

Major Joint/Combined Operations

By MILAN N. VEGO

It takes all our services together plus the industrial efforts of our Nation to win any major war.

—General Omar N. Bradley

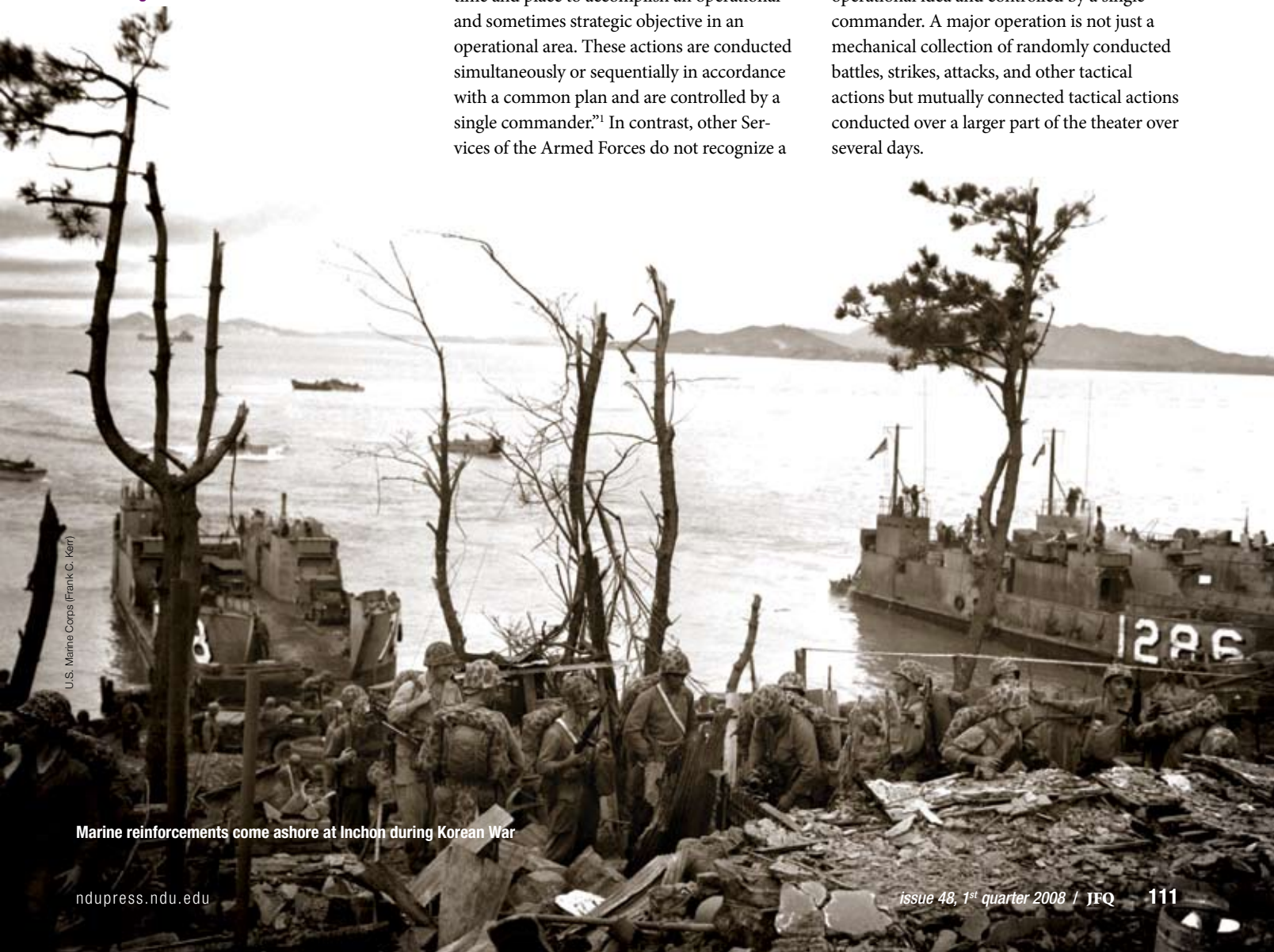
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In Western militaries, there is a general lack of a commonly agreed definition and a theory of operations aimed at accomplishing an objective. The U.S.

Army solution in the early 1980s was to adopt the term *major operation* and thereby distinguish between operations in general and those planned and conducted in accordance with the tenets of operational art. Currently, the Army and the main joint doctrinal documents describe a major operation as a “series of tactical actions (battles, engagements, strikes) conducted by various combat forces of a single or several services, coordinated in time and place to accomplish an operational and sometimes strategic objective in an operational area. These actions are conducted simultaneously or sequentially in accordance with a common plan and are controlled by a single commander.”²¹ In contrast, other Services of the Armed Forces do not recognize a

major operation as a method of their combat force employment. The Air Force, for its part, invariably (and incorrectly) is focused on planning what it calls “air campaigns.”

In generic terms, a major operation can be described as consisting of a series of related major and minor tactical actions by two or more combat arms of one or more Services concurrently and/or sequentially in terms of time and place and aimed at accomplishing an operational and sometimes limited strategic objective. Major operations are normally an integral part of a campaign; they are planned and conducted in accordance with a common operational idea and controlled by a single commander. A major operation is not just a mechanical collection of randomly conducted battles, strikes, attacks, and other tactical actions but mutually connected tactical actions conducted over a larger part of the theater over several days.



U.S. Marine Corps (Frank C. Kern)

Marine reinforcements come ashore at Inchon during Korean War

Major operations have certain commonalities regardless of the physical environment in which they are conducted. When part of a land or maritime campaign, a major operation is aimed at accomplishing a single operational objective. Major joint/combined operations are normally meant to achieve the main or principal operational objective in the initial phase of a campaign. In contrast, a major naval or air operation is planned to accomplish a secondary or ancillary operational objective. Normally, a dominant role in a major joint/combined operation will have the Service or functional component assigned to carry out the main operational objective of the operation as a whole.

In some cases, a major operation can accomplish a limited strategic objective. This is usually the case when a strategic objective is predominantly nonmilitary (for example, diplomatic, economic, psychological). Then a major operation is conducted with multi-Service and/or multinational forces. Sometimes in operations short of war, when the predominant aspects of a strategic objective are nonmilitary, a single major joint/combined operation is planned to achieve a limited strategic objective, as was the case in the U.S. invasion of Grenada in 1983 (Operation *Urgent*

Fury), Panama in 1989 (Operation *Just Cause*), and the North Atlantic Treaty Organization air offensive against Serbia over Kosovo in 1999 (Operation *Allied Force*).

A campaign in a high-intensity conventional war should be planned, prepared, and executed by an operational commander. Each of the Service or functional component commanders would be entrusted with planning and executing the respective major operations on land, at sea, and in the air. A joint or combined joint task force is the lowest command echelon that can plan, prepare, and conduct major joint/combined operations in regional conflict or a situation short of war. Strong central authority is needed to focus the efforts of all subordinate multi-Service forces. A single commander with sufficient authority and responsibility can greatly reduce Service parochialism. However, overly centralized command and control can inhibit creativity and the initiative of subordinate commanders.²

Background

The beginnings of joint operations go back to the ancient era, when armies were often supported by fleets during their operations on the coast. Naval vessels were also often used for transporting and supply-

ing troops during distant expeditions. For example, in 415 BC, the Athenians intervened in the Sicilian civil war, sending some 27,000 troops transported by 134 ships (including 60 warships) plus some 130 smaller supply vessels. The Sicilian expedition ultimately failed because the Athenians did not capture the city of Syracuse even after a 2-year siege (415–413 BC).³

In the Thirty-Year War (1618–1648), Seven-Year War (1756–1763), American Revolution (1775–1783), and French Revolutionary and Napoleonic Wars (1792–1815), a number of operations were conducted by armies and navies. In the Crimean War (1853–1856), Britain and France transported and then sustained a large army in the Crimea. Despite rather high casualties due to poor leadership and underestimation of the Russian defenses, they eventually accomplished their objectives by forcing Russia to sue for peace.⁴

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Many joint operations took place during the American Civil War (1861–1865). For example, cooperation between the Union army and navy in the Chesapeake Bay and Virginia was vital to the Union’s ultimate success in the war. The Union naval forces covered the army’s movement across otherwise-impassable terrain and guarded the vital line of water communications to that army’s ultimate source of supplies.⁵

In the Spanish-American War of 1898, the U.S. Army operations would have been impossible without the Navy’s support during the transit of troops to their landing area and then their sustainment ashore. For example, about 10,000 U.S. troops were transported from San Francisco and disembarked at Cavite, Manila Bay, in June 1898. The expeditionary force of three divisions with 17,000 men was transported from Tampa, Florida, with naval escort to an area near Santiago, Cuba, in late June. Another 5,000 American troops landed in Puerto Rico in late July.⁶

In the Russo-Japanese War of 1904–1905, both the Japanese and Russians conducted major joint operations. The Japanese First Army landed at Chemulpo, Korea, under strong naval support in mid-February 1904.



USS Harry S. Truman in Atlantic Ocean conducting carrier qualifications

U.S. Navy (Jay C. Pugh)

Afterward, it started to advance northward to the Yalu River, to cover operations at the Russian naval base at Port Arthur.⁷

The first modern major joint operations emerged in the last stage of World War I. As many as 8 to 11 field armies, with several thousand guns and mortars, up to 1,000 airplanes, and several hundred tanks, participated in major joint operations conducted along a 250- to 435-mile front and lasting from 8 days to several months.⁸ Tanks were used extensively for the first time in the battle of Cambrai in November-December 1917, when the British employed some 200 of them against the German Second Army.⁹ The series of large German offensives on the Western Front from March to July and the Allied counteroffensives from August to November 1918 were all conducted with strong support by large numbers of aircraft. For example, in the Allied St. Mihiel offensive (September 12–16), some 600 American, French, Italian, and Portuguese aircraft were employed in support of the ground troops.¹⁰ Infantry and artillery still had the primary role in these operations. Aircraft provided reconnaissance and were extensively used for attacks against enemy troops on the ground. Tanks had inadequate firepower and protection, as well as low speed and poor cross-country mobility; they were mainly used for direct infantry support during penetration of fixed defenses.¹¹ Cooperation among combat arms was rudimentary and loose. However, there was recognition of the urgent need to resolve the problem of close cooperation among the ground and naval forces, as well as aviation, in the conduct of major land operations; otherwise, success would be unachievable.¹²

During World War II, four types of major operations emerged: ground, naval, air, and joint/combined. More than two-thirds of all operations were conducted on the ground.¹³ The reason for the emergence of Service operations was the increase in the capabilities of each Service in accomplishing the operational objective, alone or with support from the others. The main forces in major joint operations were ground forces, while naval forces and air forces were employed in their support.¹⁴ Major land and naval operations were mostly joint or combined. Many amphibious landings, such as the invasion of Sicily in July 1943 (Operation *Husky*) and Normandy in June 1944 (Operation *Neptune*), were conducted with multinational forces.¹⁵

Why Joint?

Principal advantages of major joint operations include complementary capabilities, greater flexibility and, hence, a greater number of options in the employment of subordinate forces, and the exploitation of enemy vulnerabilities by employing one's forces asymmetrically. A joint force allows the operational commander to pose multidimensional threats to the enemy. The enemy will also have a much greater problem countering the capabilities of multi-Service rather than single-Service forces. One of the principal advantages in having multi-Service forces is the commander's flexibility in employing these forces asymmetrically (for example, land versus air, or sea versus land). Hence, it is possible to use one's strengths against the enemy's weaknesses more effectively or to prevent the enemy from exploiting one's own weaknesses. The operational commander also has far more freedom of action in employing multi-Service forces than in using the forces of a single Service.

A symmetric employment of forces often requires substantial numerical superiority and/or much more advanced weapons to achieve success and minimize friendly losses or casualties. In contrast, the employment of dissimilar forces can be extremely lethal, especially if the forces attacked are not ready to defend themselves against the threat. Joint forces provide a wider range of operational and tactical options, which pose multiple, complex problems for an enemy.¹⁶ Multiple Service capabilities allow an innovative operational commander to combine capabilities, tactics, techniques, and procedures in asymmetrical as well as symmetrical ways, synchronized to produce a cumulative effect greater than the sum of its parts.¹⁷

Among the disadvantages of joint forces are differences in ways of warfare, decision-making and planning processes, and doctrine, as well as parochialism and a lack of interoperability and agreed operational terms. Another major difficulty is usually the lack of common logistical support and sustainment. The planning, preparation, and execution of joint operations are more complex than for predominantly single-Service operations because of the need to sequence and synchronize the movements and actions of disparate force elements. Sound command and control can be especially challenging.

The operational commander must have full knowledge and understanding of the

capabilities of subordinate forces. He must orchestrate quick, decisive actions and have the ability to coordinate force capabilities to achieve desired results.¹⁸ At the same time, the need for close cooperation among Services should not lead to the elimination of cultural differences. The need for conformity should not be imposed at the expense of uniqueness; otherwise, one's military will become inflexible, uncreative, and, most importantly, predictable. Service cultures should not be suppressed or eliminated but preserved and exploited.¹⁹

Major operations with multinational forces are inherently more difficult to organize and execute than those with national forces. Moreover, operations with nontraditional allies can greatly increase risk. Coalition partners often have contrary views about the value of human life. Hence, treatment of prisoners of war and attitudes toward avoidance of collateral damage might differ. However, these

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disadvantages are often compensated by substantial nonmilitary advantages. Among other things, the participation of services of other nations considerably enhances the political, diplomatic, psychological, and informational status of both stronger and weaker partners. By including the forces of other nations in a campaign or major operation, the stronger partner gets access to bases, installations, and host-nation support. Perhaps the greatest benefit of major combined operations for the stronger coalition partner is that other participants enhance the legitimacy of using military forces in world opinion.

Characteristics

One of the principal features of all major operations is the decisiveness of one's actions in the course of accomplishing the ultimate objective. The aim is to seize and retain the initiative and thereby ensure freedom of action for one's forces. A major operation is usually characterized by high intensity of actions; skillful maneuver of forces; flexible command and control; extensive use of cover, concealment, and deception; and all-encompassing combat support. The aim is invariably to defeat the enemy quickly and with the smallest losses of forces and materiel.

The decisionmaking process for a major operation is based on the commander's estimate of a situation of much larger scope. In contrast to the planning of a tactical action, major operations are planned using a so-called regressive (or backward) planning process in which the ultimate objective is determined first and is followed by the determination of several intermediate, usually major tactical, objectives. These objectives are then accomplished sequentially or simultaneously.

A major operation is conducted in a much larger area of the theater than a tactical action. The size of the area depends on the force strength of each side; the size, shape, and characteristics of the physical environment; the prevailing weather/climate; and demographic, urban, ethnic, and other features. Normally, combat actions in a major operation are conducted in a given area of operations. However, the deployment of forces can encompass a large part of a theater of operations.

In contrast to a tactical action, the duration of an operation is measured in weeks or even months. The operation starts with the beginning of a deployment and ends after the assigned (or in some cases strategic) objective is accomplished—or if that objective is not accomplished. The duration of a major operation depends primarily on the degree of the correlation of force on both sides, amount of enemy resistance, and characteristics of the factor of space.

A major operation encompasses three parts, arbitrarily called the *precombat*, *combat*, and *postcombat* phases. In the case of a major joint/combined operation aimed at accomplishing a limited strategic objective, the postcombat phase is identical to the posthostilities phase. Normally, a major operation is an integral part of a campaign; hence, its main phases fall within the framework of a respective campaign. The precombat phase consists of predeployment and deployment phases. In a major operation, forces conduct operational and, rarely, strategic deployment. Deployment is normally conducted from home or forward bases to the area of physical concentration or for generating mass effect. A combat phase, especially in the case of a major land operation, may consist of two or more phases. The time between consecutive phases (or operational pauses) varies.

A major operation comprises a series of related major and minor tactical actions that collectively lead to the accomplishment of the

assigned operational objective. Major tactical objectives are accomplished by conducting battles, engagements, raids, strikes, and attacks. Minor tactical objectives are attained through such devices as ambushes, patrols, surveillance, and reconnaissance.

Each type of major operation attempts to accomplish an operational objective with forces that function in very different physical environments. It is difficult, therefore, to generalize how each major operation would unfold and what its elements would be. However, regardless of type and purpose, a major operation can comprise the following: the initial position (central or exterior) and corresponding lines of operations (interior or exterior); base of operations; concentration/counterconcentration; the ultimate and intermediate objectives and corresponding centers of gravity; maneuver and fires; sectors of main effort (thrust) and sectors of secondary efforts (thrusts); main forces and supporting forces; points of main attack (or defense); point of culmination; deception; redeployment or return to a home base; and reconstitution (see figure 1).

After the ultimate objective of a major operation is accomplished, operational success is consolidated through energetic pursuit aimed at destroying or at least neutralizing the remaining enemy forces. Redeployment is conducted during the postcombat phase. Then forces can be redeployed to another area in either the same or an adjacent theater of operations or directed to return to their home base. In the postcombat phase, there might be a need to reconstitute one's forces if they have been heavily attrited. This is not often the case

with air or naval forces. Yet reconstitution might be necessary if losses in ships, aircraft, and personnel are so high that units or elements are not capable of conducting their combat missions.

Forms of Cooperation

In generic terms, major joint operations can be planned and carried out among ground forces and the air force and navy, respectively; the air force and ground forces; the navy and ground forces; and joint operations in which all services participate. Also, in some cases, ground forces can directly or indirectly support either the air force or the navy in the accomplishment of their missions.

Air Force Support of Ground Forces. In the modern era, there have been few major land operations conducted without some participation of friendly aircraft. Air force can be employed for a variety of missions in support of friendly ground forces in both offense and defense. Among other things, air attacks can compel the enemy to stop his advance and revert to the defensive. They can compel the enemy to channel his advancing forces into areas where they can be more easily contained or destroyed. Air force can cause extensive delays in the planned movements of opposing troops on the battlefield. When ground forces are on the defensive, the air force can, by attacking the enemy forces, buy time to bring in fresh troops, reinforce positions, or launch spoiling attacks. Strikes from the air can greatly complicate withdrawal or retreat.

Obtaining air superiority or supremacy can often be more successful if air forces synchronize operations with ground forces. The quick advances of friendly troops on the

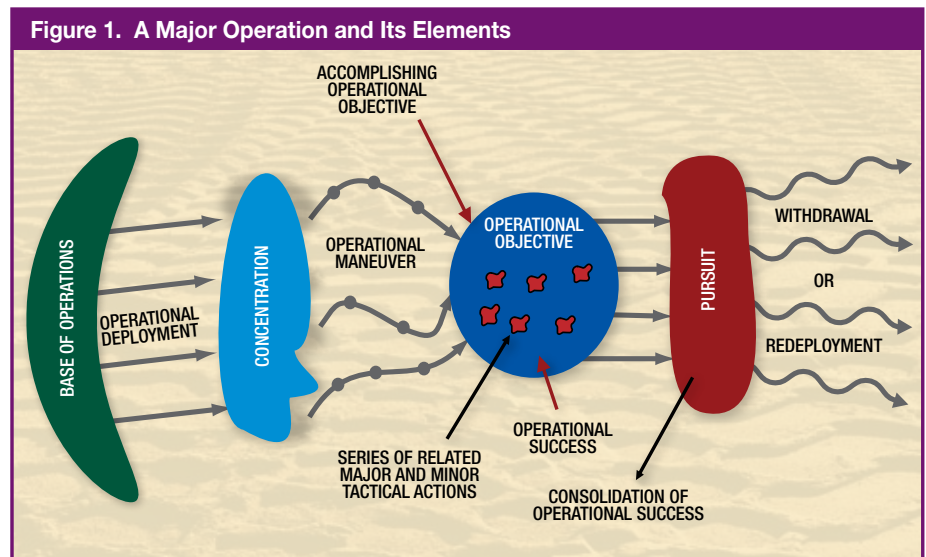


Figure 1. A Major Operation and Its Elements

ground can greatly facilitate the air force's task of obtaining and maintaining local air superiority by seizing control of enemy territory, with its ground-based air defenses, air bases, and associated airspace facilities/installations. Likewise, by stubbornly defending the country's territory or important positions, friendly ground forces can contribute to the ultimate success of the air forces by protecting the friendly air forces' ground installations.

Traditionally, air force missions in support of the ground forces have consisted of offensive air support, armed reconnaissance, and tactical air reconnaissance. Offensive air support, in turn, has consisted of air interdiction and close air support.²⁰

Air interdiction is aimed at destroying, disrupting, neutralizing, and delaying enemy land forces and their supporting elements before they reach the battlefield (see figure 2). It can limit their combat potential and control the timing of that eventual engagement, selecting the opportunity most advantageous to friendly forces.²¹ Air interdiction is considered the best means of exploiting airpower reach against enemy land forces.²²

Normally, air interdiction is conducted beyond the boundaries of a joint area of operations (or *corps deep area* in U.S. Army terms). Hence, it does not require detailed integration with the fire and movement of friendly land forces. The depth at which interdiction is conducted determines the freedom of action available to the attacking force. Increasing the depth reduces the danger of fratricide for

friendly air and ground forces, lessens the coordination required between components, and allows increasingly flexible operations.²³

Air interdiction is often confused with operational fires. Although related, they are not identical in purpose, spatial extent, or command and control processes. Among other things, the main purpose of operational fires is to facilitate the employment of all service or functional component forces taking part in a campaign or major joint/combined operation. Hence, operational fires can encompass a large part of a given theater of operations. In

air interdiction can deny sanctuary to ground forces while diverting resources and offensive potential to defensive purposes

contrast, air interdiction is primarily aimed at supporting actions of friendly ground forces and is conducted in the operational depth of enemy ground defenses. Operational fires are normally conducted some time prior to the start of a campaign or major joint/combined operation, while air interdiction is carried out largely in the course of a major land operation.

Air interdiction can create opportunities for friendly ground commanders to exploit airpower's ability to concentrate firepower quickly at any point throughout the theater. For instance, air interdiction can deny sanctuary to ground forces while diverting resources and offensive potential to defensive purposes.

The enemy might be forced to strengthen his anti-air defenses in certain areas that he did not originally envisage. Alternatively, it can force him to extend air defenses over a greater depth than intended. This, in turn, would require him to commit more air forces for predominantly defensive, not offensive, tasks. Alternatively, the enemy might be compelled to disperse air defenses because of the need to protect a large part of his forces from the attacks by one's air force.²⁴

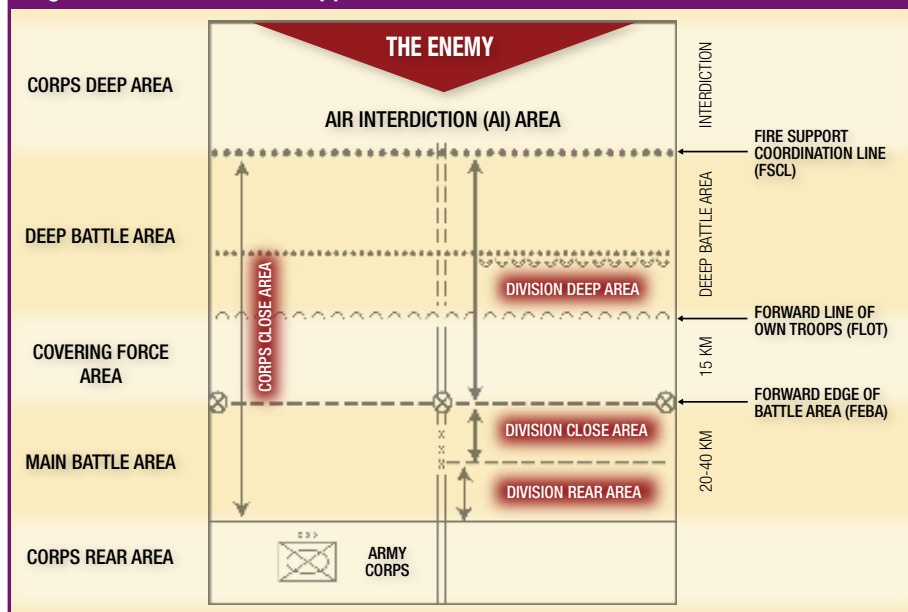
One of the chief prerequisites for the success of air interdiction is to possess a sufficient degree of control of the air; otherwise, it would be difficult if not impossible for friendly aircraft to carry out air interdiction tasks. Success in air interdiction is highly dependent on having accurate and relevant intelligence on enemy dispositions; lacking that, it is hard to select viable interdiction targets. Other prerequisites include sustained and concentrated pressure and appropriate ammunition. However, perhaps the most critical element for success is synchronization of air interdiction with ground maneuver of friendly forces.

Air interdiction is generally more effective against a highly mechanized modern military than against a less sophisticated force. It is not likely to be effective against an enemy with a simple force structure and minimal logistic requirements. When conducted against enemy forces and logistics without regard to the operational situation, air interdiction might be largely ineffective.²⁵ Therefore, air interdiction must be tailored. This means, for example, that the same procedures cannot be used against a highly sophisticated enemy force and a less capable and more primitive enemy, as is often the case with a counterinsurgency.

Airpower is rarely successful unless combined with ground maneuver. The mobility and firepower of land and air forces are mutually supporting and interchangeable. Ground maneuver and air interdiction should be synchronized so each reinforces the other.²⁶ In general, air force actions to delay or stop the movement of enemy ground forces allow friendly ground forces to obtain a positional advantage. Air interdiction of supply lines limits offensive and defensive capability in case the enemy forces are in contact with friendly ground forces. In addition, maneuver of friendly forces impels the enemy to conduct counter-maneuver and thereby exposes him to air attacks.²⁷

In the initial phase of the Normandy landing, for instance, the Allies prepared an air

Figure 2. Air Missions in Support of Ground Forces



interdiction plan to destroy critical junctures on the main roads and railroads leading to the beaches.²⁸ The main prerequisite for success was synchronization of air interdiction and maneuver of Allied ground forces. The plan for air interdiction in support of the breakout from Normandy (Operation *Cobra*), developed in July 1944, required the Ninth Bomber Command to interdict reinforcement routes to the German Seventh Army. The Ninth Air Force's planners selected 16 bridges along the Sienne and Vire Rivers where the German columns had to cross. The planners wanted to preserve critical bridges that friendly forces would use during the exploitation phase of the operation. Throughout July, the Ninth Bomber Command's light and medium bombers destroyed these bridges to isolate the battlefield.²⁹ To assist in the breakout, British General Bernard Montgomery launched Operation *Goodwood* (July 18–20, 1944). Its main purposes were to secure the port of Caen, deceive the Germans as to the location of the Allied main attack, and pin down the enemy forces at the eastern part of the lodgment. This, in turn, would enhance the chances for success for Operation *Cobra*.³⁰ After 3 days of heavy fighting, the British operation worked as a diversion but failed to effect the breakout.³¹ Also, the massive Allied bombing of German positions on July 25 was less successful than expected and resulted in some 110 friendly fatalities.³²

In contrast to the Normandy invasion, the Allies paid little attention to the need to synchronize the employment of their airpower and forces on the ground on the Italian front in early 1944. They planned to break the stalemate along the Gustav Line by mounting an amphibious landing behind the German front at Anzio (Operation *Shingle*) in January 1944. This landing would be supported by the operational fires that included air attacks aimed at interdicting the flow of supplies to the German forces deployed on the Italian front. The main targets of the Allied attacks would be the enemy's rail and road network. As provided by the plan, the Mediterranean Allied Air Force attacked German communications in January and February 1944 during the landing at Anzio and subsequent battle ashore. Afterward, the Mediterranean Allied Air Force conducted a saturation bombing of the Monte Cassino monastery against the advice of the respective air commanders. Not surprisingly, all these efforts in the air and ground assault failed because none were synchronized. This set the stage for Operation *Strangle I* (March

15–May 11, 1944).³³ Allied airpower cut every railroad in at least two places, causing a massive reduction in German supplies. However, that interdiction ultimately failed because it was not synchronized with ground maneuver. Among other things, the Germans were not forced to consume large quantities of supplies for their frontline troops. Under the cover of night, they managed to transport sufficient goods to their troops by truck. Neither did the Allied bombing force the Germans to abandon their defensive positions.

In their attack on Hezbollah in Lebanon in July 2006, the Israelis failed to synchronize the use of their massive air attacks with forces on the ground. The Israeli Air Force conducted nearly 2 weeks of air strikes without a clear ground component, during which it conspicuously failed to stop Hezbollah's rocket attacks

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against the northern part of Israel. It also signally hit Lebanese civilian targets and caused extensive civilian damage, serious collateral damage, and massive Lebanese evacuations. Yet despite all these efforts, airpower was unable to prevent Hezbollah from firing some 4,000 rockets against targets in northern Israel.³⁴

Close air support is one of the oldest and most important missions of the air force in support of friendly ground troops. Its effect

on the enemy is more direct but smaller in scale than air interdiction. In general, close air support missions are conducted against less vulnerable enemy forces in contact, which are deployed in a battle formation and better prepared to defend themselves.³⁵ In generic terms, close air support is one of several forms of tactical fires. It can also have an operational effect if it decides the outcome of a major ground operation.

On the eve of World War II, the air forces of Britain, the United States, and Germany considered close air support a secondary mission. Yet the German Luftwaffe was the most successful in providing support to army troops in the initial phase of the war.³⁶ The first real test of the German close air support doctrine occurred during the invasion of Poland in September 1939. Despite great successes in the campaign, cooperation between the German army and Luftwaffe was beset with problems. Among other things, air and ground units did not use the same frequencies in communicating. Several hours often passed between army requests for support and the actual attack. The liaison problem between air and land commanders generated confusion about the location of friendly forces. The Luftwaffe's aircraft routinely bombed friendly troops. Air support was most effective when applied to fixed fortifications and encampments and in attacks against enemy rear areas.³⁷ Yet the Luftwaffe's overall support in the Polish campaign was spectacularly successful despite these problems.³⁸ Based on lessons learned from that campaign, the Germans

2nd Marine Division Combat Camera (David Castillo)



Marine snipers take observation position in Fallujah, Operation Iraqi Freedom

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created a new air corps (Fliegerkorps VIII) specializing in providing close air support for the pending spring campaign in the west.³⁹

Another test of the Luftwaffe's close air support doctrine came during the campaign in the west from May to June 1940. The Luftwaffe used combat air patrols to protect Panzer and mechanized forces as they advanced through the Ardennes. Allied reconnaissance aircraft were shot down by German fighters and ground anti-aircraft fires.⁴⁰ The Luftwaffe played a crucial role during the Meuse River crossing by General Heinz Guderian's XIX Panzer Corps on May 13. His forces were supported by the II and VII Air Corps, whose heavy bombers and dive-bombers continuously attacked French defensive positions around Sedan. Guderian's anti-aircraft weaponry and Panzers engaged French fortifications across the river with devastating direct cannon and automatic weapons fire. The French defenses crumbled due to the howling Ju-87 dive-bombers' impact on morale, which turned out to be greater than the physical effect.⁴¹ However, the Luftwaffe's close air support was more effective against Allied fixed positions such as those at Sedan than in aid of fast-advancing Panzer and mechanized forces. There were instances of confusion concerning the location of friendly and enemy forces and occasional friendly bombing.⁴²

The main differences between air interdiction and close air support are objectives and different factors of space, time, force, and command and control. Air interdiction requires more extensive capabilities in attack-

ing aircraft than does close air support. The distances from the friendly bases to the target area are usually much longer. The time spent within range of hostile defenses is also greater. Anti-aircraft defenses are likely to be more integrated than those in the battle area. The enemy early warning time will be longer. There is also less likelihood of the attacking aircraft being given last-minute target acquisition or identification assistance from the ground. The deeper the penetration is, the more scope there will be for defensive countermeasures.⁴³

Air forces play a critical role in airborne operations by securing control of the air and then transporting airborne troops to the objective area, providing escort during transit, and furnishing close air support once the troops have landed. The main purpose of an airborne assault can be to seize some important physical objective in the operational depth of the enemy's defenses and hold it until reinforced or relieved by other forces. Air forces can be used for isolating a specific area vital to the enemy, disrupting enemy movements, or capturing personnel. Airborne raids are usually of short duration.⁴⁴

Navy Support of Ground Forces. Navies can carry out a large number of diverse operational tasks in support of armies. These tasks range from air interdiction and close air support to amphibious landings on the opposed shore and direct or indirect support of friendly ground forces operating in coastal areas. A major amphibious landing on the opposed shore can be planned to seize an area giving access to the operational objective inland, speed the advance of friendly troops

along the coast, eliminate or take control of a large naval base or port or prevent the enemy from capturing such a facility, cut off an army's avenue of escape, or prevent evacuation across the sea. Naval forces play the principal role in providing transport for troops and protecting them directly and indirectly during the transit phase of the landing and in the struggle to obtain the initial lodgment ashore.

In the Korean War (1950–1953), the influence of sea power, and its amphibious element in particular, was most clearly demonstrated when the entire military situation was transformed and the hitherto-triumphant North Korean army found itself encircled as a result of a brilliantly planned and executed amphibious landing at Inchon (Operation *Chromite*). After capturing offshore islands on September 15, 1950, about 70,000 troops embarked on 170 transports and landing ships, went ashore at Inchon, and struck inland, cutting off the road running south from Seoul along which most enemy supplies were transported. At the same time, the only other supply route down the east coast was interdicted by United Nations (UN) naval forces. Seoul was recaptured 2 weeks later. By September 16, the UN forces within the Pusan perimeter had launched a fierce counteroffensive and advanced quickly northward. Some 10 days later, they joined hands with those landed at Inchon.⁴⁵ By the end of September, the shattered North Korean army was in full retreat. Entire divisions had disintegrated. Lines of supply had been cut off. Many enemy troops were trapped in the southern part of



Marines approach Saint Georges, Grenada, Operation Urgent Fury

U.S. Navy (Peter D. Sundberg)

In the Korean War, the influence of sea power was demonstrated when the North Korean army found itself encircled as a result of a huge amphibious landing at Inchon

the peninsula because their escape routes were cut off. The North Koreans had no hope for replenishment or reinforcement because of the UN blockade of the coast.⁴⁶

A credible amphibious capability may also help to tie a sizable enemy force to the defense of a large stretch of its own mainland coast or offshore islands and thereby enhance the chances of ground forces in the sector of main effort. The value of possessing a credible amphibious threat was shown most recently in the Persian Gulf War of 1991. General

Norman Schwarzkopf employed the 13th Marine Expeditionary Unit to deceive the Iraqis and pin down their forces in Kuwait. Reportedly, the Iraqis were forced to deploy at least three infantry divisions to defend the coast from Kuwait City south to the Saudi-Kuwaiti border. U.S. Marines conspicuously prepared for an amphibious landing along the Kuwaiti coast, conducting highly publicized exercises with ominous names such as Imminent Thunder. Meanwhile, the Allies sought to convince Saddam Hussein that a major land assault would be launched against Iraq's most heavily defended areas along the Saudi border.

Naval forces can conduct diverse tasks in support of friendly troops in both offensive and defensive coastal operations. During an *offensive major operation*, naval forces can be employed in blockading the entire or a selected part of the enemy coast or strait/narrows; carrying out attacks on troop concentrations and installations/facilities in the depth of the enemy's defenses; destroying or neutralizing enemy naval forces posing a threat to the advance of friendly troops along the coast; conducting raids; preventing the arrival of enemy reinforcements by sea/land; transporting friendly troops and materiel; seizing the enemy's large naval bases/ports; and providing support to friendly ground forces in crossing straits, bays, and estuaries. The primary focus in the employment of naval forces should be on conducting actions that facilitate the advance of friendly ground troops along the coast.

The main tasks of naval forces in providing support of the army flank in a *defensive major operation* include slowing the enemy advance along the coast or a large lake; taking part in the anti-amphibious defense and the defense of naval bases/ports; conducting commando raids in the enemy's rear; and evacuating friendly troops and civilians. Support of naval forces in defense of naval bases and large ports from the seaside proved invaluable on many occasions in both world wars. A prolonged defense of a major naval base or port can considerably slow an enemy advance along the coast by tying down significant forces. Perhaps more important, any prolonged defense of a major naval base/port would represent a gain of valuable time to stabilize defenses. In some cases, the time can be used for preparing a defense of a more important naval base/port.

A navy's support of army troops on the coast also includes many tasks carried out during a major offensive or defensive operation. The most common operational task of

naval forces is protecting the flank of friendly ground troops. This broad task, in turn, can include a number of tactical tasks, such as providing fire support to the troops ashore (naval gunfire and/or close air support), laying defensive minefields in coastal waters, transporting troops and materiel, helping defend the coast, and conducting commando raids in the enemy's rear.

Fire support from naval guns and coastal gun batteries is used to defend naval bases/ports, support amphibious landings, provide flank support to advancing troops, and secure important sectors of coastline. The high mobility of ships and their strong and accurate firepower play a key role in defending naval bases. Nevertheless, fire against coastal targets is one of the most complicated tasks for shipboard artillery.

Today's longer-range and more lethal weapons allow navies to provide direct fire support against enemy-held coasts and strike operationally important targets in the enemy's interior. For example, during the major combat phase of the campaign in Iraq (Operation *Iraqi Freedom*), U.S. Navy aircraft flew half of

sometimes friendly ground troops might be called upon to seize objectives critical to the naval forces' ability to obtain and maintain sea control

the 15,000 strike sorties. They also provided extensive close air support to coalition forces on the ground. U.S. surface ships and submarines fired more than 800 Tomahawk cruise missiles against a variety of targets ashore.⁴⁷ Naval forces are also capable of striking troop concentrations and logistical infrastructure, providing support in capturing coastal facilities/installations and ports, and preventing besieged troops from being evacuated by sea.

Ground Force Support of the Navy. Sometimes friendly ground troops might be called upon to seize objectives on or off the enemy-held coast of little or no significance for the army but critical to the naval forces' ability to obtain and maintain sea control. Also, friendly ground troops should direct their actions against objectives that in the further course of an operation will be used by naval forces and therefore must be seized undamaged and quickly.

Ground forces can be extremely useful in capturing a large part of the mainland coast and/or key offshore islands with their naval/air bases and ports. As friendly troops advance

along the shore, the enemy's naval position is also steadily reduced. General control of an enclosed or semi-enclosed sea (so-called narrow seas) can largely be obtained by seizing the enemy's major naval/air bases. Afterward, enemy naval forces must either surrender or be forced into internment in neutral ports. This can be accomplished even if the advancing army on the coast has little or no support from friendly fleet forces.

One of the main reasons for the generally poor performance of the Soviet naval forces and aviation in the Baltic and the Black Sea in 1941–1945 was the loss of almost all naval bases in the first few weeks of the war. In the Baltic, the Soviets lost all major naval bases and ports except Leningrad-Kronstadt within 3 months after the start of the Nazi invasion in June 1941. Likewise, because of the withdrawal of the Red Army, the Soviet Black Sea Fleet lost all its major bases within 12 months after the beginning of hostilities. In retrospect, if the Germans had focused on seizing the few remaining Soviet naval bases in the eastern Black Sea as part of their summer offensive of 1942, they probably would have forced the Soviet Black Sea Fleet to self-destruct or to be interned in Turkey. However, these ideas were apparently foreign to the German Supreme Command, although the Soviets were well aware of the threat.⁴⁸

Air Force Support of the Navy. An air force can make a major contribution to the employment of naval forces across the spectrum of conflict at sea. The long range, high speed, and lethality of modern aircraft allow them to operate over the major part of the ocean. However, their effectiveness decreases as combat actions take place closer to the enemy or friendly shores. Maritime and air operations should normally be planned to exploit the natural synergies between air and naval forces. Aircraft have longer reach and higher speed than surface ships. They can operate autonomously. In contrast, it is rare for surface forces to operate beyond the effective range of land-based or carrier-borne aircraft. Land-based aircraft generally have a long range and can carry a large payload of weapons. They can also generate a larger number of sorties within a given timeframe than carrier-based aircraft. They have great flexibility in carrying out strikes and other offensive missions against warships and merchant ships when operating along short and interior lines. An exterior position with

numerous air bases allows the attacker to shift sectors of main effort at short notice.

Land-based aircraft can often have an important, if not the key, role in securing and maintaining command of a narrow sea. Because of the growing range, endurance, and speeds of modern aircraft, ever-larger sea and ocean regions have become areas of combined employment of naval forces and land-based aircraft. Today, no part of any narrow sea is free from observation and attack from the air. The struggle for air superiority in narrow seas cannot be separated from the contest in the airspace over the adjacent coastal areas.

Because of the short distances, the effectiveness of airstrikes against enemy ships and targets on the coast is considerably higher in a narrow sea than on the open ocean. Land-based aircraft can fly more sorties within a given timeframe. In a sea with many offshore islands, land-based aircraft can strike from bases flanking the transit routes of enemy ships. Aircraft can be quickly redeployed from one airfield to another or one part of the sea to another.

The destructive power of air forces against warships is well known. In World War II, more warships were sunk by air attack than by any other cause. The effectiveness of land-based aircraft in attacking surface ships at sea, especially in narrow seas, was demonstrated for the first time in European waters in World War II. Yet initially, due to the lack of adequate preparation and training of aircrews, attacking warships at sea did not lead to significant results. For example, during the German invasion of Norway from April to June 1940 (*Weseruebung Nord*), the Luftwaffe moved a large force of heavy and dive-bombers to southern and central Norway. The Germans sank only one British destroyer in early April. British naval ships were repeatedly attacked until the final evacuation in May. The Royal Navy failed in its effort to deny the use of the sea to the Germans in the first 5 days of the campaign.⁴⁹ Inability to control coastal waters off Norway because of the weight of the Luftwaffe attacks made Allied ship operations extremely hazardous and difficult unless protection was provided by the Allied fighters based ashore.⁵⁰

The effectiveness of the Luftwaffe's capabilities in attacking naval ships at sea was in full display during the final phase of the struggle for the island of Crete in late May 1941. The British navy was extensively employed in embarking and then transporting Allied troops from Crete to Alexandria, Egypt.

During this evacuation, the Allied ships were subjected to massive attacks from the VIII Air Corps. One effect of these attacks was that the Allies were forced to abandon efforts to evacuate troops from Crete's northern coast.⁵¹ Admiral Andrew Cunningham informed the Admiralty in London that the scale of the enemy air attacks prevented his ships from operating during the daylight hours in the Aegean or off coasts of Crete. Hence, the navy could no longer guarantee it could prevent seaborne landings without incurring losses that might lead to sacrificing the command of the eastern Mediterranean.⁵² He pointed out that he lost two cruisers and four destroyers in 3 days, while one battleship, two more cruisers, and four destroyers were severely damaged.⁵³ The Luftwaffe bombers and dive-bombers sunk three cruisers, six destroyers, five missile torpedo boats, and several smaller ships.⁵⁴ In addition, some 32 Allied transports, supply ships, and fleet auxiliaries with about 128,500 tons were sunk and had to be abandoned. Twelve ships with 94,500 tons were lost at sea.⁵⁵ In addition, two battleships, one aircraft

the employment of combat forces of three Services allows the operational commander to change the intensity of actions in space and time

carrier, six cruisers, and seven destroyers were damaged.

Airstrikes against naval bases in a narrow sea can be far more effective than those mounted from the open ocean because of the shorter distances and the larger number of land-based aircraft that can be used. They can be conducted at high intensity and repeated at short intervals. In some instances, not only fixed-wing aircraft but also missile-armed helicopters can be effectively employed. Attacks on enemy naval bases have also been carried out in many regional conflicts since 1945. For example, between January 25 and 28, 1991, U.S. and coalition aircraft attacked Iraqi ships based in Umm Qasr, the Bubiyan Channel, and the port of Kuwait. One Iraqi minelayer, two patrol craft, and one transport were sunk in these attacks.⁵⁶ On February 4, coalition aircraft attacked the Iraqi naval base at Al Kalia and disabled two missile craft. Helicopters from a U.S. frigate engaged four Iraqi patrol craft off Maradin Island; one was sunk and another damaged. With this action, the Iraqi navy's

threat to the U.S. and coalition navies operating in the northern Gulf practically ended.⁵⁷

Army–Air Force–Navy. In the modern era, many land campaigns have involved all three Services of the Armed Forces. The operational commander then can pose the threat to the enemy in all three dimensions. He has the greatest flexibility in terms of shifting the sector of main effort. The employment of combat forces of three Services allows the operational commander to change the intensity of actions in space and time from one to another part of the theater. The operational commander also has the largest number of options available. At the same time, three-Service employment poses far more severe problems for effective command and control, logistical support and sustainment, and interoperability than if forces of two Services are used.

Defense of the coast is the joint responsibility of naval, ground, and air forces. The most important parts of the coast containing beaches suitable for enemy naval landing are prepared for the conduct of beach defense or anti-amphibious defense. The objective is to prevent the debarkation of enemy amphibious forces and dropping airborne troops in the interior of one's coastal area. Naval and air forces have to cooperate closely with friendly ground forces in beach defense. Air forces and naval forces would strike enemy amphibious forces in their assembly area, during their sea transit, and during the landing and battle ashore. Air forces would also provide defense against enemy air attacks to both friendly ground and naval forces. Another important task of air forces would be protection of friendly ships transporting troops and materiel. The main methods of the employment of air forces in anti-amphibious defense are air interdiction, close air support, and air reconnaissance/surveillance of the objective area.

Major joint/combined operations are not only potentially the most decisive of all operations, but also the most complex to plan and execute. Participation of two or more Services greatly enhances the effectiveness of each. In some cases, each Service might be assigned a separate but related operational objective. However, because the outcome of a major joint/combined operation is on land, ground forces would be assigned to accomplish the principal operational objective; naval and/or air forces would be assigned supporting operational objectives. At the same time, ground forces can in some situations provide

significant support to air forces and naval forces in accomplishing respective objectives.

Major joint operations offer advantages but also disadvantages. Perhaps the most important advantage is that the employment of two or more services offers the operational commander a range of capabilities that no single service can provide. The resources of each service are complementary to the others. Properly planned and executed, a major joint operation would pose threats in all three physical mediums. The operational commander also has a much greater range of options than if a single service is employed. Another great advantage of major joint operations is that each service's elements can be employed asymmetrically.

The disadvantages in the employment of forces of two or more services are primarily caused by different ways of warfare, biases against other services, varying doctrine and procedures, and different organization of logistical support and sustainment. These disadvantages grow in the employment of multinational forces. Yet multinational efforts enhance the stronger partner's ability to deploy, employ, and sustain forces in a given theater and greatly increase legitimacy and thereby public support in the execution of a major joint/combined operation. **JFQ**

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