THE INFORMATION REVOLUTION AND PSYCHOLOGICAL EFFECTS

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The advanced military and civilian technological systems that are anticipated to flow from the ongoing information revolution will require that the psychological dimension of warfare receive increased priority in the preparation, planning, and conduct of future U.S. military operations. The improved military capabilities arising from these advanced systems will have the potential to produce significant psychological and physical effects and will present new opportunities and risks for both the United States and its adversaries. Advanced technological systems will not only help shape the environment of future conflict but will also magnify the importance of the psychological battle to conflict outcome.

To gain insight into the potential impact of the information revolution on the psychological dimension of future conflict, it is useful to review the principal psychological effects that are sought in war, the instruments used to produce them, and the past U.S. and enemy experience with such effects.[1]

OBJECTIVES AND INSTRUMENTS OF PSYCHOLOGICAL EFFECTS

In most conflicts, each belligerent conducts a psychological battle to affect the perceptions of leaders, military forces, and civilian populations so as to induce them to act in a manner favorable to its particu-

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lar side. At the strategic level, the fundamental objectives of the psychological battle are to increase the fighting spirit of friendly populations, weaken domestic and international support to the enemy's war effort, and persuade the government of the enemy side to cease hostilities on terms acceptable to the friendly side. At the operational and tactical levels, the objectives typically are to erode the fighting will and capability of enemy deployed forces and to induce their surrender, desertion, and defection; to deceive enemy leaders about friendly operations; to bolster the motivation and morale of friendly troops; and to win or coerce support from local populations.

The contending sides employ various instruments to generate these psychological effects, including combat operations; shows of force; military demonstrations and exercises; psychological operations (PSYOP); print and broadcast media; public diplomacy; public affairs; and, in the case of some U.S. opponents, overt and covert political operations and terrorist attacks. Of these various instruments, experience shows that, in wartime, combat operations produce by far the most important effects. Indeed, the psychological effects that combat operations produce often determine the cost and outcome of conflicts.

Significant advantageous psychological effects can accrue to a contending side even when its combat operations "fail" to achieve assigned objectives. One example was the effect of the 1968 Tet offensive on U.S. attitudes toward the Vietnam War. Even though the communist attacks on South Vietnamese urban areas failed to gain their immediate military and political objectives—the Viet Cong units participating in the attacks were unable to foment the popular uprisings they had hoped for, suffered enormous losses, and could not hold a single South Vietnamese town or city—the Tet offensive severely undermined the confidence of the U.S. government and public about the prospects for a U.S. military victory in Vietnam. The offensive brought about a basic change in U.S. political-military strategy: The Johnson administration imposed ceilings on further U.S. troop deployments to Southeast Asia and de-escalated the air campaign against North Vietnam. (See Davidson, 1988, pp. 483–572.)

U.S. AND ENEMY EXPERIENCE WITH PSYCHOLOGICAL EFFECTS

U.S.-Caused Psychological Effects at the Strategic Level: Air Attacks on Enemy Strategic Targets

The U.S. instrument of choice for producing strategic effects has been the air attack. During World War II and the Korean, Vietnam, and Persian Gulf conflicts, the United States conducted air attacks against strategic targets located within the enemy heartland to degrade both the enemy's physical capacity to wage war and his will to do so. A major psychological objective common to these strategic attacks was to convince enemy leaders that they could expect to pay a heavy price for their continued refusal to agree to allied peace terms.

In addition, the United States also attempted to use strategic air attacks to demoralize and frighten enemy civilian populations and thereby deny labor to an enemy's war industry (a primary objective of Allied bombing in World War II); foment indigenous opposition to an enemy government's war policies; and, in the case of Iraq, prompt an enemy government's overthrow by a coup or popular uprising.[2] These objectives also became the focus of the U.S. leaflet drops and radio broadcasts that were directed at enemy heartland audiences in the course of these conflicts.

U.S. hopes that strategic bombing would motivate enemy civilian populations to act against their governments and thereby accelerate war termination were largely unrealized. Even in the face of at times highly destructive air attacks, the vast majority of enemy civilians in Germany, Japan, North Korea, and North Vietnam remained willing to accord their national leaders at least passive support or were deterred from taking antigovernment acts by the tight surveillance maintained by their governments' ubiquitous security and intelligence services. An apparent exception to this pattern was the Shia and Kurd uprisings that broke out in southern and northern Iraq at the end of the Gulf War. These popular uprisings, in part, were

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[2]During the early phases of World War II and the Vietnam War, another important objective of such attacks was to bolster the morale of allied forces and domestic populations.

undoubtedly a consequence of the Coalition air campaign, which contributed importantly to the rout of the Iraqi ground forces in the Kuwait Theater of Operations (KTO). However, most of the uprisings occurred after the Iraqi-Coalition cease-fire was already in place, and none received military support from the United States. (Hosmer, 1996, pp. 59–60.)

U.S. attempts to influence enemy leaders to terminate wars by threatening an ever-increasing destruction of military and military-related civilian strategic targets have proven more successful, having helped to bring about the Japanese surrender, the Korean cease-fire, and the short-lived Vietnam peace agreement. In the case of Japan, the firebombing of Japanese cities and the destruction of Hiroshima and Nagasaki by atomic weapons contributed importantly to Emperor Hirohito's decision to instruct his cabinet to accept U.S. peace terms. The intensive conventional bombing of communist rear areas in Korea and the Eisenhower administration's threat to use nuclear weapons also were instrumental in inducing China and North Korea to end the Korean conflict. The U.S. B-52 bombing of Hanoi and Haiphong in December 1972 helped prompt the North Vietnamese to conclude the 1973 Paris Peace Agreements, which brought the U.S. combat involvement in Vietnam to a close.[3]

Air attacks against strategic targets also helped speed conflict termination in the former Yugoslavia. Following the mortaring of a market in Sarajevo that killed 37 people on August 28, 1995, the United

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[3]The decisions of these various enemies to conclude war termination agreements were also influenced by other factors. The increasingly tight U.S. naval blockade, the Soviet entry into the war in Manchuria, and the realization that Japanese forces would be unable to prevent a successful U.S. invasion of the homeland also contributed importantly to the Japanese surrender decision. The death of Stalin in spring 1953 and the political thaw in the former Soviet Union's relations with the West that followed his demise also helped to pave the way for the Korean Truce in July 1953. The failure of North Vietnam's 1972 Easter offensive and the realization that communist forces would be unable to conquer South Vietnam so long as U.S. airpower remained over the battlefield also helped to shape Hanoi's decision to sign the 1973 Paris Peace Agreements. Hanoi also calculated that the American public and congressional opposition to the war had reached a point where it would be politically impossible for the United States to reenter the conflict once its forces had been withdrawn. Thus, Hanoi believed that the United States would probably not attempt militarily to enforce the crucial peace terms—such as those prohibiting the infiltration of troops and non-replacement supplies from the North—that the communists intended to violate. (See Hosmer, 1996, pp. 9–42.)

States and its NATO allies used air attacks against Bosnian-Serb command and control centers, air-defense facilities, bridges, and other strategic targets to persuade the Bosnian Serb leaders to order their forces to pull their heavy weapons out of the Sarajevo weapons' exclusion zone and to cease firing on Bosnian-Muslim positions within the city. These NATO air attacks—and the prospect that further attacks might follow—also helped to encourage the Bosnian Serb leaders to agree to a general cease-fire and to enter into the negotiating process that led to the Dayton Accords.

However, an analysis of these successful uses of bombing as a coercive instrument also shows that air attacks and the threat of air attacks have produced decisive psychological effects only when certain other military pressures and conditions were also present. Experience demonstrates that enemy leaders have been persuaded to negotiate the termination of wars on terms acceptable to the United States apparently only when those leaders also perceived that they

- faced defeat or stalemate on the battlefield
- were unlikely to get better peace terms if they prolonged the fighting
- had no prospect of mounting an effective defense or riposte to the strategic attacks
- were convinced that the cost of the damage from the strategic air attacks or threatened attacks was likely to outweigh significantly the cost of the concessions the United States was demanding.

To force an unconditional enemy capitulation, experience suggests than an additional prerequisite may also be needed: that the leader or leaders who started the war would first have been removed from power. (Hosmer, 1996, p. 74.)

U.S.-Caused Psychological Effects at the Operational and Tactical Levels

PSYOP Messages. At the operational and tactical levels, the United States has relied on surrender appeals and other PSYOP messages disseminated by radio and loudspeaker broadcasts and leaflet drops to undermine the resistance of enemy deployed forces. In combat situations, U.S. PSYOP messages typically have sought to weaken the

motivation and morale of the individual enemy soldier and to per-
suade him to desert, defect, or surrender.

During the course of World War II and the large and small wars
involving U.S. forces that have followed, many tens of thousands of
enemy prisoners have claimed to have been influenced to some
extent by U.S. PSYOP messages.[4] Throughout all these wars, the
most effective U.S. leaflet has been the "safe conduct pass," which
instructed enemy troops on how to surrender and assured them of
good treatment once they were in allied hands. PSYOP appeals and
instructions have also played an important role in U.S. counterinsur-
gency and peacekeeping operations, by helping to win the support
and cooperation of local civilian populations.

While PSYOP messages have helped to encourage and facilitate
enemy surrenders and desertions, they have not been the primary
cause of catastrophic collapse of enemy resistance or of large-scale
surrender and desertion of enemy deployed troops. Indeed, the
number of enemy surrenders and deserters in past wars does not
correlate directly with either the intensity or the quality of the U.S.
PSYOP campaigns in those conflicts. (Hosmer, 1996, pp. 180–181.)
Instead, history shows that it has been U.S. combat operations that
have produced the most decisive psychological effects on enemy
deployed forces.

Attacks on Enemy Deployed Forces. A comparative analysis of psy-
chological effects in the Korean, Vietnam, and Gulf wars disclosed
three conditions that consistently produced a catastrophic disinte-
gration of enemy resistance and large-scale surrenders and deser-
tions among enemy forces. These were when friendly military oper-
ations (1) subjected enemy forces to sustained, effective air and
artillery attacks for a period of several weeks or more; (2) deprived
enemy troops of adequate food; and (3) exploited the loss of enemy
morale caused by such attacks and deprivation with timely ground
operations. The analysis further suggested that, when these condi-
tions were absent, catastrophic disintegration and large-scale
surrenders and desertions were also absent.

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[4]One U.S. Army historian puts the number of enemy prisoners claiming to have been
influenced by U.S. battlefield propaganda at "literally hundreds of thousands." (See
Sandler, 1996, p. 1.)

During the Korean War, enemy forces surrendered en masse and showed other signs of collapse on two separate occasions: The first, involving North Korean forces, occurred in fall 1950; the second, involving Chinese troops, occurred in spring 1951. In both instances, enemy forces had been on the offensive for several months and had suffered heavy casualties in their repeated attempts to drive the United Nations (UN) defenders from Korea. According to the testimony of North Korean and Chinese prisoners and deserters, the principal causes of the deterioration in morale that preceded each collapse were the weeks of intensive air and artillery attacks the troops experienced and the severe hunger they suffered because of the aerial interdiction of their food resupply. (Hosmer, 1996, pp. 91–139.)

In the case of the Gulf War, the reality and threat posed by round-the-clock Coalition air attacks decisively reduced the morale of Iraqi troops, whose fighting spirit had already faltered. Iraqi prisoners of war of all ranks cited the Coalition's 38-day air campaign and the supply deprivation it caused as the key reasons for their low morale and failure to resist Coalition ground forces. No fewer than 160,000 of the Iraqi troops—some 40 percent of those originally deployed in the KTO—had already deserted by the start of the Coalition ground attack on February 24, 1991, and most of those that remained were prepared to flee or surrender after offering little or no resistance. The absence of much serious fighting by the Iraqis is reflected by the fact that, of the more than 62,000 Iraqi troops captured by U.S. forces, only about 640 required treatment in Central Command medical facilities.[5] Instead of the many thousands of U.S. fatalities that most observers predicted for the ground campaign, the actual number of U.S. Army and Marine personnel that were killed as a result of hostile action during the 100-hour ground fighting was only 63.[6]

In contrast to the Gulf, the enemy forces in Vietnam were rarely exposed to sustained air, artillery, or other military attack. Because

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[5]All told, over 85,000 Iraqis surrendered to Coalition forces. (See Hosmer, 1996, pp. 153–154.)

[6]This does not include the 28 U.S. military personnel killed in the February 25, 1991, Scud attack on the U.S. barracks in Dhahran, Saudi Arabia. Before the fighting began, General Schwarzkopf estimated that American casualties could go as high as 20,000, with about one-third of those killed. (Moore, 1991.)

communist commanders largely held the initiative for determining the time and place of battle, the Viet Cong and North Vietnamese Army (NVA) forces were able, for the most part, to control their own combat exposure and casualties. Most engagements were short-lived, and most communist units fought only a few times a year, often only once or twice every six months. Since U.S. and South Vietnamese forces did not, as a rule, pursue retreating enemy troops, communist units that had been 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 under the protective cover of Vietnam's triple-canopied rain forests. The abundance of food sources throughout South Vietnam allowed communist troops to enjoy adequate food rations nearly all the time.

As a result of these combat conditions, U.S. and Government of South Vietnam forces never caused a catastrophic break in communist morale or an en masse surrender of a large-sized enemy main-force unit. Even though the U.S. and Government of South Vietnam mounted massive PSYOP campaigns—involving billions of leaflets and tens of thousands of hours of aero broadcasts—to induce enemy defections and surrenders, the number of main-force prisoners and defectors that came into allied hands was minuscule compared with the number of enemy troops engaged and killed during the conflict. (Hosmer, 1996, pp. 125–129.)

Enemy-Caused Psychological Effects at the Strategic Level

Generating U.S. Combat Casualties. Lacking the capability to attack the U.S. homeland or the military prowess to defeat U.S. forces decisively on the battlefield, America's enemies have sought to create strategic psychological effects by protracting the fighting and maximizing U.S. casualties. In essence, America's adversaries have made U.S. deployed forces their strategic target, calculating that lengthening casualty lists would cause the American public to turn against a continued U.S. combat involvement and force the U.S. government to settle conflicts on terms advantageous to the adversaries. Such calculations have shaped the battlefield strategy of each major adversary the United States has faced from World War II on.

When Japan initiated hostilities against the United States in 1941, its strategic plan assumed that a stubborn defense of the perimeter that

Japanese forces planned to capture in the Pacific and Southeast Asia eventually would undermine the American public's determination to support a prolonged war. According to the U.S. Strategic Bombing Survey, the Japanese leaders calculated that:

> The weakness of the United States as a democracy would make it impossible for her to continue all-out offensive action in the face of the losses which would be imposed by fanatically resisting Japanese soldiers, sailors, and airmen, and the elimination of its Allies. The United States in consequence would compromise and allow Japan to retain a substantial portion of her initial territorial gains. (U.S. Strategic Bombing Survey, 1976a, p. 2.)

As late as summer 1945, hard-line Japanese military leaders hoped that they could still inflict sufficient casualties on any U.S. forces landing on the Japanese homeland to "improve their chances of a negotiated peace." (U.S. Strategic Bombing Survey, 1976b, p. 12.)

The enemy strategy in both the Korean and Vietnam wars was also to generate U.S. casualties so as to undermine U.S. public support for a continued U.S. involvement in those wars. The Chinese strategy in the Korean War was guided by Mao Zedong's belief that "the masses in the United States had nothing to gain by fighting in Korea. He could accentuate popular disaffection by killing American troops. . . ." Mao eventually concluded that as many as "several 100,000" American casualties might be needed to destroy the U.S. will to fight. (See Hunt, 1992.) The Vietnamese communist leaders also emphasized the importance of generating U.S. casualties to intensify the "contradictions" between the American public and its government and produce other decisive psychological effects. The North Vietnamese leaders were convinced that, just as the Viet Minh's war against the French had been won in Paris, their struggle to liberate South Vietnam would be won in Washington.

Mounting U.S. casualties in both Korea and Vietnam did eventually reduce U.S. domestic support for those conflicts. Concerns about the pernicious effects of casualties on U.S. domestic attitudes caused U.S. decisionmakers in both conflicts to order major changes in U.S. war-fighting strategy so as to hold down U.S. losses. In the case of Korea, U.S. forces were ordered to cease major offensive operations, assume an "active defense," and build up the capabilities of South Korean forces to assume more of the fighting. In Vietnam, U.S.

leaders adopted a policy of "Vietnamization," which forced South Vietnamese units to take on an increasing share of the ground fighting. At the same time, U.S. forces were ordered to avoid casualties while they were being progressively withdrawn from the conflict. (Hosmer, 1987, pp. 66–74.)

Saddam Hussein's willingness to risk a possible military confrontation with the United States over Kuwait rested in part on his belief that Iraq could impose unacceptable casualties on U.S. forces in the event the confrontation escalated to open warfare. In his meeting with American Ambassador April Glaspie before he invaded Kuwait, Saddam asserted that America was "a society which cannot accept 10,000 dead in one battle."[7] He reiterated this view in a December 20, 1990, interview with German television when he rejected the suggestion that his insistence on retaining Kuwait was suicidal: "We are sure if President Bush pushes things toward war . . . once 5000 of his troops die, he will not be able to continue the war."[8]

Whenever possible, U.S. adversaries in smaller-scale contingencies have also sought to use U.S. casualties to turn U.S. public opinion against U.S. interventions. Such was the case with the Muslim terrorists who planned and conducted the October 1983 truck bombing of the U.S. Marine barracks at the Beirut International Airport, an action that forced the eventual withdrawal of U.S. troops from Lebanon.[9]   This also became the strategy of General Mohammed Aideed and the Somalia National Alliance (SNA) in July 1993 when they made a "calculated decision to kill American sol-

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[7]See "Excerpts from Iraqi Transcripts of Meeting with U.S. Envoy," 1990.

[8]In an August 16 open letter to President Bush, Saddam intimated that U.S. casualties in the Gulf region would turn the American electorate against the president, warning that the president would fall off his "seat" after the defeat of his "brute force." See Foreign Broadcast Information Service (1991), p. 2, and Foreign Broadcast Information Service (1990), p. 2.

[9]As Geoffrey Kemp, who served on the National Security Council staff at the time of the bombing, points out:

> From the U.S. perspective, the bombing of the Marines meant that it was not a question of whether we would leave but when. The domestic pressure in the U.S. to pull the Marines out coincided with the Defense Department's long-standing wish to redeploy the troops back to ships. It was clear to the President's domestic advisers that when Congress returned in January from the long Christmas recess (which begins in early November), grass roots support for keeping the Marines in Lebanon would be zero. (Kemp, 1991, pp. 139–140.)

diers" so as to undermine U.S. domestic support for the U.S. involvement in Somalia. (Richburg, 1993.) According to Ambassador Robert Oakley and John Hirsch, there is little doubt that Aideed and the other SNA "militia leaders had studied not only Operation Desert Storm but Vietnam and Lebanon to understand the domestic political impact of American casualties." (Hirsch and Oakley, 1995, n. 19, pp. 121–122.) The number of U.S. casualties climbed precipitously in the Mogadishu firefight of October 3–4, 1993, which cost U.S. forces the loss of some 18 killed and 73 wounded. These losses forced a fundamental change in U.S. policy toward Somalia and the eventual withdrawal of U.S. troops. (Hirsch and Oakley, 1995, pp. 122–125.)

Deception and Propaganda. Adversaries have also employed propaganda and deception in an attempt to undermine U.S. domestic and international support for U.S. military involvements. The principal aims of this strategic propaganda have been to convince U.S. and foreign audiences that (1) the adversary was fighting a "just" war; (2) the U.S. could not win, as the adversary would never give up; and (3) the U.S. methods of warfare and war objectives were "unjust."

One classic example of such deceptive propaganda was the worldwide media campaign mounted by the Soviet Union, China, and North Korea that charged the United States with conducting "germ warfare" during the Korean War. Communist officials claimed that U.S. airmen and artillerymen had delivered bacteria-infected insects and shellfish into North Korea. To build a case for these charges, the communists created faked "exhibits" of U.S. germ warfare paraphernalia, inaugurated a massive inoculation program in their rear areas of Korea, and by torture and threats, forced captured U.S. pilots to "'confess' on film, on tape, and in press interviews that they had indeed been part of a huge United States germ warfare conspiracy." (Blair, 1987, p. 966.) As evaluated by one historian,

> This wholly fabricated propaganda attack, supported by communist-manipulated "demonstrations" all over the world, was astonishingly successful; Washington's slow-footed and righteous denials were not. (Blair, 1987, p. 966.)

The Vietnam War also provided numerous examples of enemy deception and propaganda aimed at eroding U.S. domestic and international support for the U.S. war effort. Despite the fact that an

estimated one million NVA soldiers infiltrated into South Vietnam during the course of the war, Hanoi consistently denied that it had any troops fighting in the South.[10] Furthermore, to mask its dominant role and ultimate objectives in the conflict, Hanoi created two South Vietnamese front groups, the National Liberation Front (NLF) and the Provisional Revolutionary Government (PRG), which Hanoi proclaimed to be "the sole genuine representative of the southern people." Both the NLF and the PRG were abruptly cast aside after the 1975 takeover. To mollify international and South Vietnamese domestic concerns, Hanoi also claimed during the war that it had no intention of rapidly annexing or communizing South Vietnam. As one disillusioned former member of the PRG cabinet wrote, these assurances were

> discarded like trash within months of [the 1975] victory. By then, it was clear that there was no further need for subterfuge—either toward the Western media or antiwar movements, or toward the Southern revolution itself. (Truong Nhu Tang, 1985, p. 284.)

Adversaries have also exploited any injury to civilians or other collateral damage stemming from U.S. bombing so as to build sympathy for their cause, to incite U.S. domestic and international opposition to continued U.S. air strikes, and to constrict the targets of future U.S. air attacks. The North Vietnamese proved particularly adept at exploiting the propaganda value of errant bombing during the Rolling Thunder and Linebacker I and II air campaigns against North Vietnam. For example, the Hanoi leaders used allegations about bomb damage to the Red River dikes both to extract greater war effort from the North Vietnamese population and to discredit U.S. bombing in the eyes of the U.S. and international publics. Even though the bulk of the damage to the dikes resulted from a lack of proper maintenance (the dikes were off-limits to U.S. air attacks), the North Vietnamese population and foreign media were told that the United States was bombing the dikes intentionally, to flood the entire Red River delta.[11] Baghdad propagandists employed similar

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[10]For an estimate of NVA infiltration into South Vietnam, see Pike (1986), p. 47.

[11]Foreign media and other visitors to North Vietnam were provided tours to the same "damaged" dike over a period of several years. (Parks, 1983.)

methods in an attempt to discredit and constrain the U.S. bombing campaign during the Gulf War.[12]

In recent smaller-scale contingencies, local leaders have also employed PSYOP media to incite their populations to make war on their neighbors and UN peacekeepers. Leaders of the several former Yugoslav republics used television, radio, and print media to promote ethnic hatred and mobilize their publics to take up arms to advance or defend communal political and territorial interests. Indeed, some observers believe the media became the "main instruments in stirring up and managing" the conflict in the former Yugoslavia.[13] Similarly, broadcasts from the government-controlled Rwanda Radio did much to foster the 1994 genocide in Rwanda by deliberately fomenting ethnic hatred among the Hutus and inciting the mass killings of Tutsis. After the Hutu government had been routed by Tutsi forces, a mobile radio still under the control of former Hutu government officials precipitated the massive flight of Hutu refugees into Tanzania and Zaire by assuring them that they faced "certain slaughter" if they fell under Tutsi control. (Adelman and Suhrke, 1996, p. 38; also see Burkhalter, 1994.)

Hostile radio broadcasts also helped to undermine the U.S. and UN intervention in Somalia. To counter U.S. and UN attempts to marginalize him politically, Aideed successfully used his radio station in Mogadishu to rally support for his continued leadership and to foment anti-U.S. and anti-UN sentiment among his countrymen. (Hirsch and Oakley, 1995, pp. 116–117.) Along with protesting the U.S. and UN interference in Somalia's internal politics, Aideed's radio broadcasts also attacked the motives of the U.S. intervention,

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[12]After a planned U.S. air strike on the Al Firdos bunker unintentionally killed several hundred Iraqi civilians, further U.S. air strikes on Baghdad were sharply reduced. American intelligence had identified the Al Firdos bunker to be an Iraqi military communications site, and the U.S. air planners had no idea that the bunker was also being used as a civilian air raid shelter.

[13]As one observer put it:

> The function of the war propaganda disseminated by the conflicting parties has been, by turn, to mobilize and intimidate, glorify and demonize, and justify and accuse, bearing out the assumption that the media bears a large part of the responsibility for the outbreak and tragic course of the war in the former Yugoslavia.

For this quote and a discussion of this and other roles the media play, see Simic (1994), pp. 40–47.

accusing the United States of planning to steal Somalia's mineral resources. As proof of this nefarious U.S. intent, which many Somalis apparently believed, the radio cited the abundance of the earth-moving and other engineering equipment that had accompanied U.S. forces into Somalia.

Enemy-Caused Psychological Effects at the Operational and Tactical Levels

As with U.S. PSYOP, America's enemies have also attempted through radio and loudspeaker broadcasts and leaflets to persuade U.S. fighting personnel to desert, defect, or surrender. While enemy PSYOP has no doubt facilitated and even prompted the surrender of U.S. troops on occasion, enemy attempts to induce U.S. forces to defect or desert have met with little, if any, success.[14] Whether for this or other reasons, the volume of enemy PSYOP directed at U.S. forces has been small in comparison to the effort adversaries have devoted to maintaining the fighting will of their own troops and populations.

Morale Building and Maintenance. Enemy combat leaders have used both negative and positive psychological measures to prevent the defections, desertions, and surrenders that U.S. PSYOP has attempted to induce. One measure virtually all U.S. adversaries have used has been to inculcate a fear of capture in their personnel. Enemy troops routinely have been told that they would be tortured and killed if they fell into U.S. hands. German, North Vietnamese, and Iraqi troops, among others, were further warned that their families would be held hostage for their actions and would be severely punished if the troops defected or surrendered. Enemy officers and cadres also have attempted to keep close watch over their troops to prevent them from reading leaflets or listening to allied radio broadcasts and to deter them from attempting to surrender or desert.[15]

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[14]In the course of his comprehensive study of U.S. Army tactical psychological operations, Stanley Sandler could "find no documented evidence of a single U.S. soldier who has defected to the enemy in time of war as a result of enemy propaganda." (See Sandler, 1996, pp. 2–3.)

[15]During the Gulf War, the Iraqis stationed "death squads" behind their lines to apprehend and punish would-be deserters. In some Iraqi divisions, a few deserters were publicly executed as an object lesson to others.

Along with emphasizing the threat of sanctions, enemy officers and noncommissioned officers have also devoted considerable time and effort to building and maintaining unit morale. This was particularly true during the Korean and Vietnam wars, when communist cadres gave close attention to troop indoctrination and to the evaluation and bolstering of morale so that their men might enter battle with the proper fighting spirit. "Criticism and self-criticism" sessions were conducted regularly at various echelons in all units to ferret out and correct the poor morale of individual fighters. (Hosmer, 1996, pp. 95, 131.)

Finally, enemy leaders have also invested substantial effort in maintaining the motivation and morale of their civilian populations and in mobilizing domestic support for their countries' war efforts. Typically, enemy leaders have used their broadcast and print media to extol the righteousness of their country's cause, the heroism of their fighting men, and the certainty of their eventual victory, while demonizing both the motives and behavior of their adversaries. It will, of course, not escape notice that U.S. and allied leaders have employed similar themes in their attempts to bolster home-front morale and war support.

ADVANCED TECHNOLOGICAL SYSTEMS AND PSYCHOLOGICAL EFFECTS

Impact of Advanced Systems on Future War-Fighting Capabilities

Improvements in data acquisition, processing, storage, switching, and transmission technologies, along with accelerating progress in such areas as miniaturization and new material technologies, will produce advanced technological systems that will have important implications for future warfare. Among other consequences, these advanced technological systems will increase significantly the battlefield effectiveness of

- **finders**, by increasing their capacity to see the battlefield, identify targets, and distinguish enemy from friendly forces

- **controllers**, by decreasing their reaction time, improving their decisionmaking, and increasing their span of control

- **shooters**, by increasing their survivability, lethality, and precision.

Because combat operations produce the greatest psychological effects, the relative capabilities of enemy and friendly finders, controllers, and shooters will help to determine the extent to which the United States or its adversaries gain the psychological advantage in future conflicts. These capabilities are likely to be particularly relevant to U.S. operations that are aimed at striking strategic targets and demoralizing deployed forces and to enemy operations that are aimed at generating U.S. battlefield casualties.

Implications for Future U.S.-Caused Psychological Effects

Attacks on Enemy Strategic Targets. Improvements in intelligence sensors and platforms, penetrating aircraft, standoff weapon systems, and precision munitions should progressively increase U.S. capabilities to identify and strike high-value targets deep in an enemy's heartland.

The availability of long-endurance unmanned aerial vehicles (UAVs), for example, should make it possible to maintain persistent surveillance over an enemy's capital city and place at risk otherwise hard-to-locate mobile targets, possibly including enemy leaders. Given that most enemy leaders are likely to attach high value to their personal survival, the round-the-clock threat of sudden aerial attack might increase the incentives of some would-be adversaries to avoid conflict with the United States. So, too, continued improvements in deep-penetrating munitions may increase enemy leaders' sense of vulnerability, by reducing their confidence that heavily reinforced bunkers might afford them protection from U.S. aerial attack.

Advances in stealth, UAV, and standoff weapon technologies will also allow the United States to attack enemy strategic targets with minimal U.S. aircrew losses. Similarly, improvements in intelligence-collection technologies, precision weapon delivery, nonlethal munitions, and electronic and other capabilities to disrupt and destroy enemy computer-dependent systems and command, control, communications, and intelligence should permit the United

States to degrade an enemy's war-fighting capacity and disrupt its economy without causing significant civilian casualties.[16]

The capability to mount effective attacks against targets deep in an enemy's heartland with minimum losses to civilians and U.S. personnel will undoubtedly prove demoralizing to enemy leaders, in part because the leaders will recognize that such attacks can be continued virtually indefinitely without imposing any appreciable compensating cost on the United States. Even so, without the added pressure of actual or prospective reverses on the battlefield, attacks on enemy strategic targets will probably not, in themselves, suffice to secure U.S. war aims.

Attacks on Enemy Deployed Forces. There is the prospect that advanced technological systems will increase significantly the psychological effects of U.S. military operations on the motivation and morale of enemy deployed forces. The impact will be greatest in combat situations in which U.S. finders can readily locate enemy targets in any weather and time of day and in which U.S. shooters can promptly kill the targets U.S. controllers designate for attack. Such a capability should be severely demoralizing to enemy forces because they would perceive they faced the following prospects:

- If we fly, we die.
- If we fire, we die.
- If we communicate, we die.
- If we radiate, we die.
- If we move with our vehicles, we die.
- If we remain with our weapons, we die.

The potential for massive surrenders and a decisive weakening of enemy cohesion also will be greatest when substantial portions of the enemy's food resupply can be successfully interdicted and when U.S. aircraft, missiles, and artillery can keep enemy forces under actual attack or under the threat of immediate attack around the clock for a period of several weeks. Timely U.S. ground attacks will

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[16]Among other weapons, computer-controlled systems may be vulnerable to attack by high-power microwave, electromagnetic pulse, radio frequency, and antimaterial chemical weapons.

also be necessary to reap the maximum battlefield benefits of such psychological softening.

Sustained attacks have several important effects. They undermine the motivation and morale of enemy troops; they impede the enemy combat leader's ability to bolster or restore morale by forcing enemy personnel to remain constantly under cover and dispersed; and they provide enemy troops the opportunity to desert or surrender by making it difficult for enemy leaders to observe and control troop behavior on the battlefield. (Hosmer, 1996, p. 195.)

The Gulf War Experience. Advanced technological systems should magnify the types of psychological effects that were produced by the Coalition air campaign against Iraqi ground forces during the Gulf War. The air campaign intensified the shortcomings in motivation and morale, already present in Iraqi ranks prior to the outbreak of hostilities, by (1) convincing Iraqi officers and enlisted personnel of Coalition air supremacy, (2) proving the inadequacy of Iraqi air defense, (3) confirming the inevitability of Iraqi defeat, (4) intensifying the hardship of the Iraqi troops in the KTO, and (5) increasing the Iraqi soldiers' fears about their personal survival and the safety of their families back home. (Hosmer, 1996, p. 162.)

Iraqi line crossers and prisoners of war testified that they found the following attributes of the Coalition air campaign particularly demoralizing:

- **Ubiquity of Coalition Aircraft**. Iraqi officers and enlisted personnel alike mentioned the omnipresence of the Coalition aircraft as a key factor depressing their morale. They commented on the psychological stress caused by knowing that aircraft were constantly orbiting overhead but not knowing if and when an aircraft might strike their unit. Even Iraqi troops who had not directly experienced actual air attacks reported being demoralized by the persistent threat posed by Coalition aircraft flying overhead.

- **All-Knowing Coalition Intelligence**. The psychological stress was increased by the Iraqi conviction that the Coalition's superior intelligence and target-designation systems enabled Coalition aircraft to respond promptly to any Iraqi vehicular movement; artillery or antiaircraft firing; or the employment of radios, radars, and other emitters. As a consequence, Iraqi troops were

often deterred from operating such equipment and were conditioned to abandon their vehicles when Coalition aircraft were about.

- **Intensity of Air Attacks**. The Iraqis also reported being demoralized by both the frequency and magnitude of the Coalition air attacks, including, most particularly, the heavy bombings by B-52s. The round-the-clock attacks some units experienced during the air campaign proved particularly stressful for both Iraqi officers and enlisted personnel because it deprived them of sleep and allowed them little opportunity to perform their duties.

- **Accuracy of Bombardment**. Even though Coalition aircraft actually often missed their targets, Iraqis generally respected and were demoralized by the accuracy of the Coalition bombing.[17] Indeed, in the view of some Iraqis, Coalition aircraft seemed able to hit any target that they could detect on the battlefield.

- **Inadequacy of Iraqi Defenses**. The Iraqi soldiers also were demoralized by the realization that neither the Iraqi air force nor the other active defense measures that they usually relied on could protect them from Coalition air strikes. As the air campaign wore on, some Iraqi air defense units stopped firing on Coalition aircraft because of the perceived futility of the exercise and the danger of being seen and struck in retaliation. (Hosmer, 1996, pp. 160–170.)

Advanced technological systems will undoubtedly enhance the U.S. capability to acquire intelligence, conduct accurate bombardments, and deny an enemy effective air defenses. However, to secure the psychological effects of ubiquity and intensity, the United States will need to acquire and field sufficient air platforms, ground-based attack systems, and munitions to keep enemy troops under attack or the threat of attack 24 hours a day over a several-week period.

Finally, the ability of U.S. forces to inflict decisive psychological damage would be importantly enhanced if U.S. forces were to acquire the capability to deny enemy ground troops sanctuary from effective air, artillery, and missile attack in a broader spectrum of

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[17]Through most of the air campaign, Coalition aircraft operated at medium altitude so as to minimize losses, which reduced their accuracy.

combat environments. If a sufficient stock of deep-penetrating munitions could be acquired, for example, U.S. forces could attack enemy deployed forces positioned in extensive hardened bunkers and tunnels, something U.S. forces were largely unable to do effectively during the Korean War.[18] Similarly, while the development of the foliage-penetrating radar has increased the U.S. capability to detect some types of targets under heavy overgrowth, even more-effective sensing systems will be needed if U.S. forces are to garner maximum psychological impact from attacks on enemy personnel located in heavily foliaged terrain.

Implications for Future Enemy-Caused Psychological Effects[19]

Continued Enemy Attempts to Cause U.S. Combat Casualties. America's adversaries undoubtedly will continue to view the U.S. public's sensitivity to casualties as their primary lever for forcing the United States to settle conflicts on terms advantageous to their sides. This is almost certainly to be the case, for example, in the event of a renewed outbreak of hostilities in Korea. According to the testimony of North Korean defectors, Pyongyang intends to attempt to maximize U.S. casualties early on in any future conflict partly by conducting chemical and other attacks against on U.S. bases and forces.[20]

Adversary calculations about the leverage that can be derived from the U.S. sensitivity to casualties could prove well-founded in many potential future conflict situations. Except where the lives of U.S.

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[18]During the last 20 months of the Korean war, intensive U.S. air and artillery attacks had little adverse psychological impact on enemy troops who, except for sporadic sorties at night, were holed up in an elaborate system of bunkers, trenches, and tunnels largely impenetrable to U.S. weapons. (Hosmer, 1996, pp. 182–183.)

[19]Major portions of the following section are drawn from Hosmer (1998).

[20]Such attacks would, of course, also be intended to paralyze U.S. air operations and prevent the deployment of U.S. air and ground reinforcements to South Korea. According to the testimony of Choi Ju-hwal, a North Korean army defector, if war were to break out on the Korean peninsula again, the North's main target would be "the U.S. forces based in the South and Japan, which is the reason that the North has been working furiously on its missile programs." Choi also testified that the North Korean leader, Kim Jong-il, believes that if North Korea can create 20,000 American casualties in the region, "it would win the war." See "North Korean Defectors Warn of Missile Threat" (1996).

forward-deployed forces or other citizens are clearly at risk, the American public is likely to perceive the stakes at issue in most post–Cold War contingencies to be of marginal importance to U.S. national interests. As a consequence, the public and the Congress will have little tolerance for U.S. casualties and protracted combat involvements in such contingencies.

This limited public tolerance for casualties is likely to deter U.S. decisionmakers from intervening in many future conflict situations and lead them to constrain U.S. military objectives and combat behavior once U.S. forces do intervene. The fragility of U.S. domestic support for such involvements will also require that U.S. combatant commanders continue to give priority attention to force protection in future interventions. The propensity of U.S. commanders in Bosnia-Herzegovina to assign highest priority to force protection in their operations and the reluctance they have shown to use U.S. forces in operations (such as the forcible return of refugees) that might promote armed resistance are recent manifestations of an interest in preserving U.S. domestic support for an intervention by avoiding U.S. combat casualties.

Some Advanced Systems Will Help to Reduce U.S. Casualties. There are a number of ways that advanced technological systems should enable U.S. forces to operate with reduced casualties and thus undercut an enemy's opportunity to adversely influence U.S. public opinion.

Improved intelligence sensors and platforms, along with improvements in intelligence processing, integration, and connectivity, will make the battlefield more transparent to U.S. commanders, particularly with regard to combat in open terrain. American combat leaders at all echelons should enjoy improved real-time, shared situational awareness about both enemy and friendly forces. This should reduce fratricide and the potential lethality of enemy attacks.

The capability of U.S. air and ground forces to identify and promptly kill enemy targets throughout the entire depth of the battlefield also should reduce the threat to U.S. combat personnel. Military planners from all the U.S. services envisage a future combat environment in which U.S. information dominance, air supremacy, and long-range precision-strike capabilities will permit U.S. forces to destroy enemy aircraft, vessels, armor, and other ground elements before

they can engage U.S. forces. In ground confrontations, for example, longer-range fires that can destroy (as opposed to merely delay or disrupt) enemy maneuver units should allow U.S. troops to avoid inherently dangerous close-fire engagements more easily and thereby reduce friendly losses.

The availability of increasingly capable unmanned systems—such as UAVs equipped with multiple sensors—that can provide persistent surveillance over enemy-controlled areas obviously will reduce the risks to U.S. aircrews. The development of microsensors and micro-electromechanical systems may lead eventually to the production and deployment of pocket-sized unmanned aircraft that could scout inside buildings and along streets in support of ground-force operations in urban areas. (Evers, 1996.) Larger UAVs, in time, may acquire the capability to drop leaflets and broadcast PSYOP messages over enemy territory and even to conduct air strikes against enemy targets.

The acquisition and deployment of other advanced technological systems now under development should also help to hold down U.S. casualties; these include through-the-wall detection devices for urban combat, rifle munitions that can kill targets behind obstacles, countersniper sensors that will facilitate immediate and accurate responses to sniping attacks, combat identification systems that will lower the risks of fratricide, and effective mine-detection systems that will reduce the ubiquitous mine threat to U.S. ground forces. (Seffers, 1998.)

Finally, improvements in the U.S. capability to provide intelligence support to friendly indigenous troops or third-country intervention forces without a large U.S. ground presence should increase U.S. options for influencing the outcomes of future conflicts without risking U.S. casualties.

But Adversaries Can Also Exploit Advanced Technological Systems. The exploitation of the information revolution, however, is unlikely to be a one-way affair. Future adversaries also can be expected to use advanced technological information systems to make U.S. military interventions more costly and difficult.

Since much of the advanced information technology is expected to emerge from the private sector, we must expect the proliferation of

more-accurate and lethal weapon systems based on that technology. Such countries as Russia, which already has a well-established capacity to produce advanced technological systems, and China, which is working assiduously to acquire such a capacity, are likely to field future forces with "finder," "controller," and "shooter" capabilities that will rival some of those possessed by the United States.

Moreover, even minor rogue states are likely to be able to acquire niche capabilities that would threaten U.S. forces.[21] Future enemies will likely have access to advanced technological information systems that will improve their own situational awareness and deny U.S. forces surprise. The widespread availability of high-resolution imagery from commercial and military satellites will make future U.S. operations more difficult and risky. (Nix, 1998.) It seems highly unlikely, for example, that the United States could repeat without enemy discovery the massive vehicle and troop movements that the Iraqis failed to detect during the Gulf War.

The availability of advanced man-portable air-defense systems, equipped with a spectrum of sensors, could pose significant threats to U.S. aircrews during peace operations (which typically depend heavily on U.S. fixed-wing airlift and helicopter assets) and during opposed entry operations. A future attempt to insert American forces by airdrop or helicopter could prove costly if met by an alerted enemy equipped with such advanced man-portable air-defense systems.

A combination of technologies could enable some Third World adversaries to threaten large numbers of U.S. troops, even in rear areas. A rogue state could develop the capability to attack airfields, ports, and other sites of U.S. troop concentration with weapons of mass destruction. This might be accomplished, for example, by a cruise missile armed with biological agents guided by Global Positioning System updates to a site occupied by U.S. forces identified by satellite imagery.[22]

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[21]Some of the technologies that have been "available to the just and unjust alike" for several years are listed in Livingstone (1995).

[22]The Global Positioning System–derived coordinates of the troop location sites would be known ahead.

The information revolution also is likely to provide future adversaries with communication options that could degrade important U.S. intelligence-collection capabilities. Potential enemies may be able to use high-capacity, landline communication links and hard-to-break encryption and scrambling systems to make their communications more secure from U.S. disruption and compromise. This could increase the risks to future U.S. assault forces, in that the denial of enemy command, control, and communications has been an important element of U.S. force protection in U.S. entry and other offensive operations.

Cyberspace technologies may provide even low-tech states the opportunity to disrupt U.S. military operations, including force deployments, and to attack important targets in the U.S. homeland. Computer hackers in the employ of an enemy might be able to disrupt temporarily the operations of one or more computer-dependent infrastructures in the United States, such as the U.S. banking networks, stock exchanges, and the distribution systems for natural gas and electric power. Whether such attacks would prove successful would depend on the extent to which vital infrastructures had been hardened against cyber threats. The severity of the disruption also might be increased if the cyber attacks were cued by inside agents and accompanied by coordinated physical sabotage. (Molander, Riddile, and Wilson, 1996; GAO, 1996.)

Finally, additional states eventually are likely to exploit advanced information technologies to acquire the capability to attack the United States directly with ballistic or cruise missiles armed with weapons of mass destruction.[23] This would threaten U.S. civilian populations with potential costs not experienced in virtually all previous U.S. wars with foreign powers.[24] Should U.S. forces engage an enemy equipped with such capabilities, the threat of a possible attack on the American homeland is likely to have a significant psychological impact on the U.S. body politic and could constrain severely U.S. war-fighting objectives and military options.

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[23]Equipment and information that might assist a foreign state to "build long-range missiles are readily available through the Internet and from military surplus dealers." (See Gertz, 1997a.)

[24]America has not fought a foreign power with meaningful strategic strike capabilities since the War of 1812.

Adversaries Also Can Limit Effects of U.S. Advanced Technologies. When confrontations with U.S. forces are unavoidable, enemies may choose to employ fighting styles and engage U.S. troops in settings in which the U.S. advantages in maneuver and firepower will be less potent and in which the U.S. commander's situational awareness will be greatly reduced. American forces encountered such tactics both in Vietnam, where the Viet Cong employed close-in fighting tactics in brief combat forays from their heavily foliaged jungle base areas, and in Somalia, where Aideed's militia mounted ambushes against UN and U.S. troops in the warrens of Mogadishu.

By choosing to confront U.S. forces in urban and rural terrain that provides hard-to-penetrate cover and requires close-in fighting, adversaries can both husband their manpower resources and exact U.S. casualties. The U.S. experience with urban warfare in World War II (Aachen and Manila), Korea (Seoul), Vietnam (Hue), and Somalia (Mogadishu) demonstrates that fighting in built-up areas typically generates large numbers of U.S. dead and wounded.[25]

Future adversaries can also be expected to make greater use of camouflage, concealment, dispersion, deception, and human intelligence when confronting U.S. forces. The abortive U.S. attempts to capture Aideed and suppress hostile SNA military activities in Somalia provided numerous examples of how a low-tech adversary can use tactics and local resources that limit the utility of U.S. technological systems. The SNA's militia used shoot-and-hide mortar attacks; small-unit infiltration tactics; and low-technology, hard-to-disrupt communication instruments that reduced their exposure to U.S. countermeasures.[26] Because of their excellent human-intelligence nets, the SNA commanders probably enjoyed a situational awareness in their area of operations that was superior to that of their opposing U.S. and UN commanders.

Finally, adversaries may also attempt to use civilian populations and facilities as a shield against U.S. attacks. American forces frequently encountered such tactics in Bosnia and Somalia, where women and

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[25]For a discussion of the fighting and losses in Aachen, see Ambrose (1997), pp. 146–154.

[26]The SNA's communication instruments included walkie-talkies, couriers, fires, streetlights, and sounds.

children were often in the forefront of confrontations with U.S. forces. In Somalia, American troops occasionally came under fire from women and found it difficult to distinguish combatants from noncombatants and to determine the size, disposition, and movement of enemy forces.[27] By causing civilians to confront U.S. troops, enemies hope to provoke incidents and stimulate media coverage that will both win sympathy for their cause and undermine the legitimacy of U.S. military actions in the eyes of domestic and international publics.

THE NEED TO MANAGE FUTURE PSYCHOLOGICAL EFFECTS

Managing Psychological Effects in a Changing Information Environment

Advanced technological systems will facilitate increased media coverage of conflicts and will allow information to be disseminated instantaneously throughout the world:

- The U.S. and foreign news media will become an increasingly ubiquitous presence on the future battlefield. The media will have an independent capability to gain access to future conflict arenas and to provide real-time visual and audio coverage of battlefield events. Thus, media will be able to report promptly the human costs of U.S. combat involvements to both U.S. domestic and international audiences. As the U.S. experience in Vietnam and Somalia demonstrated, media news coverage and commentary will help shape U.S. domestic perceptions about whether a U.S. military involvement is effective or not and, most importantly, whether it merits continued public support. (Hosmer, 1998.)

- Advanced technological information systems will allow state and substate actors, including news services, nongovernmental organizations, and even individual citizens, to make voice, video, and written information instantly available to audiences located

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[27]For accounts of the tactics used by Somali men and women in combat, see Bowden (1997a).

in the remotest areas of the globe. Indeed, satellite communication systems and enlarged fiber-optic networks soon will allow cellular-type phone calls from "essentially anywhere on the planet" and, within a decade, will probably make it possible to

> live in a remote area and yet be connected to the worlds of commerce and entertainment via the Internet and other sources of multimedia at rates high enough to support movies-on-demand. The world will soon be a place where not just communications but also torrents of information will be available just about everywhere. (Evans, 1998.)

These changes in the information environment will make it imperative that potential psychological effects be given priority attention in U.S. statecraft, particularly with respect to the design and conduct of U.S. public diplomacy, public affairs, and military operations.

First, both the United States and its future adversaries will have new channels for penetrating previously hard-to-reach audiences with their public affairs and PSYOP messages. Even more importantly, the reporting of the world's independent television and print media will also be able to penetrate previously denied areas. Internet access and content, for example, are likely to prove difficult to monitor and censor even in states where the local print and television media are tightly controlled.[28] At the same time, foreign actors, including those who may oppose future U.S. peace and other military operations, also will be able to exploit the Internet to influence international and U.S. domestic public opinion. The Zapatista rebels in Chiapas and their outside supporters made extensive use of the Internet to

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[28]According to a Central Intelligence Agency report on China's print and broadcasting outlets, Chinese

> government officials are worried that as the number of Chinese homes with telephone lines grows from the present level of less than 4 percent, the state will become totally unable to monitor Internet access at residences. (See Gertz, 1997b, p. 5; also see Laris, 1997.)

PSYOP specialists may also find opportunities to reach foreign audiences by exploiting satellite-linked television broadcasts. However, the companies planning direct broadcast and interactive links from both low-earth and geosynchronous orbit satellites stress that the sovereignty of the countries receiving such broadcasts would be strictly observed, which suggests that the local government will retain a veto on what could be shown to its population.

publicize the Zapatista cause both within Mexico and to the world at large. (Robberson, 1995.)

The inherent power of the Internet was also manifest in the successful campaign various nongovernmental organizations and individuals have waged around the world to prod their governments to negotiate and sign the treaty banning antipersonnel land mines. Even though the Internet's potential for mobilizing world opinion is likely to be diluted by the increasingly large number of issue-oriented groups contending for attention in cyberspace, it still will remain a potent instrument for rallying like-minded persons to support or oppose particular actions and causes. (Mburjo, 1997.) The bombing of the Al Firdos bunker in Baghdad, in which several hundred Iraqi civilians were inadvertently killed, is the type of contingency an enemy could effectively exploit on the Internet to mobilize anti-American demonstrations throughout the world. The Internet is potentially a potent tool for inflammatory rumor, as well as "black" and "gray" propaganda, in that the actual affiliation of the provider of information can be masked easily and any visual "news" materials that are put on the Web can be transformed so as to make faked events appear true.

Second, the rapidity with which news and propaganda will travel will require U.S. public diplomacy and public affairs officials to be prepared to react promptly to counteract any adverse spin put on stories concerning U.S. military operations. It is particularly important that U.S. officials publicly explain and justify promptly and candidly U.S. actions that cause civilian casualties or collateral damage. As the U.S. experience in Vietnam, Bosnia, and Somalia has demonstrated, even supposedly "unsophisticated" adversaries can be adept at exploiting errant U.S. military operations or at staging military and political events to manipulate public opinion. For example, Aideed, who assumed the public posture of a Somali "David" confronting a U.S. "Goliath," proved to be both a highly skilled propagandist and a master at handling the press. (Hirsch and Oakley, 1995, p. 123.) He and his allies "learned very quickly how to play the CNN [Cable News Network] factor, appearing on CNN in one form or another some 29 times between June and December 1993." (Strobel, 1997, p. 173.)

Third, senior U.S. civilian and military leaders must formulate and articulate intervention objectives that can be supported by the public and the Congress. Should objectives change and the U.S. combat

involvement increase during the course of an intervention, it is vital that the reasons for such a change of mission and its possible costs be explained to the public. The failure of U.S. officials to explain adequately the changes of mission that occurred in Lebanon (1982–1983) and Somalia (1993) fueled confusion and skepticism about the purposes and merits of those interventions in the minds of the U.S. public and Congress.[29]

Finally, the expanding options for reaching audiences in countries and groups that could become future U.S. adversaries make it important that the United States begin its psychological conditioning in peacetime. The United States needs to advertise its military prowess and commitment to defending U.S. interests prior to the outbreak of hostilities. Shows of force, exercises, firepower demonstrations, and the like should be used both (1) to deter the potential adversary from attacking U.S. interests and (2) to begin to soften the fighting will of the potential adversary's armed forces in the event conflict does occur.

One reason for the low morale large numbers of Iraqi officers and enlisted personnel suffered prior to the start of hostilities in the Gulf War was the widespread awareness among the Iraqi military that U.S. aircraft, tanks, and other weapons were far superior to their own obsolete military equipment. Many Iraqis were convinced that the technological superiority of U.S. weapons foreordained Iraq's defeat in any military contest with the United States. The subsequent Coalition air campaign strongly reinforced the Iraqi view that resistance was futile. (Hosmer, 1996, pp. 204–205.)

Managing the Psychological Effects of Future Military Operations

Because the psychological impact of military actions can prove so decisive to conflict cost and outcome, U.S. civilian leaders and military commanders will need to give priority attention to the psychological dimension of warfare in the planning and conduct of future U.S. operations. It is particularly important that U.S. leaders consult

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[29]For a discussion of the effects of the public-information failure with respect to the second United Nations Operation in Somalia, see Hirsch and Oakley (1995), n. 9, pp. 158–159. Also, see Strobel (1997), pp. 204, 208, and Hosmer (1998).

with and heed the advice of area experts and persons conversant with psychological effects about the likely psychological impact of a proposed military strategy or concept of operation. Area experts— who may include persons both inside and outside the U.S. govern- ment—must be knowledgeable about local political, military, and cultural conditions and with the objectives, likely strategy, and polit- ical-military strengths and weaknesses of adversaries. Such knowl- edge is important because a military strategy or concept of operation aimed at producing beneficial psychological effects is likely to prove counterproductive if the assumptions underlying U.S. military actions are incongruent with prevailing cultural, political, and mili- tary realities. (Hosmer, 1998.)

This is particularly true in smaller-scale contingencies, in which even relatively minor military acts can produce major psychological effects. Military operations designed to "send a message" to an adversary about U.S. resolve and capability can have the unwanted effect of enhancing the adversary's popular support and resolution to resist.

Such was the case in Mogadishu during June and July 1993, when U.S. helicopter and AC-130 gunships and ground forces attacked Aideed's weapon caches, radio station, and headquarters sites. While militarily effective in reducing Aideed's immediate weapon inventories and neutralizing his radio, the cumulative effect of these attacks was politically and psychologically counterproductive. Designed to destroy Aideed's power base and command structure, the attacks instead increased support for Aideed among his Habr Gidir subclan and intensified Somali opposition to U.S. and UN forces.[30] The attacks so animated Somali opposition that an esti- mated 1,500 Somalis proved willing to suffer death or injury in their attacks on U.S. troops during the firefight in Mogadishu on October 3–4, 1993. (Bowden, 1997b.)

In larger-scale contingencies, it is also important that U.S. combat- ant commanders seek to exploit systematically the potential psycho- logical effects of U.S. military operations. When the battlefield situa-

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[30]For accounts of the counterproductive effects of these U.S. and UN attacks, see Hirsch and Oakley (1995), pp. 121–122; Maren (1996); Drysdale (1994), pp. 190, 192– 193, 197; and Lorch (1993a, b).

tion permits, U.S. theater and joint task force commanders should pursue strategies that will force enemy ground units to react in a manner that will expose them to protracted and effective aerial and other standoff attack. Systematic efforts also should be made to interdict the resupply of food to forward-deployed enemy troops. Air and ground component commanders should make the destruction of enemy morale an explicit and priority objective of their campaigns, and personnel expert in psychological effects should be included on component commander planning staffs. (Hosmer, 1996, pp. 192–194.) PSYOP should support and closely integrate with all air and ground operations.

CONCLUSION

There is every reason to believe that the psychological battle will continue to have an important influence on the outcome of conflicts involving U.S. forces. Future U.S. interventions will be conducted in an ever more-ubiquitous information environment, in which U.S. foreign policy decisions and military operations will become increasingly subject to the instantaneous scrutiny and criticism of U.S. domestic and international audiences.

Enemy leaders will almost certainly continue to perceive casualty aversion to be America's Achilles' heel and will attempt to shape their political-military strategies and tactics to exploit this vulnerability. The proliferation of more accurate and lethal weapon systems and the access virtually all states will have to advanced technological information systems will provide adversaries with the potential means to raise the human costs of U.S. military interventions and, thereby, to undermine U.S. domestic support for such operations. American leaders may be able to mitigate this threat, however, by giving priority attention to U.S. force protection and by developing and deploying advanced sensors, platforms, and weapon systems that can help to reduce U.S. casualties.

At the same time, the advanced technological systems emerging from the information revolution will increase the U.S. ability to mount psychologically effective attacks on enemy strategic targets and deployed forces. In particular, anticipated improvements in the capabilities of U.S. "finders," "controllers," and "shooters" should provide U.S. forces the opportunity in many battlefield situations to

undermine decisively the motivation and morale of opposing enemy troops. However, to exploit this opportunity to its fullest, U.S. forces will need to acquire the capability to deny enemy troops sanctuary from effective air, artillery, and missile attacks in a broader spectrum of combat environments than is now possible, and U.S. commanders will need to place greater emphasis on the psychological dimension of warfare in the planning and conduct of their operations.

War-fighters in all the U.S. services must recognize that inducing enemy troops to desert, surrender, and abandon their equipment can be just as important to a favorable battlefield outcome as the destruction of enemy armor and artillery. And as the Gulf War experience demonstrated, collapsing an enemy's will to fight can significantly reduce U.S. casualties and thereby vitiate the enemy's most important leverage in the psychological battle.

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