

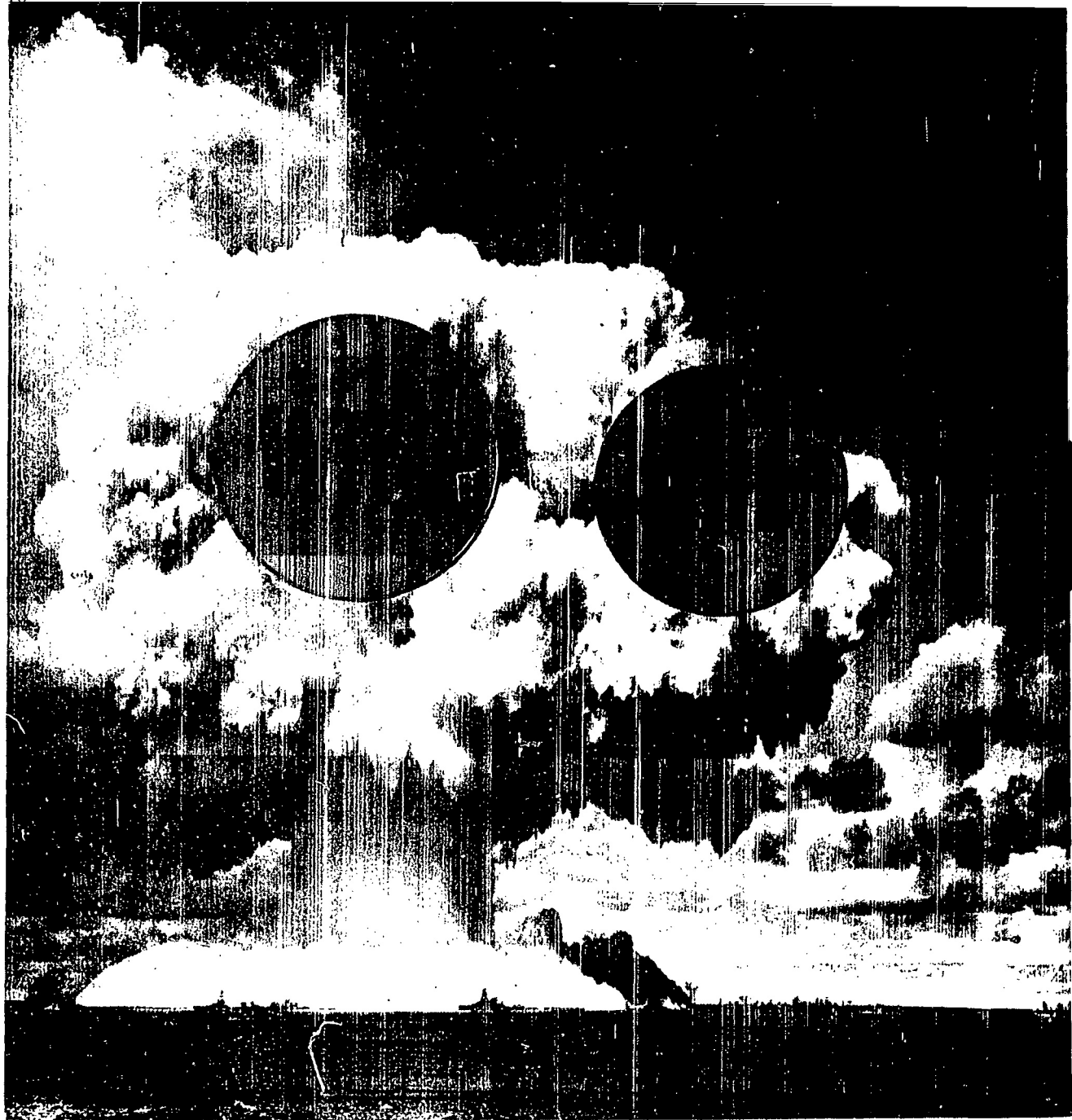
# Impossible?

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*Marine Corps Gazette* (pre-1994); Jan 1955; 39, 1;

*Marine Corps Gazette & Leatherneck Magazine of the Marines*

pg. 10



❧ "ATOMIC WEAPONS RENDER IMPOSSIBLE another landing like that on the beaches of Normandy."

That frequently heard, little understood pronouncement gives not the slightest hint of the impact of atomic missiles upon large scale tactical operations, amphibious or other types. It would be equally true to pontificate that "another landing like that in Normandy is rendered impossible by the presence of 150 hostile divisions on the coast to be invaded." Enemy air superiority or our own inability to com-

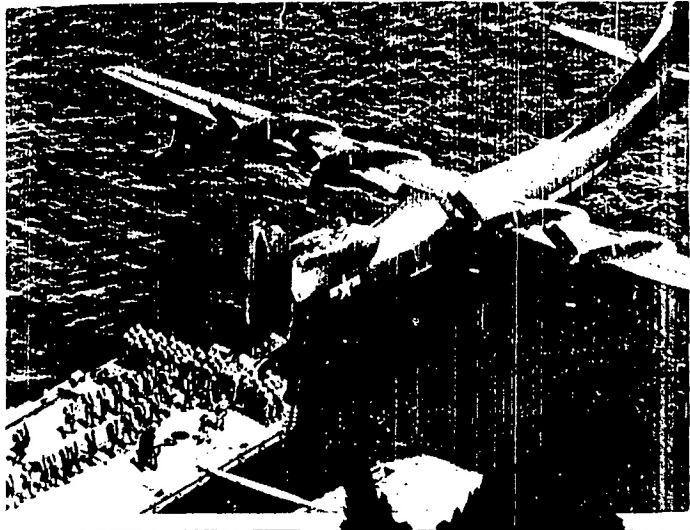
mand the seas would invoke the same judgment.

Looked at in reverse, we can positively assert that atomic weapons render impossible another operation like St. Lo, like Anzio or, for that matter, single base (Pusan type) invasion support. All those are "impossibles"—and equally meaningless. As well say, *reductio ad absurdum*, "The Roman Legion cannot exist in the face of machine guns."

The significance of the obvious reflection that Normandy's massed landings could have been shattered

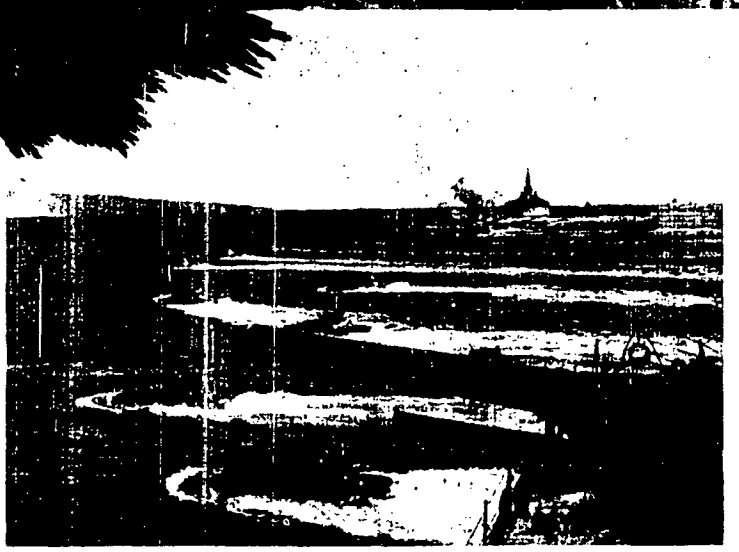
by atomic missiles lies in its tacit demand that we examine amphibious operations in the light of these new weapons. *Principles* of war continue unaltered but the tactics, logistics, organization and equipment employed to *apply* those principles may have to undergo alterations almost, if not quite, as drastic as those occurring in weapons "hardware."

Precisely how altered organizations, procedures and new equipment are made ready prior to combat needs is the age-old problem of



Skeptical... About  
Warfare and amphibious  
operations are completely

# Impossible?



By  
Col George C. Reinhardt, USA

military men confronted by novel, potent means of destruction. Study by many minds; unbiased examination of innumerable ideas; planning, accompanied by frequent practical tests in maneuvers; these comprise the test of centuries. Nations which ignored them are listed among the "lost civilizations" of recorded history.

Happily, the problem for the USA contains as much of encouragement as it does of concern. Atomic missiles are a two-edged sword. Admitting that Gen Eisenhower's

"Overlord" host would have been duck soup targets for the atom's super blasts, we should not forget the converse—liberal sprinkling of packaged catastrophes among the garrison of "Festung Europa" at H-hour could have converted the bloody shambles of Omaha beach into an unopposed landing exercise!

Numerous articles in the *New York Times* and other papers credit this country with a tremendous superiority in numbers, types and quality of atomic weapons. It is hoped that American scientific-tech-

nological skill will not permit that advantage to diminish. On the contrary, it should increase. Another point to remember: the nuclear components of atomic weapons are not subject to deterioration like other weapons, nor to obsolescence like much amphibious equipment in an era of unprecedented technological progress.

Studies seeking the optimum amphibious tactics and logistic support for atomic warfare's operations will be misleading if they concentrate mainly upon defense against super

weapons. Rather, they should emphasize the amphibious capabilities of flexible sea-air power to effectively employ atomic missiles in mass, and strenuously exploit their striking power by highly mobile landing forces.

Amphibious operations have become a characteristic American mode of warfare. Always a superb

amphibious campaign, into Sicily against Syracuse, that shattered her strength. Before the walls of that city, the Athenians failed to exploit surprise or maneuver and were appallingly negligent of their logistics.

During the course of centuries, the influence of amphibious operations upon warfare has ebbed and flowed. Decisive in all wars of the

decisive conflict. If there was no embattled landing against bitter beach defense at Yorktown, neither was such the hallmark of Okinawa, rightly labelled an outstanding amphibian victory.

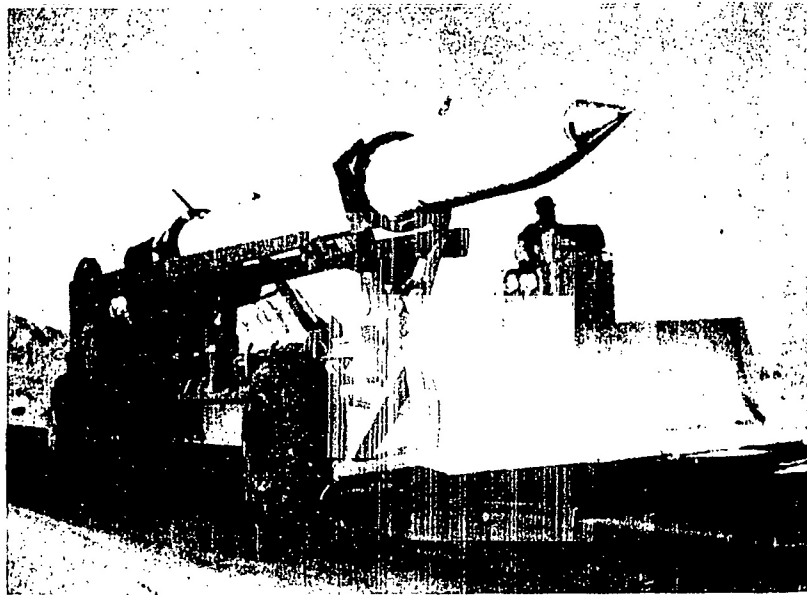
Every one of our nation's conflicts, and particularly The War Between the States, involved amphibious actions; occasionally disastrous like the British capture of Washington in 1814, but more often key contributions to final victory such as the relentless assaults upon Confederate seaports.

But all this historical lore has a limited utility. If there is one aspect of future warfare which, above all others, must *not* be planned in the image of the past, that one is amphibious tactics. No other type of operations will be more critically affected by rapidly developing technologies in equipment, logistics and, pre-eminently, by atomic weapons. History can tell us much of value by analogy and deduction, while we keep our attention riveted upon principles. When we apply those principles to conditions prevailing today — and tomorrow — we must forsake the past to derive new methods, make best use of new means and, simultaneously, guard against new dangers.

The hue and cry attendant upon the first use of atomic weapons in warfare centered the attention of the American people upon the strategic aspects of those weapons to the almost utter exclusion of tactics. Of all tactics, only the amphibious phase was, at that time, ever mentioned in the same breath with atomic weapons.

No one ever considered the impact of the super weapon upon mammoth land battlefields or awesome fleet actions upon the high seas, though World War II had its fill of both, from Stalingrad to Leyte Gulf. But they accepted, without argument, that "amphibious operations were impossible" against a foe who could blast the landing armada with atomic missiles. We have already considered the superficiality of that conclusion. A weighty question remains: what *will* be the impact of atomic weapons upon amphibious campaign plans and execution?

We must first realize that atomi-



*Super weapons — no one considered the impact*

tool of predominant sea power, though seldom adequately recognized as such (even by the nations that employed them), they are peculiarly adapted to a United States sea-air strategy which substitutes surprise and mobility for dependence upon sheer numbers. Experience amassed by our forces in 61 major (division size or larger) landings without a defeat during World War II offers today's planners an invaluable legacy.

Less known, perhaps because of historians' penchant for slighting them, are a wealth of equally decisive amphibious actions in other lands at more distant times. The Greco-Persian wars, first momentous clash between eastern and western civilizations, were decided in favor of the West when Athens abandoned her capital, staked all on amphibious operations and won at Salamis. She continued her success with sea-borne armies against Sparta's preponderant man power, employing mobility and water-borne envelopment to nullify mass. Yet, ironically, it was Athens' greatest

Mediterranean basin; mainstay of England's struggle against Napoleon; land-sea campaigns were either ignored, or clumsily staged throughout the 20th Century's first 40 years.

But we need go no farther afield than North America to unearth a wealth of amphibious experience. Two brilliant land-sea campaigns, Louisbourg (at the mouth of the St. Lawrence River) and Quebec, settled once and for all that the continent would be predominantly English instead of French. A difficult and complicated Combined — as well as Joint — amphibious campaign won American independence at Yorktown. The French Adm de Grasse secured command of the sea by beating Graves' British fleet off the Chesapeake Capes and landed French troops. He did more. He convoyed Washington's army from Elkton and Annapolis to the Yorktown peninsula, saving marches of 425 miles in one case, 300 in the other. Not only did this permit Washington to concentrate a fateful two weeks sooner, it provided him with fresh troops at the scene of the

missiles are no longer the private weapon of strategic air power. As publicly announced, they can now be fired from army cannon; delivered by tac-air; borne aloft by naval aircraft from large carriers. According to releases such as those in *U.S. News & World Report* we are little short of producing guided missiles and rockets as delivery agents, both of which will be suitable for employment by armies, navies and air forces in only slightly differing types. There is no further room for doubt that the atomic missile is a tactical, as well as a strategic, weapon.

Gone also is the illusion that the only targets for atomic missiles are urban areas or industrial complexes of vast extent; immovable (one might say un-missable) aiming points for bombers. Armies, fleets and air forces, together with the logistic installations of all three (whether ports, dock yards, air bases or depots) will undergo atomic attack wherever that attack can be pushed home.

It is simple logic to assume that atomic weapons will be delivered against the enemy in a future war by every available means: submarines no less than heavy bombers; guided missile cruisers and carriers; the artillery of land forces as well as that of naval elements.

Hostile armies, navies and air forces will, as always, be the primary (and will probably remain the principal) targets in warfare. Substituting atomic missiles for conventional ones is unlikely to change that priority. Modern cities, especially vulnerable, with their teeming population may be attacked, sometimes as acts of vengeful rage, sometimes as part of a strategic concept (once attributed to Douhet) that nations can be defeated by sheer terror. (The Mongols were masters of that by no means novel concept.) Losses resulting from such attacks will be immense, their drain upon national resources staggering. But wars are unlikely to be decided wholly, or even in major part, by them.

If it did nothing else, WW II must have convinced the thoughtful that destruction for destruction's sake is at best a costly road to victory. Unless the world reverts to policies of total extermination, it is more

profitable to destroy the enemy's armed forces and take over cities and industry intact.

Stalemate warfare which tempts baffled high commands to resort to city bombing cannot recur. Amphibious and airborne capabilities wedded to atomic weapons preclude it. Therefore, American and Allied sea power must not be partially em-

theory beyond mere threats to actual amphibious strikes—which are immeasurably strengthened by employing atomic weapons.

Amphibious operations, amenable to the wide tactical variations of land combat, fall functionally into three broad classifications—according to mission. First is the stupendous operation designed to push an in-



*Total destruction—a costly way to victory*

played as in WW I, where British strategy forgot its traditional role. Gallipoli violated every principle of joint operations. The almost unguarded German seacoast never felt the might of Allied naval superiority and the blood bath of the Somme resulted. In a future war, sea power must be fully exploited, even into the "narrow waters" of the foe, as it was in the Central Pacific campaigns after the Battle of Midway.

This is no novel concept. Von Clausewitz, arch prophet of land warfare, displayed his appreciation of amphibious potentials when he outlined a mythical (1820) European war. With England allied to Prussia against France, half the former's army should remain in England because "dominant sea power and the extent of French coast would result in this force tying down more than twice its strength in French troops devoted to defense of their shores." The ideas behind that century old study could scarcely be more appropriate to current US strategy, if we extend the Clausewitzian

vasion into an extensive land area; second, the island-seizure type where the objective is not appreciably larger than a comfortable beachhead and the defender is unable to reinforce without regaining command of the sea; the third could be described as the raid in which a port or other key point is seized, either to be held or merely destroyed and evacuated.

Each of these functional types can be either shore-to-shore or ship-to-shore maneuvers, depending normally upon the distance to be travelled between the friendly base and the objective. On occasion, the "far shore" may be a river's bank, a type of operation widely employed on the Mississippi and tributary rivers between 1861-65 and then "rediscovered" in the liberation of the Philippines eight decades later. Sometimes the "far shore" will lie along the embarkation point's coastline as in New Guinea. Here the amphibious operation becomes in fact a water-borne turning movement.

Conditions favoring this maneuver

are: possibility of achieving surprise; speed of execution compared with movement overland (considering both hostile opposition and terrain difficulties); and logistic capabilities of alternate land and water routes. Without these conditions the operation should be viewed with scepticism.

The great Sir John Moore re-

missiles can reverse the picture?

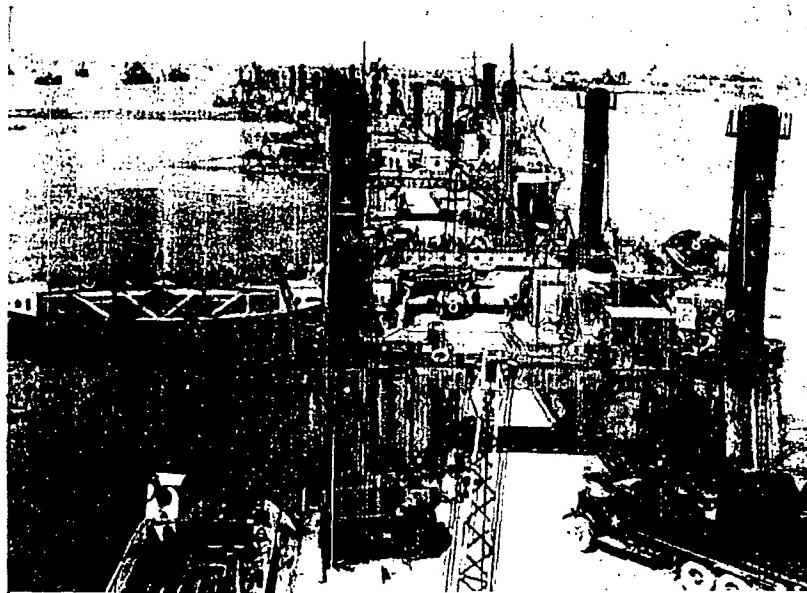
There American sea and air power appears more vital than ever. Undue emphasis is given the fact that almost no air superiority or AA defense net can prevent occasional sneak raids. Single plane attacks can carry an atomic wallop, hence every major base exists only by enemy sufferance. That, of course,

The massed amphibious forces, characteristic of invasion-type operations in the last war, do appear suicidal until a foe's atomic capability is utterly smashed. However, that type of campaign is the least attractive strategically against a foe outnumbering us in man power. We need not risk a decision against odds, mass versus mass, when an expanse of hostile seacoast offers our mobile sea-air power the opportunity of retaining the initiative, keeping the opponent off balance.

Several developments since 1945 suggest that it is possible to overthrow the main armies of the enemy without resorting to the concentration of an "Overlord." First, the old axiom, "invasion beaches must be within range of land based tac-air" is less valid. Today's aerial atomic support with its longer radius of action flies from carriers as well as runways. Second, atomic warfare's tactical realities contain a germ of truth regarding dispersion. Huge concentrations of men and materiel in a few square miles along a beach (or anywhere) pose unacceptable risks. Third, tomorrow's logistics may be able to do without old style constricted harbors and ports. Fourth, progress in both fixed and rotary wing air transport suggests an intermixture of airborne operations with amphibious to degrees previously impractical.

Each of these have engrossing implications for major amphibious campaigns. Reflecting upon atomic armed air support, we may ponder whether a floating base is any more vulnerable to atomic destruction than the huge, slow to construct, jet airfield. Certainly the floating base is the smaller target, more difficult to locate and not condemned to immobility. Nor is construction of a new carrier much slower than the extent of concrete demanded for land based jets.

Planes able to land and take off from the water appear to enjoy the only runways invulnerable to atomic blows. Water areas, even flooded marshlands, frequently found or readily "constructed" along most coasts, would be hard to neutralize by bombing. Current handicaps of sea-planes; slow speed, restricted maneuverability, need for long stretches of quiet water, have discouraged ventures into such fields.



British Info Services

### ***Huge logistic concentrations — no longer practical***

fused to sail from Portugal to Coruna in the Napoleonic Wars declaring: "the disruption of embarkation and debarkation will far exceed the rigors of an overland march." The X Corps in Korea could have marched direct to Wonsan at least a vital two weeks faster than it reached there via Pusan and waterborne envelopment, to be, allegedly, greeted by Bob Hope. (Its logistic support, of course, would still have come by water to Wonsan.) Yet Japanese amphibious operations of this nature completely disrupted British defense plans on the Malay Peninsula in 1941-2.

But to return to the three functional classifications, atomic weapons favor the attacker in the seizure and raid. Local defenses or small islands can be smothered by atomic blows delivered suddenly. Unless the enemy can retaliate, atomically, with exceptional speed, his island or base will be overrun by the landing force. The unpleasant aspect of that reflection is, of course, just what use can we make of so limited an area after its capture since hostile atomic

is thinking in terms of Normandy beaches.

Properly organized and operated, no base can be destroyed by a single hastily delivered atomic bomb. There, too, our great preponderance of atomic weapon quantity and quality is a most encouraging factor. By present indications we will have many bombs to expend for each one of the enemy. Hanson Baldwin (*New York Times*) says that an "era of atomic bombs in the thousands is at hand for the USA." Published opinions of unofficial, thoughtful commentators regarding all other nations' stockpiles never exceed 200 at the close of 1953.

Conservative references in the *Foreign Affairs Quarterly* estimate USSR atomic achievements at about one half of ours six years ago — or before the first reported Soviet explosion. It is questionable whether an enemy's atomic missiles will be expanded on "sneak raids" when bases no longer resemble those on coral atolls almost sinking under the weight of construction and equipment.

If the new trend signalized by Ernest G. Stout's *Sea Dart* eliminates seaplane inferiority, water landing areas will leap into tactical importance.

On the second point, the relative nature of mass is too often overlooked. A regimental combat team is mass against a force that cannot concentrate three battalions. Surely our more numerous atomic weapons can deny our foe the capability of "massing" to extents impossible for ourselves.

"Dispersion" in atomic warfare begins (in terms of today's organizations) above the battalion level. Tactical units approximating 1,000 men cannot be deployed widely enough to reduce casualties from a super weapon's direct hit without sacrificing their combat effectiveness. Thus, atomic deployment becomes the responsibility of regimental and higher commanders. Battalion teams must continue to operate in much the same formations; depending upon mobility and concealment, not internal dispersion.

The new "mass" will be a matter of co-ordinated actions by relatively small, hard hitting, fast moving units. Here, too, atomic warfare's challenge, this time to leadership at all levels: initiative at battalion; skilled maneuver higher up—puts American fighting men at no disadvantage.

Thus, when sea and air logistics can, together, support a number of separated thrusts (when beaches or landing zones are numerous), we do not need "Overlord's" concentrated 5 divisions for D-day assault. Nor do we need the unbroken length of suitable beach whose rarity makes major landings too easy for a defender to forecast.

The third point, seaborne logistics, conventional style, have their Achilles' heel in their ports. But with cargo discharged swiftly and efficiently over beaches (and ports of embarkation protected by keeping hostile atomic bases or delivery agencies at a distance), that weakness is largely eliminated.

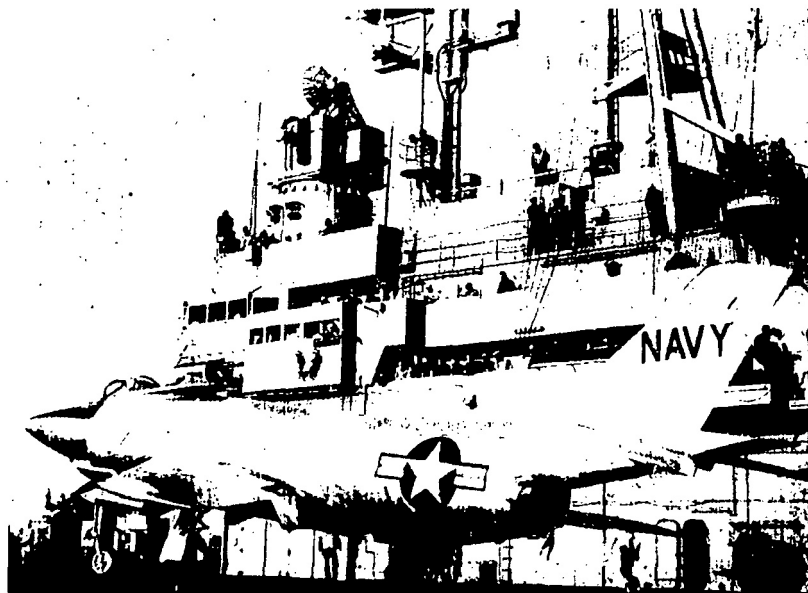
Not quite 10 years ago, across-Channel pipe lines and artificial harbors were startling innovations. Are improved means for getting supplies over the beach any more "impossible" for tomorrow? Can we not devise ocean transport on the tractor-

trailer principle? We need atomic age vessels which beach their cargo sections and (tractor style) pick up an "empty" to sail at once. Their shallow draft reduces mine hazards, their speed foils submarines.

Until hostile atomic capability will support attacks on individual cargo vessels, water transport enjoys less vulnerability than its land

with sizable problems. That is a far cry from "impossible." Rather it recalls Mahan's teaching: "Whatever the tactical difficulties involved, the strategic necessities compel a diligent study of how to meet them." If part of our difficulties stem from logistics instead of tactics, the advice remains sound.

Let us therefore survey our am-



*Floating bases—smaller targets not condemned to immobility*

counterparts. Ships at sea can "disperse" more readily than land transport. Although lineal targets such as rail lines, highways and pipelines are not worth an atomic missile's immense destructive power, immovable rail yards and highway junctions can be easily shattered to render rail and road networks unuseable.

Reference the fourth and final item: we are barely beginning, both tactically and logistically, to integrate air transport into military operations. Helicopter progress makes the rotary wing aircraft ideal for relatively short hauls of men and equipment, direct from ships at sea to a fighting front miles inland. Achievements in heavy fixed wing planes open vistas for longer range air movements. When these are adapted to water landings their value increases. No aspect of warfare meshes more readily with airborne potentials than amphibious operations. Their "marriage" is essential for atomic combat.

Nothing in what we have discussed precludes amphibious operations in tactical atomic warfare, though it does confront planners

with a prohibitive state of readiness for operations in the atomic age. Three phases, sometimes crowded into each other, but more normally spread over lengthy periods of time, characterize all amphibious campaigns. These are: (1) preparatory; occupied with planning, training and intelligence, (2) movement and assault; everything from assembly on friendly shores to and including the landing, and (3) final; in which the objective is seized and the seizure exploited.

Whether we know it or not, the United States should be already deeply involved in Phase 1 of the next amphibious operations our armed forces may have to undertake.

All three features under the preparatory phase require "lead time"—often erroneously believed applicable only to industrial procurement. That bugaboo of logistic planners can lower the boom upon tacticians and intelligence officers, too. Neither training nor intelligence can wait for a formal declaration of war—or another Pearl Harbor—if our essential "retaliatory actions" are to

include the amphibious strikes vital to over-all success.

Amphibious operations cannot be ordered on the spur of the moment. As Secretary of War Elihu Root's 1902 report noted: "It is easy for a President, or a general acting under his direction, to order that 50,000 or 100,000 men proceed to Cuba and capture Havana. To make an order

amphibious campaigns against odds in all other aspects of military might. Our organization must be revamped to land faster, cross the beach more swiftly, provide greater mobility and shock action on D-day itself and, especially, to fight in self contained small-size task forces. Our equipment and weapons, other than atomic, need re-evaluation to cast

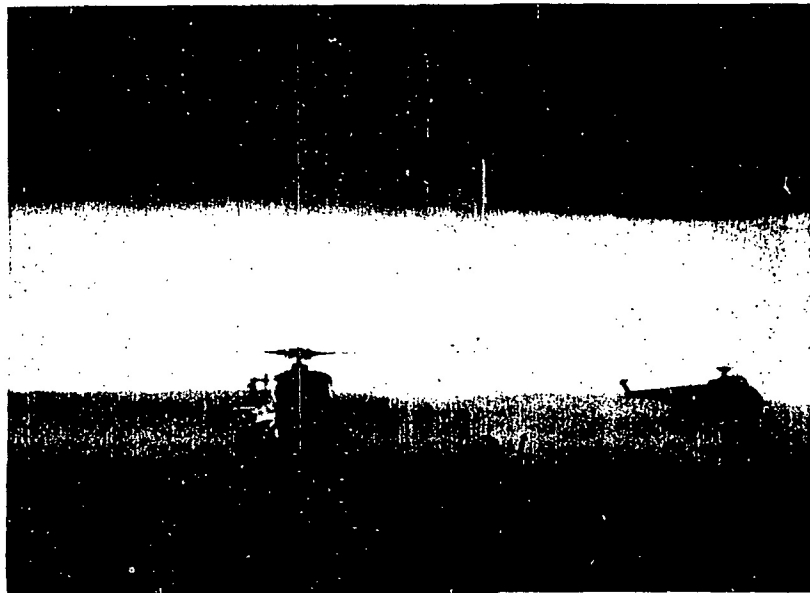
in training our assault units?

Intelligence, revamped under stress in the past decade, is functioning, properly wrapped in secrecy. We may hope that every element of strategic intelligence which can now be gathered receives adequate attention. Tactical intelligence we know must be sharpened and speeded up to meet the exigencies of mobile atomic warfare. Precise information regarding local political situations becomes an essential innovation for amphibious campaigns against a vast heterogeneous enemy. The inhabitants' attitude, accurately forecast, may materially affect those operations.

All this adds up to an immense preparatory effort, yet one that is entirely possible once we admit its necessity. If the United States is compelled to again wage war in defense of world freedom, amphibious operations, large scale and widely dispersed, cannot be delayed for 10 months after the start of hostilities as were Guadalcanal and North Africa.

Strategically selected, vigorously prosecuted, atomically supported amphibious strikes can achieve more to unbalance the aggressor's steam roller than greater effort expended in meeting him head on. To capitalize on this economy of force we need atomic weapons and varied delivery agents. These we possess. We also require changes in our organizational doctrine to exploit the principle of self-reliant, but controlled and coordinated, task forces at approximately battalion level. These task forces must have combat equipment and streamlined logistic support suitable for their missions. Airborne potentials, tactical as well as logistic, must be sagely, not rashly, incorporated into amphibious operations.

Finally, as the foundation of all the rest, we must have national recognition and acceptance of these facts. Amphibious operations will assume increasing importance in the United States' strategy. Atomic warfare furnishes American arms with their best tactical weapon against overwhelming numbers. Amphibious operations and atomic warfare are by no means incompatible. Actually, it may be in their adroit union that we shall discover a key to victory without annihilation. USMC



*Under the atomic cloud—self contained task forces*

which has any reasonable chance of being executed he must do a great deal more than that."

Undoubtedly "a great deal more" is in progress today. The lesson of "too little and too late" has been pounded home. Our concern should be directed toward insuring that our preparatory planning, training and intelligence meets the challenge—and fully utilizes the potential—of atomic weapons.

Planning encounters a peculiar handicap—our unbroken succession of amphibious victories in the past war. The fact of victory suggests continuing in the same mould, obscuring mistakes perpetrated in winning. Only defeat compels reflection. Thus the Germans entered World War II with tank tactics that overwhelmed superior (number and quality) tanks of the French in 1940.

We must therefore make certain that our superiority in atomic weapons is matched by our skill in the tactics of their employment. But we cannot rely on that advantage alone to swing the scale in tomorrow's

out the obsolescent and introduce those which fit our designed tactics and organization. Multiplicity of wheels does not automatically enhance mobility. Complex wire nets cannot assure communications on atomic battlefields.

Training is being served by successive amphibious maneuvers, testing the joint and unified nature of every amphibious operation. But are there some elements of that training which are, like some of the equipment it employs, obsolete? Have we realistically tested atomic potentials (both offensive and defensive) in recent maneuvers? Are we training enough manpower for expanded amphibious operations? Should we not train—and organize—battalion task forces for tactical and logistic independence in action while improving communications for their remote control by higher echelons. Are the implications of airborne combat units (parachute, fixed and rotary wing types) plus air transport's capability to "jump over" the beach sufficiently stressed