

Military Power and Maritime Forces

Seymour J. Deitchman

The United States is the dominant power in the global economy and its Armed Forces are the premier in today's globalizing world. It might be thought, therefore, that our national security would be assured in this world. But much of our economic power involves links with the rest of the world, and the nature of those links affects both the underlying strength of our unprecedented military power and how we can use it to protect and further our global interests. Some related, important perceptions on the part of the American public also affect such use. Together, these constraints shape the directions in which our military forces, and especially our naval forces, can and must evolve to serve the Nation in the future. The sources and the nature of the constraints and future strategic needs must be examined before we can specify the naval force characteristics to be sought.

Globalization, the End of the Cold War, and National Security

As has been amply described elsewhere in this volume, *globalization* is the term used to describe the spread of commercial and financial enterprise around the world, with all of its concomitants. The enterprises and their derivatives cross national borders; they are centered in "Anyland," with the centers of control and the flow of the assets distributed internationally. Control and ownership are concentrated in the advanced industrialized nations: the United States; the European Union and its outliers in places like Australia; Japan and the Republic of Korea in the Far East; and a few financial centers such as Hong Kong and Singapore. The United States has a role as "first among equals" in this array, simply through the sheer size of its economy and its military power. This global economy is supported by, and depends on, flows of resources from undeveloped or less developed nations—clustered conceptually in what was called the Third World during the Cold War—to centers of production and to the centers of advanced economic power.

Seymour J. Deitchman is a consultant on national security. He previously served as vice president for programs at the Institute for Defense Analyses. He has also held various positions both in government and on advisory panels and is the author of six books, including On Being a Superpower: And Not Knowing What to Do about It, Beyond the Thaw: A New National Strategy, and After the Cold War: U.S. Security for the Future.

Global enterprises are characterized by centralized policymaking with decentralized execution of policies. This pattern is enabled by the ubiquity of information across an enterprise at multiple levels of command, made available through the technologies (for example, computing, communication, transportation) that have driven the modern globalization phenomena. Those technologies, although their greatest recent advances originated in national security concerns and endeavors, are now the mainstay of the commercial world. That world dominates the markets for, and the further development of, the technologies. It therefore also affects the shape and capabilities of the armed forces.

While the spread of global enterprise as such is not a brand-new phenomenon, having begun centuries ago with the onset of the European colonial period, its current manifestation, with its distributed management, rapid flow of people and resources, and instant financial transfers, is unique, both because of the technologies and because of the organizational patterns and resource dependencies that they have induced. Now, less industrialized nations—for example, Russia, China, India, Brazil, other countries on the Pacific Rim—are joining the global industrial and commercial community. And globalization has come to characterize criminal enterprises as well—mafias, drug traders, smugglers of people and goods.

This internationalization of wealth-creating enterprises has been accompanied by the spread of culture and ideological concepts, strongly and consciously U.S.-driven: democratic government, human rights, ethical business practices, and particular freedoms for the media. From this background, the United States views globalization as providing strong support for the national security of the participating countries, including the United States. History shows that democratic governments rarely, if ever, go to war with each other. On the whole, therefore, and allowing for internal dissension about hardships attending its evolution, we tend to view globalization as leading to a more orderly world, at least for the countries benefiting from it.

There are, however, downsides to globalization for the United States. It engenders jealousies and resentments in many nations and groups who aspire to join the globalized economy, but are not yet a part of it, among those furnishing its raw resources, and among members of any groups who are feeling hurt by it in the short run. It induces rivalries over competition for resources and markets among the industrialized nations, affecting how they try to face the “outsiders” and weakening their mutual cohesion. All this is added to the residues of international tensions among the advanced nations (note, for example, the tentative pace at which the United Kingdom is becoming fully committed to the European Union), and to the effects of ethnic hatreds and strife within and among the less developed ones.

Also, there is a tendency among U.S. policymakers and the general public to think that since the rest of the world seems to be absorbing American and Western culture, it also thinks as we do and has similar values—such as respect for human life and notions of fair play. We tend, in our policy advocacy and policymaking, to ignore others’ values and cultures, which do not change very fast and are not the same as ours, in much of the world with which we must interact—parts of Europe, Russia, the Middle East, Africa, India, and the Far East. This leads to misunderstandings between us and other nations, and perceptions of American arrogance on their part. It

exacerbates the resentments attending globalization, and, worst of all for the United States, it colors and confuses our own ability to obtain accurate intelligence estimates and interpretations regarding potential trouble areas.

Overall, globalization bespeaks a world in transition, to a future that is far from understood. Like all states of transition, there is much progress, but it is proceeding unevenly, with many instabilities and conflicts—economic, political, outright military, and quasi-military. The last—the quasi-military conflicts—are the worst kind for the United States because of their ambiguity about whether and how they may affect us, whether and how we should get involved, who the players are and what they stand for, who in our government is responsible for what, and the difficulty of cross-agency coordination on policies where the overall problem definition and therefore policy guidance is unclear and there are differences with our allies about how to respond.

The biggest current U.S. advantage in this world, beyond our domination of information technology, is our ability to capitalize on that technology to synthesize large-scale systems. That is, our “secret weapon” in mastery of globalization is in technique and organization, as much as or more than in technology per se (although military technology is an important piece of the technology spectrum, and there are some militarily relevant technology areas in which we still excel—sensors, stealth, precision missile guidance, submarine design, and large-scale combat systems, for example). U.S. superiority in the globalization transition is supported by our vast people resources and ownership of, or ready access to, natural resources. This superiority could be transitory, as our industrialized companion countries are gaining on, and sometimes exceeding, our technical capability in many areas relevant to the global economy (for example, the United Kingdom, France, and Germany together in Europe; Japan in the Far East). Indeed, as fallout from the inequalities of military capability, which became apparent in Kosovo, we want these allies to learn to do what we are able to do as well as we can do it. But others, whom we may not be so eager to teach, learn as well (partly through our own help, which comes to them via the global economy, whether we intend it or not). And they may use what they learn against us.

The end of the Cold War interacts with the effects of globalization to affect the U.S. strategic position in the world and therefore the requirements for, and modes of, use of military power. The Cold War exerted a kind of perverse discipline because most U.S. actions overseas had a counter-Soviet imperialism focus, and most Soviet actions had the objective of spreading communism and countering the resistance of the United States and the North Atlantic Treaty Organization (NATO) to that. Therefore, although all the kinds of Third World involvements and conflicts we see today were extant then, we became engaged in them then as part of the strategy to prevent the spread of the hostile communist ideology and the concurrent growth of Soviet imperial power. Hence, for example, we fought major regional wars in Korea and Vietnam; we intervened to affect the directions of government changes in Central and South America; in Iran, we aided in the resistance to the Soviet invasion of Afghanistan; and we provided security assistance to many other nations to keep them from falling within the Soviet sphere.

The Cold War focus, including nuclear deterrence and thinking about national missile defense, was, along with everything else, a matter of national survival. The contest with communism was a contest for political and economic control of the world and its resources. The end of the Cold War meant that national survival concerns in U.S. international relations subsided for the foreseeable future. Even current threats to our homeland—terrorist, cyberwar, or the possible use of weapons of mass destruction (WMDs) by “rogue” states—while capable of inflicting severe damage, do not threaten our immediate national survival. Thus, our foreign policy focus now is on trade, the impact of globalization on our economy, the availability of resources, cultural exchanges, advancement of the human condition, and promotion of a world of international relationships that are conducive to those things or, conversely, conflict with national or transnational forces that threaten them. That is, international affairs for the United States have changed from matters of survival to furthering and protecting “interests” in all these areas. Attacks on those interests can threaten our national survival in the long run, but the threats do not appear imminent, as, for example, was the threat of nuclear destruction during the Cold War.

As a result, our Nation’s strategic threat structure is now different from what it was during the Cold War. Our vital interests still include threats of attack that can inflict serious damage on our homeland, our economy, and our closest allies. We must now, however, be concerned that such attacks can come from widely dispersed nations, small as well as large, and from transnational groups that threaten us in many ways and our allies along the way. Ambiguity has entered threat considerations. For example, is drug traffic to the United States and the European Community from the Caribbean, which debilitates a significant part of our populations, a threat to our vital interests? Is the risk of control over a large fraction of Europe’s and Japan’s oil supply by a dictator hostile to the United States a threat to our vital interests? Less than vital, but nonetheless important, threats to our own interests and to our obligations to support and help protect our allies (who are in great measure the other industrialized nations involved in the global economy and democratic fellowship), also appear in more dispersed parts of the globe. The threat to NATO cohesion by genocide on Western Europe’s doorstep in the Balkans, together with the attending humanitarian considerations, surely falls in this category. An attempt by China to occupy Taiwan by force, could, if unresisted, challenge our reliability as an ally and a proponent of democracy in the Far East, and consequently our long-term viability as a power on the Pacific Rim.

Because of this diffusion of threat, the character of our military deployments, pre-positioning, and operations has been reoriented. Instead of focusing on continental Eurasia, with a large permanent presence of the land-based ground and air forces in Europe and preservation of seagoing access to Europe by the Navy, we are now focused on the southern and eastern regions of the Eurasian land mass, North Africa and the Middle East, and Southeast Asia/Oceania, with major distractions in Africa south of the Sahara and Latin America as well. The Armed Forces’ orientation has shifted toward expeditionary warfare, and we have had to pre-position equipment and supplies on ships in the Indian Ocean, at Diego Garcia, in addition to supplies and equipment still stored in Europe.

For strategic planning, there has to be more than a random character to this structure. Since it is generally accepted that “he who defends everywhere defends nowhere,” the Nation must work out a hierarchy of interests that helps establish priorities for defense. Although little publicized, such a hierarchy was proposed in 1996 by the Commission on America’s National Interests.¹ The Commission, sponsored by a consortium including the Harvard Center for Science and International Affairs, the Nixon Center for Peace and Freedom, the RAND Corporation, and the Hauser Foundation, and chaired by Robert Ellsworth, Andrew Goodpaster, and Rita Hauser, divided the national interests of the United States into four major categories: *Vital*, *Extremely Important*, *Just Important*, and *Less Important* or *Secondary*. The following kinds of security threats or overseas events are included in each category (this is not a complete list, and it is paraphrased):

- *Vital interests* require attention to eventualities that would threaten the United States directly: minimizing the risk of attacks on the United States by nuclear, chemical, or biological weapons; preventing the emergence of a hostile “hegemon”—a dominant power—in Europe or Asia, or the emergence of a hostile major power on U.S. borders; preventing the catastrophic collapse of major global systems for managing trade, finance, energy, and environmental matters; and ensuring the survival of our allies (since they help ensure our own survival).
- *Extremely Important interests* are less important only in that they deal with matters outside the United States that can have serious impacts on our security, rather than those that would affect our country directly. Examples of such matters include preventing WMD proliferation or use anywhere; preventing the emergence of a hostile regional “hegemon” in areas important for our national well-being or that of our allies, such as the Persian Gulf; protecting our allies from significant external aggression; suppressing, containing, and combating terrorism, transnational crime, and drugs; and preventing genocide.
- *Just Important interests* cover a host of activities that make up the substance of the day-to-day dealings of the United States with other nations. They include such things as discouraging massive human rights violations in other countries; promoting freedom, democracy, and stability in strategically important states; preventing nationalization of U.S. assets abroad and protecting U.S. citizens from terrorist attacks or kidnappings; promoting beneficial international environmental policies; and maximizing American economic growth from international trade and investment.
- Finally, the *Less Important or Secondary interests* cover many more items and activities perpetually in the news, such as balancing bilateral trade deficits, enlarging democracy elsewhere for its own sake (in places like Congo, Haiti, or Cuba), and helping other states who are not allies preserve their territorial integrity.

This kind of strategic definition of U.S. interests is helpful in determining where the Armed Forces may have to be used. Careful scrutiny of the array, however, reinforces the dispersed and ubiquitous nature of the threats that the Nation and the Armed Forces must be ready to meet. Those that are lower in the hierarchy can move

higher quickly, as the examples of Korea in 1950, Kuwait in 1990, and Kosovo in 1999 indicate. An action by a rogue or a normally hostile government (if we can tell the difference) can change a stable, but uncertain, situation to a threatening one overnight. This is not new—it happened, for example, when the Soviet Union invaded Afghanistan in 1979. These complexities are made even more intense by the domestic political tensions that can be generated by actions at the lower levels of the hierarchy (in Panama, Somalia, and Haiti, for example), and by the uncertainties about whether any development has, indeed, moved up the ladder (in the Balkans, for example). All this simply affirms that the Armed Forces must be versatile and adaptable, and capable of action at many levels on a world scale, even more than was required during the Cold War.

Significance for U.S. Military and Naval Forces and Their Use

The design of our Armed Forces is following that of the commercial enterprise, both driven and enabled by the technology of that enterprise: substitution of capital for labor—exemplified by the use of instrumentation and automation to reduce crew size in ships of comparable size and capability (as in the reduction in our guided missile destroyers from about 300 in the existing DDG-51 to 95 in the coming DD-21); changed cost structure; use of information, communication, and transportation technology to shape organizations and their modus operandi; and centralized decision-making with decentralized execution. In the fast-moving actions that are anticipated, forces in the field are more likely to be given mission-type orders after campaigns are planned by the regional CINC headquarters, with more responsibility to be delegated to lower commanders. That this pattern will depend totally on the quality of information available at all levels of command was illustrated by several instances during the Persian Gulf War when General Norman Schwarzkopf slowed the movement of some elements of his forces because of uncertainty about their exact positions and fear that they might engage each other.²

There also exists the concern that the National Command Authorities, also having that information at their disposal, might be tempted to intervene and would thereby adversely affect prosecution of a military action, as the Armed Forces felt happened too often in the Vietnam War. The problem is that when a central authority perceives an imminent action or a risk attending one that, it is feared, could jeopardize wider political and economic goals, it is very difficult to sustain a “hands off, wait and see how it turns out” attitude. For example, much of President Lyndon Johnson’s personal intervention in Vietnam was generated by concern about whether China might be provoked to enter the war, and other kinds of concerns beyond the immediate operations attended the decision to end the Persian Gulf War short of total destruction of the retreating Iraqi forces. (It should be noted that problems of analogous vital importance face global commercial enterprises as well.)

One way to avoid such dilemmas is to complete a military mission fast enough to minimize the chance that the concerns will arise. Our Armed Forces are being designed for rapid military success, for the standard reasons that Armed Forces always have for quick success, but also for the obvious policy reasons attending globaliza-

tion and the end of the Cold War. More detailed insight into the direction of evolution of the Armed Forces and their operational characteristics can be obtained from the Joint Chiefs of Staff *Joint Vision 2010* and the emerging update, *Joint Vision 2020*.³ The terminology describing the operational concepts of the future forces captures their orientation: “dominant maneuver; precision engagement; focused logistics; full-dimensional protection”—with information superiority, in joint operations, with allied and coalition partners.

For military-to-military engagements, this orientation enables fast-response forces, basing their operations on broad knowledge of the forces and equipment that the opponent fields and what the opponent can and does do with them. It enables precision disabling attacks against the heart of the opponent’s capabilities.⁴ It allows fast movement to dominate the battlefield and defeat opposing forces.

These capabilities can be, and have been, extended to the quasi-military domain—for example, the Panama invasion in 1989, the Somalia landing in 1992, and the 1998 attack on Osama bin Laden’s camps in Afghanistan. But in this area, the use of military forces is far more subject to all the kinds of ambiguities noted earlier, given the interests at stake. In consequence of the latter, our fast-response, highly effective military capability is subject to the delays attending political decisionmaking, which can obviate some, much, and sometimes all of the advantage conferred by the forces’ technical capability. This means that our forces rarely have strategic surprise on their side, although they can achieve operational and tactical surprise by how they operate. A positive example of the latter is the way the Persian Gulf War coalition was able to use a flanking attack to drive Iraqi forces out of Kuwait; an example of the negative strategic effect of publicly argued delay in alliance decisionmaking is the way that Serb forces moved inside NATO’s timeline to destroy the civilian community in Kosovo.

The spread of military technology to the rest of the world; the dominance of commercial technology in the critical information and communication areas of military endeavor; ready access to space systems, including commercial space surveillance capability and the Global Positioning System (GPS) for navigation and weapon guidance; and the possibility that our opponents will jam the GPS to deny us its use for these purposes all create serious vulnerabilities for U.S. forces. This makes the U.S. forces’ hold on their current supreme position vis-à-vis the rest of world’s forces more precarious than is commonly realized.

The risks to our forces operate on three levels: *conventional military*, *quasi-military/terrorist*, and the *potential for WMD use*. At the *conventional military* level, there are many opposing capabilities, some of which we are not yet able to counter: ballistic missiles (it will be only a matter of time until such missiles have guided or homing warheads for deployment against ships of the fleet and ground targets); stealthy and/or fast antiship cruise missiles; advanced conventional submarines, which are especially hard to counter in littoral waters; mine warfare; advanced versions of anti-aircraft missile systems spread by former Soviet countries to any who can afford to buy them; and shoulder-fired surface-to-air missiles (SAMs) against our forces’ air mobility. In addition, commercially available space surveillance equipment and space surveillance capabilities of hostile governments can make achieving

surprise with maneuvers such as the flanking attack used by coalition forces in the Persian Gulf War much more difficult.

These threats are in direct opposition to the developing directions of our Armed Forces' maneuver and combat techniques: rapid maneuvers in unexpected directions against enemy areas of weakness and command locations; heavy dependence on tactical attack aviation and air mobility in combat zones; strategic- and operational-level air and sea movement for major force operations; dependence on the use of ports and airfields of sometimes wavering coalition partners; a consequent tendency to concentrate supplies at a few points or in a few ships converging on the area of action; and heavy dependence on worldwide commercial communication networks for information transfer and command and control of the forces. These threats will not put our forces out of action, but they will require extensive (and expensive) attention to the conventional as well as the new, unconventional types of attack that the forces will face.

At both the *conventional military* and *quasi-military/terrorist* levels, our forces are vulnerable to manipulation and breaking of the heavily space-based information/communication and navigation/guidance links—by jamming, deception, cyberwar, and antisatellite attacks (which can use high-powered lasers and microwave weapons from the ground rather than antisatellite weapons launched into space). Anyone, from a hostile nation to one of the increasingly sophisticated terrorist or criminal groups, can attack against these vulnerabilities at some level. And they must be expected to try, as we become increasingly and obviously dependent on those links for the evolving style of operation in the mode of *Joint Vision 2010*. Our overseas bases, ports, and military personnel are also vulnerable to terrorist strikes, as are our civilians, embassies, and commercial infrastructure. We will never have perfect security in any dimension. Therefore, intelligence is crucial to our force protection as well as civilian protection. And in geographical areas with which we are not familiar, help from our allies is also crucial. But in the perverse manner that is characteristic of the “globalized” world, such help is also a vulnerability because it is an additional source of leakage of information and technology to hostile quarters. There is not anything to be done about that, since recent experience in the globalized economy has demonstrated that we cannot either retreat into a shell or coerce our allies into holding the technology close; it simply makes the task of maintaining force superiority more difficult.

Another problem facing the military forces derives from the merging of the conventional military with the quasi-military kinds of opposing capability. Recent data show that on average about two-thirds of the world's population is concentrated within about 250 miles of an ocean shoreline. Also, most of the world's population growth is in urban areas, in growing megacities that tend to be concentrated within those zones along the littoral. This makes the objective areas for decisive military action more accessible to expeditionary forces, but it also means that the decisive action will have to take place in urban terrain—built-up areas where combat to achieve rapid results is very difficult. It also makes available to defenders, who may well have fewer scruples about human life and chivalric concepts of civilian protection than we do, the opportunity to use civilian populations as shields for military

operations and to stimulate civilian mobs to interfere with military movements against strategic locations. Thus, as the Russians found in Grozny, plans for rapid success in an urbanized environment might easily be foiled.

Also at both these levels, the slow *WMD diffusion* constitutes a danger not only to civilians who may be terrorist targets but also to our Armed Forces when they operate in hostile environments. Nuclear weapons are in a class by themselves in ability to deliver sudden and widespread devastation. Nuclear proliferation may be slow, but we can expect it to proceed, as it has been. In addition to the five original nuclear powers, Israel is presumed to have weapons holdings, and India and Pakistan have recently demonstrated their nuclear capabilities. Iraq and North Korea are known to be pursuing them, with what actual success we do not know. We lean on Russia not to pass to Iran nuclear technology that can be turned into weapons, but with only partial success. China and North Korea have been sources of leakage of missile technology, and this could extend to nuclear weapons technology if strategic rivalry between them and the United States should heat up. While this kind of creeping proliferation suggests that nuclear weapons may be a phenomenon of nations and will not become a terrorist weapon soon, that is only a matter of degree. Even if terrorists per se have more difficulty making the much feared “nuclear weapon in a basement” than is usually supposed, nuclear-armed hostile countries that may fear or be unable to attack the United States or its forces directly with nuclear-armed missiles can easily use terrorist groups and techniques to deliver such weapons.

In addition to possible nuclear weapons use, there is some concern about chemical and biological weapons as weapons of choice for poor nations who wish us or our forces ill. It is apparent that any of these weapons, which are usually lumped with other WMDs but have distinctive scope-of-action and time constants, can threaten our forces and, if used against them by surprise can essentially destroy—certainly defeat—a major military operation.

Quasi-military/terrorist actions and *WMD use* are now being lumped under the rubric “asymmetrical warfare.” This is simply another manifestation of the historical strivings of people to find ways to attack strength from weakness. In our own recent history, during the Cold War, the Soviet and Chinese support for Wars of National Liberation against countries to whom we had extended our protection, which led us into the debilitating conflict in Vietnam, was a major example of an asymmetrical warfare strategy. The implication of such a strategy, of course, is that the Armed Forces have to be able to engage seriously in both the conventional military and quasi-military arenas. This is an important understanding to achieve—there has been a tendency in discussions of design of the Armed Forces, recently, to view “asymmetrical warfare” as something that “displaces” the conventional warfare for which our Armed Forces have been designed and must be kept ready.⁵ The fact that it is an addition to their already full plate makes their design all the more complex, difficult, and expensive.

Then there are the military operations other than war (MOOTW). Generally, they involve keeping the peace in some area, or conveying humanitarian assistance after a natural or man-made disaster. Why must military rather than civilian resources be used for such operations? The reasons lie in their structure and training: they are well

organized and disciplined, they know how to marshal resources rapidly and have the wherewithal to do so, and they can fight if needed. These qualities figured in Panama, Somalia, and the Balkans. And Congress has called on the military to undertake such activities—for example, to participate in drug interdiction in the Caribbean. Why was the U.S. military committed in places like Somalia, where we have no obvious need to intervene except the humanitarian one, or in Bosnia, which is much more accessible to our European allies? Mainly, it appears, because we are the only ones whose armed forces have worldwide reach; because we do not have the residual political inhibitions that still act after centuries of historical rivalry among the nations that are now united in alliance with the United States; and because as the leader of those alliances, we are expected to lead by example.

Theoretically, civilian administrations are supposed to take over from the military in areas where the military initiated the action, but the civilian agencies have not yet proved equal to the task. The United States has provided no civilian agency for exercising civilian administrative control overseas, and our ethos dictates that we not run some other country's government. At best, we want to help the local people do it, but in the absence of local training and a tradition of effective civilian administration, that is a very long-term proposition—at a time and place where fast action is needed. We tend to rely on the United Nations to establish civilian administration where the alternative is chaos. It takes a long time to muster the resources, however, and even then there is no real authority or functioning organization to impose its will and discipline locally. Thus, a brilliantly executed military mission to set up some situation for effective civilian government often seems to have failed, or else it requires a continued military presence; the latter is often also viewed as a failure. Such purported failures have often been cited as reasons not to undertake the next such operation—in Europe as well as in the United States.

The U.S. military has become aware of, and has tried to deal with, this strategic need earlier than our civilian government—especially the Congress, which is put off by the financial and human cost of it. Transition to life in a globalized economic world in the absence of a Cold War requires that the government and the military come to terms with the new mission needs. In particular, the non-Department of Defense (non-DOD) agencies must see how the government can be better organized to deal with the spectrum of conflict more efficiently than it can at present, and the policies permitting such activity by those agencies must be put in place by Congress and the administration.

Many civilian agencies outside DOD and the national intelligence agencies must become involved in the broad spectrum of activity short of formal warfare that derives from the hierarchy of interests defined by the Commission on America's National Interests. Those agencies include the State Department and its bureaus, for economic assistance, information, intelligence, and technology transfer (in addition to the Diplomatic Corps); Justice, including the Federal Bureau of Investigation and the Drug Enforcement Agency; Transportation, for the Coast Guard and for the investigation of disasters that may have been instigated by terrorists; Treasury, for the Bureau of Alcohol, Tobacco, and Firearms; Energy, on matters involving nuclear weapons or a threat against our nuclear power plants and other nuclear installations;

Health and Human Services, for the Centers for Disease Control; and others, for specific assistance as needed.

Currently, these activities are controlled by Presidential directives specifying agency responsibilities and establishing coordination from the White House. These directives deal mainly with the possibility of terrorist attacks on the United States, and they fall short of dealing with all of them—for example, a cyberattack on our banking, power grid, or air traffic system, which could also involve other parts of the Treasury Department, the Commerce Department, the Federal Communications Commission, and the Federal Aviation Administration. A comparable structure must be established to deal with the aftermath of an overseas military operation involving peacekeeping or humanitarian assistance in a chaotic, combat-prone situation such as the one that characterized Somalia or Haiti at the time of our entry, or that followed the entry of NATO military forces into Kosovo. In particular, the relative roles of the military and the civilian agencies and the relationships between the parts of such actions devolving to the United States, its allies, and the United Nations must be clarified in both American and international law.

The significance of, and need for, working with other nations is often neglected in U.S. public discourse about events that may invite military action. Interlocking economies mean interdependence with other nations, and this enhances the importance of alliances even though the Cold War is over. It also means that the United States cannot undertake military action in isolation from others' involvement, and that for such action to be as effective as possible we must share technology and know-how with them. This is simply another force creating both the advantage of leadership and the risk of losing it; in being leaders we can at least influence policy in favor of our interests, but, as noted earlier, in sharing the capabilities that confer leadership, we indirectly impart those capabilities to others who would challenge us.

Also, worldwide engagement means worldwide military presence and force projection capability. That, in turn, implies the need for a mix of pre-positioned overseas assets (for rapid deployment to conflict areas) and overseas military bases (currently at about half the number that were available during the Cold War). All this suggests the need for coalition actions in all cases except direct defense of our homeland (and even that is often tied up in alliances and treaties, such as those with Canada involved in the North American Aerospace Defense Command). Dependence on overseas bases means that the allies or other nations want to have a say in the purpose and nature of military operations that are undertaken from the bases on their territory—for example, Germany asked us not to use NATO airbases in Germany to fly supplies to Israel during the 1973 war; Turkey has passed on whether and when we could use airbases on Turkish territory to attack Iraq; and Italy proposed to restrict some aircraft operations out of Aviano during the Kosovo air campaign.

Thus, as noted at the outset of this chapter, a main characteristic of U.S. inextricable involvement in (indeed, leadership of) the globalized economy is that we have global interests to protect, but cannot operate as free agents in doing so. Our very dominant global position leads to constraints on our ability to use military power as we alone would wish to, and makes deterrence just as important now as it was during the Cold War, although by different mechanisms. It also enhances the importance of

naval forces, since those forces can operate for extended periods in forward positions without challenging any nation's sovereignty, and they can exercise forward, friendly engagement through port visits, all with but a few forward support bases in especially secure areas.

Even within the above structure, the Armed Forces cannot be clear about whom, where, or when they will have to fight. They must be ready for actions in any area of instability where our interests may be challenged, in any of the ways described, but within the coalition constraints sketched earlier. This diffuse "threat" makes it especially difficult to provide a planning base for structuring the Armed Forces. Therefore, we have chosen the two major theater war strategy, the ability to fight two major regional wars of roughly Persian Gulf War size nearly simultaneously, which we may not be able to sustain in terms of budget. For example, it is the pressure of keeping the available forces ready to fight two major regional conflicts that at least in part raises the level of tension in Congress about whether the Armed Forces should be used for peacekeeping and humanitarian missions. For this reason, it may well prove necessary to change our military planning strategy to one of being ready to fight one major regional conflict while being ready to deter another—that is, use our remaining aerospace and sea power to stand off an attack on our interests in another region until we can deal with it effectively. This could free up resources and forces to engage in the military operations other than war that bid fair to be a continuing part of our post-Cold War geopolitical landscape, while keeping the bulk of the forces ready for the more conventional and demanding war fighting.

The nature of the potential opposition and the wide geographical separation of our forces' possible operating areas show the deployment capability, military systems, and preparation to operate in the exotic environments that our forces need. With respect to where and who, the forces will have to be adaptable, and train to be so. There will also be a premium on intelligence, including surveillance operations and derivative strategic interpretations of "signs"—for example, trends in attitudes, propaganda, subtle preparations for subversion or war—to allow as much time as possible to prepare for and execute deployments to specific locations against specific forces when the need arises. A change in attention to intelligence will be of crucial importance. We decreased expenditures and the scope of intelligence activities after the end of the Cold War. However, they should have been, and must in the future be, increased because there are more areas of concern to cover, and a greater need to learn about potentially hostile societies and their activities beyond what can be learned through national technical means alone, and more analysis of data that must be gathered from all sources.

The changes in strategic outlook also affect our views of overseas military engagement. We are not as willing to risk treasure and military casualties in support of "interests" as we were when survival was at stake. The question—Is this worth one American life?—arises, and the case has to be made—as it was in the Persian Gulf, and in Bosnia and Kosovo—about why any particular engagement is worth risking our servicemen's and servicewomen's lives and the expenditure of national budget that could be used to meet internal civilian needs.⁶ This attitude extends to our allies in the sense that the longer a military conflict goes on, the more questions arise as to

the purpose and value of it (we saw this tendency operate in the Persian Gulf War and the Kosovo bombing campaigns), and the more likely it becomes that the coalition will weaken or fall apart. The latter problem is exacerbated by any visible U.S. reluctance to incur casualties—a natural concomitant of asking the question above—and by the inferred tendency of the United States to want to lead by saying, “Do this,” rather than by saying, “Follow me.”

Moreover, human rights considerations have broadened to the point that a large body of U.S. and allied opinion runs against inflicting heavy damage on opposing forces, and in particular heavy civilian casualties—this in contradistinction to the tendency to condemn and punish their nefarious leaders. Arguments about sanctions and the bombing campaign against Iraq, as well as arguments within NATO about the severity of the air campaign against Serbia over Kosovo, attest to this change of attitude. In consequence, deterrence of conflict has become much more important at the conventional, tactical, and operational levels than it was before. These deterrence considerations bear little relation to the strategic deterrence of the counter-Soviet era, and the distinctions have had a marked effect on our military planning.

Let us consider the military planning first. Since drawn-out wars in support of “mere interests” are not likely to garner public support in the United States or abroad,⁷ we are planning (as described in *Joint Vision 2010*’s “dominant maneuver, precision engagement”) for fast, decisive actions that will be over rapidly and involve few casualties. Actually, even our industrial plant that supports the Armed Forces is no longer designed for support of a prolonged conflict that uses up extensive materiel. It is spread very thin, has little expansion capability, and depends on the rest of the world for much material support, such as electronic components and oil for fuel and petrochemicals. Accordingly, a determined opponent, for whom war would not be for “interests,” but for survival and position in a competitive world, could seek to defeat our strategy by turning our attempt to achieve a rapid, decisive military victory into a protracted war—for example, by sustaining a guerrilla war against us, our allies, or a friendly nation. Twentieth century military history is replete with miscalculations that a war can be kept short: World War I, World War II, Korea, Vietnam, Chechnya. We must take these lessons into our military planning, by being careful never to underestimate our opponents—another reason for an enhanced intelligence effort.

This suggests that we need to know more about the cultures and values of friends and potential foes, what *they* deem important enough for a fight to the death, and how they would organize for one. Think, for example, about potential directions and outcomes of a conflict with China over a Chinese military campaign to dominate Taiwan. As pointed out in a recent study of post-Cold War deterrence commissioned by the Navy and performed by the Naval Studies Board of the National Research Council,⁸ even the so-called rogue governments have rationales for challenging us, and they have different culture-specific values that cause them to fight wars in ways that we would not anticipate and that we must come to understand. That study put forth the idea of embedding a group of “strategic worriers” in DOD planning structure, with the mission of knowing other cultures and their leaders’ value systems, and then anticipating their strategic moves on the world scene. The knowledge gained by this group would be used to inform war games and training exercises for engagements in

various parts of the world, as well as to inform intelligence estimates for contingency planning and crisis response.

Such knowledge would greatly enhance our ability to deter actions against our own and our allied interests. As in all the other areas of military concern, the new deterrence needs are built on the old ones. Strategic deterrence in the Cold War sense is still with us. We still need forces that can counter the large remaining numbers of Russian nuclear weapons holdings, in case that country should gradually turn hostile again and reconstitute its strategic nuclear forces. In addition, our own strategic nuclear forces are now viewed as necessary to deter the use of nuclear weapons—and in some circumstances, chemical and biological weapons—by rogue or hostile states or transnational forces against U.S. forces, our homeland, or our allies. There is no need to remind the reader that the Navy, with its strategic ballistic missile submarines, is a key component of the strategic nuclear deterrent force.

In addition, to deter conventional attacks against our forces and interests overseas, we need credible conventional forces and related capabilities. To be credible, these capabilities must be demonstrated, in conflict if necessary, but by other means wherever possible. And, especially, there must be demonstration of the will to use them wisely, in furtherance of our interests, and not to squander them to no obvious gain.

As part of that demonstration, steps must be taken in advance of crises to create an environment in which challenges to our interests are less likely to arise. This must be done at many levels: political, diplomatic, economic. Then, the military forces become part of the total effort, through “forward engagement” and continuous contact with nations that are neutral or friendly, and even with some that may later turn hostile. This includes visits, military schools, personnel exchanges, and joint training and maneuvers. Such contact has multiple benefits: it helps others come to know our military; it demonstrates our capabilities in a benign, friendly environment; it helps our own soldiers, sailors, marines, and airmen to become acquainted with and understand potential partners and opponents; and it represents the beginning of coalition building that will come to the fore in times of crisis. (We should note that these methods, and even demonstrated military action, may not deter terrorists, who are driven by ideology and who think they have a strategy that can defeat our strengths. This includes the few nations that would make war on us using terrorist tactics in “peacetime.” Such transgressors may, however, be deterred for an uncertain time by severe military punishment. How long does it take for the lessons of a Persian Gulf War, or a Kosovo campaign, or a strike against a Muammar Gaddafi or an Osama bin Laden to wear off?)

Naval forces are ideally situated and constituted for forward engagement. This has been recognized in the Navy’s “Forward . . . from the Sea” concept. They can be in an area for extended periods while not wearing out their welcome in any particular spot. Carriers and other warships are highly visible signs of military power. The movement of such forces in time of crisis sends strong diplomatic as well as military signals; it is easier than moving land-based forces because entry of land-based forces may be especially sensitive just at the time of crisis and therefore not wanted by a recipient country, even one that typically avails itself of our military protection. If a crisis calls for military force, naval forces can land from the sea, with or without

ports, and if the latter, they can establish and hold a base area until land-based forces arrive. This capability, too, in modernized form, is described in the Marines' developing "operational maneuver from the sea" (OMFTS) concept.

The naval forces are positioning themselves to meet the new conditions of warfare and the new strategic needs. Under the "network-centric warfare" concept,⁹ together with the OMFTS concept, they will be positioned to have the information superiority and to carry out the "dominant maneuver" of *Joint Vision 2010*. They are also acquiring advanced tactical aircraft—the current-generation F/A-18 E/F and, together with the Air Force, the Joint Strike Fighter—for the next generation of Navy and Marine aircraft. The Navy has the capability to launch "precision engagements" using current aircraft and surface-fired weapons, and that capability will increase in the future.¹⁰ And both the Navy and the Marine Corps are developing the operational concepts and doctrines that will enable them to undertake the full spectrum of missions from friendly engagement to intense combat.

Specific Current and Future Naval Force Design Needs

It can be assumed that the basic naval force structure of carrier battle groups, amphibious ready groups, and strategic ballistic missile submarines, including all their new-generation ships, aircraft, weapons systems, and the concepts of operation that go with them, will continue into the indefinite future. This structure has been evolving steadily since World War II to meet changing world conditions, and, as the preceding discussion has shown, the forces within the structure will come to be even more appropriate to the Nation's needs in the future. The evolution of the force structure and its modes of operation will not cease, of course, and it will take some directions that derive from the current state of the world's technology, economy, and geopolitics.

The key conditioner of the modern use of naval power is that the days of independent naval force operation are long gone. Although in the current organizational trend they have much autonomy in tactical operations and even at the operational level once an action is committed, naval forces must not only keep in close touch with regional CINCs and the National Command Authorities for policy reasons, but also they are heavily dependent on external technical support for successful operations. They are particularly embedded in the information web, as attested to by the growth of the network-centric warfare concept. And for this, while they have many of their own assets at the tactical level, naval forces depend heavily both on the Air Force and on national space assets for surveillance, reconnaissance, communication, and navigation attending military action. Further, although the Marines are designed to take territory from the sea and set up protected operating bases on land, they are not fundamentally constituted or oriented to hold territory indefinitely as a ground force (although they have had to do so, and have done it very effectively, in Korea, Vietnam, and the Persian Gulf).

This is not simply a one-way dependency. The ground forces and land-based air forces depend on the sea for heavy lift, and therefore on Navy protection of the sea-

lanes. They depend on the Navy for surveillance, reconnaissance, and electronic warfare support in open ocean areas that they may have to transit or in or near littoral areas from which they may have to operate. And as just noted, they may depend on the Navy/Marine Corps team and sea-based Special Operations Forces to take and secure operating bases where safe entry and close support are needed, but not available.

Also, there is a natural partnership between naval aviation and the intercontinental bomber force. The latter cannot hold position in a theater of operations for extended periods, nor can it necessarily feel secure about safe passage through antiaircraft defenses that may prepare for their arrival during the period preceding the arrival of a sortie in a target area. It was possible to anticipate B-52 raids from Guam through surveillance of the base area during the Vietnam War, and surveillance techniques have become considerably more sophisticated since then. On the other side of the equation, naval forces can only penetrate inland to the range of carrier-based aviation and, at the longer distances, the deliverable payload of attack aircraft becomes limited. However, the Navy can maintain sustained contact and clear the way for the heavy, deep-strike forces based off-shore or in the continental United States, in addition to conducting strike warfare along the littoral and 100 to 200 miles inland. Further, the coming era of tactical and theater-level defense against ballistic and cruise missiles will clearly require the fielding of complementary systems by all the services to ensure multilayer protection of areas at risk of nuclear or even conventional missile strike—including defense of Air Force and Army concentrations on land, allied cities and forces, and naval forces at sea.

The bottom line is that, in the post-Cold War, globalized world, military forces will have to operate jointly, both because of the geographical separation among possible areas of action and the fact that in the new (*Joint Vision 2010/Joint Vision 2020*) modes of operation, the critical assets for rapid decisionmaking are distributed among the forces; none of the forces can be as self-sufficient as they once were, or as they may have thought they once were. This development is coming to be accepted by the services, in recognition of the authority that the Goldwater-Nichols Department of Defense Reorganization Act of 1986 granted to CINCs for establishing the military requirements as well as commanding the military operations in their areas of responsibility. The formal command structure below the level of CINC still largely follows the lines established during the Cold War, in that service component commanders report to the CINCs and are responsible for the operations of their force elements: fleets, carrier battle groups, air forces, and so forth. However, mutual support among these force elements is ensured by direction from the CINC and by CINC approval of battle plans.

The arrangement of areas of responsibility and authority of the regional CINCs already covers much of the world's areas where military action may have to take place: the Atlantic and the Mediterranean; the Middle East and the Indian Ocean; the Pacific, including the Far East; and Latin America. The key area where shortening of command lines is taking place is at the lower operational and tactical levels, where it has come to be recognized that combat forces "at the point" cannot wait for engagement orders—for example, strike sorties, battalion maneuvers—to percolate through

several command levels before action is authorized after the combat information network yields data on enemy maneuvers and shifting targets.

It has become clear from the lessons of the Persian Gulf War and operations in the Balkans that the traditional military operational command structure is evolving under operational pressures, just as the commercial command structure for global operations has been evolving. It is expected that in future military operations, especially those under the developing Marine OMFTS concept, forward units will often fight dispersed and in apparent isolation, making them hard for opposing forces to find and giving them a great deal of autonomy as they exercise their power—and mission—to call in heavy surface and air firepower from the fleet. However, they will have to be tied to the joint combat information and command network to do that and to operate as a coherent total force. Forward ground force units of any service will depend on air defense and aviation units of their own and other services for air defense and for offensive tactical air, mobility, and logistics support. The tactical air forces will rely on the forward ground units for accurate targeting information. Thus, even though the battlefield structure may appear to be one involving small, widely dispersed units that are apparently operating on their own, they will in fact be closely coupled in a joint operational structure. That is, indeed, the strength of the new tactical expression of network-centric operations. It is too early to say what the final structure will look like; it will be conditioned by future operations, and will have to be adaptable to remain responsive to the needs of the occasion.

The first requirement for naval forces in this environment is to make certain that they are fully connected, along with all the other services and the regional CINCs, into the worldwide command, control, communications, computers, intelligence, surveillance, and reconnaissance (C⁴ISR) network, and that they appropriately furnish their important parts of that network. Information comes from many and diverse service and national sources, ranging from troops and aircraft in contact with the enemy to systems in space. Naval forces need compatible terminals to receive the information aboard ships, and at the headquarters of Marine units at various command levels on land. They also need communications that are interoperable among the services. The needs extend further, to include intelligence, ranging from opponents' intentions and capabilities to their actual tactical movements and actions, on land and at sea, in preparation for military engagement. Naval forces also need rapid intelligence on the effects of their actions. Such intelligence is commonly thought of as "bomb damage assessment," but it amounts to much more than that. The forces need to know the broader and longer term effects of any action—whether strike or maneuver—on their opponents' activity and plans early enough to anticipate and counter enemy moves before they can have any effect. Only through building toward such an information advantage can the forces make the rapid decisions needed in the current and future strategic environment.

In the naval forces operational environment, mines and submarines can be show-stoppers. Mines conditioned the activity of the fleet and the Marines off Kuwait during the Persian Gulf War. Loss of a ship—for example, a major warship or a pre-positioning ship steaming toward the scene of an action—to a submarine torpedo could effect a marked change in the outlook of the American public on an engagement in de-

fense of a “mere interest,” thereby either triggering an undesirable expansion of a modest military action or prompting an embarrassing stand-down. A significant part of the British naval effort during the Falklands war was devoted to guarding against Argentine diesel submarines that were feared to be in the theater of operations.

From the naval force point of view, the needed intelligence includes knowledge of opponents’ mine warfare capability, moves to deploy mines, and the locations and extent of minefields. Knowledge of opposing fleet and air activity must also include submarine activity. Although the Navy and Marines have begun to give concerted attention to the risks and problems of mine warfare, which can be carried out by irregulars as well as by organized military forces (swimmers attaching limpet mines to ships in harbors, for example, or small boats loaded with explosives going off next to a warship), serious attention to antisubmarine warfare (ASW) essentially stopped with the end of the Cold War.

Antisubmarine warfare has been largely ignored in the competition for resources characteristic of our post-Cold War military planning. We have largely stood down from the heavy ASW emphasis of the Cold War era, both in research and development (R&D) and in actual operations at sea.¹¹ Yet, many potentially hostile nations and others who might want to interfere with U.S. and allied fleet and logistics operations are acquiring modern, quiet submarine capability. Such nations include China, North Korea, Iran, Pakistan, and India—not to mention the remaining and very substantial Russian submarine capability, which although reduced in recent years can be reactivated if they perceive the Navy as a hostile force. At the same time, our naval forces are focusing on the littoral area, in shallow waters where the underwater physics is much more difficult than in the deep, open oceans where we had concentrated our ASW attention during the Cold War. We have not yet solved the problems of finding and defeating hostile submarines in the relatively shallow waters of the continental shelves.

Mine and submarine warfare pose two serious vulnerabilities that must be remedied to permit the most effective use of our naval forces in defense of our interests. Failure in that effort would pose a serious threat to our developing military strategy of achieving fast decision with minimal casualties—a strategy that we have seen is needed in this era in which “interests” rather than survival dominate our global orientation.

The Marine Corps must be organized and prepared to deal with the prospect of having to achieve rapid success in urban environments that have, in addition to hostile populations, military or quasi-military defenders who know how to use buildings and rubble for cover, concealment, and offensive resistance. And they may have to achieve this under the watchful eyes of the news media’s cameras, which will assuredly be focused on the most intense areas of death and destruction. The Marines are well aware of this need and have been preparing for what they call military operations in urban terrain (MOUT), or what has elsewhere been called military operations in built-up areas. This preparation has involved a series of exercises by the Commandant’s Battle Lab whose purpose is to develop appropriate tactics and training, and through R&D to develop matching sensors and weapons, all with a view to capturing built-up areas rapidly, without destroying them—as we saw happen in Chechnya. Part of this preparation includes experimentation with nonlethal means of securing

sections of streets and controlling the movements of mobs, both to avoid casualties to the civilian population and to prevent the civilians from being caught up in, and interfering with, combat operations.

The preparation must also build understanding of local cultures, customs, and values and include education training to impart this knowledge to our forces and their leadership. Such understanding and training could help forces anticipate the defense techniques of urban resistance groups and, if successfully integrated with the combat techniques being developed for MOUT, could eventually change the character—extended combat, heavy destruction, heavy casualties—of fighting in built-up areas. The need for such understanding and training emphasizes the need for, and value of, coalition operations, particularly operations with military forces and civilian administrators in or near the area of prospective combat. They will have much relevant information to provide, and our forces should be trained to seek out and heed it.

Summary of Areas for Naval Force Concentration

It is now possible to compile, from the preceding discussion, a compact summary of the particular needs of the naval forces in the globalizing, post-Cold War world of globalization that go beyond continual fleet, aviation, and weapons system modernization:

- All-source intelligence, surveillance, and reconnaissance input is crucial to naval force operations. Navy and Marine systems contribute to such input, but they also depend heavily on other services and national agencies for it. In this environment they must make their needs known and ensure that they are met, or their operations will be severely hampered.
- The naval forces' combat information systems must be a fully interoperable part of the theater- and worldwide intelligence and combat information network. Accomplishing this will entail developing ideas for network-centric operations that have been emerging from the Naval War College and several Navy-sponsored studies. These concepts include the idea of a balance between centralized policymaking and decentralized execution within the information and command network. The naval forces will have to work to extend that network physically and conceptually, working in conjunction with related efforts of the other services and the regional unified commands.
- The naval forces will need a precision land strike capability, which can operate autonomously as necessary or jointly with either the intercontinental bomber force or theater land-based air and ground forces. Capability in this area, already substantial, is being continually augmented, and that augmentation will continue so that the naval forces can take full advantage of joint targeting assets such as the high-altitude, long-endurance, unpiloted aircraft *Global Hawk* and the Joint Surveillance and Target Attack Radar System.
- The naval forces will have to give close, sustained attention to antimine and antisubmarine capability in the littoral environment. Mines and modern, quiet, non-nuclear submarines represent "poor-man's weapons" against a major naval power. They are easily purchased, they are appearing in increasing numbers

around the world, and they constitute a major U.S. vulnerability. The naval forces must be prepared to counter them.

- The Navy and Marines will need surface combat capability against stealthy antiship cruise missiles (or hostile ships) such as is being pursued in the current Cooperative Engagement Capability program and its extension to joint experiments with land-based air defense systems. These experiments will have to be continued until we are capable of providing cruise missile protection of an entire combined-arms combat force extending from far out at sea to far inland.
- The Navy must partner with other theater forces in theater ballistic missile defense, and it must be able to float such defense into place at appropriate locations at sea to undertake the defense alone in some circumstances (for example, defending Taiwan or Japan ad hoc from the sea, when political considerations may have precluded assistance “on the ground” before eruption of a crisis).
- Naval ships and the Marines must be defended against WMD effects. Ship protection would include positive pressure in ventilation systems, rapid wash-down and decontamination capability, and immunization or treatment for chemical or biological attacks. The Marines must learn and practice how to operate in an environment where nuclear weapons have been or may be used, and how to operate in a chemical environment while wearing protective gear. And they must work with the Army and U.S. allies to acquire better, less debilitating protection. Also, for all the forces, continued research is needed on the detection of biological agents and on immunization or field application of antidotes for them.
- The naval forces need the ability to land marines rapidly, overcome resistance rapidly (including sustaining civil order by nonlethal means, since much of the action will be in urban or built-up areas), and secure ports and areas where follow-on land and expeditionary air forces can enter and undertake sustained operations; that is, they must continue to develop OMFTS and the techniques and equipment for military operations in urban terrain or built-up areas.
- The Navy will have to be able to protect logistics support fleets from any threats—air, surface, or subsurface—as they transit to a theater of operations.
- The naval forces will need counterterrorism capability for ships and their crews in ports and for marines ashore. This must include intelligence conducive to the anticipation and interdiction of terrorist attacks.
- To engage in the operations with coalitions that can be foreseen, to forestall terrorism, and to make it easier to subdue hostile urban areas when necessary, the naval forces will need the ability to work well with allies and other potential coalition partners. The knowledge and capabilities will have to be adaptable to many areas of the world. This will require the training of officers and commanders to enhance knowledge of diverse cultures and value systems, and of crews to adapt to those cultures and value systems (not to adopt them, but to be able to work in harmony with them). National policy must provide for the exchange of technical capabilities with allies. Such education, training, and knowledge will be needed at all levels, from small combat units or ships’ crews to commanders in chief. The naval forces must not only train their own people in these areas, but also they must work with the other services in their related efforts. Whether, when, and

how to tailor capabilities to specific geographical areas, the provision of resident experts for consultation with the CINCs, and the nature of, and readiness for, ad hoc training for unexpected contingencies—all are matters yet to be taken up. The naval forces should promote their resolution at the policy levels of DOD and the Department of the Navy, and then diffusion of the results through the fleet and the Marines.

- Continuous training for both conventional military and quasi-military operations, including military operations other than war, is needed. The naval forces must work out ways to build and sustain proficiency in both areas—for example, by having different parts of forces in training and deployment for different aspects at different times; one part can at one time be preparing for, and deployed in, MOOTW and defense against asymmetrical warfare, while the other part is involved in training and preparation for conventional network-centric war fighting. The fractions of the forces to be assigned to each kind of activity at various times, rotation policies between them, the nature of the education and training, and other relevant matters—these too remain to be worked out. This is a major policy issue that must be worked out if the Nation and its naval and other military forces are to adapt effectively to a post-Cold War world having a global economy and posing major challenges to U.S. interests and security. 🌐

Notes

¹ Commission on America's National Interests, *America's National Interests* (Santa Monica, CA: The RAND Corporation, July 1996).

² Michael R. Gordon and Bernard E. Trainor, *The Generals' War* (Boston: Little, Brown and Company, 1995).

³ John M. Shalikashvili, *Joint Vision 2010*, Joint Chiefs of Staff (Washington, DC: The Pentagon, 1997).

⁴ Of course there can be mistakes, fratricide, and so forth; military operations are rarely perfect. But we can compare the World War II air raids against Dresden, which caused hundreds of thousands of civilian casualties, with the air war against Belgrade in 1999, which the Serbs claimed caused some dozens of civilian casualties, for similar operational effects.

⁵ National Defense Panel, *Transforming Defense: National Security in the 21st Century* (Washington, DC: Government Printing Office, 1997).

⁶ It should be noted that since our Civil War, at least, the United States has always been interested in minimizing combat casualties. We have eschewed such tactics as the Russian practice of committing division after division to be chewed up in combat to achieve a breakthrough, or the likes of Chinese “human wave” tactics, which spend personnel freely “now” in the expectation that that will hasten victory downstream. But the notion that troops should lay down their lives in what is viewed by much of the public as a sort of geopolitical game, rather than for the Nation's freedom and survival, adds further to the desire to avoid casualties in military action.

⁷ A test we should not want to undertake, for example, would be to find out whether military conflict with China over Taiwan, as a war of principle, if it became protracted, would also fail for lack of support.

⁸ Naval Studies Board, National Research Council, *Post-Cold War Conflict Deterrence* (Washington, DC: National Academy Press, 1997).

⁹ The concept and its modus operandi are described in detail in the report of a study sponsored by the Chief of Naval Operations: Naval Studies Board, National Research Council, *Network-Centric Naval Forces: A Transition Strategy For Enhancing Operational Capabilities* (Washington, DC: National Academy Press, 2000).

¹⁰ The current inventory includes the joint direct attack munition guided bomb and laser-guided bombs. Under development for the services' future inventory are the joint standoff weapon and the joint air-to-surface standoff missile. There are also surface-fired, precision-guided weapons such as the current *Tomahawk* and extended-range standoff land attack missile and, in the future, the gun-fired extended-range guided munition (ERGM) and a land attack version of the standard missile with extended range. This missile, as well as the *Tomahawk*, the ERGM, and the joint air-launched missiles will have the ability to attack targets with unitary warheads or submunitions, including the brilliant antitank submunition.

¹¹ Naval Studies Board, National Research Council, "Overview," vol. 1 of *Technology for the United States Navy and Marine Corps, 2000–2035* (Washington, DC: National Academy Press, 1997).