reverted to the infantry. Only in 1928 was an experimental tank unit established at Camp Meade, Maryland. Despite the strenuous efforts of a few dedicated individuals and the fertile imagination of the unit's "sponsor" on the General Staff, Major Adna Chaffee, little official support was forthcoming. Under

² As late as 1939, only 1.2 percent of the Army budget was allocated to R&D.

Chief of Staff Douglas MacArthur, both infantry and cavalry branches were permitted to develop mechanized forces independently. Unfortunately, the infantry saw the tank as subordinate to the foot soldier, while the head of the cavalry branch considered it a usurper of traditional horse cavalry and refused to support those individuals who sought to develop "independent" mechanized forces.

General Malin Craig's tenure as Chief of Staff from 1935 through 1939 witnessed improvements in the Army's overall posture. Craig reoriented attention to a force-in-being capable of immediate response. At the same time, the War Department made important strides in planning for future expansion and for the mobilization of industry in the event of national emergency. The groundwork thus laid would prove invaluable when rearmament finally began in earnest in 1940.

Nevertheless, after two decades of economic retrenchment and doctrinal conservatism, in 1939 the United States Army "was not only a small Army but one still attuned to the combat style of 1918 rather than to the war of armor and aircraft that the Germans were about to unleash."

THE UNITED STATES NAVY BETWEEN THE WARS³

The US Navy fared considerably better in the interwar period than its ground counterpart. Not only were more funds available because of a greater perceived role in national defense, but within the Navy itself doctrinal developments occurred that would change the organization, strategy, and tactics of sea warfare between 1942 and 1945.

In contrast to the Army, for two years after

³ Captain Charles M. Cooke, Jr., Instructor of History, USAFA, 1960; revised by Captain Robert J. Cooper, USAFA, 1968; edited by Captain Robert C. Ehrhart, USAFA, 1978.

the conclusion of WWI, the Navy continued to expand, as President Wilson pushed forward a massive building program passed in 1916. In 1921, however, the United States took the initiative in calling an international conference to limit naval construction. The result was the Washington Naval Conference of 1921-1922. The Five Power Treaty that resulted did, in fact, restrict the size and strength of the signatories' forces with a formula limiting the United States and Britain to a total of 500,003 tons of capital ships (battleships), Japan to 300,000 tons, and France and Italy each to 170,000 tons; a ten year ban on new capital ship construction was imposed. The treaty also included a non-fortification clause prohibiting the fortification of each nation's possessions in the western Pacific, with the exception of the Japanese home islands and Hawaii. The effect of the disarmament treaty on the United States Navy was significant. The United States agreed to scrap 15 capital ships (costing over \$300 million) and to leave defenseless the islands of Samoa, Wake, Guam, and the Philippines. Professional naval officers expressed concern over the treaty, arguing that it eliminated the capability to defend American possessions and interests in the western Pacific since the capital ship clause gave Japan dominance in that region while the nonfortification clause denied the fleet secure bases from which to operate in the event of war.

With the signing of the treaty in 1922, the Navy settled down to its traditional role of "showing the flag." It remained almost wholly Pacific oriented, with the majority of the fleet on the West Coast and a squadron alternating between the Philippines and the China Station to demonstrate continued American interest in China. Throughout the period, war planning focused on Japan as the most probable enemy. Only with the development of the "Rainbow Plans" in 1938 was serious consideration given to the possibility of a two-ocean war.

"No man can be a great officer who is not infinitely patient of details, for an army is an aggregation of details."

George S. Hillard

After "a period of comparative stagnation in new construction" in the 1920s, the Navy entered a new building program under the aegis of President Franklin Roosevelt, one-time assistant secretary of the navy and an avid sea enthusiast. New Deal relief funds to help the steel and ship-building industries were allocated for the construction of naval vessels. In 1934 the Vinson-Trammell Act authorized an eight-year building program to replace a total of 102 ships; naval appropriations increased every year thereafter. Finally, in 1938 provisions were made for a true two-ocean navy.

Behind this greater willingness to spend scarce dollars were the deteriorating situations in Europe and Asia. Determined to remain out of a foreign war, the American people looked to the Navy to intimidate or ward off potential aggressors.

Doctrinally, these years were fertile ones. The official emphasis of the Navy continued to be on the all-big-gun battleship fleet intended to seek out and destroy the enemy's main battle fleet in a Mahanian "decisive battle." Despite this orientation, however, the period was marked by the germination of ideas and developments that would be of critical importance between 1942-1945 and without which victory over the Japanese would have been difficult if not impossible. Specifically, the interwar years witnessed the development of the doctrines of amphibious operations, submarine warfare, and naval aviation.

Amphibious Warfare

Modern amphibious doctrine was born on 25 April 1915, when some 300 Allied ships stood off the Dardanelles and launched an amphibious assault upon the southern tip of

the Gallipoli peninsula. In the first landing, 78,000 troops began one of the most costly and unsuccessful campaigns of World War I.

In the light of amphibious operations in World War II, the planning was completely inadequate. All the difficulties that plague this task were present and magnified: lack of landing craft; no knowledge of the disposition of enemy forces; no knowledge of sea currents; inadequate plans for naval gunfire support; lack of good beaches; no provisions for guiding the landing force to the proper beaches; no combat loading of transports and supply ships; and finally, inadequate ship to shore communications. The result of the whole affair was the evacuation on 2 January 1916 of the last Allied soldier from the Gallipoli peninsula. At the cost of 252,000 casualties, the Allies had accomplished little or nothing.

The disaster at Gallipoli led to a general opinion between the wars that large-scale amphibious landings against defended positions were impossible, especially if carried out during the daytime. The complete failure at Gallipoli was one reason why most nations neglected to study and develop amphibious techniques during the interwar period.

An exception was the United States Marine Corps. After World War I, Japanese mandate control of the Marianas, Marshalls, and Carolines awakened some Americans to the future threat to the Philippines, Guam, and even the Hawaiian Islands. One of the first to see the danger in the Pacific situation and the necessity of developing an offensive amphibious capability was Major Earl H. Ellis. USMC.

His plan, submitted in 1921 to the Commandant of the Marine Corps, called for the "reduction and occupation" of the Japanese mandated islands and the "establishment of the necessary bases therein." Anticipating a war with Japan in the future, Ellis saw these measures as "practically imperative."

By 1927, due to a campaign by Ellis and

other officers, the Joint Board of the Army and Navy recommended that the Marine Corps "be given special preparation in the conduct of landing operations." In 1933, the formation of Fleet Marine Force insured the commitment of the Corps to the primary mission of seizing, occupying, and defending advance naval bases. The next year a *Tentative Manual for Landing Operations* was published. Developed by both students and faculty at the Marine Corps school at Quantico, the basic assumptions and conclusions in this document were never changed. In 1935 the Marine Corps began serious training for future amphibious operations with the yearly fleet landing exercises.

The problem area that became most apparent in the first training exercise was that of the landing craft. Until 1938, lack of knowledge and funds produced a reliance upon standard, V-bottomed ship's boats. These boats were underpowered and were unsuitable for use in rough surf encountered near the beaches. Another limiting factor was the draft of the boats which prevented them from getting close enough to shore for beaching. This resulted in the troops often being dropped off in water over their heads. If the boat succeeded in delivering its cargo, it could not perform any function after that because insufficient engine power prevented it from backing off the beach. Experimental landing craft were tried; these too were miserable failures. This fact coupled with lack of funds retarded the development of specialized landing craft, although it was readily apparent by 1935 that such craft were an absolute necessity.

Finally, in 1938, a self-propelled tank lighter (tank carrier) was successfully tested. The next year, the father of modern amphibious craft, Andrew J. Higgins, introduced a boat of shallow draft that could be beached easily and then extracted from the beach by its own power. In 1940 a variety of

tank lighters and personnel carriers developed by both the Bureau of Ships and the Higgins Company were tested. In every case, the Higgins boats proved superior. By the start of World War II, Higgins had developed the prototypes of the LCVP, the LCT, and LCM.⁴ These were the light amphibious craft that were to bear the brunt of the assault phase of World War II landings. Equally important was the development of that is called today the LVT.⁵ Marine Corps and naval officers had come up against the seemingly impassable barrier of the coral reef. How to get by it without losing a large percentage of the boats seemed to be an insoluble problem. Then in 1937 several Marine Corps and naval officers read of an "alligator" amphibian invented by Donald Roegling for rescue work in the Florida Everglades. The "alligator" was a tracked vehicle propelled when afloat by flanges fixed to the tracks and worked, in principle, similar to the paddle-wheeled steamship. Major John Kalut was sent to investigate this vehicle and returned a favorable report; however, procurement of the LVT was not begun until 1940 when a board recommended the purchase of six. This quantity was later revised to 200. Without this vehicle the landings at Tarawa, Eniwetok, Kwajalein, Peleliu, Guam, and Iwo Jima would have been much more difficult.

The Marine Corps neglected one extremely important type of landing craft — the various landing ships that were eventually used in World War II. A landing ship, as the name implies, is capable of spanning large parts of the ocean under its own power without having to be carried to the vicinity of the beaches.

⁴ Landing Craft, Vehicle and Personnel; Landing Craft, Tank; and Landing Craft, Mechanized.

⁵ Landing Vehicle, Tracked (Amphibious Tractor).

Fortunately for us, the British Navy had discovered at Dunkirk the necessity for such craft and had very quickly developed them. By the time the United States entered the war, the British were able to show us plans and prototypes that we were quick to copy.

Prior to the beginning of the landing exercises, there was much speculation as to the feasibility of using naval guns as artillery support for amphibious landings. To be effective against fast, armored targets such as the modern naval vessel, naval guns had to have high velocity and relatively flat trajectory. These are undesirable characteristics for guns designed to operate against emplacements and fortifications on land. In 1935 off-shore firing against targets on the island of Culebra proved to be effective although ranging problems were difficult to solve. In this same exercise, a beginning was made toward the development of techniques for spotting and correcting the fan of shot. The 1937 exercise brought up one cogent criticism of naval gunfire which unfortunately failed to take root. In his critique of the operation, Brigadier General J. J. Meade (Commanding General, First Marine Brigade) commented vigorously on the failure to allow a long enough "softening-up" period for gunfire support to reduce enemy emplacements. This criticism was repeated time and again by Marine Corps officers during the World War II, up to and including the Iwo Jima operation:

Another part of the problem of naval gunfire support was shore fire control. The difficulties encountered were threefold. The first problem was ineffective and insufficient communications equipment and procedures. The second was the inexperience of naval gunfire spotters assigned to the shore party. These men showed a lack of knowledge concerning ground targets and methods of destroying them. The third difficulty was the lack of training among the naval gunfire

liaison officers. Correct procedures and effective equipment to ameliorate the first problem were developed in fairly short order while the second was solved by substituting an Army (or Marine Corps) artillery officer to act as spotter. The third problem area took more time to solve but its solution showed the vital and necessary role that the junior officer must play in the development of new and untried doctrines. Twelve ensigns completed the first course in Naval Gunfire Support in July 1941 — a very modest beginning, but one that had repercussions all over the world. Three of these officers directed the naval gunfire plans for North Africa, Sicily, and Normandy. Two were assigned to General MacArthur and helped to plan his New Guinea, Hollandia, and Leyte Gulf operations. Others were on Nimitz's staff and some of them eventually staffed the Naval Gunfire Liaison Officer's Schools that were opened during the war.

Fully as important was close air support. Aerial operations during the various exercises soon demonstrated the need for an attack plane. The planes then used for close air support were primarily observation and fighter types. At the time, those types could not be successfully modified for close air support. As with naval gunfire support, Marine Corps officers were quick to point out that longer periods of pre-assault bombardment were desirable. This complaint, too, was to be repeated in World War II.

Marine Corps officers soon learned that the most effective close air support given to their troops was by Marine Corps aviators. At this time, however, Marine squadrons were not trained in carrier takeoffs and landings. The battle to have Marine squadrons trained for carrier operations and sent as a group to support their comrades in amphibious operations was a long one, one that the Marine Corps did not win until World War II. Until that time no clear decision had been made as to whether close support of troops during and after the landing was the main function of the Marine

pilot.

Logistics support can easily make or break an amphibious landing. Logistics support may be defined simply as "the science of getting the beans and bullets to the beach." Correct combat loading means the troops on the beach get the right things at the right time, which in turn requires that those items needed first must be loaded aboard ship last. Another requirement of combat loading is autonomy. The equipment to be loaded must be broken down into units that correspond to the combat units that are aboard the particular transport involved. Planning requires that the weight and cube of all equipment be known and the cubic storage area of the deck cargo spaces and the cargo holds of the various ships involved be calculated. The Marine Corps had, by 1936, provided a table of all Marine Corps equipment, but the Navy did not assemble the information needed concerning its ships. This prevented any worthwhile prewar exercise in combat loading.

A more serious defect in the Navy's support of the logistical side of the operations was its failure to provide adequate shipping to transport the Marines and their equipment. Part of the reason for this failure was the fact that the Navy just did not have the right type of ships available, but the Navy must plead guilty to lack of interest and concern. The 1937 landing exercise demonstrated how little the Navy understood the problem when they loaded some of the assaulting forces onto battleships. This type of vessel could not be considered a satisfactory troop transport. Here was the most glaring demonstration of the lack of interest; it was almost standard practice for the Navy to furnish any vessel that happened to be available for troop-carrying duties, regardless of suitability. Furthermore, these ships were never the same ones, so it was extremely difficult for Marine planners to prepare proper ship loading. An attempt to remedy this deficiency was not

made until the winter of 1941 when the Navy assigned three transport ships for Marine Corps use. These vessels unfortunately proved unsatisfactory and satisfactory vessels and techniques were not developed until well into the war.

Another facet of logistics support is the shore party organization. The shore party performs the vital tasks of unloading the supplies from the landing craft onto the beach and of serving as a clearing house and message center for the flow of supplies and material inland. The shore party was first formed in 1936, but its missions and functions were not yet understood and the necessary communications equipment had not been developed. During the training exercises prior to World War II, little attention was given to the problem of moving the supplies from ship to shore and from shore to the troops. Confusion arose over the jurisdiction of the supplies once they had reached the beach. It was clearly a Navy responsibility to take the supplies from the transports to the beach. It was equally clear that once on the beach it was a Marine responsibility to distribute and store the supplies. The problem was to assign the responsibility for moving the supplies from the boats to the beach. The Marines believed this was the Navy's responsibility; the Navy believed the opposite. The problem was not resolved until well into the war and was one of the main difficulties during the landing at Guadalcanal. Two authorities summarized the evaluation of amphibious doctrine in the Navy and Marine Corps as follows:

By the close of 1940 most of the major problems of amphibious warfare had been worked out in theory, and valuable practice and experimentation had gone far to refine the doctrine, provide training for a sizeable number of Marine Corps and Navy personnel, and eliminate some of the more critical "bugs" in procedure. Progress was at last beginning to be made

in the evolution of efficient landing craft ... in the construction of attack transports, and in the perfection of communications procedures and equipment. Little actual training in combat-loading had taken place, although the techniques were fairly well developed.

It cannot be said that the Marine Corps or any other branch of the armed services was fully prepared . . . to conduct landing operations against hostile shores. The many errors in execution which the recent landing exercises had disclosed proved without doubt that there was still a long way to go before near perfection could be claimed. But the very fact that the errors had been demonstrated empirically and that cognizance had been taken to them was in itself an immense stride in the right direction. More than that, a detailed doctrine of amphibious warfare had been evolved, tested, improved, and found to be sound in its main principles. Large numbers of marines as well as army and navy personnel had been trained in the fundamentals of amphibious fighting which requires technical and physical skills by no means easy to acquire. The remaining test was the ultimate one of battle.

Submarines

In World War I, American submarines had played a minor role; only a few reached Europe and operated in combat waters. Some knowledge was gained in using them in anti-submarine warfare. However, little experience was gained by Americans in the use of the submarine in its major role as a commerce destroyer. This lack of knowledge extended from the field of tactics to include technology, size of submarine, and doctrine.

German submarines sank over 12,000,000 tons of shipping during the war. In February 1917 the Germans resorted to unrestricted

submarine warfare, and from February through June 1917, Allied shipping losses exceeded 3,000,000 tons. These tremendous losses came close to paralyzing England; only the entry of the United States into the war and the inauguration of the convoy system saved her-What lessons' the few American submarines did learn were soon to be forgotten by those who headed the US Navy in the postwar period.

In 1922 the major powers held a conference in Washington, D.C., to bring about a "limitation of armaments" and "a common understanding with respect to principles and policies in the Far East." Out of this meeting came the Five Power Naval Treaty which had a far-reaching effect on the development of the US Navy, both technologically and strategically. The agreement bound the United States and Japan to maintain the status quo "with regard to fortifications and naval bases ... in their respective territories and possessions. . . ." Since the United States had not fortified any of its island holdings, the US line of communications to the Philippines was vulnerable to Japanese attack. Furthermore, it left the United States Navy without adequate advance bases to project its power across the vast spaces of the Pacific. This was particularly true for the submarines of the period which were small, short-range boats not capable of operating for long periods.

At the Washington Conference, an additional proposal for a treaty on the use of submarines was rejected by France: therefore, it did not become binding on any of the powers. This treaty would have placed impossible conditions upon the submarine in attacking any merchant vessels. Submarines would have been required to surface, stop, visit, and search any merchant vessel it desired to sink, and place the crew and passengers in safety before carrying out the attack.

In 1930 the London Conference on Naval Armament Limitations convened. Over the protests of American submariners, the United

States delegation went to the conference with a proposal to limit the size of submarines to 250 tons. As one submariner remarked:

To my mind, this proposal disregarded the unique function of the submarine which permits it to be projected into areas not under the surface control of our own forces. Our proposals, disregarded the fact that while we had interests and obligations in the Western Pacific, we had, largely by the 1922 treaties, surrendered surface control, in large part, of that area.

This proposal was unacceptable to the Japanese. Thus, unwittingly, they contributed to the American development of one of the primary weapons that brought about Japanese defeat in World War II. The Conference did, however, limit total submarine tonnage to 52,000 tons for the United States, Japan, and Britain. As one American admiral commented: "By limiting our overall submarine tonnage to limits set by Japan, we further weakened our ability to restrain Japanese aggressive action in the waters of the Western Pacific.

When the conference concluded, the Navy formed a committee of 18 experienced submariners to help settle the question of what type and size of submarine to build with the tonnage limitation. The argument that it was better to have many small -submarines than fewer large ones persuaded 16 members to recommend the continuation of 800 ton submarines. However, the two dissenting members filed a report for 1200 tons or larger vessels. They saw the necessity of building considerably larger submarines that could operate in the far-western Pacific from bases in the Hawaiian Islands. The Navy decided in favor of the minority opinion and directed development of a submarine capable of operating at long ranges and for long periods

of time. The result was the 1600 ton submarine. Without this class of submarine in World War II, the United States would not have been able to strangle the Japanese homeland and cut it off almost completely from its vital overseas supply area. As one high-ranking naval planner expressed it:

Our submarine campaign in the Western Pacific proved to be a decisive factor in winning the war. That this campaign could be undertaken at all resulted from a correct evaluation in 1930-31 of our national strategical situation in the Pacific, an evaluation made even before the Japanese seizure of Manchuria in 1931.

Naval Aviation

American Naval Aviation in World War I gained operational experience in the field of antisubmarine warfare. In the main, the naval air arm carried out two types of operations: one, against U-boat pens; and two, patrol and convoy missions. In addition, naval aircraft patrolled the North Sea minefields to prevent the Germans from sweeping them or clearing paths through them. In the later stages of the war the Northern Bombardment Group made up of Navy and Marine Corps aviators was attached to the Royal Air Force and operated against various land targets, railroads, supply dumps, and airfields.

Most of these operations were carried out by land planes from bases in France, England, and Italy. In addition, seaplanes and lighter-than-air craft of various types were used for patrol and convoy duty.

Naval Aviation in World War I had gained considerable experience in wartime operations and had established a good record. However, the major problem of the role of Naval Aviation in fleet operations was not even touched upon. No experience had been gained in aircraft operation with the fleet.

The British had been the first to develop a sea-going landing field. In 1918 the first carrier strike was launched against German bases in the North Sea by the converted cruiser *HMS Furious*, which had a 300-foot landing deck. In 1919 the British launched *HMS Argus*, which may be considered the first real aircraft carrier. It had a flush deck with the control tower and operations center located in an island on the right side of the ship.

Some officers of the United States Navy were quick to note the British developments and to see the possibilities of the aircraft carrier. In 1918 Admiral Henry T. Mayo, Commander in Chief of the US Fleet, called for two or more aircraft carriers that could carry 5 planes each and maneuver at a speed equal to that of the swiftest battleship. For some, the vision of a future fleet in which the airplane carrying ship would be as important as the destroyer was a definite possibility.

Agitation for the building of the aircraft carrier continued and was finally made a part of naval policy in 1919 when the study, "Future policy governing development of Air Service for the United States Navy," insisted that air-raft carriers were essential to the fleet. Also, the study recommended conversion of a collier Ito an experimental aircraft carrier for training purposes, but ultimately foresaw the need for "one carrier for each squadron of capital ships." The conversion from collier to aircraft carrier was carried out in 1922 when *USS Jupiter* was converted to *USS Langley*, thus becoming the first aircraft carrier of the United States fleet.

Meanwhile, personnel and organizational problems confronted US Naval Aviation. When the war ended, most naval flyers left the service. A major problem for those who remained was promotions, since command at sea was still the primary criterion for any advance in rank. Several solutions were proposed: recognition of flyers as specialists, installation of flying pay, rotation of flyers

between sea and shore jobs with the requirements of other shipboard duties while at sea, and temporary promotion. None of these was put into effect at the time and the promotion problem continued.

Another difficulty was maintaining pilot strength. The Navy was faced with deciding from what source new pilots should come and whether they should be enlisted or officer. No satisfactory personnel policy, however, was obtained until the late 30s.

A major organizational dispute in 1919 arose over the desire of naval aviators to create a separate Bureau of Aeronautics. This proposal met strong opposition from the already existing bureaus of the Navy Department — Steam Engineering, Navigation, Ordnance, etc. Before any resolution was made, the storm clouds generated by General William Mitchell aroused the Navy Department into action. Led by Mitchell, the agitation for a separate Air Force or Air Department grew stronger. With the specter of a separate Air Corps and the specific example of what this concept had done to British naval aviation before them, the Navy Department was quick to close ranks behind the proposal for the creation of the Bureau of Aeronautics. On 12 July 1921 a bill creating the Bureau became law. The new organization was charged with "all aeronautic planning, operation, and administration," to include selection of flying officers, distribution of aeronautical ratings, methods of training, and development of aviation equipment.

Less than 2 weeks after the creation of the Bureau of Aeronautics, the famous bombing experiments of General Mitchell took place. The sinking of the *Ostfriesland*, followed by similar sinkings in 1923 and 1924, convinced all but a few diehard battleship admirals that future fleet operations could be endangered by the absence of air cover. Accordingly, the Navy began to devote some attention to the development of suitable aircraft, aircraft carriers, and air tactics. The first manifestation of

this was in the mid-twenties with the introduction of aircraft into war games at the Naval War College. These games demonstrated that aircraft could have a decisive influence on the outcome of a sea battle. The next step was the decision to convert two battle-cruiser hulls to the carriers *USS Lexington* and *USS Saratoga*. However, the need for carriers was couched in terms of "aerial scouting and . . . overhead protection of the battleline." The concept of a carrier task force, operating independently, had not yet occurred to naval officers.

That concept was to gain credence as the Navy began to include aircraft carriers or simulated carriers in its annual fleet exercises. This was first done in 1923 when the battleships *USS New York* and *USS Oklahoma* were designated as aircraft carriers and their single planes were designated as squadrons. The value of the carrier and its planes was clearly demonstrated when the "squadrons" were launched undetected and successfully bombed the Panama Canal without being attacked by aircraft or even being fired upon by anti-aircraft batteries.

In 1929 *USS Lexington* and *USS Saratoga* joined the fleet and were included in the exercise of that year. The problem was again the attack and defense of the Panama Canal. Black Force, the attacking fleet, had a total of 116 aircraft while Blue Force, the defending fleet, had 145. The major innovation was made by Admiral William V. Pratt, commanding the attacking force. He detached his carrier, *USS Saratoga*, from the main force and sent her south of the canal with a Black Force cruiser as escort. The plan was that carriers *USS Saratoga* and *USS Aroostook* (which remained with the main force) would launch their planes in such a fashion as to reach the objective at the same time. The plan was a rousing success with, theoretically, two of the canal's locks destroyed and two of the airfields damaged.

The prewar exercises led many Navy and Marine Corps pilots to conclude that dive bombing was the most accurate and effective method of bombing ships at sea. Bombing tests in 1921, where Army pilots had bombed from an altitude of 200 feet, demonstrated how very necessary low altitude was for accuracy. The problem was how to do this without being too vulnerable to antiaircraft fire. The Army Air Service modified their techniques at Kelly and Selfridge Fields during the early 20s to diving at an angle of 60 degrees, but Major R. E. Rowell, USMC, who observed these practices, considered this still too vulnerable to antiaircraft fire. In 1925 he began to experiment with more acute angles of diving with the squadron he commanded at San Diego.

At the same time, Captain J. M. Reeves, USN, took command of the aircraft assigned to the battle fleet and began experiments that produced the technique of diving from 10,000 feet at an angle of 70 degrees. By 1926 aircraft were making simulated attacks upon battleships from altitudes of 12,000 feet at angles exceeding 75 degrees.

The next year, 1927, saw the first recorded, organized, dive-bombing attack. It was carried out by five Marine Corps aircraft led by Major Rowell against Nicaraguan rebels. When the Marine Corps pilots returned from Nicaragua, they put on exhibitions of their new techniques at various air shows. At the Cleveland Air Show an interested spectator was Ernst Udet, future chief of aircraft design and supply for the Luftwaffe. He later helped develop the Stuka for the German Air Force.

Meanwhile, the Bureau of Aeronautics had commenced development of a plane to be used exclusively for dive-bombing and with the capacity to carry a 1,000 pound bomb. The Martin XT5M-1, developed in 1930, was to be the forerunner of those aircraft that were to defeat the Japanese Fleet in World War II.

As the development of naval air progressed,

the need for a reorganization of fleet aviation became obvious. In 1933 all aircraft assigned to the fleet were put under Commander Aircraft, Battle Force, and all aircraft carriers were assigned to the Battle Force. At the direction of the Chief of Naval Operations, Admiral William V. Pratt, this reorganization served to bring the Navy nearer to the Task Force concept which in large part was responsible for the Navy's victories of World War II. By 1937, with the commissioning of *USS Yorktown*, the Navy had three front-line carriers and one back-up (*USS Ranger*). The initiation of seagoing refueling further contributed to the realization of the Task Force concept. New war plans drawn up in 1938 called for naval forces to remain at sea for long periods of time. As one planner recalls,

"Admiral Leahy [Chief of Naval Operations] asked me if I thought the fleet could remain at sea for such indefinite periods, since it never had been able to do so in the past. I said I thought it could, although I did not positively know. He said that he thought it could, too. Consequently, an order was issued to the Commander in Chief, US Fleet, to develop equipment and methods to replenishment at sea of all types —not only the destroyers which had been fueled at sea in the past, but also battleships, carriers, and to include particularly the replenishment of carrier gasoline.¹²

In June 1939 a 2-day test of refueling at sea while underway was carried out by *USS Saratoga* and the tanker *USS Kanawha*. The tests demonstrated the feasibility of refueling carriers and other ships at sea, and immediate development of the methods and techniques of this operation was begun.

In 1939 Rear Admiral William F. Halsey and Vice Admiral Ernest J. King, Jr., both in

command of carrier divisions, furthered the development of a Fast Carrier Task Force by experimenting with destroyers and cruisers as escort vessels for the carriers. The addition of much needed anti-aircraft firepower of the battleship, however, was not possible at this time because of opposition from many ranking Navy officers who still considered battleships to be the main line in any future war.

In 1938 expansion of the US Navy and Naval Aviation began on a large scale. The Naval Expansion Act that year authorized the building of 40,000 tons of aircraft carriers and a minimum of 3,000 aircraft. By July 1940 total carrier tonnage was up to 200,000 tons and the aircraft ceiling became 15,000. As a result, by early 1941 seven carriers were commissioned: two were to be commissioned later in the year and 18 more were approved for construction. Also, it was decided to appropriate some money for smaller escort carriers whose value had long been recognized by Marines, who wanted them for close air support missions. The Navy, too, was eager to get this type of small carrier for pilot training and aircraft ferrying missions.

Planning for an increase in aviation personnel particularly pilots, came just in time to match the projected increase in carriers and aircraft. New congressional action in 1939 increased the Naval Aviation Reserve from 1,500 to 6,000 and provided for the commissioning of graduates as Ensigns, USNR. Still unchanged was the requirement that prospective Cadets be college graduates between 18 and 28.

By 1941 the US Navy had progressed considerably toward its goal of efficient and effective use of the air. Emphasis on dive-bombing, pilot training, and building of carriers gave the Navy the nucleus to build the most powerful naval weapon in the history of

sea warfare. While the aircraft necessary to conduct a modern war were not yet in the inventory, the design work for these aircraft had been completed and in most cases the prototype was flying. The doctrine and techniques for refueling, replenishing, and repairing the fleet while at sea had been worked out, although the equipment necessary was not yet developed. Sufficient provisions had been taken to insure an adequate supply and reservoir of trained pilots. The need for escort carriers had been recognized and procurement had begun. It would take Pearl Harbor and 2 years of war, however, to overcome the inertia holding back the full realization of the Fast Carrier Task Force.

CONCLUSION

The interwar years were a trying time for American military and naval forces. Financial restrictions, isolationist or at least apathetic attitudes toward foreign affairs, and political considerations imposed obstacles to the continued development of these services. At the same time, this period — with the experiences of the recent war so vivid and with continued rapid advancements in technology — offered opportunities to consider new methods of war, new ways to organize and employ force. While the Navy admittedly faced fewer difficulties, it also made greater strides toward the development of new methods of fighting. In the same period, advocates of the newest element of modern war — air power — were not only concerned with questions of organization and position within the defense establishment, but were also struggling to develop a doctrine for the proper employment of this new form of war.