



## THE FOUNDATIONS OF AIRPOWER

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[Airpower](#) provides the Nation and the joint force with unique and valuable capabilities. **Airmen should understand the intellectual foundations behind airpower and articulate its proper application at all levels of conflict; translate the benefits of airpower into meaningful objectives and desired effects; and influence the overall operational planning effort from inception to whatever post-conflict operations are required.**

Airpower stems from the use of lethal and nonlethal means by air forces to achieve strategic, operational, and tactical objectives. The Air Force can rapidly provide national leadership and joint commanders a wide range of military options for meeting national objectives and protecting national interests.

Elevation above the earth's surface provides relative advantages and has helped create a mindset that sees conflict more broadly than other forces. Broader perspective, greater potential speed and range, and three-dimensional movement fundamentally change the dynamics of conflict in ways not well understood by those bound to the surface. The result is inherent flexibility and versatility based on greater mobility and responsiveness. Airpower's speed, range, flexibility, and versatility are its outstanding attributes in both space and time. This combination of attributes provides the foundation for the employment concepts of airpower.

*Upon the outbreak of war the offensive power of the Air Service should be ready for instant use, and the offensive in the air should be assumed immediately. During this period of hostilities offensive aerial operations will exert an important influence upon the future conduct of the campaign. It should be used offensively, primarily to secure the control of the air, and, secondarily, to disrupt and delay enemy communications and ground establishments.*

— Training Regulation No. 440-15, "Fundamental Principles for the Employment of the Air Service," 1926

With its speed, range, and three-dimensional perspective, **airpower operates in ways that are fundamentally different from other forms of military power.** Airpower has the ability to conduct operations and impose effects throughout an entire theater and across the [range of military operations](#) (ROMO), unlike surface forces that typically

divide up the battlefield into individual operating areas. Airmen generally view the application of force more from a functional than geographic standpoint, and classify targets by generated effects rather than physical location.

**By making effective use of the third dimension, the electromagnetic spectrum, and time, airpower can seize the initiative, set the terms of battle, establish a dominant tempo of operations, better anticipate the enemy through superior observation, and take advantage of tactical, operational, and strategic opportunities. Thus, airpower can simultaneously strike directly at the adversary's centers of gravity, vital centers, critical vulnerabilities, and strategy.** Airpower's ability to strike the enemy rapidly and unexpectedly across all of these critical points adds a significant impact to an enemy's will in addition to the physical blow. This capability allows airpower to achieve effects well beyond the tactical effects of individual actions, at a tempo that disrupts the adversary's decision cycle.

**Airpower can be used to rapidly express the national will wherever and whenever necessary.** Within 36 hours of the deployment order, Air Force F-15s were flying combat air patrols over Saudi Arabia in response to the Iraqi invasion of Kuwait in 1990. More recently, Air Force forces demonstrated that same rapid-response capability by airlifting desperately needed supplies into tsunami-stricken areas of South and Southeast Asia and earthquake-stricken Haiti. The world at large perceives American airpower to be a politically acceptable expression of national power which offers reasonable alternatives to long, bloody ground battles, while making an impact on the international situation. While a "boots-on-the-ground" presence may often be required, airpower makes that presence more effective, in less time, and often with fewer casualties. Increasingly, US national power and international influence are gauged in terms of what we can or cannot accomplish with this capability.

**The Air Force provides national leadership and joint commanders with options, the threat of which may accomplish political objectives without the application of lethal force.** The means is embedded in the ability to respond rapidly to crises anywhere in the world and across the ROMO. An obvious example is the deterrent role played by the Air Force's nuclear-armed bombers and intercontinental ballistic missiles against the Soviet Union during the Cold War. More recently, B-52 and B-2 bombers have rotated into Guam to provide a ready and visible presence.

**The Air Force provides the unique ability to hold at risk a wide range of an adversary's options and possible courses of action; this is increasingly the key to successful joint campaigns.** Airpower is increasingly the first military instrument brought to bear against an enemy in order to favorably influence the overall campaign. Frequently, and especially during the opening days of a crisis, airpower may be the only military instrument available to use against an enemy; this may be especially true if friendly ground forces are not immediately present in a given region.

Air Force forces can respond rapidly to apply effects. The same spacecraft which Airmen employ to observe hostile territory prior to the outbreak of hostilities provide key

intelligence to battle planners. The same aircraft which provide visible deterrence to a potential aggressor can be employed immediately to defend or attack should deterrence fail. The shift from deterrent force to combat power is near-instantaneous. From ready deterrent to bombs-on-target is only a question of command and control and flight time.

**Airpower is more than dropping bombs, strafing targets, firing missiles, providing precision navigation and timing, or protecting networks. It is also a way of influencing world situations in ways which support national objectives.** To most observers in the post-Cold War world, the use of military power is politically less acceptable than in previous times. This is true even if we act in a purely humanitarian endeavor or influence a given international political situation with a modest show of force. In international disasters, natural or man-made, from the Berlin Airlift to earthquake relief operations in Pakistan, the Air Force is the only military force in the world which has the airlift and air refueling capability to provide immediate relief supplies and personnel in response to global emergencies. Air Force aircraft delivering relief supplies serve not only to alleviate the immediate situation, but also to provide a visible symbol of the care, concern, and capability of the United States. Through careful building of partnerships, Air Force forces can favorably shape the strategic environment by assessing, advising, training, and assisting host nation air forces in their efforts to counter internal or external threats. The perception of credible US forces underpins many deterrence and assurance strategies. Such activities lead to greater regional stability and security.

Within the broad sweep of history, the benefits of this instrument of military power are relatively new. Up until the latter part of the 20th century, naval forces provided the primary symbol of American military power and resolve; powerful warships making port calls throughout the world were visible symbols of the strength and capability of the United States. Today, airpower plays a very similar role—and not just in those nations with major seaports. In numerous humanitarian operations, Airmen have provided relief, demonstrated resolve, and helped to shape the attitudes of world leaders and their people.

This influence is more than just airplanes. US space-based assets are a non-intrusive method of providing up-to-the-minute warning and information on the maneuver of hostile military forces or other potentially dangerous actions. The United States often shares this information with friendly nations in response to potential adversaries to defuse points of conflict before they result in hostilities. US air, space, and cyberspace capabilities provide the means to alert allies of a potential aggressor's hostile intentions or impending attack when in-country physical presence is unwarranted. They can influence potential adversaries by stripping them of the ability to hide hostile military activity without violating national sovereignty.

**Airpower's speed, range, flexibility, precision, and lethality provide a spectrum of employment options with effects that range from tactical to strategic.** This range of effects is an important contribution. A surface-centric strategy often seeks its outcome through the destruction of hostile land forces and the occupation of territory.

However, destruction of hostile land forces may be only a tactical or operational objective and may not achieve the desired strategic outcome. Further, territorial occupation, with its attendant large cultural footprint, may not be feasible or politically acceptable. Sea power, with its ability to project force and disrupt the economic lifeline of a maritime-capable adversary, also provides the potential for strategic results. However, slow surface speeds can constrain its capability to respond rapidly from one theater to another. In addition, it may be extremely vulnerable in littoral regions. Often, in such circumstances, the political risks outweigh the actual military risks.

Airpower, on the other hand, has been successfully used to influence strategic political outcomes in many world crises since the Berlin Airlift of 1948. Throughout the Cold War, and continuing under various international arms control agreements, Air Force assets have been used to observe and verify compliance, leveraging our ability to negotiate and influence diplomatically. If force becomes necessary, Air Force assets can secure strategic outcomes at any time by overflying surface forces and thus bypassing geographical boundaries, or striking with precision at the critical vulnerabilities within an adversary's political, military, and industrial centers of gravity. Even in situations when joint strategy requires large-scale destruction of enemy surface forces, Air Force forces can deliver the bulk of that destruction. It can do these things sooner than can other military forces, and it has been demonstrated that the earlier the application of effects, usually the less total force required. In humanitarian cases, the earlier the relief, the better the effect.

Operating in a seamless medium, there are no natural boundaries to constrain air, space, and cyberspace operations. Through [centralized control and decentralized execution](#) of Air Force assets, commanders reap the benefits of airpower throughout the ROMO, wherever most needed at any given time.

**Airpower has a degree of versatility not found in any other force.** Many aircraft can be employed in a variety of roles and shift rapidly from defense to offense. Aircraft may conduct a [close air support](#) mission on one sortie, and then be rearmed and subsequently used to suppress enemy surface-to-surface missile attacks or to interdict enemy supply routes on the next. In time-sensitive scenarios, aircraft en route to one target, or [air mobility](#) aircraft in support of one mission, can be reassigned new targets or re-missioned as new opportunities emerge. Multirole manned and unmanned platforms may perform [intelligence, surveillance, and reconnaissance](#), [command and control](#), and attack functions all during the same mission, providing more potential versatility per sortie. Finally, aircraft can be repositioned within a theater to provide more responsiveness, while space and cyberspace capabilities can be reprioritized.

Joint campaigns rely upon this versatility. However, many airpower capabilities are limited in number; dividing or parceling out airpower into "penny-packets" violate the tenet of synergy and principle of mass. To preserve unity of effort, [joint force commanders](#) normally vest a single air commander with control of all airpower capabilities.

Historically, armies, navies, and air forces massed large numbers of troops, ships, or aircraft to create significant impact on the enemy. Today, the technological impact of precision guided munitions enables a relatively small number of aircraft to directly achieve national as well as military strategy objectives. When combined with stealth technologies, airpower today can provide shock and surprise without unnecessarily exposing friendly forces. To destroy a single target, we no longer need the thousand-plane bomber raids of World War II or the hundreds of sorties of Vietnam. Today's air forces can provide accurate and assured destruction of vital targets with far fewer aircraft, sometimes multiple targets with a single aircraft. Moreover, that capability can be delivered from within the theater or around the globe if necessary. Whether in the skies of Iraq and Afghanistan, delivering United Nations [peacekeeping](#) troops to Africa, or monitoring [nuclear weapons](#) proliferation and development, Air Force forces have a far-reaching presence and the ability to produce direct and immediate effects.

With those characteristics considered, one should remember that **air, space, and cyberspace superiority are the essential first ingredients in any successful modern military operation.** Military leaders recognize that successful military operations can be conducted only when they have gained the required level of control of the domains above the surface domains. Freedom to conduct land and naval operations is substantially enhanced when friendly forces are assured that the enemy cannot disrupt operations from above.

Control of the air, space, and cyberspace domains is not a goal for its own sake, but rather a prerequisite for all other military operations. Air mastery has allowed American land, naval, and air forces to operate where they want, at their own tempo, while creating the environment for success.

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