PSYCHOLOGICAL EFFECTS OF U.S. AIR OPERATIONS IN FOUR WARS 1941-1991

LESSONS FOR U.S. COMMANDERS

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The psychological effects of air operations can significantly shorten wars and reduce their costs, particularly in American lives. In some conflicts, the psychological effects of air operations may exceed the physical effects in importance.

This report suggests ways to maximize the psychological impact of U.S. airpower in future conflicts. To do so, it draws on interrogations of enemy deserters and POWs and other data to examine, compare, and draw lessons from the psychological effects of air operations in the Korean, Vietnam, and Persian Gulf wars and to a lesser extent, in World War II. Two types of air operations in particular have the potential to produce psychological effects that may significantly reduce the duration and intensity of an enemy's resistance:

- air operations against enemy strategic targets, the destruction or threatened destruction of which might help to coerce an enemy government to end a conflict on terms acceptable to the United States
- air operations against enemy deployed forces, the demoralization of which might cause enemy cohesion to disintegrate and battlefield resistance to collapse.
PSYCHOLOGICAL EFFECTS OF AIR OPERATIONS AGAINST STRATEGIC TARGETS

Experience in Past Wars

In all major conflicts from World War II on, the United States has attacked what have been termed strategic targets, including targets near or within the enemy's capital city, to reduce the enemy's physical capacity to wage war. At the same time, these and other strategic attacks have also aimed to produce psychological effects. Among other objectives, the strategic air operations have sought to force enemy governments to halt their aggression and withdraw their forces from friendly territory, negotiate a truce or peace agreement, or capitulate. Air operations have also endeavored to generate internal opposition to the enemy government's war effort and, in at least one instance, to precipitate the enemy government's overthrow.

The experiences of past conflicts suggest that, while U.S. air attacks on strategic targets can provide important coercive leverage on an enemy, such attacks by themselves are unlikely to secure U.S. war aims. To force an opponent to capitulate or negotiate an end to a conflict, the United States and its allies also must be able to convince the enemy leadership that its deployed forces will face defeat or, at best, stalemate if the fighting continues. Because the enemy's decisions about war termination will depend heavily on his perception of the likely battlefield outcome, U.S. air planners should consider enemy deployed forces a strategic target.

World War II, 1941–1945. Air attacks on strategic targets in World War II generally fell short of producing the psychological results their planners hoped for. This was particularly true of Germany, where the Allied bombing of cities failed to deny labor to German industry. The psychological effects of the Allied bombing did speed Japan's decision to surrender and helped shape Italy's decision to seek a peace accord. However, in neither instance was the Allied bombing the sole cause for the enemy decision to terminate hostilities, as the deployed forces of both Axis powers had experienced repeated defeats.

Vietnam, the United States conducted air attacks against military and military-related strategic targets partly for psychological effect. The principal psychological objective of these attacks was to persuade enemy leaders to negotiate an early end to the conflicts on terms acceptable to the United States.

These air attacks failed to deter the communists from protracting the fighting for three years in Korea and for over eight years in Vietnam. In addition to the humanitarian and other constraints the United States imposed on its air operations, various conditions and attitudes in the enemy camp diluted the coercive effects of the U.S. strategic attacks. These included the enemy government’s

- access to support and sanctuary from external powers, which allowed the enemy to continue fighting even when its indigenous war-related production facilities had been destroyed
- strong commitment to the objectives or cause that gave rise to the conflict with the United States
- readiness to absorb enormous human and materiel losses
- ability to maintain domestic support for the war effort and/or sufficient internal security to suppress any potential opposition
- perception that the likely benefits from continued conflict would exceed the costs resulting from the U.S. bombing.

After having already made what it considered to be its maximum feasible concessions in both the Korea and Vietnam peace talks, the United States resorted to escalation or threatened escalation to bring the negotiations to closure.

Severe U.S. escalation or threatened escalation was required to extract comparatively modest concessions from both enemies. In Korea, the dual threat of a widened war with China and the U.S. use of nuclear weapons was needed to break the deadlock over the U.S. demand for the voluntary repatriation of prisoners of war. In Vietnam, Washington had to employ massive B-52 and fighter-bomber strikes on Hanoi and Haiphong to force the communists to complete a peace agreement, the key provisions of which they had already accepted.
The communists agreed to terms only after their military forces on the battlefield had been stalemated. Prior to the settlements, the communist forces in both Korea and Vietnam had mounted major offensives, the defeat of which left them no prospects for immediate further military gains.

**Persian Gulf, 1991.** The principal psychological objective of attacks against strategic targets in the Persian Gulf conflict was to effect a change in Iraq’s policy on Kuwait. Coalition air campaign planners envisioned the bombing as possibly effecting such a change by (1) causing the replacement of the Saddam Hussein regime, which, in turn, would result in a reversal of Iraqi policy toward the occupation of Kuwait, or (2) persuading Saddam to withdraw from Kuwait and to comply with the various other United Nations (UN) resolutions relating to Kuwait.

Coalition planners apparently hoped that air attacks might bring an end to Saddam’s regime by (1) incapacitating and isolating Saddam and his senior aides, (2) encouraging Iraqi military and other regime elements to remove Saddam, or (3) inciting the Iraqi population to rise up and overthrow the Iraqi leader. To achieve this outcome, the Coalition focused its air attacks on the leadership and telecommunications and command, control, and communications target sets that were thought to constitute the “central nervous system” of the Baghdad regime.

None of these objectives was realized. Saddam and his senior aides survived the bombing and retained the capacity to control Iraqi forces. Apparently, the Coalition lacked the precise and near-real-time intelligence required to neutralize the cautious and elusive Iraqi leadership. Coalition attacks also apparently failed to prompt a coup or civilian uprising against Saddam, at least prior to the cease-fire. Nor is it clear that an attempted coup or popular uprising would have succeeded. The large numbers of security troops and police forces protecting Saddam in Baghdad apparently were not sufficiently reduced by the bombing. Indeed, the Iraqi leader’s extensive palace guard, intelligence, and internal security apparatus seem to have survived the war essentially intact.

The Coalition air campaign directly influenced the Shia and Kurd uprisings that occurred after the war by encouraging the antigov-
ernment sentiments of the regular army forces in the Kuwait Theater of Operations (KTO) and contributing importantly to their catastrophic route. However, the United States declined to aid these postwar uprisings in part because it wanted to preserve a unified Iraq as a buffer against Iran. The uprisings were ruthlessly suppressed, partly by the Republican Guard forces that had been a priority target of Coalition air and ground attacks.

While Saddam moved a significant way toward accepting the Coalition's demands for an unconditional withdrawal from Kuwait, in the end he proved unwilling to agree to withdrawal terms that obligated Iraq to pay reparations and subjected Iraq to a continued UN embargo. Saddam refused the Coalition demands despite the pressures exerted by the continued Coalition bombing, including the devastating attacks on the Iraqi ground forces deployed in the KTO, and the impending Coalition ground offensive.

Saddam had staked his prestige on retaining Kuwait to the extent that he dared not submit to a premature defeat, which might have led to his humiliation and fall from power. He apparently calculated that a ground battle would be more conducive to his personal survival than an unconditional acceptance of Coalition terms. Moreover, Saddam probably hoped that, even if his forces were expelled from Kuwait, they might still be able to give the Coalition enough of a "bloody nose" to salvage his international and domestic prestige.

Saddam also apparently believed that he could control the risks of a ground battle by safely extracting the Republican Guard and other high-value military forces that were important to his regime's survival in the event the fighting went badly for his side.

**Lessons for U.S. Commanders**

In possible future conflicts, U.S. enemies are likely to seek to prolong the combat and increase the human costs of the fighting to the United States in the expectation that the American public will refuse to accept the casualties, turn against the involvement, and force the U.S. government to make otherwise unwarranted concessions to end the conflict. To disabuse adversaries of the continued efficacy and wisdom of such a protracted warfare strategy, the United States is
likely to turn again to strategic attacks or the threat of such attacks as a means of creating pressure on enemies for early war termination.

This analysis of the psychological effects of air operations against strategic targets in past wars has implications for how U.S. theater, air component, and other commanders might prepare for, plan, and conduct strategic attacks in future conflicts.

**Expect Limits on the Coercive Effects of Strategic Attacks.** Experience suggests that the bombing of strategic targets alone is unlikely to secure U.S. war aims. In addition to the various internal factors that may make enemy governments resistant to such pressure, U.S. self-imposed constraints are likely to limit the potential coercive leverage that can be achieved through future air operations against strategic targets. The U.S. concern to minimize civilian casualties and other collateral damage has increased over time and will probably constrain severely both the methods and targets of air attacks in future conflicts.

Commanders should expect future adversaries to attempt to promote a further tightening of the constraints on U.S. strategic attacks by (1) stimulating intense international television and other media coverage of any errant U.S. bombing that causes civilian casualties or collateral damage and (2) manufacturing false evidence of errant bombing. Enemies will also exploit U.S. humanitarian concerns by repositioning war materiel and key personnel in civilian areas that are expected to be off limits to U.S. air attack.

To limit the adverse political effects of U.S.-caused civilian casualties or collateral damage, U.S. officials in Washington and commanders in the field must be ready to explain and justify U.S. air attacks to domestic and foreign audiences promptly.

Needless to say, commanders must also exercise care to avoid sanctioning attacks on targets that carry significant risks of producing civilian casualties or collateral damage. The negative political fallout from such errant attacks, including the incitement of anti-American sentiment within the enemy population, is likely to outweigh the value of the targets destroyed and may limit the commander’s freedom of action in future bombing.
Plan on Multiple Pressures to Secure War Aims. In the past, a combination of military pressures and other conditions has been required to compel enemy leaders to capitulate or agree to a negotiated settlement acceptable to the United States.

Conditions Producing Enemy Concessions. Attacks or threatened attacks against enemy strategic targets have helped to persuade enemy leaders to terminate wars on terms acceptable to the United States only when the enemy leaders have perceived

- that they faced defeat or stalemate on the battlefield
- that they were unlikely to get better peace terms from the United States if they prolonged the fighting
- that the cost of the damage from the strategic attacks or threatened attacks was likely to outweigh significantly the cost of the concessions the United States was demanding
- that they had no prospect of mounting an effective defense against the strategic attacks and saw no possibility of launching a counterattack that would cause the United States to terminate its coercive operations.

Conditions Producing Enemy Capitulation. The above four conditions have also been required to force enemy capitulation. However, the experience to date suggests that capitulation will probably also necessitate an additional condition: the removal from power of the leader or leaders who started the war.

When weighing the possible advantages and disadvantages of demanding total capitulation from enemy leaders responsible for the initiation of a war, U.S. decisionmakers and commanders should bear in mind the probable intractability of such leaders, even when they confront a seemingly hopeless military situation.

Consider Enemy Deployed Forces a Strategic Target. Because battlefield prospects are likely to weigh so heavily in the enemy decisionmaker's calculations about war termination, U.S. commanders should consider the enemy's deployed forces to be a strategic target. Experience shows that air and other attacks on enemy deployed forces can constitute an important source of pressure on an enemy government to terminate a conflict. In every major conflict from
World War II on, enemies have capitulated or acceded to peace terms demanded by the United States only after their deployed forces have suffered serious battlefield defeats.

In future conflicts, enemy leaders are likely to prove equally reluctant to make concessions or terminate conflicts as long as they see a chance to prevail on the battlefield. To cause future enemy leaders to abandon the strategy of protracted warfare, the United States and its allies must be able to demonstrate that the balance of forces on the battlefield will progressively shift to the enemy's disadvantage as long as the fighting continues.

**Improve U.S. Capabilities to Attack High-Value Targets.** To be maximally effective, coercive air attacks should focus on targets that the enemy leadership values highly. It is difficult to divine in the abstract the target sets that enemy leaders are likely to value the most. However, almost all enemy leaders are likely to attach high value to their retention of power and personal survival.

To create negotiating leverage from these fundamental enemy interests, a future U.S. air campaign might aim to persuade enemy leaders that they are likely to (1) die, (2) be overthrown by internal forces, or (3) be removed by external forces if they refused to end a conflict rapidly on terms acceptable to the United States. The credibility that enemy leaders will attach to such risks will depend in large part on their perception of the U.S. will, capability, and freedom of action to turn such threats into reality.

To effectively attack or credibly demonstrate a capability to attack senior enemy leaders, air campaign planners will require near–real-time intelligence on the whereabouts of such leadership targets—information that will probably be difficult to acquire in the types of closed, security-conscious regimes that the United States is most likely to confront. The comprehensive and timely intelligence required to use air attacks to incite and/or facilitate the internal overthrow of an enemy regime by other elites is also likely to be difficult to obtain.

Air operations to foment a popular uprising against a well-defended and as yet undefeated enemy government will rarely succeed. Experience shows that enemy populations have failed to move against authoritarian governments even when those populations
have been subjected to massive bombing. In future conflicts, humanitarian considerations are likely to prohibit even limited direct attacks on civilian populations.

A more promising approach may be to threaten the enemy leaders with external overthrow. Enemy leaders are likely to give credence to the threat of a possible external overthrow of their regime if the following apply:

- Statements of U.S. war aims allow for the possible total defeat of the enemy in the event a negotiated settlement cannot be achieved rapidly.

- American air, ground, and naval deployments and military operations against enemy deployed forces are consistent with an ultimate objective of achieving a total military victory and occupying the enemy's homeland.

- The pattern of air operations against strategic targets in the enemy's rear areas is also consistent with a possible march on the enemy's capital and a subsequent military occupation.

**Integrate Psychological Operations (PSYOP) with Strategic Air Attacks.** To maximize the psychological effects of air operations against strategic targets, such operations must be closely integrated with a supporting PSYOP campaign. The thematic content of the PSYOP leaflets and broadcasts should directly or indirectly reinforce the psychological message or messages that the bombing is attempting to convey. This will require close coordination between the Air Force officers planning and conducting the air campaign, and the Army personnel who will be mostly responsible for the design and dissemination of the PSYOP messages.

In past conflicts, such close integration has sometimes been lacking, in that both the content and the dissemination of PSYOP messages have failed to support adequately the psychological objectives of the strategic bombing operations.
PSYCHOLOGICAL EFFECTS OF AIR OPERATIONS AGAINST
DEPLOYED FORCES

Experience in Past Wars

History demonstrates that air operations can produce significant, even decisive, psychological effects on the morale and battlefield behavior of deployed forces. Air attacks can severely reduce an enemy’s capability to prosecute a war by (1) causing enemy troops to desert, defect, surrender, or flee the battlefield and (2) dissuading troops from manning their weapons and otherwise carrying out their military duties.

Large-scale desertions and surrenders may be difficult to achieve because of the effective morale-building and control mechanisms that sometimes exist within military units and because of the individual soldier’s attitudes and fears, including the soldier’s

- concern that his desertion or surrender attempt will fail and that he will be captured by his own forces or killed by one side or the other in the process
- fear of execution, torture, or other mistreatment by his captors
- fear that his surrender or desertion will cause reprisals to be taken against his family, or against himself if he is eventually repatriated
- confidence in his combat leaders and loyalty to his immediate comrades and his country
- belief in the cause he is fighting for and prospects for victory.

This study analyzed five periods during the Korean, Vietnam, and Gulf conflicts in which the testimony of former enemy personnel provides insights about the battlefield conditions that seem to produce or fail to produce the collapse of resistance and large-scale surrenders and desertions among enemy deployed forces:

- September–December 1950 in Korea, when North Korean resistance collapsed and the vast majority of North Korean prisoners were taken
• April–June 1951 in Korea, when Chinese resistance significantly weakened and units surrendered *en masse*

• December 1951–July 1953 in Korea, when no breakdowns in communist resistance occurred and when few North Korean and Chinese troops surrendered or deserted

• 1963–1972 in Vietnam, when communist resistance never faltered decisively and when only a small number of North Vietnamese Army (NVA) and Viet Cong (VC) main force troops defected or surrendered

• January 17–February 28, 1991, in the KTO, when the morale of the Iraqi deployed forces collapsed and vast numbers of Iraqi troops deserted home or surrendered.

**Conditions That Did Not Necessarily Lead to Large-Scale Surrender and Desertion.** Some conditions clearly contributed to poor enemy morale but not necessarily to large-scale surrenders and desertions.

*Initial Morale.* While the status of enemy morale at the beginning of a conflict can importantly determine the pace and scale of enemy demoralization once the fighting begins, initial morale is not a sufficient explanation for why troops surrender or desert in large numbers in some conflict situations, while in others they do not.

Differences in starting morale help to explain why the Iraqi forces collapsed so completely and why the cohesion of the VC main force and NVA units fighting in South Vietnam held up for so long. Starting morale, however, does not explain the collapse of North Korean forces in fall 1950 or the collapse of Chinese communist units in spring 1951. Both the North Korean and the Chinese troops possessed high morale when they first entered the fighting.

*Casualties.* While high casualties undoubtedly demoralize enemy troops, the number of enemy forces killed does not necessarily correlate with the number of enemy surrenders and deserters. The Gulf conflict, which produced the smallest number of enemy killed both in absolute terms and as a proportion of the number of forces deployed, produced the largest number of deserters and prisoners. In contrast, the Vietnam War, which saw the largest number of enemy killed, produced only a small number of NVA and VC main force prisoners and defectors.
Even though North Korean and Chinese communist units—when on the attack—continued to take significant casualties during the last year and one-half of the Korean War, very few Chinese or North Koreans surrendered or deserted to UN forces.

Intensity and Quality of PSYOP. The intensity of the PSYOP in the various conflicts also does not explain the difference in the number of surrenders and deserters. Allied PSYOP in Vietnam, which involved the dissemination of an estimated 50 billion leaflets, were more intensive than those in Korea and Iraq. Yet no decisive erosion in enemy resistance occurred in Vietnam. The PSYOP effort was least intensive in the Gulf War, yet massive numbers of Iraqi troops deserted and surrendered.

Neither does the quality of the PSYOP seem to explain the difference. While the Coalition’s PSYOP campaign against the Iraqi forces deployed in the KTO appears to have been particularly well designed and executed, the allied PSYOP in Korea and Vietnam were also competent operations, particularly with respect to offering assurances of good treatment to prisoners and deserters.

Conditions That Consistently Produced Large-Scale Surrender and Desertion. This examination of the Korean, Vietnam, and Gulf wars suggests three conditions that have consistently produced a catastrophic disintegration of enemy resistance and large numbers of enemy surrenders and deserters.

Sustained, Effective Air and Other Attacks. The Gulf and Korean cases demonstrate that sustained air attacks on deployed forces can prompt and facilitate large-scale enemy surrenders and desertions by (1) demoralizing enemy soldiers and giving them a reason to surrender or desert, (2) degrading the enemy combat leader’s capability to reconstitute troop morale, and (3) providing the troops with the opportunity to surrender or desert. The communist forces that were routed in Korea in fall 1950 and spring 1951 and the Iraqi units that disintegrated in the KTO in February 1991 all had been subjected to sustained allied military attacks prior to their collapse.

In the conflict situations in which enemy troops were not subjected to sustained, effective attacks, their resistance did not collapse, and they did not surrender and desert en masse. The last 20 months of the Korean War produced few North Korean and Chinese surrenders
or desertions, largely because the communist troops, except for the brief periods when they were on the offensive, were usually well protected by an elaborate system of bunkers, trenches, and tunnels that was largely impregnable to air and artillery attack.

Communist forces in Vietnam were rarely subjected to sustained air, artillery, or other military attack. Communist commanders largely retained the initiative about where and when their units would fight, and as a consequence the communist forces were able, for the most part, to control their own combat exposure and casualties.

Most communist units fought only a few times a year, perhaps once or twice every six months, and then only briefly. After engagements with allied forces, communist troops withdrew to rear areas, where they could evade further air attacks by frequently changing locations and remaining under the protective cover of the triple-canopied rain forest.

**Resulting Food Shortage.** A second condition that seems to have prompted the collapse of enemy resistance and large-scale surrenders is the food shortage resulting from sustained and effective bombing of enemy lines of communication (LOCs) and supply vehicles. Many of the enemy forces that collapsed in Korea in fall 1950 and spring 1951 and in the Gulf in early 1991 suffered from severe shortages of food. Prisoners and deserters in both conflicts cited food shortages as a leading reason for low morale in their units.

In combat situations in which food was adequate, unit cohesion did not disintegrate and few troops surrendered. Once the battle lines in Korea had stabilized in late 1951, communist troops began to get adequate food. While some VC and NVA units experienced temporary food shortages, the abundance of food sources throughout South Vietnam enabled communist troops to enjoy adequate food rations in most areas nearly all the time.

*Timely Ground Attacks to Exploit Collapsing Morale.* Ground offensives to exploit the deterioration of enemy morale have proved to be the final condition common to the situations in which collapsing enemy resistance has led to large-scale surrenders.

The erosion of North Korean morale that occurred as a result of sustained UN air and other attacks in summer 1950 was exploited in
September 1950 by the Inchon landing and the UN breakout from the Pusan perimeter. Similarly, the serious deterioration in Chinese fighting will that existed prior to the defeat of the Chinese offensive in May 1951 was exploited by a major UN counterattack.

In the case of the Iraqi forces in the KTO, the Coalition’s 100-hour ground offensive in February 1991 exploited the widespread demoralization of Iraqi ground troops that had resulted from the Coalition air campaign.

The Vietnam War saw little, if any, battlefield exploitation of enemy defeats or losses of morale. Once U.S. forces had found and fixed the enemy, they usually relied on air and artillery rather than ground forces to finish him. Even when U.S. troops attempted to close with the enemy, the jungle terrain usually made it extremely difficult to prevent his escape. Army of the Republic of Vietnam (ARVN) units rarely closed with enemy forces and virtually never attempted to pursue retreating enemy troops.

As a result, communist units mauled by friendly air attacks and defeated in battle were invariably able to withdraw to rear areas where they could rest, refit, and rebuild their morale.

**Lessons for U.S. Commanders**

This analysis of the psychological effects of air and other military operations against deployed forces in the Korean, Vietnam, and Gulf wars suggests the following implications for U.S. theater, air component and other commanders:

**Emphasize Psychological Aspects in Training, Planning, and Operations.** To exploit fully the potential of U.S. military operations against deployed enemy forces, U.S. commanders will need to devote increased attention to the psychological dimensions of warfare in the planning and conduct of their operations. Commanders should avoid the bifurcated approach often evident in the past, when combat operations were used mainly to produce physical effects on the enemy and PSYOP messages were used to produce any desired psychological effects.

Commanders should understand that military operations rather than PSYOP messages produce the most important psychological effects.
Commanders should also realize that combat operations can inflict psychological damage to an enemy deployed force that equals or even exceeds the physical damage suffered by that force. The psychological effect of combat operations applies especially to sustained air and artillery attacks, which have proved capable of decisively undermining the cohesion and fighting will of enemy ground forces. As the Korean and Gulf wars have demonstrated, enemy demoralization opens the way for rapid and low-cost battlefield victories.

The recognition that military operations produce the decisive psychological effects does not lessen the importance of PSYOP, which exploit and reinforce the psychological effects created by military pressure. PSYOP cost little and can be a significant force multiplier.

Commanders must also seek to minimize the potential adverse psychological effects of their military operations. In rural and urban guerrilla conflicts, for example, air commanders must restrict and carefully control air attacks to avoid causing civilian casualties that would create additional recruits and popular support for the enemy side.

To ensure that future combat leaders and planners understand the psychological dimensions of warfare, the psychological effects of military operations and PSYOP should receive increased coverage in military training and in the curricula of the service war colleges and command and staff schools.

Adopt an Overall Campaign Strategy That Promotes Psychologically Effective Attack. The war-fighting commander should adopt an overall campaign strategy that will force enemy ground units to react in a manner that will expose them to prolonged and psychologically effective aerial and other attack. To erode decisively an enemy's will to fight, friendly aircraft may have to attack over a period of several weeks or more. The air operations and ground fighting that preceded the collapse of enemy forces in Korea in 1950 and 1951 lasted several months; the air campaign that so demoralized Iraqi troops in the KTO lasted 38 days.

Make Demoralization an Air Campaign Objective. In past conflicts, the psychological effects of air operations have been largely unplanned and unanticipated. Air campaigns should be designed to maximize the psychological, as well as the physical, effects of air-
power. To ensure that adequate attention will be given to psychological effects,

- The air component commander should make the destruction of enemy morale a priority air campaign objective.

- Personnel expert in psychological effects should be included on air campaign planning staffs.

**Employ Concepts of Operations That Maximize Psychological Effects.** The air component commander should adopt concepts of operations that will maximize the psychological effects of airpower. To this end, he should

- *Keep enemy forces under attack or at least under the threat of attack, around the clock, for a protracted period.* Maintaining attack aircraft day and night over all sectors of the battlefield may require a large force. Because the ubiquity of the friendly air presence is likely to have a demoralizing effect on enemy forces, flights to and from deeper targets should be vectored over enemy troop concentrations whenever possible. To deny the enemy leaders an opportunity to reconstitute the morale of their troops, commanders should oppose suggestions for temporary ceasefires or other respite in the air campaign.

- *Deny food to enemy forces by attacking supply depots, interdicting LOCs, and destroying thin-skinned supply vehicles.* Experience also shows that round-the-clock armed reconnaissance flights along enemy supply routes can prove sufficiently intimidating to enemy drivers that they will refuse to drive resupply missions.

- *Use heavy bombers for surprise and shock effect.* In the Vietnam and Gulf wars, the B-52s were often the aircraft most feared by enemy troops, even though they frequently failed to hit their intended targets. The advent of Global Positioning System targeting should make heavy bomber attacks with general-purpose bombs more accurate and allow heavy bombers to be employed in closer proximity to friendly lines. Attacks by heavy bombers equipped with precision weapons could have devastating psychological effects in that they would permit the sudden devastation of bunkers and other hardened emplacements immune to destruction except by direct hit.
• *Make the enemy believe his air defenses are impotent.* Experience shows that enemy forces are demoralized when aircraft can attack them with virtual impunity. Thus, in addition to the obvious traditional reasons the air commander has for holding down his combat losses, there is a psychological reason as well. To convince the enemy that his resistance is futile, U.S. aircraft should strive to attack him with near zero losses. The advent of new sensor, stealth, standoff, and precision-strike capabilities should make it possible for U.S. forces to approach the achievement of this demanding objective more closely.

• *Condition enemy personnel not to operate their weapons and other equipment.* Enemy personnel should be taught by PSYOP messages and military actions that it is dangerous for them to operate or remain with their equipment. Friendly aircraft should strive to react promptly to any enemy vehicular movement, artillery or antiaircraft firing, or the use of radios, radars, and other emitters. The objective of these air conditioning operations would be to convince enemy forces of the following:

—If you fly, you die.

—If you fire, you die.

—If you communicate, you die.

—If you radiate, you die.

—If you move with your vehicles, you die.

—If you remain with your weapons, you die.

**Develop Weapons That Increase Airpower’s Psychological Impact.** The Air Force should seek to develop and acquire sensors and weapon systems that will magnify the potential enemy’s perception of American air prowess. Among the capabilities that might have particularly strong psychological effects would be sensors and weapons that would allow U.S. aircraft to detect and attack effectively enemy (1) artillery and mortars immediately upon their firing and (2) personnel and equipment positioned in camouflaged, hardened emplacements or under heavy foliage.
Exploit Psychological Effects of Air with Timely Ground Operations. Experience shows that weaknesses in the cohesion and morale of enemy ground forces are likely to be temporary and subject to repair. After air attacks and other sustained military pressures have eroded the cohesion and fighting will of an enemy force, a ground offensive should be mounted promptly to exploit the psychological vulnerabilities that have been created. Timely ground attacks enable U.S. forces to reap the maximum battlefield benefits of the cumulative psychological softening. Effective follow-up by ground forces must be particularly rapid when one is attempting to exploit the shock effects of a particular, massive bombing attack.

Integrate PSYOP with Air Attacks Against Deployed Forces. Air planners should work closely with their PSYOP counterparts to integrate and coordinate military operations and PSYOP messages. Such close coordination was sometimes lacking in the Gulf War. Air attacks can enhance the credibility and receptivity of PSYOP messages. PSYOP can be used to solidify and exploit perceptions created by air attacks. PSYOP messages help to break down two key barriers to surrender and desertion: (1) enemy concerns about how to surrender or desert safely and (2) enemy fears about treatment after capture.

Know Enemy Psychological Strengths and Vulnerabilities. Because information from former enemy personnel is so vital to the assessment of the effects of military operations on enemy morale and to the design and evaluation of PSYOP messages, war-fighting commanders must ensure that enemy motivation and morale receive high priority in prisoner and deserter interrogations.

The Air Force should develop a cohort of PSYOP specialists and psychologically oriented intelligence specialists, including trained interrogators, to work with Army personnel in conducting and evaluating prisoner and deserter interrogations, in designing PSYOP messages, and in assessing the psychological impact of air and other military operations.

Begin Psychological Conditioning in Peacetime. The Air Force and other U.S. military services have two principal reasons for advertising their capabilities to potential adversaries during peacetime: to deter the would-be aggressors from attacking U.S. interests and to begin
the psychological softening of the potential adversaries in the event war does occur. For the Air Force, much of this advertising will be a natural by-product of air shows and peacetime training and deployment exercises. These and other opportunities should be used where appropriate to demonstrate the superior capabilities of technologically advanced U.S. aircraft and weapon systems.