

# Influencing Events Ashore

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The thrust of this study is to assess how globalization and its impact are likely to affect national security strategy and, in turn, what this will mean for the naval forces of the United States. The simple answer is that U.S. naval forces will be powerfully affected by globalization and the phenomena associated with it. But, as with most answers to difficult and complex questions, some of the devil will rest in the detail. And more will rest in how Congress responds to its constitutional mandate to “provide and maintain a Navy” and how the President, as Commander in Chief, carries out those responsibilities. Three observations and findings are particularly relevant to this line of inquiry and the impact of globalization on naval forces.

First, globalization is having and will have profound effects on states, regions, and people. For example, as China joins the World Trade Organization, its society, culture, and political systems will be buffeted and battered simply by virtue of having to deal with rules, regulations, and agreements largely foreign to its historical experiences, but standard and essential to the way that the world conducts its commerce and business. However, predicting specific consequences and impacts of the force and power of globalization will not follow automatically or easily.

Second, naval forces (along with everyone else) will have to deal with two revolutions that are both symptoms and causes of globalization and its associated phenomena. These are the revolutions in knowledge and in people. About the first, perhaps well before the 21st century ends, more new knowledge will be invented and created than has existed for all of previous history. In essence, knowledge will become extraordinarily inexpensive, provided one knows where to look. The great enabler of this first revolution is the second. It has been the empowerment and indeed the liberation of unprecedented numbers of people that form this revolution and a principal driving force behind globalization. Exploiting and mining the knowledge revolution must and will remain dependent on people and their capacity to act.

Third, globalization, along with other realities of international politics, particularly the absence of a comparable naval threat, is linking U.S. naval forces even more intimately with events ashore and the traditional role of influencing and affecting those events. Thus, U.S. naval forces will be faced with a double challenge: shaping this capacity and potential to tasks that are likely to be highly political, psychological,

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and perceptual in nature, *while* retaining sufficient warfighting means both to be credible and to be prepared for whatever circumstances necessitate the use of force in anger. Globalization will demand changes in the roles, missions, and operations of naval forces. The future measure of the effectiveness of U.S. naval forces will be how these challenges are met in responding to globalization and the other realities and uncertainties of the new century.

## Changes Ahead for the Navy and the Nation

Few people taking part in this study would disagree with the proposition that the forces and factors that are part of the phenomena of globalization will have a profound impact on the future. Nor would many contradict the view that even 30 years from now the world will be a very different place. This future may or may not be one of wider peace and prosperity. However, what can be done now, today, that will make this transition safer and more secure for the United States and its allies? The Navy provides two examples.

During the late 1950s and early 1960s, the Polaris fleet ballistic missile program went into overdrive to deploy a ship as soon as possible. The first patrol began in December 1961, and Polaris' successor, Trident, remains on station today. A small, relatively obscure annex to the Polaris program was called Project Michelson, in honor of Albert Michelson, the Naval Academy graduate and Nobel Prize winner who first measured the speed of light in 1886. Through Project Michelson, the academic community was challenged and commissioned to examine the fundamental questions of war and peace in the Nuclear Age. Because of this project, a great deal of the intellectual work that went into defining and better understanding the meaning of war and peace and defense and deterrence in the Nuclear Age was conducted. Given the effect of the knowledge revolution, it is possible that we are entering an era that in some ways will be as profoundly different as were the worlds before and after these weapons of mass destruction (WMD) were first created. Perhaps globalization will necessitate a new Project Michelson in order to understand better this new and evolving world and the effects of globalization.

Second, when Admiral Elmo Zumwalt became Chief of Naval Operations in 1970, he initiated Project 60. That project, meant to be completed in 60 days, was to be the design and blueprint for a new Navy. While it took nearly an additional month to finish, the blueprint was created that reshaped the Navy, moving it from a largely World War II posture with over 900 ships ultimately to a modern, combat-ready force about half that size. If the impact of globalization turns out to be as profound as some expect, then a modern-day Project X may be needed. A hybrid of Projects Michelson and 60 could be one possibility.

Over the next 30 years, the effects of globalization on naval forces will be to expand the geostrategic and political-military requirement to influence events ashore. This requirement will extend well beyond seeking and winning command of the seas by sending enemy fleets to the bottom, and beyond projecting naval power on the littorals and nearby oceans in wartime. The peacetime use of naval force will matter more than simply keeping the ability to place ordnance on target in determining how

this future evolves. Future naval operations will encompass conflict, crisis, and peace, and extend across the political-military spectrum from war to defense diplomacy and routine overseas presence. Responses will range from new forms of deterrence, prevention, and containment of dangers and potential threats to building political-military relationships and inroads in selected littoral states and with a broader array of governments and nongovernmental organizations.

This enhanced link with the shore will create a great tension. Naval forces, of course, will have to remain fully prepared in their core competence of fighting and winning the Nation's wars, as they have been since the Continental Navy and Marine Corps were created more than 200 years ago. But the spectrum of naval missions is broadening as new political-military operations gain greater frequency—for example, military operations other than war (MOOTW); law enforcement for combating terrorism, crime, and drug trafficking; humanitarian interventions such as that in Kosovo; peace operations. Even as this spectrum increases in width, traditional concerns are narrowing; for example, deterrence is becoming more selective and focused, and prevention of dangers, crises, and instability is being aimed at particular groups of state and nonstate actors. Iraq and North Korea fall into the first category; terrorists such as Osama bin Laden, into the latter.

The simultaneous broadening and focusing of certain tasks, coupled with the inherent tension between the demands of maintaining core competencies while conducting newer missions, have immediate consequences. Absent a major military threat, and in spite of the countervailing technological potential, the tensions between war fighting and influencing events ashore are likely to be made more pronounced by globalization. Owing to the new century's dynamics, wars likely will be fought and military force applied in different contexts and settings. The (unprecedented) intervention of the North Atlantic Treaty Organization (NATO) in Yugoslavia in 1999 is one such example. As national policies respond, naval forces will have to retain an inherent flexibility in concept and structure to accommodate the political and strategic demands. Regardless of whether military operations are unilateral, bilateral, or multilateral, naval forces will have to be prepared to respond to each challenge, perhaps with little warning time to prepare and rehearse.

As the strategic mission of affecting and influencing events ashore grows in importance, sailors and marines will need a bigger tool kit that will enable them to understand their roles and responsibilities. Seeking influence ashore will require naval forces to closely coordinate with other military services and agencies of government with national security responsibilities. The tools will extend beyond the familiar weapons of war (for example, satellites, bullets, bayonets) to include less familiar civilian tools. These include rendering humanitarian aid and assistance, training and educating foreign militaries, exploiting cyberspace and other commercial technologies, and building influence by promoting understanding and knowledge among countries and societies having the common bond of the sea. Fostering an effective synergy among these tools (and across services and departments) will require an extraordinary amount of training and education. In addition, understanding how to influence events ashore will require development of an effects-based and nodal analysis

targeting methodology that focuses on political perceptions and will without necessarily having to resort to the traditional threat or use of force.

Even as naval forces become more adept at performing these new missions, they will have to master the demanding agenda of continuing to transform themselves internally. Contributing to this enterprise are the knowledge revolution and the people revolution, both of which are intensified by globalization. Whereas the former is greatly enhancing human intellectual capacities, the latter is empowering individuals and altering American society. Together, the two revolutions create opportunities and challenges for naval forces and their senior leadership to exploit. In order to deal with these concurrent revolutions, changes to doctrine, organization, training, and equipment will be mandatory. As the Navy adapts to changes ahead, one overarching challenge will be recruiting and retaining skilled personnel. Training and educating this cadre will be made more demanding by the changing demographic and vocational makeup of American society. Currently, the Department of Defense (DOD) is focusing on quality-of-life issues. While attending to them is necessary, this will be far from sufficient in confronting the demographic and vocational realities ahead. Future military systems will certainly be more technologically sophisticated, and every sign suggests that future military tasks will be broader. These realities will pose fundamental challenges in recruiting and retaining the necessary numbers of able people to man the units that will form tomorrow's naval forces.

In addition to maintaining extremely able people, naval forces will have to continue modernizing ships, aircraft, sensors, information systems, weapons, munitions, and other contributors to combat capability. While there may be no global military threat to U.S. interests for some time to come, the need to prepare for advanced military technology, information systems, and asymmetrical strategies capable of deployment against U.S. forces will be a critical priority. While tomorrow's naval forces will be performing new missions, including substantial transformation with a view to enhancing their own potential, these forces will have to retain a proficient fighting capability for the wars of tomorrow, and against the enemies of tomorrow, who doubtless will be better armed than those of today.

How U.S. naval forces are organized, provided for, trained, equipped, and used in a globalizing world will require fresh ideas, new perspectives, and innovative policies. These functions are the legal responsibility of DOD civilian and military leaders. Innovation is one of the intellectual scantlings on which the future course of the Department of the Navy is set. It is clearly the consensus of past and present naval leaders that the ability to embrace change is essential to dealing effectively with the changing security environment. The overwhelming challenge will be to understand what the new century will demand for and from national security strategy, and then to display the intellect and courage needed to examine alternative courses of action, including some that may seem radical or unconventional.

The findings, observations, and recommendations of this chapter are directed to the Secretary of the Navy and ordered according to the responsibilities for organizing, training, equipping, and providing for the forces as enumerated in Title 10 of the U.S. Code. The results are intended to help inform the debate about the Navy's future and to assist decisionmakers in determining future courses of action.

## The Legacy of the Past

It can be argued that it is the inherent ability of naval forces to strategically and politically affect and influence events ashore that will matter most in a future that extends out perhaps as far as 2030 and in which globalization continues to exert great influence. Such an argument is justified by an understanding of how the role of naval forces has evolved since the first iron men went to sea in wooden ships and how the future naval forces of the United States are likely to be designed, manned, and employed. In practical terms for naval leadership, the main challenge will be in organizing, training, equipping, and providing for those forces in a future that will be decidedly different from that of today's setting. And this will of course require an understanding both of what is different about the impact of globalization and what remains valid from the lessons of the past.

### *A Changed Navy Role: Political Influence Born of Strategic Reach*

For centuries, the principal purpose of naval forces was popularly perceived as resting in the ability of great men-of-war, called capital ships, to win command of the seas and oceans. Alfred Thayer Mahan, the godfather of sea power advocates, concluded on economic grounds that, in order to sustain growth, modern states would need access to colonies both for resources and for larger markets. In gaining access to, and control of, these colonies, states would come into conflict with other states embarked on similar missions. Navies would be needed to seize and defend colonies and foreign bases to ensure access and control and to destroy rival navies bent on doing the same. In this maritime competition, as envisaged by Mahan, great, decisive sea battles would be fought between capital ships to win command of the seas and control of the wide ocean commons.

Lesser navies, measured in the currency of those distant days, possessed fewer or inferior capital ships. Therefore, these weaker navies had no alternative but to attempt to deny command and control of the sea, to fight limited actions in which surprise or some other tactic could compensate for inherent weakness in capital ships and therefore in collective naval power, to concentrate on destroying commerce to impose a heavy economic price on hegemonic enterprise, or to serve a coastal defense role. But, as will be argued, the broader strategic and political utility of naval forces lay in the ability to affect and influence events ashore. Sinking enemy fleets and conducting combat operations at sea would ultimately prove relevant and successful only when those actions led to achieving the policy objectives of the war or conflict.

Technology encouraged and intensified this strategic relationship between naval forces and political objectives ashore. Modern air power and aircraft, electronic systems (for example, radio, radar), and the submarine redefined the meaning of naval strategy and tactics, and even that of the capital ship. Aviation was the classic example of extending the strategic reach of naval forces beyond the range of naval guns and therefore influencing events ashore from a greater distance. The Japanese believed that the surprise air attack against Pearl Harbor in 1941, while sending much of the Pacific fleet (temporarily) to the bottom, would shock the United States into passivity and inaction, allowing Japan freedom to expand its Greater East Asian Co-

Prosperity Sphere. Indeed, they were quite wrong. This event provoked just the opposite reaction, and the effects and influence were to catalyze the United States into declaring war and ultimately forcing Japan to accept unconditional surrender. In the aftermath of World War II, nuclear weapons, nuclear power, and intercontinental missiles would produce another revolution in politics and strategy that had profound implications for military and naval forces and that would reinforce the central importance of naval forces in affecting and influencing events ashore.

### ***More from the Past: A Primer on Geopolitics and Naval Forces***

From the days of Alfred the Great and the birth of the Royal Navy until today, why had the strategic, political, military, and operational value and virtue of naval forces inherently rested in their ability to affect and influence events ashore even though winning command of the seas was widely perceived as the core purpose? Why was the reality of naval operations more complex than the popular mythology? The reasons, relating to geography and society, are so obvious that they are often overlooked. Society is shore-based. The seas and oceans provide access to, and transport of, resources and peoples. The oceans are the broad commons on which the bulk of commerce flows. But the seas and oceans are transitory, in that they may be used but can never be permanently occupied. They are not the places and regions where people live, society functions, and political decisions are made. That is on land. Hence, naval forces are of strategic and political value only when their use has effect and influence on what happens ashore. If sinking enemy fleets is relevant to that purpose, then naval forces provide strategic value. A historical example is the destruction of Phillip II's great armada in 1588 by a combination of English "seadogs" and devastating Channel storms, saving England from invasion and possible occupation by Spain.

Naval forces can achieve effect and influence in various ways. Mahan, among many naval strategists, saw the threat of a direct attack to destroy a state's navy and its other means of defense, to impose an economic blockade, or to launch an invasion as the basis for naval power and strategy. The corollary was the notion of the superior fleet in being, with the implicit and potential power to bombard, invade, and inflict substantial damage on an adversary, thereby deterring or preventing specific actions by that adversary.

Still, naval commanders relished the prospect of scuttling an enemy fleet whether at sea or at anchor. Before the Battle of Copenhagen, Lord Nelson told his "band of brothers," "No captain can do wrong if he brings his ship alongside that of the enemy." Yet, when Nelson finally swept the combined Franco-Spanish fleet from the seas at the Battle of Trafalgar on October 21, 1805, Napoleon still fought on for another decade until he finally met defeat at the great land battle of Waterloo. The seas may have belonged to England, but it was the European continent on which victory or defeat would be determined.

Despite the attraction of commanding the seas, in fact, the seas were and are generally uncommanded. One side could use the seas if it avoided direct confrontation with its adversary and if time was not an important factor. The question to be answered is, "If command, then for what?" The "for what" is often forgotten. Yet it re-

lates to influencing events ashore and projecting or applying naval power and force for political purposes of one kind or another. Interestingly, in its earliest days, because it possessed no true capital ships, the Navy limited its wartime roles to harassing enemy commerce and defending the coastlines (along with Army coastal artillery defense forces).

Mahan and Halford Mackinder collided over whether the great ocean commons or the heartland of Eurasia was the strategic center of greater gravity. Mackinder argued that whoever controlled the heartland of Eurasia would control the world. This was a land-centric, geopolitical formulation for strategy. The two competing strategic theories found homes and followers, and eventually there were attempts to put each into practice. The great sea battles and naval actions of World War I (despite the deep frustration of the Royal Navy in failing to sink the High Seas Fleet at Jutland in 1916) and of World War II were events that seemed to shift the argument in Mahan's favor. However, it was nuclear weapons that would dominate the strategic calculus of the second half of the last century, certainly for the United States and the Europe-centered world.

Nuclear and thermonuclear weapons transformed the strategic calculus for a simple reason. Their destructive power threatened the existence of society at large. A thermonuclear war between the Soviet Union and the United States could conceivably and very likely have destroyed both. For the first time in history, the prospect was real that there would be no distinction between winners and losers in a war. Avoidance of war had to be made the strategic priority. Deterrence was the foundation for strategy, even though the balances between offensive and defensive systems and between nuclear and conventional forces were hotly debated.

Of the consequences of the strategic nuclear revolution, two are relevant. First, the Cold War and the long nuclear standoff between the superpowers and their allies reaffirmed what mattered most. Deterrence required that the targets for effect and influence were political and resided in the various leaderships. The ambitions and intentions of the Soviet leaders in the Kremlin were to be contained. Allies and the American public became concerned, and occasionally frightened, if the Soviets seemed to be gaining or winning some advantage. Of course there was no quantitative measure of knowing with certainty what actually deterred and what did not. It took years to arrive at a state of mutual deterrence that was acceptable to both sides and that facilitated stability in the superpower relationships. Second, throughout this strategic stalemate, and perhaps because of it, the goal of commanding the seas became increasingly irrelevant, at least in actual practice.

During the Cold War, from Korea in 1950 through Vietnam two decades later, the October 1973 Middle East Crisis, the Yom Kippur War, and Operations *Desert Shield* and *Desert Storm* in 1990 and 1991, the fact was that the United States and its allies controlled (or commanded) the seas all of the time. But control did not guarantee success. In those conflicts, and despite its naval dominance, the United States won some and lost others. However, strategically, the theories of neither Mahan nor Mackinder were substantiated. Strategic, political, and operational considerations other than the importance of the oceans or the heartland, including limits on the use of force and the risk of nuclear escalation, produced the particular outcomes in Korea

and Vietnam. Neither argument won. And, especially now, when there is no navy or naval force even on the distant horizon that could challenge that of the United States, a framework beyond that of Mahan and Mackinder is needed.

## A Strategic Assessment for the Era of Globalization

Globalization might have little impact on U.S. naval forces if it were taking place only in the United States, Europe, and other continental land masses. But that is not the case. Indeed, globalization's dynamics are especially vigorous in regions dominated by oceans, islands, and littoral urban areas: Asia, the Mediterranean, the Greater Middle East and Persian Gulf, the Caribbean, and Latin America. The politics, economics, and security affairs of most of these regions are being transformed by globalization. Of special significance is that many of these are regions where U.S. naval forces operate and play a leading role in carrying out U.S. national security policy and defense strategy. The strategic challenge is twofold: adapting U.S. naval forces to new missions being created by globalization, *and using these forces to help guide globalization in ways that serve U.S. interests and goals.*

In these and other regions, key features of globalization are noteworthy because they create a framework for thinking about the potential contributions of U.S. naval forces. Globalization

- Is a relentless and mainly inexorable force largely driven by the knowledge revolution and the people revolution.
- Is likely to have profound effects on virtually every state and society.
- Is uneven and uncertain in impact, and difficult to predict.
- Creates forces of both integration and disintegration.
- Expands strategic reach in both breadth and scope.
- Blurs and bypasses political, economic, legal, and cultural boundaries.
- Creates new security challenges that are horizontal in nature, cutting across many boundaries, and challenges structured international institutions, national governments, and other bodies for vertical solutions.

What should be the basis for an assessment of the role of naval forces in an era of globalization? As much as any symbol of globalization, the ubiquitous Golden Arches of McDonald's provide a starting point for an alternative strategic construct. That the staples of the American diet—cheeseburgers and french fries—are becoming parts of the global diet is no longer a surprise. A similar ubiquity cuts across the commercial world, providing American products and culture extraordinary, and not always welcomed, access around the world. Globalization is transforming international, regional, and local economies. Ownership, access, and the flow of business, commerce, and finance have been redefined in this new, dynamic global economy.

The realities of the global economy must be assimilated as part of the new security environment. For nearly a century after Mahan, economic dependence on the seas and oceans for trade and commerce was absolute. Over 95 percent of all trade

and overseas commerce was by sea, for the simple reason that other forms of transportation were too costly and uneconomical. This situation became one of the prime contributors to the argument that naval forces should be used to protect sea-lanes from interruption and otherwise help promote economic stability. But the effects of globalization have transformed the relevant economic factors of the past. In gross tonnage and total volume, sea-borne trade is still dominant. Yet in terms of dollars and other assets that express wealth, today's financial transactions flow through electronic networks and the ether of the atmosphere, whether by landlines or satellites. In terms of commercial wealth and dollar value, cyberspace has eclipsed Mahan's ocean commons. It is unclear how cyberspace can be protected by military forces in the manner that navies once stood astride ocean sea-lanes, keeping safe the oil, goods, and food that sailed from state to state and from continent to continent.

Another consequence is that the equation for access is changing. Ensuring access to economic resources has always been a significant rationale for military forces, especially naval power. There has been an enduring need for access—to oil, natural gas, bases, allies, adversaries, and key regions—and for keeping navigation unfettered and maintaining overall freedom of the seas. But all the military forces in the world had no leverage or effect in maintaining access to Persian Gulf oil in 1973–1974, when the Organization of Petroleum Exporting Countries (OPEC) cut the flow of oil to the United States. Today, with gasoline selling at \$2.00 per gallon, military power will not reverse that hike. The new reality is that currency flows, devaluations, and devastating speculation can close access to markets in the time it takes to move money electronically. Military forces cannot be used to buffer or constrain these financial flows and transactions. Globalization has created economic transactions that overshadow access and that cannot be countered with military power or other usual instruments of national policy.

The Mahanian economic argument for naval forces no longer applies in a period when there is no major danger to sea-lanes, and military force cannot be used to deal with the new electronic means of economic transactions. Naval forces are likely to have an indirect role in ensuring that the economic conditions for stability and prosperity are protected. But it will not only be sea-lanes and ocean commons that will have to be protected, certainly for the short term, for there are many littoral dangers, including piracy, mines, and cruise missiles. The indirect role resides in the underlying capacity for projecting force in ways that reassure friends and perhaps restrain those with unfriendly intentions. Building military-to-military relationships, especially with states for which the military serves as a guarantor of stability, will also reinforce this assurance.

Beyond this, globalization is occurring in a world with many middling or smaller powers that have little ability or desire to challenge the United States in a face-to-face military confrontation or take on the Navy and Marine Corps on the high seas and littorals. Happily, for the time being, global wars are of historical and not current concern. Moreover, the prospect for major regional wars may be waning. A new peer-rival to the United States could emerge in the distant future, but not tomorrow. Despite the continuing presence of Saddam Hussein and North Korea, plus a nuclearized South Asia, the reality is that other conventional threats have diminished. In

their stead, a new or different type of danger loosely termed asymmetrical has emerged. This term suggests that future adversaries most likely will seek to avoid a direct clash with the United States by using indirect means to obtain their objectives. These instruments could include information or cyberspace war, or biological and other WMDs, backed by long-range missiles—in essence, responding outside the rules to extract force multiplier strategies. These new and more relevant threats arise as much from uncertainty about the impact of change as from well-armed and technologically capable states that wish the United States ill. This faceless, diaphanous nature of security in a globalized world will pose challenges that are more perplexing than those of the past, although of lesser absolute danger.

Irrespective of specific military threats and any consensus on what this term implies for specific policies, the political leadership of the United States still regards and considers the Nation as the sole remaining superpower. This position implies unique capabilities and worldwide responsibilities that make isolationism both impractical and unlikely. These responsibilities entail responding to so-called asymmetrical threats, mounting humanitarian interventions, and shaping the strategic environment to encourage stability. Political pressures forcing U.S. military forces into law enforcement roles are also growing. Countering terrorism and drug trafficking are two of the better known activities. Countering the proliferation of nuclear, chemical, and biological weapons also has a strong law enforcement component.

As globalization continues to impose change and transformation, these fresher, nontraditional tasks seemingly are emerging as the newest drivers for determining where, how, and how often U.S. military forces are likely to be used in the future. If so, perhaps the most interesting and perplexing question for the long term will be how the core competencies required for fighting and winning big wars, which have been the traditional drivers of force structure and doctrine, will be balanced with these other less traditional and non-warfighting missions. The task of quantifying and measuring military threats in order to set requirements for U.S. forces and capabilities will be more difficult than in the past. The impact of globalization on an already changing world will pose a major challenge for DOD in identifying and justifying the forces that the Nation is likely to need.

What does this strategic assessment mean for the Nation's naval forces? The critical challenge during the 20th century was to deter, fight, and win the Nation's wars on the high seas and littorals. In the early 21st century, absent a maritime rival, there will not be wars, or even big military rivalries, on the high seas. The most pressing new challenge will be to work with other military services and U.S. agencies to prevent potential instabilities, threats, and enemies from becoming actual dangers to U.S. and allied interests. Former Secretary of Defense William J. Perry has called this "preventative defense." If prevention and containment of conflict, instability, and other dangers have become drivers of defense planning, the key challenge for the Navy and Marine Corps and other services will be determining how to use military forces to affect and influence those events ashore that have an important bearing on U.S. interests and goals. Applying power ashore for new era purposes thus will be a principal subject on the strategic agenda.

## Future Naval Missions: How to Influence Events Ashore

Charting the future course begins by understanding the legal basis for DOD and Navy authority in building and operating military forces. The Law of the Land, explicit in Title 10 of the U.S. Code and the National Security Act of 1947, sets responsibility for conducting “prompt and sustained combat incident to operations at sea” as the legal and operational basis for naval forces. Whereas during the Cold War the Navy and the Marine Corps mostly operated as individual and separate services under the Department of the Navy, today they operate as a single composite team. Moreover, great emphasis is being placed on joint planning in order to integrate the efforts of all four services. The actual employment of forces from all services is the responsibility of the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, and the commanders in chief (CINCs) of the various services. But organizing, training, equipping, and otherwise providing for naval forces is the legal responsibility and authority of DON and its secretary. DON prepares the budgets, programs, and investment strategies for building the naval and marine forces of today and tomorrow.

The Navy is manned with about 543,000 active duty sailors and marines, plus about 130,000 uniformed reservists, and 190,000 civilians. In the 2001 DOD budget, the Navy receives about \$92 billion that must be allocated among military personnel; operations and maintenance; procurement; research, development, testing, and evaluation; and other categories. Guiding this spending not only each year but also over extended periods of 5 and 10 years is a big and important challenge. An interesting issue will be whether the legal authority of the Navy Department under Title 10 and related Federal directives should be expanded to take greater account of non-wartime missions and operations. In any event, clarity on missions and priorities is key to charting the future wisely.

What are the Navy’s missions? In 1970, Admiral Zumwalt defined four general missions: deterrence, sea control, power projection, and presence. While these missions often were recast and redefined to reflect the outlook of particular administrations and naval leaders, they remain valid for today and tomorrow. But in contrast with the Cold War, the priorities and means for accomplishing these missions have been greatly transformed. Because deterrence and sea control are now more certain today than then, emphasis has shifted to new variants of power projection and peacetime presence to support U.S. interests.

Deterrence has shifted from managing the nuclear standoff between the superpowers. Applying deterrence against weaker but potentially hostile states, such as Iraq, will require more thought. Here the notion of preventive deterrence may fit. Preventing, as opposed to deterring, suggests a proactive strategy that requires more than the threat of overwhelming retaliation. Sea control has become a lesser mission—one that is part of littoral warfare and projecting power, along with antimine, antimissile, and antisubmarine warfare in confined sea areas. Until a major maritime threat emerges, sea control will have less importance. Similarly, projecting power is mutating. Preparing to project naval power during wartime will remain a central planning task. But this mission can no longer be defined solely in terms of strikes against the shores with missiles or marines. The notion of power has been extended

to what Professor Joseph Nye of Harvard has called “soft power,” that is, the use of nonmilitary, nonforceful instruments of policy to achieve preferred outcomes.

As for “hard power” missions, the Navy seemingly will acquire new responsibilities as the United States moves to deploy ballistic missile defense systems in the coming years. A particular Navy responsibility will be to take part in the construction of theater air and missile defenses (TAMDs) for protecting deployed U.S. and allied forces, as well as allied countries needing protection from WMD proliferation. Currently, the Navy has two TAMD systems under development: a lower tier Navy area defense system and an upper tier Navy theaterwide program. The idea is to fit defensive missiles aboard different classes of surface warships and submarines, thereby providing considerable mobility for quickly concentrating defense screens at places of critical importance. The Navy’s role in any future national missile defense program will depend on the technologies fielded. In addition, the United States will be taking steps to upgrade its homeland defenses against terrorism, attacks on its information systems, and other threats. The Navy will be playing roles in these efforts, which likely will have a significant impact on all four services. If homeland defense and missile defense emerge as growing national security concerns, the reach of naval forces in other than a defensive capacity may become important—for example, their capacity to threaten retaliation and pre-emptive attacks.

Presence is perhaps the mission that will be the most completely redefined, and the most useful. The Navy regularly keeps three carrier battle groups and amphibious ready groups deployed in the Mediterranean Sea, the Persian Gulf, and the Asia-Pacific region. In addition, nearly a full marine division is stationed on Okinawa. Periodically, other naval and marine units deploy overseas to meet shifting demands for presence. There and elsewhere, the purpose of naval presence is not only to provide readily available options for crisis response but also to influence peacetime political and military affairs. Presence implies the ability to support the role of affecting and influencing, provided it is done in ways that will achieve those aims. Doing so will require new or at least more intensive and rigorous analytical approaches to understanding the limits of what can and cannot be achieved through various forms of presence.

For some time to come, it is unlikely that naval forces will have to fight great sea battles such as those of the past or conduct sweeping assaults on enemy beaches. However, the strategic reach of naval forces in peacetime will become more global, extending to political and economic relationships that traditionally were viewed as nonstrategic and entirely commercial. *One result is that the very presence of naval forces in distant parts of the globe can contribute to economic and political stability, and in ways that serve to significantly facilitate peace, prosperity, and progress.* In the coming years, then, the act of influencing events ashore will involve shaping not only the geopolitics of key regions but also their economic dynamics. There must be a sufficient understanding of how to employ naval forces to achieve these ends. Developing this understanding is becoming one of the central challenges of the future, and meeting that challenge will profoundly change the qualitative face of naval forces. *The relationship between naval forces and economic and political stability,*

*and even peace and progress, could become the basis for a new strategic rationale for, and realignment of, naval missions.*

Effects-based targeting and nodal analysis are useful methods for assessing how naval forces can be used to influence events ashore. While effects-based targeting was discredited in the 1960s as part of the failed strategy of gradual escalation in Vietnam, it has since become part of the planning process for wartime operations. Its core idea is that instead of destroying an entire target system or complex, a bombing campaign should focus on disabling key nodes and subelements in ways that have identical effects at the cost of far fewer sorties. Knocking out a single, largely irreplaceable transformer or junction box can have the same effect as destroying an entire power generation facility. Hence, nodal analysis is crucial to deriving the basis for targeting. A generation ago, effects-based targeting was hard to carry out because U.S. aircraft lacked the capacity to deliver ordnance with the necessary accuracy. But the arrival of smart munitions has made it a far more feasible proposition. Indeed, it has produced not only greater lethality and effectiveness but also a need for fewer aircraft and personnel in carrying out air bombardment missions.

The emerging need is to broaden effects-based targeting for use also in peacetime, specifically, for the purpose of influencing political events ashore. Just as munitions are employed to strike military targets in wartime, naval forces are employed in peacetime and individual crises for the purpose of achieving political and economic goals. By learning how to employ them in highly focused ways, on the targets that matter, the United States should be able to gain more mileage and effectiveness out of its naval forces and other military assets when they are employed in such missions. An added benefit will be to help reduce the currently growing pressures for committing greater amounts of military personnel to such missions as peacekeeping, law enforcement, humanitarian assistance, defense diplomacy, and others. The key point is that effects-based targeting can improve the effectiveness and efficiency of political and diplomatic missions of U.S. naval forces.

Regardless of the specific approach used, the act of understanding how to employ U.S. military forces to shape the political will and perceptions of foreign actors at a variety of levels will be of critical importance in the 21st century. In all likelihood, transition to the use of naval forces in this way will require changes in how they are organized, trained, and equipped. It also will require the adoption of new intellectual and operational approaches. What will be needed is a new mentality and way of thinking that goes beyond traditional war fighting and its professional skills.

Learning how to influence events ashore in a world committed to globalization will have even greater implications for how the U.S. Government makes foreign policy and carries out its efforts overseas. A key effect of globalization is that boundaries between states, business corporations, NGOs, and other institutions are blurring. This development makes it harder for all of them to operate independently in their once separate spheres of activity. To a great degree, they must now take each other into account and often coordinate their activities with one another. Government institutions in particular face trouble adjusting because they normally are organized vertically to preside over limited spheres of activity rather than to integrate policies across several functional areas. The institutions that worked during the Cold War were not

configured to fit this globalizing world either internationally or nationally. This particularly applies to the United States because its global involvements and multiple policy instruments, as noted by Ellen L. Frost in her chapter, create a greater need to think on an integrated basis while magnifying the negative consequences of failing to do so. Reorganizing staffs and operations both in Washington and in the field likely will be needed if U.S. foreign policy and national security strategy are to handle the pressures *and opportunities* of exerting strategic influence in a globalizing world.

## Transforming the Naval Forces

The Navy's current size of about 320 warships is partly a product of history. In 1970, when Admiral Zumwalt became Chief of Naval Operations, the Nation's naval forces numbered more than 900 ships, most of them of World War II vintage and designed for threats and dangers of the past. DOD had over three million troops in uniform, more than double the number in service today, and its budget commanded six percent of the gross domestic product (GDP). The war in Vietnam was destroying the Nation, and the Nixon administration was beginning a slow draw-down under the banner of Vietnamization of that war by assigning more responsibility to the local forces.

Zumwalt reached several conclusions. First, he believed that the war was causing a crisis over race within the Navy that, if unchecked, could destroy the service. Second, he concluded that the Navy had to be modernized if it was to deal with the emerging Soviet threat. And third, he calculated correctly that the Nation had the time to make this transition. As a result, Zumwalt was able to cut the size of the Navy nearly in half, thereby freeing up additional resources for modernization. He also put in place controversial personnel policies to cope with what he saw as the largest and most immediate threat to the Navy: racism and prejudice.

Ten years later, in the waning days of the Carter administration, the Navy stood at about 480 warships, including 13 aircraft carriers, 188 surface combatants, 79 attack submarines, and 66 amphibious ships. In response to what seemed to be a growing Soviet threat, the Carter administration began, and the incoming Reagan administration expanded, a huge defense buildup in 1981 that included an ambitious shipbuilding program to reach a goal of 600 ships and 15 aircraft carriers. The goal of a 600-ship navy was never attained, but, a decade later and by the end of the Cold War, the fleet numbered 580 warships. Subsequently, both the Bush and Clinton administrations conducted reductions in forces, reducing active duty levels to about 1 to 1.4 million service personnel<sup>1</sup> and the following battle force ships (projection for 2001):

Ballistic missile submarines	18
Aircraft carriers	12
Attack submarines	55
Surface combatants	116
Amphibious ships	40
Mine warfare ships	16
Logistics force ships/support forces	59
<b>Total</b>	<b>316</b>

Today's total force ostensibly is sized to support overseas presence as well as to carry out two major theater wars (MTWs) nearly simultaneously. Higher force levels for each of the services will be approved only if a serious new threat emerges. But no such threat is foreseeable either at sea or elsewhere for at least the coming decade. For the following reasons, the 10-year rule once followed by the British government could become a good rule of thumb for gauging future force levels.

- This is about the length of time for a new threat to emerge and for a counter to be put in place.
- DOD is in a procurement cycle that emphasizes modernization, not greater force levels, but a cycle that is substantially underfunded.
- Today's shipbuilding program for the coming 5 years includes 39 ships, 17 of them combatants. Given a warship's life expectancy of 35 years, this plan is headed toward a 200- or 250-ship navy at best unless the shipbuilding plan is considerably augmented or life expectancy lengthened.

Although the DOD budget is edging upward, it remains around 3 percent of GDP. And much of this increase is largely to offset inflation, so its significance should be kept in perspective. Where the Nation will be in regard to its security and military force structure in 30 years is not knowable. If the current focus and resource expenditures on law enforcement and humanitarian missions (for example, Yugoslavia) continue, and the need for war fighting does not increase, then a straight-line projection from 1970 through 2000 to 2030 establishes a bottom line for a future level of defense capability and spending at around 2 percent of GDP. At that level, DOD resources would include less than 1 million active duty servicemen and a Navy and Marine Corps of perhaps 200 to 250 ships or less organized around 10 to 15 battle groups and amphibious forces. Of course, a threat or a crisis could arise and change the Nation's course, mandating a larger force. Or, assuming the Federal budget and spending practices permit, the Nation may choose to keep the current posture indefinitely. The future is uncertain, but the full range of possibilities needs to be kept in mind in gauging how the Navy should prepare for the coming era.

The key to keeping well-prepared naval forces is no longer strictly through enhancing quality and ensuring greater ability to perform future missions. Better quality can be achieved partly by buying new weapon systems, munitions, and command, control, communications, computers, intelligence, surveillance, and reconnaissance (C<sup>4</sup>ISR) systems. But something more profound and underlying applies. The differences between naval forces of today and well into the future may not be defined in terms of platforms. There will still be aircraft carriers and sleek aircraft, guided missile cruisers and destroyers, submarines, and versatile amphibious ships, although of far higher quality. Instead, the main difference will be their missions, their uses, and the impact of knowledge that will bring about a profound, qualitative transformation. It is with the serving people—sailors, marines, and civilian employees—that this transformation and the influence of the knowledge revolution will have its greatest impact.

Exactly what is meant by the knowledge revolution and the people revolution? As seen by many, the knowledge revolution can be defined as the creation, during this century, of more new knowledge than has been generated in all of human history. Consider that in the last 100 years, new knowledge has produced such inventions as penicillin, the artificial heart, automobiles, airplanes, nuclear power, jet and rocket propulsion, radio and television, the computer, the Internet, and air conditioning. The Human Genome Mapping Project and molecular and distributed computing are leading examples of the potential for greater advances and the extraordinary impact that these knowledge-driven advances will hold for humankind. The consequences are beyond comprehension. How all this extraordinary knowledge will be put to use remains a penetrating question. To cite one example of the prospects ahead, computing power will be orders of magnitude greater than now, and it will be essentially free of cost. Putting this capacity to work will provide opportunities that simply have not been thought about yet, and they will be mind-bending. The knowledge revolution is taking place mostly in the scientific community and the commercial sector, but it will affect the defense arena as well, creating changes that will be no less profound than those brought about by the nuclear era.

The people revolution can be defined in terms of changing attitudes, capabilities, needs, and expectations of American society. It is the consequence of two factors. One is the extraordinary empowerment of individuals in terms of how they live their lives, and the second is the changing demographics of American society. Creativity and productivity have been enhanced. Access to ideas, information, and the means of making a living have been opened and expanded. In all modern states, social and cultural norms—reflecting work, values, education, and rewards—are being redefined to keep pace with these changes in empowerment. Concurrently, demographic and vocational patterns are changing dramatically. In the United States, people will live longer, perhaps marry and have children later, and both spouses likely will work. People may hold dozens of jobs, not just one or a few, during their careers. The Nation is also graying, and several of today's ethnic minorities will become future majorities in major cities and regions. Given these extraordinary changes, the military services will have to adjust, perhaps in ways that are seen today as revolutionary, in order to attract, recruit, retain, reward, train, and educate the future military cohorts.

Empowered by technology and free markets, people are the creators of the knowledge revolution and the whirlwind of globalization. In addition to the freedom, flexibility, and opportunity created by the knowledge revolution, people have become more valuable as resources, if such a distinction exists. Consider a few of the implications for naval personnel in recruitment, manning, and retention. Given the reduced manning needs of new ships such as the Elmo Zumwalt class of destroyers (the DD-21), the problems of recruiting large numbers of sailors for shipboard duty may be lessened. However, there is a more difficult side to the personnel issue. Fewer sailors may be needed, but they will have to be highly intelligent, well educated, and superbly trained to operate the advanced systems of the future. How can such people be recruited and kept on active duty long enough to justify the costs of training them over a period of many months or longer? Will tomorrow's personnel need to be older and more experienced than now? How will this need square with the reality that for

most enlisted people and many officers, military service is performed at a young age and lasts only a few years? If tomorrow's sailors are older, will they be equally able to handle the rigors and stresses of military life, which commonly are regarded as being best experienced at a young age? Indeed, how do the services deal with the personnel cohort when average life expectancies approach 100 years? What happens when people hold perhaps 20 completely different jobs during their careers, and work until their 70s, 80s, and even 90s? What happens when working spouses and married couples delay childbearing into middle age and beyond? Each of these issues will have profound consequences for how naval forces are recruited, trained, manned, organized, and retained.

The crucial and exciting challenge will be that of blending the knowledge and people revolutions with new military technologies in order to produce the transformed force of tomorrow. Clearly, this transformation should aim at enhancing the combat power of the Navy and Marine Corps, and at strengthening their capacity to contribute to CINC war plans. In all likelihood, the Navy and Marine Corps will play the critical role of providing a highly mobile force that can be deployed quickly in a crisis, especially to littoral areas that lack prepared bases and infrastructure. They may be called upon to lead the way in halting enemy aggression so that later arriving U.S. forces from other services have the time and opportunity to deploy. Even after all U.S. forces are fully deployed, the Navy and the Marine Corps will provide a major portion of the joint force's total combat power and thereby will contribute importantly to its ability to strike precisely, maneuver in dominating ways, support its operations leanly, and protect itself from enemy attack.

In addition to enhancing combat power, transformation must address how to enhance the capacity to exert political influence ashore during peacetime. There will have to be organizational and institutional changes beginning at the national level and working their way down to small units in the field. Unified commands will require more knowledge and information about how to deal with the local political and economic affairs of each region. Perhaps mini-National Security Council staffs will be created that reflect the cross-cutting nature of issues in each region. Such staffs might be installed at the unified and specified commands. For naval forces, operational commanders at the numbered fleet, fleet Marine force, and even battle group may need such staffs. Regardless of the exact staff arrangements, much of the necessary analysis will be done at the regional and local levels. This means that foreign area experts, officers and enlisted, will be needed—the kind now being provided by the Navy and the Marine Corps through expansion of their foreign area officer programs. With improved data and knowledge, there will have to be modeling, simulation, experiments, and exercises to test and challenge the various ways to exert influence and pursue national goals. The key point is that the act of exerting influence should receive as much analytical attention as fighting wars.

For military and political reasons, naval deployments also are likely to change. Alternatives should be investigated now. Permanently deploying ships, aircraft, and submarines is a possibility, as is using rotating crews. Going to cruising squadrons and deployment on warning are other options. Altering port visits in order to increase time ashore is another attractive idea, for it could help enhance influence. Naval lead-

ers also should consider assigning far more officers and enlisted men to foreign states as advisors, observers, ship's company, or staff aids in order to build up the interchange among militaries. Over time, expertise in foreign affairs could become as important to promotion as joint duty has been in the Goldwater-Nichols era.

If current trends continue, the integration of ship's companies with marines and Coast Guard personnel, and perhaps airmen and soldiers too, may make sense as a way to increase the Navy's capacity for its new missions. On a frigate or destroyer, a reinforced platoon of marines as ship's company or a unit of Coast Guard personnel could become the standard. These personnel would be trained for law enforcement, intervention, and other tasks that may require the equivalent of landing the landing force to protect U.S. citizens and friends in hostile areas. While the Reserve component forces are used differently by the Navy and Marine Corps than by the Army, options for employing them effectively should be examined. In the future, new ships that replace both the aircraft carrier and the amphibious assault ship, as well as other old ships in service, could have this mixed manning scheme. Future crews might include a blend of active, Reserve, and virtual members from the other services. Two centuries ago, marines were stationed onboard Navy ships in rather large numbers. The past here may become prologue.

The consequences for platforms and force structure are still in the formative stages. Clearly, improved information and knowledge systems will result with or without the help of globalization. It is the volume and carrying capacity of ships rather than specific systems that could become more important as the spectrum of missions broadens. Each battle group might be task-fitted for particular missions and even trained en route to the region of interest. If the wartime capacity of naval forces increases greatly in lethality and battlefield punch, as appears likely, logic suggests that fewer units and fewer personnel will be needed in many contingencies. Assuming this holds true, will the bureaucratic and political process permit this type of rational planning to take hold? This is a question that applies with equal relevance across the other services and DOD as a whole.

Globalization also has important consequences for the defense industrial base inherited from earlier times. Largely composed of private companies that sell goods and services to the armed services, the defense industrial base is in the midst of a major transformation and compression. The public- or government-owned components—national laboratories, research and development establishments, and supporting infrastructure—are also vast. In many ways, they have become competitors with the private sector for scarce resources. Owing to shrinking budgets, the past decade has seen the defense industrial base shrink from about a dozen large aerospace and defense companies down to basically four: Lockheed Martin, Boeing-McDonnell Douglas, Northrop Grumman, and Raytheon. The maritime industries, for both defense and commerce, have been compressed and reduced even more so. To a degree, what happened to the American civilian maritime industry—the private shipping companies and shipbuilding yards—is instructive. Since the 1980s, the United States has not had a commercial fleet flying under its flag, and its shipyards build almost solely for the Navy and the Department of Defense. For the entire defense

industry, the growing risk is that there will not be enough demand and money to buy ships, aircraft, and other major platforms to sustain even the current capacity.

For defense industries, it will be the production of components and subsystems of platforms that sustain them and that play a lead role in determining the modernization of U.S. forces. Especially for information technology, globalization is spreading the numbers of private sector, nondefense firms that could become capable of producing such subsystems for defense. Given the restrictions of law, regulations, oversight, and profit limits, however, many of these nondefense firms will have no incentive to work for the government. For their part, the current defense firms are so dependent on a few huge projects—for example, the F-22, the Joint Strike Fighter, and the SSN-21 submarine—that they will have little flexibility to shift to other lines and products. For these reasons, the defense industry faces a troubled future. Guiding it to a safe landing will be difficult, but this is a task that must be done, for a globalizing world will be one in which high technology counts for a lot, especially in the military arena.

### **The Distant Future: Few Big Wars, Many Other Missions?**

Clearly, a major military and naval transformation will occur. The process by which this transformation is unfolding can be portrayed in distinct terms. But what is the ultimate destination: not necessarily the size of the Nation's naval forces, but the qualitative characteristics and mission orientation? What kind of naval forces should emerge: not just in 5 to 10 years, but in the longer term, 20 to 30 years from now, when the transformation will be complete? Peering into the distant future is a precarious exercise, but it also can be an instructive way to help think about how U.S. naval forces are evolving.

A good way to begin is by asking this question: If Mahan and Mackinder were alive today, what might they predict that the Navy would do or look like in 30 years' time? An admiral in Mahan's day, circa 1910, would not have been shocked to see the fleet in 1940, with its battleships and subsequent island-hopping strategy against Japan. While he might have been surprised by the role of carriers, submarines, and amphibious operations, he would have adjusted quickly. An admiral of 1940 would have been shocked, however, by the Navy of 1970. While he might recognize the silhouettes of some ships, he would have been astonished by jet aircraft, missiles, nuclear weapons, operational patterns, and even the Navy's personnel and culture. How might an admiral of today react if he or she were to be granted a preview of the Navy of 2030? The question is unanswerable, but because so many changes are occurring in technology, geopolitics, and other arenas, the outer reaches of possibility should be kept in mind in trying to judge where the Navy may be headed in the coming decades.

Three possible scenarios illuminate different directions in which the future might evolve in response to globalization and other dynamics. At one extreme is a world made quite stable, peaceful, and prosperous by the positive and integrative forces of globalization. Some conflict and violence would exist, but would be mostly contained to minor or local levels, and the prospect of world war among developed states would

be virtually unimaginable. At the other extreme is a world torn apart by globalization. This is a competitive world, as Mahan might have predicted, in which states compete over territory and resources. In this more contested world, the emergence of a rival peer or coalition to challenge the United States, and thus the potential for serious war, would remain a persistent threat. Between these two extremes is a world in which globalization has brought about both positive benefits and negative backlashes. In this third scenario, the interconnectivity of markets, communications, commerce, and finance would make many countries prosperous, but also would produce painful dislocations, widening the gap between haves and have-nots. Global wars between developed countries would be highly unlikely in this third scenario, and even the likes of today's major regional wars would be reduced in frequency. But a great deal of conflict and violence still would exist in unstable areas, as would other dangers such as WMD proliferation, asymmetrical threats, ethnic turmoil, humanitarian catastrophes, terrorism, and organized crime.

Each of these worlds could mandate a quite different U.S. national security strategy and require naval forces to perform different missions. In today's parlance of shaping, responding, and preparing, the first world of fewer and lesser threats would require naval forces to focus on preparing and shaping in order of priority, with little responding. The second world, of greater chaos and danger than now, would require naval forces to respond and shape, with little time left over to prepare for the future. In the third world of mixed geostrategic trends, shaping would emerge as the priority mission, with responding and preparing as subordinate, co-equal tasks. In this world, naval and all U.S. military forces might not have major regional wars that they could single out as a clear justification for defense planning. But they would have many demands on their hands in terms of humanitarian missions, broad law enforcement, homeland defense, peacetime shaping and defense diplomacy, and low-level crisis intervention.

In the first world, the demand for naval and other forces would be significantly lower than it is today. Defense forces would be focused on traditional war fighting as insurance against some future threat or contingency. But they would be a less used instrument of national policy, presumably assuming detached roles similar to those of the 1920s and early 1930s. In the second world, the demand for U.S. forces might be as great or even greater than now if China, Russia, or some large coalition emerges as an adversary. Regardless of their size, they would be focused on fighting major wars, not performing peacekeeping and intervening in small crises. In many ways, the third world, in the middle of the spectrum, is the most interesting for, and demanding of, the services—for reasons that go beyond its ready plausibility (it would, after all, represent a less tense extrapolation of today's world). This is a world in which military force would still play an important role, but budgets would be tight in ways that imposed difficult trade-offs and choices. There would be no overarching threat on which to base claims for money and capabilities, but there would be many challenging missions creating a broader spectrum of demand on the services' skill and competence. They would need to remain prepared for war fighting—most likely a single MTW at a time—and, simultaneously, for a wide range of lesser missions that could have a substantial cumulative impact on the military's time, attention, and scarce resources.

The political-military geography of such a world is instructive. In contrast to the Cold War, Europe would no longer be a zone of political confrontation and conflict with the ever-present threat of nuclear war. Instead, Europe likely would become a zone of peace, brought together by globalization and the European Union, and carrying out business-like relations with Russia. East Asia likely would turn out to be a zone of political and economic stability in ways encouraged by globalization. Korea likely would have unified, Japan would continue its constructive ties with the United States and other democracies, and China would be less authoritarian and integrated into the world economy, pursuing a *modus vivendi* with Taiwan. Overall, the Middle East and Persian Gulf likely would be less tense than now, with Iraq remaining a pariah, but Iran pursuing a moderate path and integration with the globalizing world economy, and the Arab-Israeli conflict largely settled.

If the three most important geostrategic regions seem likely to be made more stable by globalization, where will the zones of chaos and instability lie? One unstable zone will be the Balkans and the oil-rich Caucasus-Caspian Sea region. South Asia will remain troubled by Indian-Pakistani rivalry, WMD proliferation, religious fundamentalism, and backlash against globalization. Partly owing to its inability to profit from globalization, sub-Saharan Africa seems destined to become the Balkans of the early 21st century, torn apart by political incompetence, poverty, disease, and conflicts over resources in ways necessitating regular outside help and intervention. In Latin America, the combination of uneven economic development and a narco-technical culture could lead to greater threats to the northern tier, particularly the Andean states and parts of Central America drawn into drug trafficking. Mexico could become nearly ungovernable, resulting in refugees and illegal immigration posing a crisis for the United States.

Clearly, this global scenario could evolve in many ways far different than portrayed here, with some regions becoming unstable and others succumbing to more extreme forms of violence and chaos. But the point is that this scenario, irrespective of exactly how it unfolds, could produce a future in which conflict and violence will not automatically disappear. In the world of 2030, globalization will produce challenges and demands for ensuring security that may well be far broader and more complicated than now. Progress will be made by the inexorable spread of the rule of law, accepted commercial standards of conduct, and greater emphasis on humanitarian issues. While pursuit of peace, stability, and progress will become the goal of most states, there will remain a wide divergence of opinion about specific ends and the means to achieve them. As a consequence, U.S. military forces could be stressed by new challenges and requirements, as well as by the constraints on resources in the absence of a major new threat or danger.

How will the U.S. military be affected as a whole, especially if the future produces a world in which concern about big war is less prevalent than now, but demands grow for using forces to deal with a wide variety of other tasks—for example, handling messy local situations, building partnerships with new countries, and reassuring others of their security? While this scenario is not certain, thinking about its likely impact is instructive. Clearly, the U.S. military will need to remain capable of fighting major regional wars, but most likely not two at the same time. Through

changes in technology and doctrine, front-line personnel requirements for waging such conflicts seem likely to decline. This is the case because modern weapons will make U.S. combat forces more lethal and mobile, and because the modern battlefield itself is spreading out, becoming less dense.

In this world, however, the widening spectrum of other missions seems likely to become more personnel-intensive and resource-demanding. Whether interdicting Liberian drug runners at sea, providing forces on the ground for stability in Central Asia, or pursuing an upsurge of partnership activities in multiple regions, the daily chores of the U.S. military will become less susceptible to technological fixes while requiring more manpower. As personnel with these skills become increasingly difficult to recruit and retain, pressures will grow to reduce the numbers committed solely to warfighting missions. Especially if the U.S. defense posture contracts below the current level, striking a sound balance between manpower levels for warfighting and levels for these other missions will be a difficult management challenge.

To the extent that this scenario transpires, all services seem likely to be affected by the accompanying challenges and by the need to alter their force structures. The Army is designed almost totally for fighting two MTWs; its 10 active divisions, support assets, and multiple Reserve component forces are organized in ways that provide few assets and personnel for the nontraditional missions that may lie ahead. While it is trying to become more mobile and agile, it likely will be pushed in the direction of making broader reforms in order to align itself with future requirements in a world of fewer wars, but many other missions. The Air Force faces similar constraints, for its own forces are oriented to carrying out traditional warfighting missions: air defense, tactical support, interdiction, and strategic bombardment. It will be able to perform some new missions, but not the full spectrum of them. How these two services will cope with their future challenges remains to be seen. What does seem apparent is that while the Navy and Marine Corps are not fully prepared, they are the best situated to deal with the new environment and the role of influencing events ashore by performing the new missions. The Marine Corps has the necessary focus on expeditionary missions, with light and agile, but potent, forces. Naval forces have the mobility and flexibility to deploy to many places, to influence the critical littoral areas, and to organize regional security affairs around cooperative maritime concepts, in ways reflecting NATO's Partnership for Peace. Working as a team, the Navy and Marine Corps have the mobility, agility, and lethality demanded by tomorrow's globalized world.

Even so, naval forces will have to make important changes in order to become properly configured and prepared for the future. To fully exploit the knowledge revolution, it will have to pursue new technologies, systems, and ship designs. For example, several ballistic missile submarines no longer needed for strategic deterrence might be converted to new hybrid roles of carrying both troops and tactical or anti-ballistic missile systems. Personnel demands will require new and innovative forms of service, compensation, and training. Outsourcing of many tasks that were once performed by military personnel will be needed. Maintenance, supply, logistics, health care, communications, and even intelligence fall into this category. In strategy and doctrine, naval forces will have to resolve the dilemma of preserving core competencies by maintaining a credible warfighting capacity, but with a different force

than now. In many ways, the view of the three-block war expressed by the Marine Corps in the 1990s provides a model to follow. These blocks include warfighting, peacekeeping, and humanitarian assistance, to include operations in cities and highly populated areas. Added to these blocks will be new missions for protecting the environment, adjudicating legal and international settlements, providing closer links with other navies and countries, and performing other assorted assignments to help influence a broader range of events created by globalization.

The U.S. military posture in 30 years will depend heavily on political decisions made about strategic requirements, defense budgets, and manpower levels. If DOD military manpower remains at its current level of about 1.4 million soldiers, sailors, and airmen, the future size and mix of key forces might not differ greatly from now. But if manpower is reduced to about 1 million personnel as a byproduct of this scenario, there will have to be significant reductions. In any event, emerging technologies and new missions create added reasons for thinking in nonlinear, innovative ways about future force structures. Clearly, detailed analysis, unconstrained by past assumptions and paradigms, will be required to determine force structures and distribution among the services appropriate to these technologies and emerging missions. However, if DOD manpower were to decline to this level, the Navy might have to consider more radical restructuring. The issue is not predicting the future, but preparing for future international environments that could be affected by these personnel trends and the effects of globalization.

## Naval Forces for a World Similar to Now

Between the poles of global peace and global confrontation, the type of middle-ground world discussed earlier is not the only way in which the future could evolve. An alternative is a world security system not radically dissimilar to today's. In this scenario, the effects of globalization will have less geostrategic consequence than in the others. Despite this strategic continuity, however, U.S. military forces will still face important pressures to change. This future military environment likely will be characterized by five general categories of threats and U.S. force operations that will drive defense planning:

**Direct traditional threats.** From major theater wars to ballistic missile defense, these will represent clear military threats to the United States and its vital interests. Preparation for these threats is preparation for serious warfighting tasks.

**Traditional MOOTW.** These operations include, for example, peacekeeping and the evacuation of U.S. citizens from dangerous overseas situations. Long part of the lesser included contingencies of the U.S. military, these requirements typically have affected policy and procurement on the margins.

**Direct asymmetrical threats.** These threats could range from cyberwarfare to terrorist use of nuclear, biological, and chemical weapons in the United States. Whether by individuals, organizations, or nations, these threats will reflect direct attempts to hurt the United States, its citizens, and its interests. These threats seek to counter U.S. capabilities in traditional war fighting by moving warfare into a different domain, where U.S. advantages might not be so disproportionate.

**Implicit threats.** These are not threats whose main motivation is to attack the United States or defeat its forces. Instead, they fall into the category of transnational threats. The clearest example is globalized criminal activity, especially drug trafficking and illegal immigrant smuggling across national boundaries. Illegal financial flows and environmental crimes (for example, illegal fishing, pollution at sea) fall into this category as well.

**Globalization challenges.** A wide range of developments could menace U.S. interests and goals, as well as those of the international community. Challenges could include genocidal actions in Rwanda, famine in Ethiopia, floods in Mozambique, chemical spills in European waterways, environmental strains (for example, global warming, a decline in fishing stocks), the election of nationalist leaders who challenge international order, and tensions created by a divide between haves and have-nots. These challenges will arise not necessarily due to any conscious action or intention to harm U.S. interests, but they are capable of directly or indirectly causing such harm. The changes in strategic reach due to globalization suggest that any or all of these developments have the potential to engage the United States. Many could make demands on U.S. military forces for responses that fall well outside the traditional province of war fighting, and they present opportunities for preventive shaping.

All five of these categories create fundamentally dissimilar rationales for the use of U.S. military forces and radically different environments in which they will be operating. For many in the U.S. defense policy community, the comfort zone for military planning and procurement remains mainly in the first category and, marginally, in the second. The reality is that in the future, U.S. forces will be used most frequently in the last four categories, not the first category of fighting major wars. In addition, U.S. forces will be regularly called upon to *participate in the shaping of international trends and dynamics through their overseas presence and political-military interaction with the forces and governments of other countries*. Peace maintenance will be a sixth category of operations, and it too will fall outside the domain of preparing for wars and create demanding challenges of its own.

In addition to performing these operations in a fluid setting over the coming 30 years, U.S. forces will be undergoing changes of their own, as will the entire U.S. national security structure. How will U.S. naval forces be affected? The likely result will be a mixture of continuity and change. Physical realities will produce the appearance of dominating continuity. The vast majority of DOD weapons and infrastructure have already been built, are now being constructed, or are in the finished design stage. Aircraft carriers will still sail the world's oceans, though they may look different and carry a smaller air wing made up of different aircraft than are deployed today. Marine Corps combat units may have fewer people than now, but they will rely on MV-22 Ospreys and advanced amphibious assault vehicles for far better mobility moving from ship to shore and shore to shore. The same trends of fewer forces but more capability will apply to the other services. The Air Force will fly F-22 and Joint Strike Fighters, but probably in reduced numbers. The largest uncertainties, however, will apply to the Army and whether it relies on the M1 tank or a vehicle like it or whether it can make the transition to a lighter, more mobile system. The Pentagon, 90 years old in 2030, likely will still be the headquarters of the Department

of Defense. But behind this surface appearance of continuity, a great deal of change is likely, including change in the naval forces.

Virtual command centers likely will dominate the entire U.S. military, down to tactical levels. In a ship's Combat Information Center, the officer on duty will have instant access to multiple offices, staffs, and data banks from around the world, receiving advice ranging from intelligence analysis of ongoing events in a region to assessments of how to deal with a radar system in a dust storm. Artificial intelligence aids and systems will have taken over many of the duties performed by humans today, and they will be augmenting tomorrow's decisionmaking. Virtual command centers, remote staffing, and artificial intelligence tools will have combined to greatly reduce the number of military personnel that will have to be put into harm's way in order to provide effective command and control of forces. The Marine Corps will be able to deploy a fully functional Joint Task Force (JTF) headquarters using only two big air transports to carry all of its equipment and a fraction of its personnel. These few personnel will perform three functions: direct support of the commander, liaison with other organizations, and systems operations. Everything else will be handled via remote staffing and virtual personnel.

Virtual activity may come to dominate much of military training and exercises. Already today, powerful constraints on training have arisen, including environmental effects and public opposition. These constraints likely will intensify, as fewer areas on land and at sea remain sufficiently open to allow for military operations. Another factor will be the growing capacity of information systems and simulators to provide much of the necessary training with the high-technology weapons of the future. Major field deployments may be necessary less often than today. If so, the cost of operating forces and keeping them ready may diminish in some respects.

Fleet structures will change greatly. While fleet commands will still exist, they likely will be shore-based, with the vast majority of personnel and skills shared between fleets and organizations in the United States. Fleet staffs will include only a handful of personnel who provide the admiral a core team. Admirals will be shore-based, but will be able to move aboard essentially any ship while still maintaining connectivity and staff support. In practice, fleet commanders will be far more relevant to conducting missions of political suasion through theaterwide travels than to actually commanding their forces from the windswept bridge of a warship. Indeed, CINCs will increasingly rely on JTFs for operations, and naval forces will report directly to the JTF commander rather than to fleet commanders. Deployments will be both more standard and more variable. About a quarter of the Navy's ships may be either home-ported outside the United States or on extended, multiyear deployment supported by rotating crews. Similar to pre-positioned ships of today, a sizable share of the Navy's warfighting capability will be carried aboard civilian ships with minimal crews and only a few assigned Navy personnel to monitor combat systems; thus, black hulls may be as likely to shoot the decisive missile as gray hulls.

Naval warships themselves will have fewer personnel than now. The number of personnel per ton aboard each ship likely will be a fraction of today's total. Each and every sailor aboard ship will be individually selected in order to enhance the ship's functioning. Everything likely will be done not only to minimize the number of de-

ployed sailors but also to ensure that each sailor and marine has a clear understanding of why his or her presence and personal skills are needed. Technical skills will rule assignments, not old-style labor. While Navy ships will still be more heavily manned than civilian ships, chipping paint and swabbing decks will no longer be shorthand for the deck hand's daily responsibility.

Aboard ship, the makeup of crews will be different than now. No longer will age be a clear determinant of an individual's status in either the enlisted ranks or officer corps. With personnel moving between military and civilian jobs, specialty skills and relevant experience will play a larger role than age and longevity in determining status. By age 20, some personnel already may be senior limited-duty officers due to their mastery of computers and information networks. Some aviation squadrons may have lieutenants in their 40s, with thousands of hours in the cockpit, who value the opportunity to fly above the allures of command. With biotechnology fostering longer life spans, an intelligence specialist might be over the age of 70, with decades of experience in understanding regional affairs. Perhaps one of the most unusual changes will be the common deployment aboard ships of personnel from other U.S. Government agencies, foreign countries, the United Nations, and even nongovernmental organizations. These personnel will be integrated into staffs and crews, especially in cases where efforts are being made to launch effective international responses to disintegrating nations or environmental disasters.

When wars or conflicts occur, naval forces will be able to orchestrate combat operations at sea from any and all of its platforms and command centers. The ability to make war from shore-based command centers such as Cheyenne Mountain will be matched by a similar capability aboard a range of combatants from the LPD-17 class amphibious ship to carriers and cruisers. Key naval assets for war will include ballistic missile defenses and hybrid ships that could have as few as 25 crew members. Weapons systems will be capable of being engaged either by senior leaders ashore or relatively junior personnel aboard ship or in the area of action. For the Marine Corps, what a former commandant termed a "strategic corporal" will have the capacity to bring all or much of the Nation's capability to bear on specific targets. For the Navy and Marine Corps, this extended range of warfighting command capacity will require greatly increased training, education, and technical expertise. Every sailor and marine will be viewed as an expert, empowered to make important decisions in ways that produce lateral organizations of networked assets rather than the vertical military hierarchies of the past. The effect will be to make the Navy and the Marine Corps more capable of employing their high-technology weapons, advanced information systems, and modern doctrines with great effect on the battlefield. How often serious wars will occur three decades from now remains to be seen, but when they occur, the Navy and Marine Corps will be able to marshal impressive combat capabilities to wage them.

## **Conclusion: Charting the Navy's Future**

Clearly, the impact of globalization is changing the world. Naval forces will need to change in order to remain important policy instruments. Although the future is impossible to predict beyond generalities, certain changes now under way within the

realms of both international and U.S. defense establishment politics lead to important conclusions for naval forces in the near and longer terms. Naval forces will be performing missions that are untraditional and, by today's standards, new or unconventional. These forces will not only be preparing for war, but they will also be taking roles in influencing events ashore and otherwise shaping the peacetime geostrategic environment. Naval forces will themselves undergo major changes as new doctrines, technologies, information systems, ships, weapons, people, and organizational cultures become the actual resources for response to these future challenges, realities, and needs.

The task facing the current and future leaders of DOD and the Navy will be to anticipate and to implement these changes so that future naval forces remain fully effective in conducting national security policy and defense strategy. But does DON have the proper legal authority to carry out these important transformations and responses to the demands of globalization? Currently, Title 10 of the U.S. Code and related Federal directives provide DON the full authority to prepare naval forces for prompt and sustained operations incident to combat at sea. But while the law and directives permit conducting and preparing for these non-warfighting tasks, the authority and language lack the emphasis, clarity, and detail that are likely to be needed. The implication of the current statutes is that being prepared for combat operations is not only more important than these other missions, but that such preparation is also sufficient for these lesser tasks. This language made sense in the past, but no longer; because noncombat missions are already important, and seem likely to become even more important in the years ahead, they no longer can be treated as a backwater concern. A strong case can be made for rewriting the relevant codes and directives to ensure that the necessary legal authorities are beyond question. The need to create proper legal authority to prepare for new missions, of course, must be accompanied by sensible decisions in allocating Navy funds, personnel, and other resources so that adequate capabilities for new missions are created.<sup>2</sup>

A set of additional recommendations for naval forces also can be advanced. Naval forces must continue to develop a sound understanding of how to employ assets in peacetime in order to influence political, economic, and military events ashore and in surrounding waters. Owing to globalization, the agenda ahead in this arena may be different from now, yet it is reminiscent of how the British Navy was used in the 19th century and earlier as an important instrument of diplomacy and strategic policy. The key point is that action consistent with this agenda must be carried out with care and precision if it is to succeed; there are good ways to use naval power for this purpose, but also bad and ineffective ways. Naval forces also will have to develop a keen understanding of the wide spectrum of other missions short of war fighting—for example, peacekeeping, humanitarian operations, and partnership building with foreign militaries. The key point is that the Navy will need not only to understand how to perform these missions expertly but also to have the physical assets to do so. These assets will exist only if conscious decisions are made to fund them in Navy programs and budgets. The same applies to the need for new overseas bases, facilities, and infrastructure. Because naval forces likely will be called on to operate in new geographical areas, it will require nec-

essary shore-based support assets. Such requirements must be identified, funds allocated, and the necessary arrangements made with friendly foreign countries.

The future will depend upon how the incoming administration and the Congress decide to act. Public opinion seemingly favors a still strong military, but there is no widespread enthusiasm for major spending increases. Modest spending hikes, however, may be forthcoming. If carried out annually, they can gradually elevate the DOD budget over the coming decade, thereby broadening investment options. In any event, priorities set by DOD and the Navy will have a major impact on determining the future naval force posture, its capabilities, and its mission orientation. Careful planning will be needed.

In the spirit of Projects Michelson and 60, the Navy would be well advised to institutionalize a planning cell to deal with future eventualities and with the long-term effects of globalization, the knowledge revolution, and the people revolution. The immediate task is to get started on this enterprise, for developing a better understanding of the changing environments at home and abroad is essential to maintaining the intellectual basis and flexibility needed to deal with the challenges that certainly lie ahead. 🌐

## Notes

This chapter, and indeed the entire project, were inspired by Admiral Elmo Zumwalt, who died recently. Much of its content is drawn from his wisdom and experience. Adam Siegel also made a significant contribution. The term *naval forces* applies principally to the Navy and Marine Corps. However, the roles of the other major military services—especially as joint operations expand—and the Coast Guard are also important ingredients in the overall power and effectiveness of naval forces.

<sup>1</sup> This includes a Marine Corps of about 175,000 organized into three active and one Reserve division.

<sup>2</sup> See DOD Directive 5100.1, *Functions of the Department of Defense and Its Major Components*, September 25, 1987.