Chapter 7
The Changing Character of War

One of the key challenges that strategists face is balancing the tension between the constantly changing character of war and its underlying, unchanging nature. During the early 1990s, technological enthusiasts suggested that information technology would eliminate the Clausewitzean fog and friction of war. Today, even its most stubborn proponents now admit that advanced technology cannot do so. It is equally important for traditionalists to admit that, although the underlying nature of war as described by Clausewitz has not changed, the character of warfare has and will continue to change along with society as a whole. This chapter addresses the changing character of modern warfare with an eye to both truths.

Combatants select from an entire range of tactics and technologies that are appropriate to their own societies; therefore, this chapter first explores how the concept of hybrid war has captured the latest incarnation of this trend and how it is affecting modern conflicts. After defining the challenges that hybrid war presents, the chapter moves on to explore specific manifestations of the phenomenon and how they challenge the United States. First, it discusses what has changed and what remained the same in insurgency and counterinsurgency. Then it explores the humanitarian issues that are an integral part of modern battlefields. Expanding the arena of conflict, the chapter next deals with the changing character of maritime and air power in the 21st century. The

U.S. Air Force (Aaron Allmon)

F–15E takes on fuel from KC–10 during combat mission over Afghanistan

discussion of maritime conflict begins with the planned structure of the U.S. fleet and the trends that will impact that structure and closes with recommendations for how to deal with these trends in an era when maritime power is of increasing importance. Next, we examine the complex and flexible amalgam that is airpower and how it has adapted to the changing character of modern war. A final section provides a much longer term historical view of what constitutes asymmetry and the changing character of war.

The Challenge of Hybrid Warfare

The National Defense Strategy issued in 2005 was noteworthy for its expanded understanding of modern threats. Instead of historical emphasis on conventional state-based threats, the document identified traditional, irregular, terrorist, and disruptive threats, outlined their relative probabilities, and acknowledged increased vulnerabilities to more unconventional types of conflict. Moreover, the strategy even noted the overinvestment in traditional means of warfighting and the need for the United States to shift the focus and resources to other means.

Although intrastate wars and civil strife have occurred more frequently than interstate wars throughout history, their strategic implications and operational effects have had little impact on Western militaries, especially that of the United States. Instead, the U.S. Armed Forces have focused on state-based threats and high-intensity conflicts or conventional warfare.

U.S. Army (Jeff A. Collet)

Soldier fires AT–4 rocket launcher during firefight near Asadabad, Afghanistan

The result has been overwhelming American military superiority, which has been measured in terms of conventional capabilities and global power projection. However, American force capabilities and investments must change as new enemies and altered conditions influence both the frequency and character of war.

After the National Defense Strategy appeared, a number of American and foreign observers complimented the Department of Defense for moving beyond a preoccupation with conventional warfighting. But they also cited an increased blurring of distinctions among various forms of warfare, rather than the clear-cut categories outlined in the strategy. The Pentagon itself suggested that most future complex challenges would involve synergy from the simultaneous application of multiple approaches. The National Defense Strategy explicitly stated that potential challenges could overlap and that "the most dangerous circumstances arise when we face a complex of challenges. . . . [T]he most capable opponents may seek to combine truly disruptive capacity with *traditional*, *irregular*, or *catastrophic* forms of warfare."[1]

Many defense analysts suggest that future conflict will be multimodal, combining various methods of warfare to increase both their frequency and potential lethality. This threat is frequently described as *hybrid warfare* where adversaries can employ unique combinations of *all* forms of warfare specifically targeted to U.S. vulnerabilities. Criminal activities can be considered part of this threat because they destabilize government authority and abet insurgents by providing resources. Such activities could involve smuggling, narcoterrorism, illicit transfers of advanced explosives and weaponry, or exploitation of urban gang networks.

Major challenges in the future will be posed not by a state that chooses a single approach but rather by states or groups that select an approach from a menu of tactics and technologies. Such potential enemies will blend diverse elements in innovative ways to suit their own strategy, culture, and geography. As Michael Evans of the Australian Defence Academy warned prior to the Quadrennial Defense Review: "The possibility of continuous sporadic armed conflict . . . means that war is likely to transcend neat divisions into distinct categories."[2] Still others point to the increasingly complex operating environment with large civilian populations, dense urban areas, and complex information activities that will abet the hybrid challenger. Colin Gray predicted that "there is going to be a blurring, a further blurring, of warfare categories."[3] The British and Australians are exploring the implications of this blurring and the desired countercapabilities

required to effectively operate against hybrid threats. In fact, British thinking on the subject has surpassed American doctrine and incorporated hybrid threats within the construct for irregular warfare.

In many respects, Hizballah represented the rising tide of hybrid threats. The 34-day battle in Lebanon in 2006 revealed Israeli weaknesses, which had implications for American defense planners. Combining an organized political movement with decentralized cells that used adaptive tactics in areas outside Lebanese government control, Hizballah demonstrated that it could inflict as well as take punishment. Specifically, highly disciplined, well-trained, and distributed cells contested ground against modern conventional forces with a mixture of guerrilla tactics and technology in dense urban centers. Like the jihadist defenders of Fallujah during April and November of 2004, Hizballah skillfully exploited the urban terrain to lay ambushes, evade detection, and hold strong defensive positions in close proximity to noncombatants.

The Israelis grudgingly admitted that Hizballah resistance was several orders of magnitude more difficult to deal with than were counterterrorism operations on the West Bank or in Gaza. More importantly, the degree of training, fire discipline, and lethal technology wielded by Hizballah was far more advanced. The tactical combinations and technological innovations employed by Hizballah were particularly noteworthy. The antitank guided missile systems used against the defensive positions and armored vehicles of the Israel Defense Forces, coupled with decentralized tactics, were surprises. At the battle of Wadi Salouqi, for instance, a column of Israeli tanks was halted by these tactics. The antitank weapons in the Hizballah arsenal included the Russian-made RPG–29, AT–13 *Metis*, and AT–14 *Kornet*, with a range of 3 miles. The Israelis found that AT–13s and AT–14s were effective but not necessarily formidable against their own first-line Merkava tanks.

Hizballah even launched some armed unmanned aerial vehicles that challenged the Israelis to detect them, including Iranian Mirsad-1s or Ababil-3 Swallows. In addition, there is evidence that Hizballah invested in signals intelligence and monitored the cell phones of Israel Defense Forces as well as unconfirmed reports of de-encrypting Israeli radio traffic. Hizballah also appeared to use advanced surveillance systems and advanced night vision devices. The employment of C802 antiship cruise missiles also provided another side of hybrid warfare.

Perhaps the most unusual asset demonstrated by Hizballah was its stock of 14,000 rockets. Many were old and relatively inaccurate, but thanks to help from Iran or Syria, Hizballah also possessed newer missile systems that could reach deep into Israeli territory. These missiles were used to terrorize the civilian population as well as attack Israeli military infrastructure. The fact that Hizballah could launch as many rockets on the last day of the war as the first gave these old rockets a strategic impact far beyond their limited tactical value.

Hybrid wars represent more than traditional conflicts between states and other armed groups. They incorporate different modes of warfare including conventional capabilities, irregular tactics and formations, terrorist acts of indiscriminate violence, and criminal disorder. Hybrid wars can be conducted by states and various nonstate actors. Separate units or the same unit can conduct such multimodal activities that are operationally and tactically directed and coordinated within the main battlespace to achieve synergistic effects in the physical and psychological dimensions of conflict. Moreover, these effects can be achieved on all levels of war.

At the strategic level, many wars have had both regular and irregular components. However, in most conflicts the two occurred in different theaters or different formations. Examples include the Continental Army and militias in the Revolutionary War, the Army of Northern Virginia and Mosby's Rangers in the Civil War, British regulars and Spanish guerrillas in the Peninsula War, the British 8th Army and Bedouins under T.E. Lawrence in World War I, and

U.S. Army (Adam Mancini)

Soldier launches RQ–II Raven umanned aerial vehicle, Afghanistan

the North Vietnamese army and Viet Cong troops in the second Indochina War. But hybrid wars are different in that they blur capabilities or apply them in the same battlespace. The integration of irregular and conventional forces operationally and tactically is a new phenomenon.

The future does not portend separate threats relegated to distinct slices of a conflict spectrum. Traditional conflict will remain the most dangerous threat, but hybrid warfare will become more common. It will pose threats that blur and blend different methods and modes of warfare at the same time. Therefore, the most distinctive change in the character of war will involve combining various types of combat rather than a widening number of distinct challenges.

Hybrid wars blend the lethality of state military power with the irregular protracted conflict. Accordingly, potential adversaries such as states, state-sponsored groups, and self-funded actors will exploit advanced capabilities, including encrypted command systems, man-portable air-to-surface missiles, and other lethal systems. They will employ insurgent tactics such as ambushes, improvised explosives, and assassinations, and also combine high-tech capabilities such as antisatellite weapons with terrorism and cyberwarfare directed against financial targets.

Such challenges are not limited to nonstate actors. Conventional forces can be transformed into irregular units with new tactics similar to the Iraqi *fedayeen* in 2003. The evidence suggests that several Middle Eastern nations are modifying their militaries to exploit this mode of conflict. This development will make it increasingly difficult to characterize national forces as traditional and nonstate actors as irregulars. Future threats will present a more diverse array of effective countermeasures to Western capabilities as Hizballah clearly demonstrated.

Regardless of state sponsorship, the lethality and capacity of organized groups are growing as incentives to exploit nontraditional modes of war increase. This transformation will mean modifying current views about frequency and content of future conflicts. Irregular and protracted forms of conflict have been castigated as the tactics of the weak, employed by nonstate actors who lack the means to do anything else. That judgment is misleading since future adversaries may exploit such means precisely because they are militarily effective. In fact, such measures may come to be seen as tactics of the smart and nimble, rather than the weak and under-resourced.

The rise of hybrid warfare does not represent the end of traditional or conventional warfare, but it introduces a complicating factor in the 21st century. Instead of thinking about conventional or irregular warfare, defense planning must be expanded to include hybrid combinations. Instead of conventional or irregular threats presenting an either/or situation, both types of warfare must be contemplated, perhaps simultaneously. The implications of added complexity are significant. As John Arquilla of the Naval Postgraduate School observed: "While history provides some useful examples to stimulate strategic thought about such problems, coping with networks that can fight in so many different ways . . . is going to require some innovative thinking."[4]

The Department of Defense recognized the need for exploring the nature of this complex challenge. Secretary of Defense Robert Gates discussed hybrid threats with the senior leadership as part of the broader issue of reprogramming the investment and capability mix. Consequently, the Pentagon has initiated research on the problem including large joint exercises.

Future conflicts will not be easily parsed in simple classes of conventional and irregular war. Many defense analysts acknowledge the blurred lines between them. Conventional and irregular forces, combatants and noncombatants, and physical or kinetic and virtual dimensions of conflict will be blended and blurred to pose complex challenges. Defense planners can no longer think in terms of conventional or irregular enemies. They must adapt to hybrid warfare.

Counterinsurgency Warfare

The United States has been slowly and painfully relearning the lessons of counterinsurgency. This process is reflected in efforts to develop a unified response to deal with insurgencies in both Afghanistan and Iraq. Of particular importance has been an understanding that insurgencies are no longer unified political movements such as those of Mao Tse-tung or Ho Chi Minh, but rather coalitions of the angry responding to perceived threats to their way of life. This evolution from single political actors to coalitions was evidenced in the anti-Somoza Nicaraguan movement, the anti-Soviet insurgencies in Afghanistan and Chechnya, the anti-Israeli organizations in Palestine, and the anti-American insurgencies in Iraq and Afghanistan. All of these movements can be best described as *anti* movements; they were not linked by any cause other than ejecting an outside power. Once that goal is accomplished, the insurgents know they will have to fight each other to resolve whose vision of the future will prevail in the contested area.

Inevitably, new insurgent coalitions have learned

from past counterinsurgency operations. Their most critical innovation is the understanding that against the outside power the message is the insurgency. They realize that they cannot inflict a military defeat on that outside power. There will be no Maoist third-phase conventional offensive that will crush the government forces. Instead, they plan to defeat the outside power by breaking its political will. They will accomplish this objective through effective strategic communications against that outside power while positioning themselves for the inevitable internal conflict that will follow the withdrawal of the outside forces. Thus, their strategic communications campaign will address both external and internal audiences by targeting the outside power while addressing potential supporters and neutral states.

Today, insurgencies arise spontaneously rather than under central planning and direction. For example, in the first Palestinian Intifada, Afghanistan, and Iraq, the insurgents launched effective strategic campaigns without unified leadership. They demonstrated emergent intelligence where independent actors following basic rules create strategic effects, and thus precluded any form of decapitation strategy. Of particular note was the bombing campaign in Iraq over the summer and early autumn of 2003. The insurgents attacked the Jordanian embassy, Red Cross, and United Nations. By doing so, they ensured that the U.S. coalition would get little or no help from Arab nations, nongovernmental organizations (NGOs), or international bodies. While this brilliant bombing campaign appeared to be planned, there is no indication the insurgents had a unified command. Thus, the intelligence behind the strategic campaign has the properties of emergence.

The development of coalitions of the angry that conduct aggressive strategic communications and that have links to emergent intelligence poses greater challenges to counterinsurgency operations than traditional Maoist movements. Nevertheless, the basics of counterinsurgency remain valid. Before any counterinsurgency effort can gain the support of the people, it must provide security. Moreover, that security cannot be transient and must protect all members of the society who have sided with the government against the insurgency. Just as some members of the public refuse to testify against drug pushers because of their fear of retaliation, most citizens in a country torn by insurgent violence avoid being associated with a government that cannot protect them.

Another basic element of counterinsurgency remains unchanged: the hope for a better future. However, that concept of a better future must originate with the local people, not with outsiders. While the United States has promoted democracy in Iraq and Afghanistan, Islam stresses justice over democracy. The problem is compounded by a naïve belief that one form of democracy—national elections—is better than alternative local forms of democracy. This has led some to push national elections on societies which are not ready for complex powersharing arrangements. Remember, it took the English almost 450 years to advance from the Magna Carta to a parliamentary democracy. Yet some have planned to take a society with no experience in democracy from a dictatorship to a democracy in only a couple of years.

While the basics of counterinsurgency have not changed, the difficulty of achieving them has increased. Since the Nation no longer confronts a single, unified movement, it must understand the political, economic, social, and religious motives of various groups, which range from preserving a certain way of life to imposing a new type of government or a stricter form of religion and from protecting criminal enterprises to seeking revenge or personal gain. As noted, these coalitions are not committed to common beliefs but rather band together to fight outsiders. There is not even unity within major factions. Instead, each faction is networked together, often by preexisting political, social, or religious linkages. These simple networks allow insurgents to share information to attack outsiders, although they do not fully trust each other.

While not every counterinsurgent must be a state builder, efforts to establish security must be based on understanding players and intentions in any given area. There will not be a national-level solution but rather local responses to issues that motivate fighters in that area. Even when events are addressed, such as the Anbar Awakening, counterinsurgents must sustain powersharing compromises among the various groups to prevent the outbreak of civil war.

A final dangerous development in insurgencies is that nonstate actors in general and insurgents in particular have greater communications, technological capabilities, and arms than at any time in the past, which has made it possible to overmatch governments in many regions.

One key question is how often insurgencies will occur in the future. If the United States is convinced that it will never fight such enemies again, then it can ignore the problem and focus on other issues. But if defense planners accept that insurgents threaten strategic American interests, then they must be prepared to defeat them and develop a strategy for

counterinsurgency operations. Since each insurgency has unique problems, each requires a unique approach. However, despite the fact they present unique challenges, each counterinsurgency effort will require an all-of-government approach.

And how does the United States achieve an all-of-government response? Does it require every component of the government to deploy trained personnel to respond to insurgencies, or does it task the military to provide the necessary personnel? If civilian agencies are forced to respond, what percentage of their personnel will be committed? How much will such operations cost and what laws must be enacted or amended to carry out these missions? Moreover, how extensive is the potential disruption to agency manpower policies in achieving a deployable force?

Similar obstacles are posed by all-military solutions. For example, if the Services must field the necessary response, can they recruit the necessary personnel? Should the military activate selected Reservists who have comparable jobs in the civil sector? Or should the military form units in either the Active or Reserve Components to accomplish these missions? And if so, how should the military revamp its force structure to gain such capabilities? What types of units are reduced or eliminated to free up personnel required to execute these new missions?

At the core of agency responsibility is the question of strategic communications. How can the United States engage in strategic communications to defeat insurgents while reinforcing its own political will? Given the centrality of strategic communications and

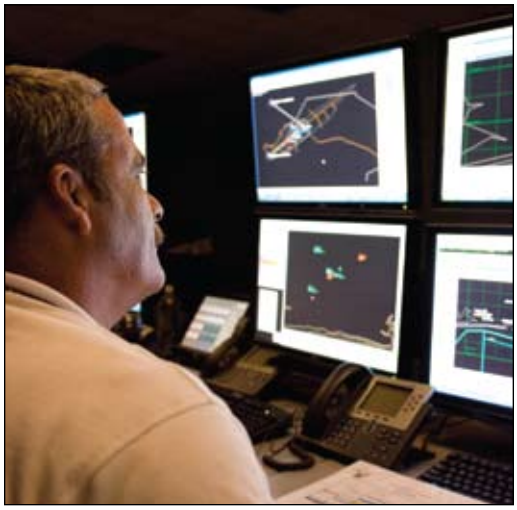
Future U.S. Naval Power

AIRCRAFT CARRIERS	**11**
MAJOR SURFACE COMBATANTS	
Arleigh Burke–Class Destroyer	62
DDX	7
CG[X]	19
LCS	55
TOTAL	**143**
SUBMARINES	
SSBN	14
SSGN	4
SSN	48
TOTAL	**66**
AMPHIBIOUS/ EXPEDITIONARY	
Amphibious Warfare	31
Command Support	30
Combat Logistics	20
MPFF Ships	12
TOTAL	**93**

Key: DDX=Next Generation Destroyer; CG[X]=Next Generation Cruiser; LCS=Littoral Combat Ship; SSBN=Ballistic Missile Submarine; SSGN=Guided Missile Submarine; SSN=Nuclear Attack Submarine; MPFF=Maritime Prepositioning Force (Future).

21st Century War

ASYMMETRY	TYPE
numbers of forces	degree
types of forces	kind
type/quality of leadership	kind/degree
type/amount of training	kind/degree
tactics and strategies	kind
geopolitical differences	kind/degree
economic differences	kind/degree



U.S. Air Force (Joe Laws)

Contractor monitors and maintains data link between Joint Terminal Attack Controllers on ground and tactical aircraft during exercise Bold Quest Plus

our notable failures in the recent past, an effective campaign is essential to counterinsurgency operations. However, the fragmented nature of insurgencies often increases the problem of developing that strategy. For example, a first-hand cultural understanding is essential to developing such a successful campaign. Unfortunately, American personnel systems do not support a career pattern that permits government employees to develop a sufficiently deep level of understanding. Thus, developing counterinsurgency strategy requires reconsidering the career paths for professionals in the field established by current personnel systems.

Once the civil and military roles are adequately delineated, the United States can build the requisite capabilities in the host government. Insurgencies are easiest to defeat at their inception and best defeated by indigenous forces. As such, they require a network of American specialists to advise on governance, economics, and local security. They should be a corps of professionals trained to support a cooperative security engagement strategy. In addition to these advisers, the military should provide training and equipment to assist indigenous security forces.

An additional challenge in developing a successful counterinsurgency strategy is the amount of manpower required. The ratio most often cited is 1 security officer for every 50 citizens. In Afghanistan alone, this guideline would demand nearly 600,000 personnel. Since this number is beyond the capabilities of the United States or its allies, the only solution is developing forces in the host nation. Even then, to meet this standard, 2 percent of the population would be needed in the security forces. Paying for this mobilization poses another challenge.

Advisory capacity will also be a major issue for the United States. Those nations threatened by insurgent movements typically lack the ability to provide key services. They require advisers in a range of ministries in addition to advisers for local security. In addition to building these capabilities, the statutory authorities and funding necessary to successfully achieve this strategy must be determined. Given the unpredictability and length of insurgencies, counterinsurgency strategies should be at least multi-year and perhaps even multi-decade in scope.

Even if the United States can successfully disengage from Iraq and Afghanistan, it must be prepared to meet other insurgent threats that are sure to arise. The Nation will require organizations, training, and skills to conduct effective counterinsurgency operations against coalitions of the angry.

Humanitarian Issues in Conflict Zones

The American military has dealt with humanitarian problems throughout its history, whether these involved victims of natural disasters or refugees in wartime. Since the 1990s, however, these problems have been constant in U.S. military operations, and the trend is likely to continue over the next decade. Sometimes humanitarian problems such as in Kosovo are the cause of military intervention and at other times they exist as a consequence of ongoing conflicts.

Military intervention involving humanitarian crisis may have one of two outcomes. First, an uncertain peace may follow the decisive end of fighting among warring parties. While various policies of the North Atlantic Treaty Organization (NATO) and the European Union on Kosovo and Bosnia remain open to criticism, the policies postintervention brought stability and allowed for relatively bloodless peacekeeping and nation-building. Second, conflicts may not end decisively, such as those in Iraq and Afghanistan.

To win against an insurgency, the host government must establish its legitimacy by providing its people with security, humanitarian assistance, basic public services, governance, and the start of postwar reconstruction. As a major force combating insurgents in Iraq and Afghanistan, the U.S. military has become deeply involved in the humanitarian and reconstruction efforts as a part of efforts to win the support of the people. Lack of security in many areas has further magnified military participation in humanitarian activities. The inability of underfunded and understaffed Department of State and U.S. Agency for International Development (USAID) activities also has drawn the military into the humanitarian sphere. American forces are now operating on the same playing field as civilian NGOs and international organizations. This inequality was exacerbated in the case of Iraq where the Department of Defense was initially placed in charge of postwar operations. In fact, the traditional humanitarian lines between civil and governmental entities generally tend to disappear in areas dominated by insurgency.

Various points of friction dominate humanitarian affairs. First, in both Afghanistan and Iraq, the enemy learned that attacking NGOs was a low-risk, high-reward strategy. For the insurgent, there is a payoff in attacking humanitarian organizations, particularly those that are unprotected, allied with the United States, or associated with unpopular religions. By attacking the military, the insurgent invites retribution. By attacking an element of either the United Nations or an NGO, the insurgent may strike a blow against

the government's effort to create legitimacy at the local level, especially if the NGO subsequently chooses to cease operations in that area.

Second, colliding bureaucratic cultures also create problems. In Afghanistan, for example, special operations personnel initially fought in civilian clothes using concealed weapons, leading to objections from NGOs. This practice was changed by the military in 2002 but continued to be raised by NGOs into 2004. Meanwhile, well-intentioned military members advised NGO personnel that they were part of the same team and that civil affairs and other units were eager to coordinate humanitarian efforts, which is a poor choice of words. Most civilians resent being coordinated by military or governmental entities while the military regards coordination as simply a low-level activity that involves everyone. NGOs associate coordination with control, whereas the military associates it with interaction and communication.

Third, local reconstruction teams can become a point of friction. In late 2002, the Provincial Reconstruction Teams (PRTs) came into being in Afghanistan. These interagency teams of 50 to a few hundred personnel were designed to further security and reconstruction and promote host-government interests. There are 50 teams in both Iraq and Afghanistan, including 13 teams in Iraq that are non-regional and embedded with maneuver units and 14 in Afghanistan fielded by the coalition. While they have solved problems, they have created some as well.

PRTs initially heightened concerns of nongovernmental and international organizations as well as career diplomats over a military takeover of stabilization and reconstruction activities. Critics have also noted a lack of standardization, basic operational concepts, and doctrine among the various teams. On balance, however, PRTs have been a plus for coalition efforts and useful in resolving disputes between governmental and nongovernmental organizations. The teams have institutionalized American or coalition presence and also made it easier for NGOs to interact with both Department of State and USAID personnel.

As General David Petraeus stated to counterinsurgency military commanders in 2003, *money is ammunition*. This observation illustrates a fourth point of friction. Beginning in 2002, unit commanders who often could not wait for help from USAID or PRTs began to get Commander's Emergency Relief Program (CERP) funding for relief and reconstruction tasks. Since then, these funds have become a multibillion-dollar effort. As a result of this explosion in CERP funding, 20 percent of development assistance goes through the Pentagon. This form of humanitarian assistance has become a point of bureaucratic friction despite attempts by military commanders to work in close coordination with USAID and the PRTs.

U.S. Marine Corps (James A. Burks)

Marines conduct operation in Helmand Province, Afghanistan, April 2009

A fifth point of friction is the weakness of American instruments of power in the diplomatic and economic spheres. Despite a Presidential directive in 2005 making the Department of State the lead agency for stabilization and reconstruction, economic and security assistance amounts to only 5 percent of the Pentagon budget. The United States spends approximately $20 on defense for every $1 spent on Department of State and USAID programs combined. The last requested increase in defense budget equals the entire State-USAID budget. Moreover, the 8,000 Foreign Service Officers are simply inadequate to meet the requirements of 2 conflicts, 265 diplomatic and consular posts, and activities in over 120 countries. While Congress protects and expands defense funding, it barely supports the Foreign Service, which is roundly criticized for not solving problems that it is not adequately resourced to tackle.

The future promises more stability operations and humanitarian activities. U.S. participation in Iraq and Afghanistan will continue for some years to come. In short, the problem of failing and failed states will dominate international relations. While it is fair to believe that the Nation will be cautious of undertaking further commitments, it is easy to envision large-scale stability operations with or without conventional violence. Thus, the military role in humanitarian affairs will remain large in both conflict situations and natural disasters.

The United States must continue to build on recent progress in promoting stabilization and reconstruction activities. The Department of Defense has elevated stability operations as well as irregular warfare in doctrine and training. The Department of State has established an Office of the Coordinator for Reconstruction and Stabilization, which is supported by Secretary of Defense Robert Gates among others. USAID has also organized a military liaison office and, along with the Department of State, assigned senior advisers to combatant commands. The Departments of Defense and State, USAID, and U.S. Institute of Peace are working on *whole-of-government* and *whole-of-society* approaches to humanitarian problems. One promising initiative is the Consortium on Complex Operations, which is a virtual think tank for governmental agencies and other interested parties. Moreover, U.S. Africa Command and U.S. Southern Command function as interagency organizations in their areas of responsibility, a development that has brought praise as well as criticism. However, all of these organizational developments are still new and must be allowed to mature.

Despite some renewed interest, the U.S. military does not want to take the lead in stabilization and reconstruction activities. Although improving skills and programs for stability operations is important, nation-building is not a core military competency. It is an area for civilian leadership. In fact the last two Secretaries of Defense have been at the forefront in advocating substantially greater capabilities for stability operations in the Department of State and USAID. If the Nation fails to do this, then the military role in humanitarian operations will grow even larger—to the detriment of all concerned. Thus the Nation must consider ways to:

- improve interagency planning for complex contingencies
- dramatically increase the budget and manpower of the Department of State and USAID for stabilization and reconstruction activities, development assistance, and public diplomacy
- broaden congressional understanding of the need for a multilevel civilian response corps
- maintain current emphasis by the military on stability operations and irregular warfare
- institutionalize and codify the military response to natural and other humanitarian disasters
- disentangle the legislative authorities for humanitarian activities and stability operations
- refine U.S. actions and programs to prevent deadly conflict and state failure.

The Changing Nature of Maritime Conflict

Like other maritime forces around the world, the U.S. Navy is engaged in a major fleet reconstruction program. Over the next three decades, its acquisition plan calls for reaching a fleet of 313 ships and submarines, with some 70 percent intended for major combat operations and the balance for other missions. This program offers long-term planning stability. Seven major projects already are approaching either lead-ship stage or full production. Moreover, a new-generation CVN–21 super-carrier, the CVN–78 *Gerald R. Ford*, will go into production this year. The resulting fleet will have 11 aircraft carriers, 143 major surface combatants, 66 submarines, and 93 amphibious, support, and expeditionary ships. This acquisition plan could transform the Navy into a force best suited to cope with the new conditions of the 21st century.

There are two problems with the plans for this fleet expansion. The first is that, in numerical terms, the naval force has declined since the Cold War to less than half of its size in the 1980s. This decline is

alarming given the growing maritime capabilities of other nations such as China. Accordingly, the Chief of Naval Operations has warned that the present plan is insufficient and that the 313-ship Navy will not be adequate for missions in the coming years.[5]

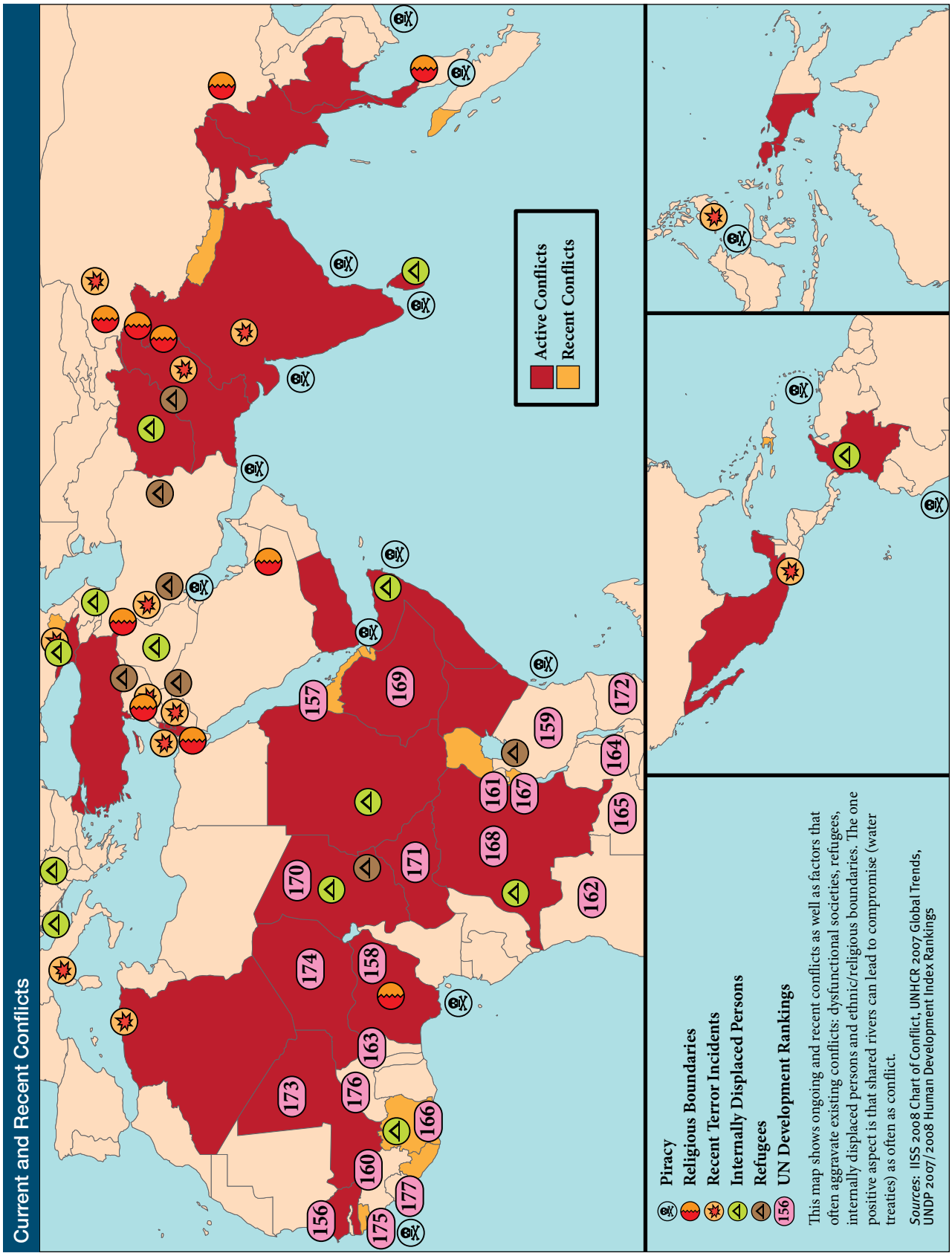
The second problem with the planned expansion is the general view that the Navy will not be able to meet its target of 313 ships. Meeting this target would require constructing about 10 ships each year from now to 2037 at an estimated cost of $25 billion,[6] which is unlikely in the present fiscal environment. The problem is aggravated by the high operational tempo resulting from the conflicts in Iraq and Afghanistan. This tempo has shortened the anticipated life of both ships and aircraft while reducing the propensity for Sailors to reenlist and maintain existing force levels. For example, many observers were startled when two advanced *Aegis* ships recently failed their inspections and were declared unfit for service. These ships had deteriorated more quickly than expected largely because of operational tempo. Moreover, with the rate of technological change occurring today, it is increasingly difficult to have incremental modernization. Instead, the Navy is forced to identify transformational leaps in platform specification as evidenced by the Littoral Combat Ship, the DDG–1000 *Zumwalt*-class destroyer, and the CG (X) next generation cruiser programs. These are inherently riskier and costlier to fix when things go wrong. For all these reasons, alternate fleet structures as low as 220 ships have been predicted, which would clearly aggravate the resources-commitments gap still further.

The issues of fleet size and funding confronting the United States are part of a trend affecting all the navies of the world. Individual platforms, sensors, and weapons are simply getting more expensive relative to available resources for naval procurement. The result in Europe and much of the Asia-Pacific region has been substantial downsizing of naval forces. Although the capabilities of remaining platforms are greater, overall coverage and flexibility suffer.

U.S. planners are torn between the demands of major combat and those of stabilization operations. Combat operations require high-intensity sea-control capabilities for deepwater antisubmarine warfare, antiair warfare, and ballistic missile defense with seabased nuclear deterrence. Such operations are designed for combat with traditional symmetrical peer competitors. By contrast, stabilization operations are aimed at asymmetrical threats. These operations demand capabilities required for expeditionary warfare such as projecting naval forces and supporting forces ashore. Stabilization also includes maritime domain awareness, small ship operations, and activities with coast guards. Finally, these operations are used for constructive naval engagement with other countries in areas such as surface ships and inclusive naval procedures. These types of operations are not cheap. Recent asymmetrical conflicts—such as the USS *Cole* incident in Aden, the ambush of a boarding party from the Royal Navy frigate HMS *Cornwall* by the Iranian Republican Guard, and the hit on the well-armed Israeli corvette *Hanit* by a C–802 missile fired by Hizballah forces in Lebanon—indicate the extent of the demands on maritime operations.

Balancing these demands against the requirements of hedging against a near-peer competitor is far from easy. *A Cooperative Strategy for 21st Century Seapower* is candid about the "tensions . . . between the requirements for continued peacetime engagement and maintaining proficiency in the critical skills necessary to fighting and winning in combat."[7] For example, while it is true that helicopters can deliver ordnance in a high-intensity war as well as humanitarian aid in a tsunami relief operation, it is also the case that a month spent learning Arabic is a month lost training for high-intensity operations. More specifically, the best ships for maritime security operations are often ocean and inshore patrol vessels, but these would be of limited utility in a conflict in the Taiwan Straits. Allocating scarce resources between competing sets of commitments is the most difficult conceptual issue facing naval planners.

In addition, the current focus on Iraq and Afghanistan aggravates planning. Priority is given to defense projects bearing on those conflicts and places others related to future contingencies on a back burner. This mindset affects the Navy and its allies in two ways. First, it jeopardizes or at least delays long-term projects that may be equally important as those projects associated with current operations. Second, it raises issues about the utility of naval power at a time when boots on the ground seem the main requirement. Despite an obvious shift in naval priorities from power *at* sea to power *from* the sea, the contribution that navies make remains both out of sight and out of mind. For example, in Great Britain over half the contingent deployed in Afghanistan was naval personnel, including marines, helicopter pilots, and medics. However, the Royal Navy got little credit because it operated more or less as army personnel. Some conclude that it might make sense to treat all naval personnel as such, a result of believing that navies do not matter as much


Current and Recent Conflicts
Active Conflicts
Recent Conflicts
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
Piracy
Religious Boundaries
Recent Terror Incidents
Internally Displaced Persons
Refugees
UN Development Rankings
This map shows ongoing and recent conflicts as well as factors that often aggravate existing conflicts: dysfunctional societies, refugees, internally displaced persons and ethnic/religious boundaries. The one positive aspect is that shared rivers can lead to compromise (water treaties) as often as conflict.
Sources: IISS 2008 Chart of Conflict, UNHCR 2007 Global Trends, UNDP 2007/2008 Human Development Index Rankings

as they did in the past. This attitude negatively affects the debate whenever an expensive naval project is presented to the media or the political establishment.

The importance of seapower for the global economy is growing. Globalization in fact rests on the container and modern shipping industry. Low and decreasing seaborne freight rates mean that the cost of shipping $700 television sets from China to Europe is no more than about $10 per set. This helps keep American and European costs of living and rates of inflation down, encourages China to industrialize, and makes industrial relocation possible from both Europe and North America to the Far East. Lower costs also prompt the diversification of production lines in an increasing number of countries. Seaborne commerce produces mutual dependence among members of the international community in industrial production and consumption. The world is seen as an increasingly interconnected nexus of partners with high degrees of mutual economic as well as political interdependence in which the world's seas play a vital part.

Nevertheless, the system is under threat. Today, globalization relies on a supply-chain philosophy of just enough and just in time, which increases vulnerability to disruption. This situation is compounded by low stocks of life essentials such as oil and food that many states retain. The all-round maritime development of countries in the Asia-Pacific region, especially China and India, suggests a sophisticated appreciation of the fact that the 21st century will prove the maritime century. There seems little doubt that by 2050 seapower will drive international events. But whose seapower will it be?

Solutions to these issues are likely to be sought in three ways. The first is making resources more cost-effective through better project management. This includes the establishment of a real partnership between the Navy and the defense industrial base that would prevent the kind of risk and blame-shifting characteristic of the Littoral Combat Ship while encouraging innovation such as the leasing by the Royal Navy of offshore patrol vessels from Vosper-Thorneycroft.

A second solution is making the best use of technology. While Iraq and Afghanistan indicate that superior technology is not the answer, it offers an important advantage. Networked naval forces can be dispersed and concentrated. Modularization provides design and operational flexibilities unheard of 20 years ago. Improved propulsion systems enable modern platforms to deliver more days at sea, allowing commanders to do more with less. But technological innovation presupposes an availability of manpower that many navies find difficult to achieve.

Finally, defense planners around the world must recognize that the range of risks and threats is wider

U.S. Marine Corps (Tyler W. Hill)

U.S. Marines investigate hole in earthen berm separating Iraq and Syria during Operation *Al Anbar Border Initiative* Phase II, north of Qaim, Iraq, to prevent smuggling between Syria and Iraq

than the resources available to even the most powerful individual nations. Furthermore, many risks and threats are challenges to all countries. This calls for the development of maritime partnerships, establishment of cooperation and coordination agreements, and recognition that operations may be best conducted through multilateral compromises on decisionmaking and standard operating procedures. The maritime consensus necessary to defend global trading must be seen as integral to operations rather than as unimportant peacetime activities.

The changing character of maritime conflict points to the importance of seapower in the future. Nonetheless, financial, industrial, and other trends may well impede the kind of ambitious fleet reconstruction plans discussed above. The Nation will be hard-pressed to balance the demands of the challenges maritime forces must address together with a greater reliance on international partnerships.

Airpower in a Nutshell

America has undergone a nonlinear growth in airpower over the past three decades. Its ability to contribute to combat operations at the high end of the conflict spectrum is exponentially greater because of the convergence of low observability or stealth, freedom to attack fixed and moving targets with high accuracy from relatively safe standoff ranges irrespective of weather or time of day, and expanded battlespace awareness made possible by developments in command, control, communications, and computers and in information, surveillance, and reconnaissance. As a result of such improvements, airpower has acquired capabilities to set the conditions of victory in joint warfare against organized opponents that field conventional forces.

Four important rules must be stipulated to clarify the meaning of the term *airpower*. First, airpower is a shorthand way of saying air, space, and cyberspace power. Second, airpower does not refer only to combat aircraft or the combined assets of an air arm. Rather, in its totality, airpower is a complex amalgam consisting of equipment and less tangible ingredients bearing on effectiveness, such as employment doctrine, concepts of operations, training, tactics, proficiency, leadership quality, adaptability, and practical experience. These soft factors vary among air arms around the world operating superficially similar kinds or even identical types of equipment. Yet they are given little heed in typical air capability analysis. Only through their combined effects can the success of raw hardware

▼ *Continued on p. 159*

Changing and Enduring Aspects of Conflict

Conventional wisdom holds that transformation, however defined, is necessary to compete in the current environment. Although that may be true, change that is strategically or operationally misinformed can lead to irrelevance or worse. To avoid that outcome, those responsible for the structure and implementation of any military or defense transformation would do well to arrive at a clear understanding of which aspects of warfare are new and changing as well as which are not. The task is not an easy one because a number of assumptions about contemporary warfare have been broadly accepted without the benefit of critical examination.

One assumption is that the wars of the 21st century will differ greatly from those of the past, in that future wars will be asymmetrical whereas previous conflicts were purportedly symmetrical. A second assumption is that the key to military success is knowledge of the enemy and greater situational awareness. Another assumption is that military transformation can deliver success irrespective of the political context in which the conflict occurs. But asymmetry is the rule rather than the exception in war. Moreover, *asymmetry* itself is not a particularly useful term since knowledge is dependent on the time available to obtain it, and real-world time constraints mean militaries must be able to function in an atmosphere of uncertainty. The political context plays a decisive role in whether transformed militaries can deliver victory.

The term *asymmetric* has become enormously popular in defense literature. Its current usage falls into two categories. The first suggests that asymmetrical warfare is a newer and cleverer way of fighting, and thus the exception rather than the rule. The second category uses the term to describe any conflict that appears to differ from conventional or traditional ways of fighting. Examples of asymmetrical conflicts include the war on terror or any guerrilla war, insurgency, irregular, or small war, even stabilization and reconstruction operations.

Both usages of asymmetric are flawed and misleading. The first presumes that belligerents have been and in most cases are symmetrical. Yet this presumption is not supported by historical analysis. In fact, in reviewing the historical record, the opposite is true. Symmetry between or among opposing forces is less common than asymmetry. Every enemy is asymmetric relative to its opponent in important ways. Likewise, every conflict is asymmetric. Asymmetry results from the interplay of political, cultural, economic, and geographic factors that cause communities to evolve differently. It is unavoidable and exists even when protagonists are not consciously using it to their advantage. It is also the state of nature—the rule rather than the exception.

The second usage of asymmetric requires accepting that irregular wars are less frequent than conventional conflicts. However, as Max Boot points out in *Savage Wars of Peace*, America

has fought more so-called small or irregular wars in its history than conventional ones. Moreover, the Nation has forces designed for such wars and has developed them over decades. One can argue over whether there are enough forces for this purpose or whether they are properly deployed, but the point remains that asymmetrical conflicts are natural events, and fighting them has hardly posed an unfamiliar challenge for the United States.

Asymmetries are common in warfare and fall into two categories: kind or degree. Disparities in numbers, training, and leadership are asymmetries of degree. Basic differences in strategy, weapons, or sources of strength—Sparta, for instance, was clearly a land power and Athens a naval power—are examples of asymmetries of kind. Distinguishing between asymmetries demystifies the term by providing a framework for understanding them. This categorization underscores the point that asymmetric wars are the rule and the types of asymmetry may vary over time.

Because asymmetry is the rule, describing enemies or types of conflicts as asymmetrical adds little to strategic analyses. In confronting asymmetrical adversaries, those adversaries are also, by definition, facing asymmetrical adversaries. Thus, it is important to grasp the particulars. Simply put, how does the adversary differ from you and how should you alter your thinking to meet the challenge? And in a counterinsurgency, the adversary should be called *insurgents*. Second- and third-order questions, such as political objectives, weapons, and others, should be brought to the forefront.

Asymmetry is a natural state of affairs while symmetry is the exception to the rule. Military operations involve multiple asymmetries of both kind and degree, and it is impossible to predict which particular difference or combination of differences will prove decisive. Consequently, the term *asymmetric* offers little value. It does not matter whether the next adversary or conflict is asymmetric. Rather, what matters are the second- and third-order questions that, in turn, ought to reveal how to maximize strengths and minimize weaknesses of a military force.

A debate has raged for over a decade over whether information-age technology will result in a revolution in military affairs. At the risk of oversimplification, the argument is focused on how much confidence should be placed in technology versus human judgment. Certainly, knowledge is more desirable than ignorance, particularly in war. In addition, new technology is making more information, if not knowledge, available to operating forces. But knowledge is not an independent variable, separate from the actors, objectives, and actions in a given contest. When information is regarded as a dependent variable, the argument for making it a fundamental premise, as is the case for U.S. defense transformation, weakens considerably. This premise is based on the flawed assumption that decisions can usually be delayed until sufficient knowledge becomes available. While that may be true in some cases, it is by no means universal. It is certainly not true in a war where political circumstances and other factors may force the timing of decisions.

Decisions on implementing the surge depended to some extent on information gained from strategic assessments from across Iraq. However, timing the surge was driven more by political concerns, both domestic and international. While knowledge gained by means of the assessment was the key variable to decisionmaking, it was dependent on timing. The required knowledge had to be gained within a certain timeframe. Knowledge not gained during that period was simply not available to decisionmakers at the time of the decision. Accordingly, decisions were made based on the best information available at the time.

Knowledge is largely a function of the time required to gain it. It is not infinite, and therefore decisions must be made before all the information is available. This implies that many decisions entail some degree of uncertainty and is particularly true in war where both sides are actively engaged in denying information to each other. Acquiring knowledge in war is a continuous, often violent activity, and requires intrusion into many different domains. Furthermore, it is likely that legal and ethical constraints will limit such intrusions, despite advances in enabling technologies. Accordingly, leaders will not have the luxury of making decisions with complete knowledge. Rather, they will have to operate in an environment characterized by some degree of uncertainty. Thus, the development of the ability to make decisions in ambiguous environments must remain an integral part of any transformation process.

It is generally accepted that military transformation is critical to strategic success. However, this judgment assumes that transformation will proceed in the right direction and that political context—the constel-

lation of power relationships that exists among key players whether states or nonstates—is unimportant. Unfortunately, history demonstrates that even a transformed military is not enough to overcome bad strategic decisions. To be sure, all parties involved in an armed conflict will make mistakes. Misperceptions and misjudgments occur more often than thought. Although many mistakes can be corrected during the course of a war, one of the most difficult to overcome is the failure to appreciate the political context surrounding a conflict.

The rebuilding of the German *Wehrmacht* between World War I and II has long been touted as a textbook case of successful transformation. It involved creating a new air arm, an expanded navy, and notably land forces organized and trained for mobile warfare. However, that machine could not compensate for a flawed strategy, which failed to appreciate the political context, and particularly the position of the European powers and, ultimately, the United States.

The British, French, and Soviet militaries also transformed during the 1920s and 1930s, each shaped by political and cultural influences that made them unique. The British placed emphasis on preserving their maritime power, the French invested in static defenses, and the Russians moved toward reliance on tanks and heavy artillery. Nonetheless, strategic and political decisions made within the existing political context set the course for success or failure.

A cautionary note is found in ongoing defense transformation—established on the principles of speed, precision, knowledge, and jointness—that may yield a truly exquisite military machine. However, that machine will not necessarily be able to overcome strategic mistakes and generate success. In other words, transformation of the U.S. military cannot replace strategy.

Contemporary defense policymakers must challenge the conventional wisdom regarding war. A fixation on irregular or asymmetric warfare must not obscure either the enduring or changing character of warfare. At a minimum, we must avoid oversimplified labels such as asymmetric, which tell us little about the similarities and differences between adversaries. Similarly, the talk about transformation, change, and reform must not obscure fundamental aspects of warfare, not least the crucial issue of strategy.

Continued from p. 157

in producing desired combat results be determined.

Third, airpower is inseparable from battlespace information and intelligence. Thanks to the dramatic growth in the lethality and effectiveness of American airpower in recent years, it has become fashionable to speak increasingly not of numbers of sorties per target killed, but rather of number of kills per combat sortie. Nevertheless, airpower involves more than merely attacking and destroying enemy targets. It involves knowing what to hit and where to find it. On one hand, it is almost a cliché to say that airpower can kill anything it can see, identify, and engage. On the other hand, it is less widely appreciated that it can kill only what it can see, identify, and engage. Airpower and intelligence are opposite sides of the same coin. If the latter fails, the former is likely to fail as well. For that reason, accurate, timely, and comprehensive information on enemy assets is not only a crucial enabler but also an indispensable precondition for success.

Fourth, properly understood, airpower is not the province of one Service alone. It embraces not just aircraft and other combat capabilities of the Air Force, but also the aviation assets of the Navy and Marine Corps, along with Army attack helicopters and surveillance aircraft. Although the Air Force is the only Service that can provide full-spectrum airpower in all mission areas, recognition and acceptance of the fact that air warfare is an activity in which all four Services have important roles to play is a necessary first step toward a proper understanding and assimilation of the changed role of airpower in modern warfare.

As evidenced by successful U.S. combat operations against conventionally equipped forces since the Gulf War of 1991, airpower has become a strategic force. The effectiveness of earlier air offensives was limited on the operational and strategic levels because it simply took too many aircraft and too high a loss rate to achieve too few results. Today, airpower can make its presence felt quickly. Its superior power can affect an enemy from the outset of battle and the subsequent course of a joint campaign. Of course, all military force elements have gained the opportunity in principle to achieve such outcomes with new technologies and concepts of operations. American airpower is distinctive in that it has pulled well ahead of surface forces, both land and maritime, in its capacity relative to our enemies. This progress is attributable not only to stealth, precision, and information dominance, but also to the abiding characteristics of speed, range, and flexibility. Current and emerging air employment options offer theater commanders the possibility of engaging and

neutralizing enemy forces from standoff ranges with virtual impunity, thereby reducing the threat to U.S. troops who otherwise might have to directly engage the enemy and risk sustaining high casualties.

It is fundamentally wrong to assume that airpower can win conflicts without ground and naval involvement. Yet although success in major wars will continue to require integrated participation by all forces, current air warfare capabilities promise to allow joint force commanders to conduct operations more quickly and efficiently than ever before. One can argue that air assets of all the Services have the potential to seriously degrade fielded enemy forces of all kinds, thus enabling other force elements to achieve objectives in combat with a minimum of pain, effort, and cost.

Perhaps the greatest payoff in transforming American airpower since the mid-1980s has been the increase in situational awareness of friendly forces while denying that capacity to the enemy. That information advantage entails breakthroughs in targeting capabilities and creates a powerful force multiplier in concert with high-accuracy attack systems. Indeed, the area of sensor fusion is arguably more pivotal than any other technology development in the air warfare arena because it is the precondition for extracting the fullest value from new imposition options.

A second major payoff afforded by recent improvements in airpower is the potential that it holds for situational control from the outset of combat, such that the first blow can often predetermine the subsequent course and outcome of a major war. Airpower, at least in principle, permits the attainment of strategic objectives through simultaneous rather than sequential means of plodding from tactical through operational to strategic levels with an exorbitant cost in lives and national treasure. This differs from what airpower classicists such as Giulio Douhet and his followers envisaged. America today has the ability with airpower to cause early destruction or neutralization of enemy war-making potential. However, critical targets are no longer leadership, infrastructure, economic potential, and other objectives listed by the proponents of strategic bombardment. Instead, targets embrace key assets that enable enemy forces in the field to organize their actions. With the recent advent of offensive cyberspace warfare, the initial attack may even be surreptitious.

Finally, the transformation of airpower has enabled U.S. forces to maintain constant pressure on the enemy from a safe distance, increase the number of kills per sortie, selectively target with near-zero unintended damage, substantially reduce reaction time, and cause a complete shutdown of the ability of the enemy to control its forces. While these and other payoffs are not all-purpose substitutes for a balanced force able to operate effectively in all mediums of warfare, they allow joint force commanders to rely on airpower to conduct deep battle for the greater extent of a joint campaign. This foreshadows an end to the need for friendly armies to plan on conducting early close-maneuver ground combat as standard practice.

In addition to its effective performance in higher intensity combat involvements since 1991, the airpower of all the Services has been increasingly critical for counterinsurgency operations in Iraq and Afghanistan. Although kinetic capabilities in irregular conflicts have proven less applicable than conventional warfare such as Operation *Desert Storm* or the 3-week high intensity fighting that ended the Iraqi regime, the achievements by coalition assets in Southwest Asia have disabused those people of the notion that airpower in counterinsurgencies is rarely presented with lucrative targets. On the contrary, experience bears out the proposition in the Air Force counterinsurgency manual that airpower can be effectively leveraged in irregular warfare, notwithstanding the fact that such conflicts are overwhelmingly ground-centric in nature.

Airpower has several advantages in counterinsurgency warfare. First, it offers mobility and air dominance without which nothing else is possible. Moreover, its unique advantages in speed and range enable it to span large areas with a rapid-response capability while allowing coalition and indigenous ground forces to focus their efforts wherever needed. In addition, with theater-wide situational awareness, the air and space assets of joint force commanders can monitor ground operations for emerging threats in one region, bring firepower to bear in another, and provide critical border security in yet another. As for other advantages, air and space assets can disrupt insurgent's freedom of movement and ability to mass forces, and also prevent an irregular conflict from spreading to conventional fighting. They also can geolocate, fix, and target insurgents and terrorists as well as provide prompt on-call medical evacuation of wounded to rear-area facilities. In addition, airpower affords minimal intrusiveness and makes a small footprint in other nations. Much activity of airpower occurs outside the range of combatants on the ground. Yet it proves increasingly pivotal in shaping the outcome of joint counterinsurgency operations.

Perhaps the most innovative use of airpower in counterinsurgencies involves nontraditional intelligence, surveillance, and reconnaissance (NTISR),

which currently is being performed by coalition fighters over Iraq and Afghanistan. NTISR assets are combat aircraft equipped with electro-optical and infrared sensors in their onboard targeting pods, the main purpose of which is not intelligence collection but strike support. Such aircraft are being increasingly and routinely used to fill the gaps in existing ISR coverage. Their targeting pods allow fighter pilots to provide real-time situational updates to friendly troops in contact with enemy forces, often in conjunction with Predator unmanned surveillance aircraft operations. This development has greatly improved the ability of coalition ground forces to locate and engage nearby insurgents.

Despite airpower enhancements in developed countries, including potential competitors such as Russia and China, America remains indisputably on the cutting-edge of technological innovations in the field of military aviation. Only the United States possesses high-end stealth capabilities such as found in B–2 and F–22 aircraft. Moreover, there is a substantial gap between U.S. aerial combat assets and those of other nations in size, technical capability, extent of reach, sustainability, and breadth of operational and support services. Among the air forces of the world, only the United States maintains full-spectrum land- and seabased strike assets, intercontinental-range bombers, and supporting tanker, airlift, and space surveillance and targeting adjuncts, which offer the ability to engage in global power projection and all-weather precision attack. This description in no way demeans the air arms of allied and friendly nations around the world. Rather, it merely acknowledges the advantages that American airpower offers theater commanders. Most countries are likely to use their air arms only as partners in a U.S.-led coalition. With the exception of the Israeli use but inconclusive effect of airpower against Hizballah in 2006, only America has demonstrated the capacity to organize and conduct a full-scale air campaign in support of joint and combined operations. **gsa**

NOTES

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