

Understanding “Asymmetric” Threats to the United States

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Understanding "Asymmetric" Threats to the United States

Executive Summary

The purpose of this report is to evaluate whether the concept of asymmetry has analytical utility and to characterize the threat environment facing the United States in 2002. "Asymmetric threats" have come to mean a great many things, and so the term lacks basic definition. Very often, those who use the concept point out that the "asymmetric foe" is one who strives to exploit U.S. weaknesses or who strives to circumvent superior U.S. military power by cunning, surprise, indirect approach, or ruthlessness. In the end, we are left to ponder how these descriptions differ from good strategy or tactics. Does the concept of asymmetry have anything novel to offer?

There are many definitions of what constitutes an asymmetric threat, none of which holds sway in defense planning and policy making circles. In general, the term is used to describe forms of attack against which the United States has no defenses, and it depicts tactics that Washington will not abide (either because they are morally reprehensible or restricted by legal agreement). The authors of this report find that the concept has come to bear too great a burden, as it is used to explain: different and challenging threats; the United States' position in the world and the security challenges it faces; U.S. legal and political self-imposed constraints; vulnerabilities to new and old threats; and novel approaches designed to offset U.S. strengths. This report acknowledges that the term does reflect the uncertainty that currently exists in the international security environment, and it does impress upon us that the United States is either vulnerable to some menace or unprepared at some level to cope with a selection of modern-day threats. Yet, can such a concept serve defense planners and policy makers well? This is more than a semantic debate over a policy buzzword. It is a question of whether "asymmetry" can help establish a useful conceptual and analytical framework for conveying the complexity and addressing current and emerging security challenges.

The report examines the origins of asymmetry as a security concept. The concept has found its way into our lexicon to explain the unique security circumstances facing the United States. It also captures the challenge of determining what deters "the enemy," and underscores the difficulty of coping with the unfamiliar, unorthodox, or different war-fighting techniques that the United States faces in a post-Cold War world. There are several factors that, together, give impetus to the threat dynamics we see today. A review of the 21st century security environment must include discussion of: the reality of U.S. military dominance; the self-imposed limits that the United States places on its international and military activities; the differences that exist between how the American people and their potential enemies evaluate success; the tolerance by U.S. leaders of vulnerabilities (some of which are systemic); the fact that the United States faces multiple adversaries and threats across a broad spectrum; and the ease with which potential adversaries can acquire technologies and weapons that may be used to undermine U.S. influence abroad, attack the U.S. homeland, and confront U.S. forces.

There are also key elements of current and popular representations of the "asymmetric threat" to consider. Such threats may be said to work to: defeat our strategic imagination; pose menaces so awful that the government dare not respond; and challenge our ability to respond effectively. One of the challenges U.S. policy makers face is to resist the urge to focus simply on those threats that are unusual, different, or designed to evade American strengths. Instead, defensive energies should be directed to defeat those threats that would wreak great damage upon American interests. It is not sufficient for a threat to be different; it must also be effective. This report discusses in greater detail concrete expressions of the "asymmetric threat." The different, unorthodox, and unimaginable threats reviewed

include brief examinations of terrorism, the uses of readily available technologies for military purposes, attacks involving mass casualty agents and munitions, counterspace warfare, and the use of ballistic missiles.

Discussions of "asymmetry" and security are not limited to the United States. Russian and Chinese writers view the concept of asymmetry through their own cultural and strategic prisms. "Asymmetric threat" has a particular meaning for the Russian audience and is tightly associated with Washington's movement towards deployment of a missile defense system. In the case of China, the discussion of asymmetry reflects a specific approach to strategic problem-solving. Russians and Chinese are endeavoring to understand how analysts in the United States conceive of "asymmetry" and are wary of new American approaches that further disadvantage their forces. One must also recognize that the term can become part of foreign lexicons because analysts in the United States use this term. This treatment of foreign viewpoints helps supports a key finding of this report, that, for any discussion of asymmetry to be useful, it should be context-specific.

The reader will find that discussions of asymmetry in the two case studies addressed here float into the background as a more meaningful discussion of situation-specifics fills the foreground. In looking at Iraq's use of biological and chemical weapons to attack military forces in theater and U.S. civilians and the September 11 attacks on the U.S. homeland, the study reaffirms a more classical approach to understanding threats, by examining their political-strategic contexts and considering the myriad of human factors involved, to include moral, psychological, and cultural factors involved. The more generic concept of "asymmetry" does little to help us understand the security relationships and challenges facing the United States.

This study finds that the utility of the term "asymmetry" for understanding security matters has diminished since it was introduced in the mid-1990s, and it advocates stepping away from the mindset of the time. Examination of specific uses of the term "asymmetry" indicates that the frequent references today to threats that are so labeled do little to help order defense priorities. Given the international security realities and the analytical shortcomings of this concept, and given the clear imperative today to clarify national defense priorities, the relatively young concept of asymmetry will fade from defense jargon in the years ahead. For these reasons, the Department of Defense, among others, should phase out the use of this term.

Understanding “Asymmetric” Threats to the United States

Introduction

“Asymmetry” is a term used extensively, even casually, throughout the U.S. defense and policy communities of the United States. Its usage is so casual, in fact, that it has contributed to confusion in understanding modern-day threats and distorts thinking about the security challenges facing the country. The resulting muddle and misconceptions ultimately could have a negative impact on the development of national security and military strategies as well as defense planning.

“Asymmetry” or “asymmetric” has many definitions and is used to describe many things, from weapons systems and tactics, through strategy and worldviews, to comprehension of what is sanctioned by morality or international law.¹ “Asymmetric threats,” for example, are commonly viewed as having the potential to produce widespread civilian casualties or considerable environmental damage. Asymmetry in this context does not mean that the weapons used are necessarily better or worse than those of the United States. Rather, potential adversaries are willing to use such weapons without “conventional” limitation. Indeed, those behind “asymmetric” attacks or warfare are sometimes viewed as exhibiting breathtaking malice and ruthlessness. There is even a bit of craftiness and a subversive quality that one may associate with an adversary’s “asymmetric” approach, an attribute perhaps most clearly illuminated in November 2001 by President George W. Bush discussing bringing terrorists to justice: “We must not let foreign enemies use the forums of liberty to destroy liberty itself.”

Alternatively, the term has been used to describe specific “asymmetric” dangers posed to U.S. security by ballistic missiles, sea mines, terrorism, cyberwar, among other tools of warfare. “Asymmetric” responses tend to represent the general set of counteractions that weaker states or groups devise to confront superior U.S. military forces. Any military plan that avoids meeting the United States in a head-on, force-on-force, “fair” battlefield fight is also considered to be “asymmetric.”² One could observe that an “asymmetric,” “competitive,”³ or “unfair” approach is nothing more than good strategy in practice.

Indeed, “asymmetric warfare” and “asymmetric threats” seem to be formless and shifting concepts, insofar as attempts to use them to understand and analyze the security environment can be like grabbing sand out of a barrel. You know that you have grabbed something of substance, but there is not nearly as much there as you first felt once you removed your hand from the barrel. You also observe that the substance itself is ever remolding its shape, even as you hold it in your hand. We will show that in the end what really matters to the analyst are the grains of sand, rather than the amalgamated whole that “asymmetry” represents.

In this study, we will demonstrate that the term “asymmetry,” as it is used to explain threats facing the United States, has come to bear too great a burden and, consequently, has diminishing utility. As it is commonly used today, analysts rely on the term to explain, among other things:

- new, unorthodox, surprising, urgent, and unfamiliar threats;
- the historically unique security circumstances facing the United States, which is dominant in nearly every facet of its international and security relationships;
- the constraints that the United States places on its foreign and defense policies and activities;
- U.S. vulnerabilities, or lack of defenses;

- Washington's weaknesses in executing responses to threats; and,
- novel tactics and operations available to potential enemies.

In recent years, U.S. defense and policy communities have appeared obsessed with the "asymmetry" concept.⁴ Yet at the most basic level, to be "asymmetric" is simply to be different, either by self-willed design or merely because that is the way things are. Moreover, to be "asymmetric" to a rival is not necessarily to be unfamiliar.

Accidents of history and geography have endowed and rewarded polities unevenly. States share the legal personality of sovereignty, and different clusters of states will share a number of possible characteristics (namely, political, social, cultural, economic). But asymmetry, or *difference*, is the norm.

The United States is no stranger to asymmetric tactics. Americans, after all, have won a long series of great contests against "asymmetric" foes.⁵ The United States also is capable of defeating itself by placing constraints on the use of its strengths. Major examples of this phenomenon include: the ways in which the United States turned the task of defending South Vietnam into an intractable foreign policy "quagmire";⁶ and the ways in which the 1991 Gulf War was operationally, politically, and strategically conducted and concluded, with all of its consequences.⁷

Only in the "ideal type" world of theory are rival actors, polities, or coalitions truly symmetrical. In the realm of rational choice, identical players "Country A" and "Country B" pursue identical strategic logic to reliably predictable outcomes. The Cold War theory of stable deterrence was constructed in this way.⁸ In historical practice, however, every political entity is distinctive. Even when polities have comparable status—for example, superpowers, or great powers—their strategic behavior is based on unique political, strategic, and cultural contexts.⁹

The purpose of this study is to explore the concept of asymmetry and clarify for policy-makers issues associated with many of the current and emerging threats facing the United States. This study will look at three different dimensions of the asymmetry concept. Section 1 will describe the characteristics of the security environment and the unique attributes of the United States, looking specifically at factors that work to soften or undermine U.S. dominance. U.S. self-imposed constraints and vulnerabilities, technology proliferation, and the fact that the United States faces multiple adversaries all create opportunities that may be exploited by adversaries for the purpose of deterrence, coercion, aggression, or inflicting damage.

The United States of the early 21st century is the dominant power among nations. This fact may fairly be said to frame and drive analysis of the concept of asymmetry. In this study, we will begin by using the concept to describe relationships that exist between the United States and other state and non-state actors, where those actors are responding to the reality of U.S. dominance by exploiting differences in values (principles, ideals, ideas, and principled adherence to arms control agreements), military capabilities, and strategic objectives to achieve their goals. In the current security environment, in other words, an adversary will strive to circumvent U.S. strengths or introduce new challenges to U.S. planning, preparation, and operations by using methods with which the United States is unaccustomed to dealing promptly, effectively, or at all.

An examination of the characteristics of threats, or the phenomena that "asymmetric" is often used to describe, takes us a step farther in our examination. Section 2 looks at the origins and descriptions of many threats commonly referred to as "asymmetric." Here we will consider threats that are different in approach and pose unprecedented or considerable danger, which make them worthy, therefore, of more focused attention by policy-makers and defense planners.

The concept of asymmetry appears to have some utility for the politician or anyone who wants to talk very broadly about current threats to the United States. After all, the term does reflect the uncertainty that

currently exists in U.S. security relationships, and it does reflect the fact that the United States is either vulnerable to some menace or unprepared at some level to cope with some modern-day threats. But it is not clear how “asymmetry” serves as a coherent analytical and planning concept. How valuable is this term to analysts? How valuable is it to those who steep themselves in defense planning?

The general discussion of threats and the security environment leads to particular case study illustrations where we have identified differences of values, ideals, and ethics, military capabilities, and political-strategic objectives that may be exploited by potential adversaries. Strategic significance poses yet another set of issues to be addressed. Not all hostile acts will be strategically significant. Pinprick attacks, for example, are considered the price great powers pay to do business in the international system. Inventive foes will always find a way to exploit weaknesses and conduct attacks such as the October 2000 terrorist strike that crippled the USS Cole in the port of Aden, Yemen.¹⁰ Yet small, isolated attacks do not usually result in a change in U.S. policy goals or national security approaches, although they can affect U.S. regional strategy and operations.¹¹ Case studies in Section 3 include: the potential use of Iraqi biological weapons against U.S. forces in theater and targets in the U.S. homeland; and an analysis of the September 11, 2001 terrorist strikes against the United States.

This study will conclude with some observations about the numerous challenges facing the United States, including Washington’s ability to cope with what have come to be labelled collectively as “asymmetric threats.” We will provide general conclusions relevant to U.S. defense planning. This study also features an appendix that presents a selection of definitions of “asymmetry” used in a security context.

Section 1: The Unique Circumstances Facing the United States

The idea of the peer competitor, or a potential adversary having enough influence and military power to challenge the United States in a meaningful way on the international stage, took root in the U.S. defense community before it could be defined or even considered carefully. The policy wisdom inherited on the subject by the Administration of George W. Bush from the Clinton Administration is that there will be no such class of competitor in America’s future much prior to 2015.¹² The familiar notion of “the peer” has been underlined by the popularity of the concept of the “asymmetric threat.” In the later years of President Bill Clinton, therefore, there was no peer competition looming on or just over the planning horizon, and emerging “asymmetric” threats seemed to arise to fill the threat vacuum. For what such threats would lack in sheer massiveness, they would substitute indirectness, unorthodoxy, and cunning. “Asymmetric” threats would exist, but would fade into the background in an environment featuring significant peer competition.

Yet historical evidence tells us that even peer competitors can be highly different.¹³ The fact that today’s putative asymmetric threats would be posed by non-peers (by any definition) to the United States, is strictly a temporary accident of strategic history. Most policy-makers assert or assume that America faces no significant threat today, and that that threat, however construed, is not likely to take the form of a “peer competitor” in the mold of the old Soviet Union that could challenge the United States globally and threaten America’s very survival.¹⁴

With the collapse of the Soviet Union, leaders in the United States and its allied countries in the North Atlantic Treaty Organization (NATO) believed that they were suddenly freed from the specter of having to fight a major, potentially nuclear, war with the Warsaw Pact. The outcome of a major change in the international security environment and the Persian Gulf War (1991) confirmed for many the global leadership position and military dominance of the United States.

General U.S. military dominance, its economic wherewithal, and its considerable experience in war planning and fighting, do not make the United States “unassailable” or “secure.” Several events on the world stage, and U.S. responses to them, have dispelled the notion of a fortress United States protected by vast distances from its potential adversaries. The political will of the United States to act as the world’s

guardian, for example, was questioned after a rag-tag militia attacked elite U.S. military forces in the streets of Mogadishu, Somalia in 1993. In conventional terms, the forces of Somali tribal leader Farah Aideed were no match for heavily armed, airmobile Rangers and Delta Force troopers. Using primitive weapons and communications, "unthinkable" tactics, and "barbaric" acts conducted for the benefit of the news media, the militia convinced the leadership of the United States that the price of involvement in Somalia was very high.¹⁵

U.S. responses to crises in Somalia, Haiti, Rwanda, and Kosovo have signaled that the United States can be both risk and casualty averse when U.S. forces are sent into battle for purposes not clearly aligned with common understanding in the United States of what constitutes a threat.¹⁶ At the same time, we should also acknowledge the recent experiences of the 1991 Persian Gulf War and the on-going war against terrorism in Afghanistan and other parts of the world, occasions when the American people have sent their sons and daughters into battle. Indeed, in the case of the 1991 Gulf War, American leaders and citizens expected a much higher number of losses than were actually inflicted. There are occasions where, in the words of Secretary of Defense Donald Rumsfeld, "casualties in war will strengthen our resolve."¹⁷ Yet the fact remains that threatening, or inflicting casualties on, U.S. forces in ways that are "unthinkable" and distasteful to the American public, such as deliberately crashing hijacked airliners into symbolic targets, can be a viable method of challenging U.S. military dominance.¹⁸

For deterrence to work, the person or leadership to be deterred must be informed of the threat, believe that threat, and weigh the potential cost of the threat against the value of choosing to go ahead with the action subject to the deterrence threat.¹⁹ The goal of coercion is to persuade the target state that it would fare better to meet the coercer's demands rather than to resist them.²⁰ The goal of attacking is to inflict damage in pursuit of political or military ends (and may represent expressions of blind hate or revenge), demonstrate the vulnerability of the attacked (to shock or dispirit), and enhance the reputation and status of the attacking group or state. These descriptions are broad but involve targeting American ideals and values, avoiding direct force-on-force engagement, and acting with surprise.

The term "asymmetry" captures several elements that both define the current security environment and highlight U.S. weaknesses and vulnerabilities. Chief among these elements is the unique position of the United States – a political entity possessing unsurpassed resources and capabilities.²¹ The reality of moral and political self-restraints, preferences for and belief in the due processes of domestic and international law, and a global cultural, economic, and military profile paradoxically make the United States a tempting target worldwide to states and groups that oppose:

- U.S. (or western) ideas (to include ideas of progress and capitalism);
- U.S. ideals (to include such principles as freedom of speech and belief in the general benefits brought about by openness in society, democratic political processes, free trade, and borderless information transfer); and
- U.S. international engagement and national and strategic goals.

The United States is a target, therefore, of many state and group leaders who oppose U.S. (or western) ideas and practices.

Leaders of states and non-state groups (e.g., terrorists) seeking to avoid direct confrontation with the United States can strive to strike weak points in U.S. social, economic, and political structures or leverage opportunities associated with U.S. military vulnerabilities. Adversaries respond to U.S. military dominance by considering unorthodox, indirect, surprising, or even "unthinkable" methods of challenging the United States.

The post-Cold War environment confronting the United States has four key attributes that frame references to "asymmetric" threats: the reality of general U.S. military dominance (meaning its ability to

act effectively with its armed forces); self-imposed constraints and preferences, to include tolerance of key vulnerabilities, which can limit U.S. responses; multiple adversaries that tax U.S. resources; and, the spread of lethal mass destruction/disruption weapons that are both difficult to counter and increasingly easy for rogue actors to acquire. Adversaries tailor their threats in response to the realities of U.S. military superiority and vulnerabilities for the purpose of deterring, coercing, or attacking the United States.

Military Dominance

Concerns over readiness notwithstanding,²² U.S. military forces continue to set qualitative and quantitative benchmarks worldwide. By most measures the United States is the dominant military power in the world.²³ Indicators of dominance include: global national security strategy; the existence of an unmatched global power-projection capability; considerable operational experience and constant innovation, experimentation, and development of modern warfighting techniques; a large, integrated, and interoperable force structure; a joint, interoperable military force structure;²⁴ interservice coordination, planning, and system interoperability;²⁵ an extensive alliance network and practice in coalition leadership; technological and industrial superiority; and a sizeable defense budget.

One indicator of U.S. military dominance is the small number of combat fatalities it has had to suffer in recent years. In one major theater war and numerous peace enforcement missions in the course of a decade,²⁶ U.S. armed forces suffered fewer fatalities in active operations since the end of the Cold War (approximately 200) than from a single terrorist attack in the 1980s.²⁷ Yet one should be careful not to equate U.S. military dominance to “domination” or “imperviousness.” American forces can be threatened and suffer casualties, possibilities that could imperil policy or strategy.

U.S. Department of Defense vision statements suggest that technology will allow fewer American forces to dominate *any* battlespace in which they operate.²⁸ The technological superiority of the United States is a reflection of its considerable economic resources, advanced industrial base, intellectual capital, free exchange of ideas, and commitment to continuous research and development.²⁹ Technological dominance in areas ranging from biotechnology to directed energy weapons contributes to the maintenance of conventionally superior, militarily dominant U.S. forces.³⁰

U.S. military dominance is a reflection of the relative wealth of U.S. society. No other country spends as much on defense as the United States.³¹ Other countries invest higher percentages of their gross domestic product on defense, but the United States accounts for 37 percent of worldwide military expenditure, which, nevertheless, represents only 3 percent of its gross domestic product.³² In other words, the United States can afford to spend what it does on defense and remain economically healthy.

Lest we become blinded by the obvious, it is useful to point out that potential adversaries also may possess certain advantages that may be leveraged for military purposes. Largely because they follow in our research and development footsteps, adversaries can do things more cheaply, quickly, and without having to wrestle with a huge bureaucracy. By using industrial espionage, potential adversaries can cut years and billions of dollars off of their weapons programs. The spread of technology and the worldwide market have resulted, in some cases, in the easy purchase of many U.S. systems and in their being manufactured abroad. Command and control capabilities, which took Washington billions of dollars and years to develop, may be acquired by others overnight. Arms control also has resulted in abandonment of many systems and termination of research in key areas, a policy that may not be followed by other parties. Iran, for example, is striving to build a force of intermediate-range ballistic missiles while the United States and Russia are forbidden by treaty to do so. Despite being party to the Biological Weapons Convention, Russia has advanced biological weapons and, importantly, vaccines and remedies that the United States does not have. Many countries, moreover, do not have to worry about justifying “controversial” activities to citizens.

Self-imposed Constraints

Whether sovereign states or non-state actors threaten U.S. security, there are constraints on U.S. freedom of action and defense. Historically, the United States has devised and observed a number of limits on its international and military activities.³³ Some of these constraints are elaborated in domestic or international law, are generated by democratic institutions, American character and culture, or follow a just war tradition reaching back many centuries.

Rule of Law

Self-imposed constraints may emanate from actual and perceived obligations under both domestic and international law. The power of the executive to conduct military operations, including covert activities in response to a threat or hostile act, without the authorization of the Congress, has been debated since the founding of the United States.³⁴ Some domestic laws constraining action are the result of domestic tensions about the roles and powers of the branches of government.

From the early days of the founding until the Posse Comitatus Act of 1878 (18 U.S.C., Sec. 831, 1385), it was accepted that the President should enforce the laws of the land by using the military forces as he deemed necessary as part of his duty to execute the laws of the country faithfully, to suppress rebellions and other unruly combinations.³⁵ Posse Comitatus declared the use of the armed forces within the country unlawful unless Congress authorized it. The act has been subsequently modified in 1981 and 1996 to allow for limited participation of military forces in counternarcotics missions and in response to weapons of mass destruction attacks.³⁶ According to the Center for Strategic and International Studies, the act does not deny, limit, or condition the use of the armed forces in response to a catastrophic terrorist attack on the United States. "The *Posse Comitatus* Act," he writes, "does announce our strong national policy that law enforcement is a civilian function, but this policy is significantly limited in its application by the Constitution (including the president's authority in times of serious emergency), as well as by other specific statutes."³⁷ Even when the act does apply, it only applies to certain kinds of military activities involving the exercise of police powers.

The United States also is restricted by law and presidential writ from using "unseemly methods" as part of a retaliator's campaign against individuals or groups waging a deadly war against U.S. interests and citizens more efficient. Terrorists or other criminals captured and placed in U.S. custody are generally protected by the American legal system, which prevents more intrusive investigative techniques.³⁸ Were these same individuals apprehended by other states, they might be exposed to interrogation methods that include torture and threats to family members that could help root out safe harbors for terrorists or reveal critical operational intelligence.³⁹ To be sure, the laws and established rights protecting individuals are valued and significant in the United States, yet they also protect the criminal and the dangerous.

While it is technically true that the U.S. ability to respond flexibly to "asymmetric threats" is constrained by international laws, there is no natural opposition between promoting national "self interest" and upholding the Rule of Law.⁴⁰ International law is founded upon the consent of states. States are not bound by any rules that they themselves have not voluntarily accepted, either by ratifying a treaty or by acquiescing in the establishment of a long-standing customary practice perceived as creating a legal duty.

While there are general prohibitions against the threat or use of force against the territorial integrity or political independence of a state, international law nevertheless admits instances wherein a state has a right to act in its own defense or to protect citizens.⁴¹ In certain circumstances, including consent, countermeasures, force majeure, national distress, and self-defense, a state may resort to activities that otherwise may be viewed as an infringement on the rights of another state.

Most of the Law of Armed Conflict is composed of unobjectionable principles designed to prevent unnecessary destruction and suffering while leaving states free otherwise to pursue their self-interest. The *jus ad bellum* prohibition against the aggressive use of military force is a theoretical “constraint” on U.S. foreign policy, as the public is not likely to support American aggression or a strategy of aggrandizement in any event.⁴²

One of the most familiar U.S. legal restrictions in dealing with “asymmetric threats” is the ban on assassination, known as Executive Order 12333.⁴³ The Order provides that “no person employed by or acting on behalf of the United States Government shall engage in, or conspire to engage in, assassination,” although the term “assassination” is not clearly defined.⁴⁴ Would it be illegal to assassinate any government official or only those who hold high offices? Is a bombing raid that kills a national leader an assassination?

The word “assassination” includes the concept of “murder.” The Executive Order prohibits Executive Branch employees from committing or encouraging certain forms of murder, although some legal opinions have concluded that the ban does not pertain to terrorists.⁴⁵ There are other reasons to believe that the tension on this restraint has been lessened somewhat over the preceding years.

Indeed, a number U.S. military campaigns conducted during the last century and the beginning of the new one did not reflect a hesitation to “decapitate” enemy leadership. Examples of this evolution in thinking include: the retaliatory strikes against tents and terrorist camps in Tripoli in 1986, which could have killed Muammar Qaddafi; the 1990 capture of Panamanian dictator Manuel Noriega; the targeting of houses, bunkers, command posts that might have sheltered Iraqi leader Saddam Hussein in 1991; the use of missiles in 1999 to destroy the villa of Serb leader Slobodan Milosevic; and the decimation of leadership posts, command bunkers, and caves used by the Taliban and Al-Qaeda leaderships in Afghanistan in 2001.⁴⁶

International law and the “assassination” prohibition in E.O. 12333, in other words, are not legal bars to the intentional killing of an aggressive tyrant or individual terrorist when necessary to prevent further unlawful bloodshed.⁴⁷ It is worth noting that intentionally targeting a foreign leader, whether of a state or of a terrorist group, can result in a number of undesirable consequences, including:

- Leaving the organization leaderless, resulting in rampage by out-of-control forces angered at the killing;
- Encouraging others to target own our leaders or allied leaders, who may be more vulnerable to attack;
- Providing ammunition for a political warfare offensive alleging we are engaging in illegal “assassination” (the distinction may not be readily understood);
- Bringing to power even more militant individuals who are less willing to negotiate or compromise; or
- Creating dissension within our ranks, be it in the form of allies defecting from a multinational operation or members of Congress or the press attacking the policy.

Political Will

The United States is a republic in which power stems from the people and long-term policy success is unlikely without the understanding and support of the people and their elected representatives in Congress. This institutional balance is both a great strength and a potential weakness. The experience of World War II demonstrates that when the American people understand and support government

policies, no country in the world can exceed their ability to pull together and meet great challenges. Vietnam, on the other hand, shows that America can be vulnerable to political warfare to neutralize military superiority and persuade elected representatives to snatch defeat from the jaws of military victory.

For the United States in particular, the case for involvement or intervention must be made for nearly every political, economic, and military issue; geographic remove and the sheer size of the continental United States give Americans a perception of security and lack of urgency that in the past, however ill-advised, has argued against intervention.⁴⁸ Historically, Americans have not perceived that, in the words of President John F. Kennedy, they should have to "pay any price, bear any burden, meet any hardship, support any friend, oppose any foe to assure the survival and success of liberty." The American public has been more persuaded by the view that without U.S. intervention, cherished values, such as preventing widespread slaughter of the weak and innocent through acts of genocide, will be placed at risk. The American public is more likely to support U.S. military intervention abroad when it is obvious that there is a direct danger to be countered. Public support for entry into WWII in defense of friendly countries in Europe was hotly debated and politically too dangerous until the Japanese struck Pearl Harbor.⁴⁹ It can be safely argued that a war against terrorism—despite the al Qaeda support for bombings of U.S. embassies and other terrorist acts—would not have had public support were it not for the attacks against the Pentagon and the World Trade Center on September 11, 2001 (See Section 4).

Continued public support for military action is likely to be contingent on operational success. According to one observer of American reaction to covert operations: "It is a hard, but true, fact of life that success overcomes a lot of moral, legal, political, and cultural scruples; stalemate or defeat turns them into irresistible political trends that lose wars on the home front."⁵⁰ Few factors are more likely to result in a loss of popular support than perceptions of incompetent leadership (e.g., pursuing a "no-win" strategy), a belief that the United States is "not playing fair," (e.g., supporting tyrants who abuse human rights), or that American troops are committing "war crimes."

U.S. military involvement in Korea and Vietnam demonstrated that U.S. public opinion is susceptible to change. To a significant degree, perception determines support, and that support can be lost through inattention or stolen by effective propaganda. A pattern of mishaps, misfortunes, and botched missions sours opinion toward military operations in favor of less risky diplomatic avenues. Adversaries are likely to target public support with sophisticated disinformation and political warfare campaigns. Support depends on the moral, legal, and political propriety of American military action abroad and the presentation by the president of his case to Congress and the American people. Success raises confidence and generates momentum. Political will is a starting point and must be sustained by popular support.

Much of the basis for moral judgment in the United States rests on the just war or natural law doctrine passed down through the Judeo-Christian tradition. Moral considerations, therefore, are self-imposed constraints that may be expected to impact decisions concerning responses to threats, in peace and war. According to the just war tradition, consideration of moral restraints on military operations begins with a discussion of the cause. If the cause is just, the good that results must outweigh the damage and suffering that are entailed. It is also desirable under this tradition to make every effort to achieve a peaceful solution to the problem before resorting to force.

Just war doctrine also guides behavior in war. The conduct of the war is vital to the justice of the entire operation, meaning that even if the cause were just, severe violations of recognized rules of war would undermine policy and the military action.⁵¹ There should also be concern about excessive collateral damage, which may undermine political support for an operation. Any appearance of torture of civilian or military prisoners, wanton murder of bystanders, forced starvation, or the needless destruction of homes would be viewed as immoral and jeopardize both domestic and international support for U.S. military operations generally.

Stakes and Measures of Success

Culture and political principles and ideas unique to the United States guide elected leaders in the formulation of policies to promote and protect U.S. interests. President George W. Bush recently cited the American persona as entertained abroad as a reason the United States is threatened: "And we are committed to defending America and our allies against ballistic missile attacks, against weapons of mass destruction held by rogue leaders in rogue nations that hate America, hate our values and hate what we stand for."⁵²

The United States and its adversaries may have differences in stakes and definitions of success and victory. The United States has global interests, allies, and resources to protect. By virtue of its geography and economic and political relationships, responding to most of these concerns takes place in regions that are distant from U.S. territory. For the specific state in question, or others in the region, U.S. policies may threaten interests perceived as crucial to the survival of the state and its leadership.

For example, North Korea viewed U.S. hegemony after the 1991 Persian Gulf War as a significant threat to its regime: "The growing crisis with the national survival at stake, Kim Jong Il took seriously the critical situation in which North Korea was left alone to face up to the U.S.A.... His decision called for strengthening the national defense with all means and resolutely dealing with any American military provocations. In absolute material terms, the U.S.A. is hundreds of times superior to North Korea. In most experts' opinion, there was no chance for North Korea to survive the American onslaught."⁵³ Adversaries may risk everything, it seems, including national destruction, because they have nothing left to lose. Where there is a significant difference in the stake involved, in the calculations of some terrorist leaders, the United States may be less willing than its adversary to continue the struggle. Withdrawing from a conflict may conform with American cost/benefit calculations, as it did in the case of the humiliating withdrawal from Somalia in 1993. The prosecution of the war against al Qaeda and the Afghanistan's Taliban government in 2001 and 2002 demonstrates that adversaries can also misconstrue U.S. character and resolve.

The United States also may have different scales for measuring victory and success than its adversaries. U.S. military planning and operations rely on speed and efficiency through the application of advanced technologies, thereby limiting U.S. casualties and collateral damage. Once engaged, U.S. forces intend to "dominate" all aspects of the conflict and achieve the national leadership's operational and strategic objectives.⁵⁴ Potential adversaries are unlikely to challenge U.S. superiority directly, but will instead seek to use fear, initiate hostilities short of war, use indirect or unorthodox strategies (political and military), and deny the U.S. access to the region to frustrate its ability to project power.⁵⁵ "Victory" for a state adversary may mean stalling U.S. action politically through pressure on regional allies, manipulating the environment to promote high U.S. casualties and dissuade intervention,⁵⁶ or generating U.S. domestic resistance to intervention abroad through violence.⁵⁷ It also may mean throwing a wrench (using low technology means) into the technology sophisticated U.S. war machine, denying U.S. military progress by bogging it down and encouraging political resistance at home. For the United States, the conditions for "victory" have been explicitly stated and reflect the preference for decisive military engagements leading to the unconditional surrender or capitulation of an adversary.⁵⁸ "Success" may be nothing more for adversaries than resisting and occasionally lashing out at U.S. citizens and/or property.⁵⁹

It is difficult for Americans today to understand the relationship of their notions of victory when they are held up along side those of an elusive opponent, a party who frames success and victory in the following terms: "I am willing to sacrifice self and wealth for knights who never disappointed me. Knights who are never fed up or deterred by death, even if the mill of war turns."⁶⁰ However different the ends, we should recall, nevertheless, that Americans too, some 225 years ago, shouldered a remarkably similar obligation when they signed with their lives the Declaration of Independence: "And for the support of this Declaration, with a firm Reliance on the Protection of divine Providence, we mutually pledge to each other

our Lives, our Fortunes, and our sacred Honor." Subsequently, many did pay with their lives and fortunes.

Acceptance of Vulnerabilities

The tolerance by the American people and its leadership of certain vulnerabilities represents a set of preferences important to understanding the threat environment and why many are wont to use "asymmetric" as a descriptor of present-day threats. There are, on the one hand, vulnerabilities inherent to the U.S. form of government that are caused by such factors as U.S. open society arrangements and the right of legal due process, even to malefactors. U.S. legal processes and constitutional principles protect civil liberties (to include basic rights like freedom of assembly and freedom from unreasonable search and seizure) and are also extended in many cases to foreigners.

The physical borders of the United States are relatively porous. Once inside the United States, all may travel within national boundaries with relative ease. Assets and technologies within the United States are available for all to exploit. The United States also fosters international trade and communication. Cyberspace adds another dimension to the national commitment to freedom of movement, freedom of access to information, and freedom of speech. These realities mean that critical public and private infrastructures of the United States are, and will continue to be, vulnerable to attack, and that those who desire to hurt U.S. citizens or interests can do so from within the U.S. homeland. America's openness and freedoms make it more vulnerable.⁶¹

On the other hand, there are vulnerabilities that exist because certain dangers are deemed sufficiently low-risk to warrant a rather low priority in defense planning. Absence of a clear and sustained policy over more than three decades with respect to ballistic missile defense contributed to national vulnerability to all classes of ballistic missiles. Similarly, while the potential problems of chemical and biological weapons have not escaped the attention of policy-makers and defense planners, the country almost certainly has not done all it can to prepare for the time when weapons of mass destruction may be used against U.S. cities and troops. The problem of satellite vulnerability also has been raised in the administration of George W. Bush; the country continues to tolerate a high degree of vulnerability in its satellite systems.

These preferences or tolerances limit the ability of Washington to impose its will, and they render the United States vulnerable to an increasing range of threats against American forces and citizens overseas and the U.S. homeland. As the September 11, 2001 attacks have demonstrated, shocking, catastrophic attacks resulting from lack of defense preparedness to defeat known threats will cause Washington to rethink the level of defense commitment it gives to some of these areas.

Multiple Adversaries, Diffuse Threats

Various elements within the U.S. national security organization remain focused on meeting the challenges of a peer or "near peer" competitor.⁶² Yet the array of current and potential opponents confronting the United States varies widely in terms of the character of the threats they pose and the lethality and striking distance of weapons they may use. Adversaries range from such states as Russia, China, North Korea, Iraq, Iran, and Libya to non-state groups that attack U.S. citizens or challenge U.S. interests at home or abroad. Non-state groups also vary considerably. They include groups such as Al Qaeda, Osama bin Laden's widely distributed network of anti-American jihad warriors, and narco-insurgents such as *Fuerzas Armadas Revolucionarias de Columbia* (FARC).

In addition to the difficulties presented by the sheer number and diverse composition of potential adversaries, those states, groups, and individuals possess a wide range of capabilities with which to threaten or attack the United States. Capabilities range from information warfare and terrorism to an ability to inflict significant damage using weapons of mass destruction. The United States spends vast

amounts of money and devotes substantial resources to counter numerous threats to its citizenry, institutions, infrastructure, and armed forces.⁶³ That said, insofar as political-strategic surprises are a natural part of international life, dollar expenditures alone cannot buy complete safety for American citizens or immunity from terrorism and international crime.

In the absence of a central threat, the United States is attempting to meet all contingencies, from theater war against near peers and rogue states to operations other than war against terrorist and irregular groups. Inevitably, the United States is hard-pressed to address all eventualities, even with its considerable resources.⁶⁴ There often is little agreement in policy and planning circles as to which threats should receive priority (the current focus on counterterrorism stands out as an exception), and contingencies often arise unexpectedly.⁶⁵ In the realm of intelligence, for example, the sheer volume of information collected on familiar and emerging threats often overwhelms processing capability and ability to focus on threats as priorities shift and change. Several notable intelligence failures serve as examples of the problem: the surprise Indian underground nuclear weapons detonation in 1998, North Korea's long-range Taepo Dong launch that same year, Iran's 1998 launch of a medium-range ballistic missile, and the breakdown in analysis that led to the bombing of the Chinese Embassy in Belgrade in 1999, and, most recently, the September 11, 2001 terrorist attacks.⁶⁶

Although American policy-makers and planners could never consistently divine what their Soviet counterparts were thinking, decades of intelligence gathering had familiarized Washington with the Soviet/Warsaw Pact material threat to a large degree.⁶⁷ Since 1989 the large number of new actors and potential adversaries has overwhelmed American attempts to respond to them.⁶⁸ Defense planning and policy-making in the United States are made all the more difficult because the face of the adversary is constantly changing.⁶⁹ For example, little was known in the United States about the Japanese cult *Aum Shinrikyo* prior to the 1995 Tokyo gas attack despite the cult leader's paranoid anti-American rhetoric and attempts to export dual-use technology from the United States.⁷⁰ Little is now heard of Aum (or Aleph as they are known today), but groups like Abu Sayyef (the Philippines) and November 17 (Greece) continue to target Americans overseas.⁷¹ Intelligence is wanting on programs such as ballistic missile development in rogue states, even though the United States has been challenged by such states directly or indirectly for decades.⁷² In short, the character of the competition between the United States has changed from a single adversary threatening U.S. survival to many adversaries presenting different threats and posing challenges varying in strategic significance and impact.

Ease of Acquisition of Destructive/Disruptive Weapons

Proliferation of highly destructive and disruptive weapons takes many forms. One form of proliferation seeks to challenge the ability of the United States to project power worldwide by enhancing capabilities and associated technologies of another party. For example, Russia has transferred or sold to the People's Republic of China a number of air, sea, and land platforms and systems.⁷³ History has shown that the proliferation of conventional weapons (as is the case with all kinds of proliferation) can be slowed but not stopped entirely – it will continue despite the best attempts of the United States to regulate the trade.⁷⁴

A form of proliferation that receives much attention from policy-makers involves the transfer of missile technology. During the Cold War, the Soviet transfer of such technology to regional powers was a problem but not a pressing danger for the United States. Missile technology in the developing world had barely advanced beyond that used by the Germans in the Second World War; at best, the weapons could strike regional targets in hostile, neighboring countries.⁷⁵ In addition, states that possessed long-range ballistic missiles were significantly influenced by one or both superpowers.

The proliferation of missile technology combined with weapons of mass destruction is of much greater concern to the United States. Ballistic and cruise missile technology is readily available. The global economy has fostered development of worldwide linkages and established a web of trade relationships to

form a significant marketplace for missile technologies and weapons of mass destruction (WMD). The Rumsfeld Commission summarized the rationale for acquisition: "A number of countries with regional ambitions do not welcome the U.S. role as a stabilizing power in their regions and have not accepted it passively. Because of their ambitions, they want to place restraints on the U.S. capability to project power or influence into their regions. They see the acquisition of missile and WMD technology as a way of doing so."⁷⁶

Ballistic and cruise missiles carrying WMD⁷⁷ payloads pose a substantial threat to U.S. interests. The mere possession of such weapons, combined with veiled threats and propaganda, may deter or coerce the United States, especially if policy-makers "care a lot more about Los Angeles than Taipei."⁷⁸ Threatening America's allies with ballistic missiles can deny regional access or force withdrawal of deployed forces. The rationale of rogue states and others for acquiring WMD, according to one expert, is that "WMD is the great strategic 'equalizer' – the means for 'devaluing' U.S. military might by exploiting America's well known aversion to casualties and its clear dependence upon access to ports, airfields, military facilities and coastal waters in the theater of conflict."⁷⁹ Several states acquiring or upgrading their ballistic and cruise missiles are also investing in WMD capabilities, or are seeking assistance from other states.⁸⁰ There is also concern that rogue states utilize Russian WMD expertise and material.⁸¹

Some adversaries of the United States need not invest in conventional weapons, ballistic missiles, or technological alliances to acquire destructive capabilities. America's global economy, relatively porous borders, open source intelligence and information, and inadequate law enforcement resources allow access to a range of goods, services, and information that together can be developed into formidable weapons. The knowledge and equipment necessary to manufacture biological and chemical agents are well within the capabilities of some individuals and terrorist groups.⁸² Access to knowledge, skills, and components has changed significantly: "In today's increasingly market-driven, global economy, nations so motivated have faster, cheaper and more efficient access to modern technology. Commercial exchanges and technology transfers have multiplied the pathways to those technologies needed for ballistic missiles and weapons of mass destruction. These pathways reduce development times and costs, lowering both technical and budget obstacles to missile development and deployment."⁸³ Sometimes the ambiguous threat of starting a WMD program can achieve desired goals. In at least one specific case, the United States was coerced in this way.⁸⁴

Some non-state groups seek WMD merely to inflict punishment on the United States for grievances, real or perceived. Although referring specifically to Israel, the words of a leader of Hezbollah captures the intent of global terrorist groups: "We are not fighting so the enemy recognizes us and offers us something. We are fighting to wipe out the enemy."⁸⁵ This desire to eradicate the United States has been compounded by an acceptance of self-sacrifice in the name of the specific cause. According to Usamah Bin Laden, "those youths know that their rewards in fighting you, the USA, is double than their rewards in fighting some one [sic] else not from the people of the book. They have no intention except to enter paradise by killing you. An infidel, and enemy of God like you, cannot be in the same hell with his righteous executioner."⁸⁶ Increasingly, however, groups with such beliefs are attempting to produce or acquire chemical and biological weapons. Some groups, such as the cult *Aum Shinrikyo*, not only attempted to manufacture biological and chemical weapons, it also used them for seemingly irrational purposes, to disseminate, for example, airborne anthrax using a spreader from the top of a high-rise or assassinate the Imperial Crown Prince and his wife. Other groups attempt to manufacture or obtain chemical or biological weapons based on assessments that appear in the open news media.⁸⁷

Other advances in technology could allow small groups or even individuals to deter, coerce, or punish the United States without investing in WMD. Information technology drives the U.S. economy, yet the technologies present U.S. vulnerabilities that adversaries can exploit using low-cost methods. Electromagnetic pulse (EMP) generated by a nuclear explosion could inflict severe damage on U.S. telecommunications and power systems. Exponential advances in computing power and commercial information technologies equate to a proliferation of sophisticated software and advanced hardware in the

hands of individuals and small groups.⁸⁸ One U.S. military officer succinctly stated the appeal of information warfare: “Today’s [Chinese] reserve forces can do something even the PLA could not for many years – reach out and touch someone continents away with electronic and information weapons.”⁸⁹ If coercion is the goal, adversaries can conceivably seize control of U.S. information systems from anywhere on the planet with equipment as basic as a laptop computer, some software applications, and a modem. In some cases automated control systems could be hijacked virtually, resulting in environmental disasters or the sabotage of commercial and public transportation systems.⁹⁰ China’s proficiency in attacking U.S. computer networks gain considerable notoriety in 2001.⁹¹

Summary

This survey suggests that the United States faces some very real threats—threats that might qualify as “different,” “unorthodox,” or even “unimaginable”—despite its often cited dominance in the current security environment. The United States places significant constraints on its ability to act in the international arena, despite the fact that Washington faces abundant challenges. It faces a wide range of actors that have different measures of victory and success or for whom conflict with the United States may be a survival-level interest. Those actors either are equipping themselves or are already equipped with a range of highly destructive and/or disruptive capabilities that can strike the United States from a distance or deny it access to the region. The threat posed by those capabilities, stated or implicit, can deter or coerce the United States. “Asymmetric” threats, as these are commonly referred to, can become dangerous when the U.S. leadership fails to adapt to competition in which the rules of conduct are different.

Section 2: Threat Characteristics and Descriptions

Adversaries are unlikely to attack U.S. strengths directly but instead will probe for gaps and exploit vulnerabilities. Developing strengths and searching for weaknesses are dynamic processes. Developing a list of threats and responses is only limited by time and imagination. The means and methods discussed below capture a spectrum of capabilities that may be married to a range of possible adversarial objectives.⁹²

Characteristics of “Asymmetric Threats”

A problem with defining “asymmetric threats” is that a definition implies that the universe of threats divides neatly into the symmetric and the asymmetric. Notwithstanding the apparent clarity of some cases, there is no more definitive a test for what is an asymmetric threat than there is for who is a terrorist. If one person’s terrorist is another’s freedom fighter, so one state’s or group’s asymmetric threat is another’s standard *modus operandi*.

The characteristics of threats that generally are deemed to be “asymmetric” include:

- a. “unusual” threats, at least as Americans perceive them (e.g., taking, torturing hostages);
- b. “irregular” threats, in that they are posed by instruments unrecognized by the practice and laws of wars, treaties, and arms control agreements (e.g., nuclear explosions to disrupt satellite operations);
- c. threats “unmatched” to the American arsenal of capabilities and plans that may or may not appear truly dangerous (from a survival standpoint) but certainly look different from war (such as the September 11 attacks);

- d. threats highly leveraged against U.S. military and civil assets (e.g., ballistic missiles and weapons of mass destruction);
- e. threats that are difficult to respond to in kind (e.g., terrorism, and WMD use);
- f. threats difficult to respond to in a discriminate and proportionate manner, rendering the readily available U.S. military response unduly heavy handed, if not plainly irrelevant, or ensnaring policy in a lengthy political or legal process which inhibits any real action (e.g., nuclear terrorism, guerrilla warfare, and sabotage); and
- g. threats that are conducive to the frightening prospect of the "unknown unknown" (e.g., the unthinkable ramifications that may be associated with an extensive attack with biological weapons).

This list is neither complete nor mutually exclusive, but it serves to highlight a range of threat possibilities and the extent to which they can overlap. All of the characteristics identified above focus on what may be considered to be the "different," "unknown," "unconventional," or "unimaginable." With many of these threats, we know only that there is something lurking out there, yet we are not certain how, when, or where to look for them.

Yet the United States should be interested not simply in threats that are unusual, different, or designed to evade American strengths. Rather, the United States has to focus on threats, which in this case happen to warrant description in the minds of many as "asymmetrical," that if executed could wreak great damage upon American interests. In other words, it is not sufficient just for a threat to be different; it also needs to be effective. Many candidate "asymmetric threats" are not aimed at achieving a measure of physical control and do not rely on brute strength to succeed, but rather work in an offsetting manner with the inadvertent cooperation of the victim (e.g., the acceptance of certain vulnerabilities, such as open borders or political delay in deployment of a ballistic missile defense system). It follows that the effectiveness of those threats reflects, in part, American choices and preferences.

Careful reconsideration of "asymmetric threats," and responses to them, leads to the working conclusion that this analytical process is nothing more than effective strategy at work between combatants. Because choices for asymmetric activity merge with common-sense approaches to strategy, such as applying Sun Tzu's precepts for doing what the enemy does not expect,⁹³ there is virtue in partitioning the phenomenon of highly irregular "asymmetric threats." These threats work in four main ways (which, again, may overlap): they defeat our strategic imagination; they pose possible menaces so awful and awesome that governments dare not respond, at least not until actual experience provides incontrovertible evidence of the threat; and they challenge successfully our ability to respond effectively.

Every security community is the prisoner of its own strategic expectations. Efforts at strategic deception tend to work when they show enemies what they expect to see.⁹⁴ U.S. historical experience, culture, and geopolitical context, as well as the practical constraints of government (limited information, time, money, flexibility), prompt planners and policy-makers to prepare for some contingencies but not others. The United States prepares for threats upon which consensual agreement has been reached. It may be unjust or inaccurate to identify failure of imagination as the strategic culprit, when the problem reduces to knowing how to act in face of the full array of imaginative possibilities. More often than not, the difficulty lies not so much in a failure of imagination, as someone will have thought of the threat at issue, but rather in an understandable failure of confidence in imaginative threat identification.⁹⁵

Experience suggests that the U.S. defense community, with its hundreds of planning staffs, study groups, and independent theorists, has little difficulty imagining dire "asymmetric threats." A converse argument also may be made that that the pressure for consensus in the defense and intelligence communities is an effective barrier to imaginative thinking. There is considerable disincentive to making imaginative threat assessments, in other words, that are not congruent with an institution's way of thinking. These forces

may be said to have led to such tragedies as the 1941 Japanese attack on Pearl Harbor and the 1968 Tet Offensive in the Vietnam conflict. Nevertheless, the problem still lies in locating decision rules to filter threats worthy of serious attention from the rest. Even the wealthiest polity cannot afford to invest in tailored responses to all conceivable threats.

The danger posed by many “asymmetric threats” comes about with the unwitting cooperation of its intended victims. In the case of terrorism, for example, if the leadership and population of the United States permit acts of terror to spread fear and drive citizens into a garrison state mentality, then at best Americans will have to accept a very high price as the cost of living with this asymmetric foe. At worst, the United States may discover that the responses it has initiated to counter terrorism are so burdensome that it must compromise politically.

Because most “imagined threats” do not come to pass, it follows that most of them can be safely ignored. But it can be difficult to separate with high assurance those threats that can be ignored with impunity and those that cannot. “Acts of God,” such as giant tsunamis or planetary collision with a near-earth object, tend to be classified in official and popular minds as events so unpredictable and awful as to be beyond policy preparation or anticipation. Apart from the obvious danger of public panic, the difficulty and cost of suitable anticipatory responses are self-detering. Even when the threat approaches both high plausibility and amenability to a reliable solution – as in the menace presented by rogue government missile attacks – government and public are likely to opt for the non-response of psychological denial.⁹⁶

The purveyor of an “asymmetric threat,” such as a biological agent, would ideally not leave a business card with an address at the scene of the crime, although states may choose to use BW on the battlefield without fear of being identified or may wish to use a BW threat to coerce or deter the United States. As we have seen, highly irregular “asymmetric” warriors can succeed when they are indifferent to personal survival and/or when they can merge anonymously into urban environments or forbidding physical terrain. In Afghanistan, for example, although irregular foes generally can function only with the willing or coerced acquiescence of host governments, it is by no means an elementary matter for the United States to “drain the swamps” in which al Qaeda lives.⁹⁷ Other difficulties include: the state “swamps” at issue are inhabited by many people deemed to be innocent; they will have affiliates abroad, some of whose official and popular opinion the United States will need to take seriously; and operational problems can render problematic the robust intentions expressed and muscular language used in American policy statements. American responses to “asymmetric threats” must not only be effective but also politically and morally tolerable in our culture (see Section 1). The Roman Empire devised and practiced standard operating procedures against irregular foes, domestic and foreign, that were extremely effective for that day and time.⁹⁸ Those procedures could not be followed today by U.S. society in the contexts of the laws of war and “the CNN factor.”

The Different, The Unorthodox, The Unimaginable

It would be a mistake to attempt to provide a comprehensive list of so-called “asymmetric threats.” What is “asymmetric” is ever changing and context-dependent. Nonetheless, the United States faces threats that it considers to be different, unorthodox, and unimaginable—in other words, threats that are conceptually beyond that which it has considered to be “ordinary” and “conventional” and which have dominated Washington’s approach to defense planning over the past several decades. These kinds of threats routinely find their way into the ever-growing “asymmetric” basket.

The second part of this section explores some of the threat characteristics just discussed. Many of the threats the United States faces stem from the factors associated with the current security environment discussed in Section 2, but also from key military-technical trends, such as the rapid advancement of technologies for sensors, information processing, precision guidance, and the proliferation of weapons of mass destruction and ballistic missiles. Possibilities also have opened up for new arenas for military competition, such as in space or cyberspace. All of these factors increase the chances that the United

States will be surprised or that it will miscalculate in planning and response. Different, unorthodox, and unimaginable threats, when they are executed effectively, can be significant and menacing. They can also be highly leveraging economically, achieving results substantially disproportionate to the costs of an effective defense. This section describes some threats that could be classified as significant menaces with which American political leaders or military forces may not be able to cope very well.

Foreign writings reveal several assumptions about the West and conflict, though these are not necessarily universally held: that Western states have an aversion to casualties and damage, are sensitive to public opinion, will not commit to a long war, and focus on precision attack (even from stand-off ranges) to protect U.S. forces and minimize collateral damage and death of innocents.⁹⁹ Based on these assumptions, adversaries of the United States are likely to attempt to interfere with our intentions to end a conflict quickly and at minimum cost, deny the U.S. unfettered access to air bases in nearby territories through diplomatic and political pressure on host countries, strive for stalemate to extend and frustrate a campaign by the U.S. and its allies, and demonstrate U.S. political weakness or undercut U.S. stature in the world by striking deployed forces, embassies, or homeland targets.¹⁰⁰

From the Gulf War, the first large-scale regional conflict since the end of the Cold War undertaken by U.S. forces, allies and potential adversaries observed the force projection capabilities and operational prowess of the United States and drew several lessons. First, potential adversaries are likely to try to prevent the United States from massing forces in theater and to more directly pressure regional U.S. allies against involvement.¹⁰¹ Manipulating the theater of battle in which the United States intervenes may undermine U.S. advantages in conventional force projection and weaken public and allied support for U.S. action there. The theater may be manipulated by coercing allies, assuming and inflicting calculated losses, employing shocking or unfamiliar non-Western combat methods, circumventing technological advantages, and adopting attrition strategies.

Potential adversaries also observed the enormous effort required to muster and sustain support within the United States and among coalition partners. Other states operate outside the constraints of American-style democracy and alliances, which may be an advantage in a conflict with the United States. An adversary with few domestic constraints, acting unilaterally, can mobilize quickly and achieve almost total surprise while the United States needs time to build political consensus for action.¹⁰² Thus, an adversary may view the U.S. political structure and culture as vulnerable, and attempt to influence decision-making.

Another way in which adversaries may seek to manipulate the outcome of a conflict with the United States is to mire it in a conflict that cannot be won or withdrawn from without unacceptable consequences. This circumstance could be advantageous to an adversary given the potential to exhaust the will and resources of the United States to fight. In Iraq, American and British involvement continues with the enforcement of the no-fly zones at considerable cost, militarily, monetarily, and politically. From the end of the Gulf War to November 1998, the Defense Department spent \$6.9 billion on operations in the Persian Gulf.¹⁰³ Saddam Hussein's wartime strategy reflected his understanding of U.S. weaknesses, that as a war dragged on, casualties mounted, and other Arab states that identified with his cause led to fractures in the coalition, U.S. resolve would wane.¹⁰⁴ In response to the coalition objective of liberating Kuwait, Saddam's strategy was intended to maximize coalition casualties and inflict maximum damage on Kuwaiti oil fields.¹⁰⁵

Terrorism

As we have seen, inflicting and taking casualties might threaten the ability of the United States to achieve goals in a conflict; when adversaries have no concern for preserving even their own lives, they are difficult to understand.¹⁰⁶ Bombs delivered to their targets by people are nothing new; the lethality of recent attacks and seemingly large number of "weaponized humans" and the difficulty of detecting them, however, constitute a new kind of threat to U.S. security. In the September 11 attack, nineteen hijackers inflicted more casualties than the Japanese Navy did at Pearl Harbor in 1941.¹⁰⁷ The horrific way thousands of

people were killed in New York, Pennsylvania, and Washington was so shocking to the American mind that the President observed, “No one could have possibly dreamed that it would come in the way it did.”¹⁰⁸

Attacks in which explosive-laden vehicles are driven into U.S. targets have persisted for several years. In each case, the United States was not at war with the nation in which the attack took place and the targets have been national assets: military installations, naval vessels, and embassies. U.S. planners recognize the need to mitigate physically the vulnerabilities identified by each attack,¹⁰⁹ but resist changing the way of life or foreign policy in response to these attacks—which would constitute compromising American ideals and principles.

The martyr-mindset behind an attack, in which an individual’s goal is to die with his enemy, is difficult to anticipate and defend against. Even Israel, which has far more experience than the United States in coping with these attacks, has not been able to prevent them.¹¹⁰ The United States addresses the threat of weaponized people by physical security changes around likely targets,¹¹¹ by freezing the assets of individuals and organizations thought to support the attacks, and through far-reaching diplomatic efforts to locate and halt the organizers of the attacks.¹¹² While the goal of a suicide attack may be martyrdom, the United States designs defenses against the attackers themselves but does not address the bomber’s grievances. To do so would undermine U.S. values as it legitimizes terror as a means to influence policy. If defeating the individual martyr is difficult to achieve, it can be even harder to comprehend and counteract the mindset of a leader willing to accept national martyrdom in the hopes of seriously damaging the United States. Such a mindset is beyond the U.S. understanding of a rational actor.¹¹³

Prior to September 11, 2001, homeland defense was conceived in terms almost exclusively related to weapons of mass destruction (WMD), missile attacks, and/or information warfare.¹¹⁴ Yet terrorism,¹¹⁵ insurgency,¹¹⁶ sabotage,¹¹⁷ and other forms of irregular warfare in the homeland have been a feature of the American political landscape, in one form or another, since the rebellion against “taxation without representation” pitted the colonies against the wealth and power of Great Britain. Yet, forms of irregular warfare have played a relatively minor role in discussions regarding homeland defense.¹¹⁸ The perception changed dramatically when mass-scale terrorism on U.S. soil became a reality.

The nature of terrorism, to create widespread fear and influence decision-making, has not changed. The character of post-Cold War terrorism, however, is different from that used by terrorists driven primarily by political ideology.¹¹⁹ Although terrorists will continue to strike at national symbols or icons such as the Pentagon or the Eiffel Tower,¹²⁰ there is a noticeable trend among terrorist groups willing to become martyrs towards conducting fewer attacks but producing more numerous casualties.¹²¹ A number of sub-state actors justify their actions using a religious and/or millennial worldview that supports indiscriminate, mass casualty attack on “unbelievers” including civilians.¹²² Terrorists no longer follow the motto: “a lot of people *watching*, not a lot of people *dead*.”¹²³ In addition, some groups possess technical expertise and funding to purchase weapons or develop capabilities to strike the United States from a distance. Included in their motivations is a desire to acquire weapons of mass destruction. Such adversaries may be undeterrable.

American decision-making may also be affected by multiple, geographically distant, resource-intensive conflicts. The U.S. post-Cold War security strategy has been oriented toward deterring opportunism, avoiding a situation in which an aggressor in one region may attempt to take advantage when U.S. forces are heavily committed elsewhere.¹²⁴ Some adversaries may attempt just that, widening conflict by providing assistance to countries hostile to the United States and dispersing American resources by increasing the time and attention it must pay to numerous actors. For example, China and Russia, by providing ballistic missile development and/or nuclear assistance to North Korea, India, Pakistan, and Iran, are broadening the threat spectrum the United States faces in vital regions. Iran has been deeply involved in widening the circle of threats the United States may face, generally at a low-intensity level, attempting to assassinate dissidents abroad, frustrate the Arab-Israeli peace process, and export revolution to Turkey, Egypt, and North Africa.¹²⁵

Exploiting Technological Vulnerability

Adversaries also may exploit technology dependence. Information collection and reporting systems from satellites, sensors, and aircraft were used to devastating effect in Operation Desert Storm in 1991 in Operation Enduring Freedom, which continues. The volume, quality, and speed with which coalition forces could process information contributed to the "multiplier effect" of weapons technologies and situation awareness for which the conventional Iraqi forces had neither an effective counterpart nor an effective countermeasure.¹²⁶ However, the rapid technological transformation of the military proposed by the Joint Chiefs of Staff in their Joint Vision 2010 may pose difficulties for future operations due to the fact that computer and communications networking systems could create weaknesses in the security and efficiency of the system.¹²⁷

Unless accompanied by proper back-ups, American reliance on technology is a liability when technology is compromised or its function disrupted. Information warfare is waged between computer programmers, attacking and defending digital systems remotely, not soldiers with conventional weapons. Confrontation in cyberspace may be an inevitability given advanced U.S. technology, a preference for technological solutions that distance soldiers from immediate physical danger and reduce battleground uncertainties, the ease with which skills and equipment can be obtained, and the ability to strike almost any target connected to the World Wide Web. Because of the availability of computer components and the standard characteristics of programming and usage, the American military's reliance on its computers is perceived as both a strength and a serious weakness—this was demonstrated in late 2000 by the theft of top secret U.S. computer system codes for guiding space ships, rockets, and satellites.¹²⁸

U.S. technological superiority, manifested in a growing reliance upon electronic equipment in civil and military systems infrastructures, can be shut down by exploding a nuclear weapon in the atmosphere above the United States. An explosion would generate an electromagnetic pulse (EMP), which American planners know destroys unshielded electronic circuitry on earth- and space-based platforms and causes cars to stall and telephone systems to fail.¹²⁹ The strategic and tactical threat of EMP has increased with missile proliferation.¹³⁰ EMP could affect homeland infrastructure, forces in theater, and satellite communications, affecting the ability of the United States to operate and coordinate a military response.¹³¹ The effects of EMP have been known for thirty years, constituting a classic "Achilles heel" problem.¹³² A key reason for U.S. nuclear testing was to learn how to harden electronic circuitry from EMP effects. Unless and until testing resumes, even at a low-yield level, it will be challenging to develop shielding for high-technology-dependent systems.

Vulnerability in Space

There is some concern in the administration of George W. Bush that the United States is not adequately defending itself in space. The space commission chaired by Donald Rumsfeld, before he was selected to be the U.S. Secretary of Defense, concluded that the United States is at risk of experiencing a "space Pearl Harbor."¹³³ There certainly is good reason to be concerned—the United States is more dependent on space than any other nation. In time of crisis or war, attacks on U.S. space platforms would be even more serious. U.S. vulnerabilities in this area and the reality that the United States has been surprised in the past and has experienced technical space system failures are reasons for concern. As the Commission noted in its report, "surprise is most often not a lack of warning, but the result of a tendency to dismiss as reckless what we consider improbable."¹³⁴ The 2001 *Quadrennial Defense Review* underscored that during crises and wars, adversaries may target the national, allied, or commercial space systems we rely on "as an asymmetric means of countering or reducing U.S. military operational effectiveness, intelligence capabilities, economic and social stability, and national will."¹³⁵

Unconventional Warfare

Operations in cities are another type of engagement U.S. forces will face in the future. Military shorthand for these actions is military operations in urban terrain.¹³⁶ The services and Joint Staff are working to overcome intelligence and tactical shortfalls experienced in Somalia (1992-93), Bosnia (1995 to present), and Kosovo (1999).¹³⁷ Poor intelligence is identified as a persistent major problem, as “those developing countries that U.S. military planners regard as having the greatest potential for urban operations occupy the lowest priority within current national intelligence collection efforts.”¹³⁸ Training and intelligence concerns are being addressed, but it is important to note that urban environments are enormously demanding on military resources: the Army and Marine Corps estimate that fighting in an urban setting demands nine times the ground forces of operations on open terrain.¹³⁹ While American planners seek to improve security and reduce the advantages of the enemy, conflict in an urban setting can level the playing field somewhat for a less sophisticated force.¹⁴⁰

Ballistic and Cruise Missiles

Proliferation of WMD and long-range means of delivery exploit U.S. vulnerabilities, challenge our understanding of “escalation dominance,” and may undermine U.S. will to engage. As with other “asymmetric threats,” disagreement as to the severity, proximity, and appropriate response to the ballistic missile threat produce different policy and strategy recommendations. It is not in dispute, however, that the United States is vulnerable to ballistic and cruise missile attack and that proliferation of missiles and WMD payloads are on the rise. The Intelligence Community estimates that about a dozen states now possess or are actively pursuing offensive chemical and biological capabilities.¹⁴¹

Many states that have programs to produce weapons of mass destruction also have programs to acquire ballistic missiles. Proliferation and the relatively low cost of purchasing missiles and WMD have made missiles more accessible and the threat they pose to the U.S. homeland and deployed forces more pervasive. A number of states possess numerous short- and medium-range ballistic missiles, which pose a significant threat to U.S. forces deployed abroad as well as to allied and friendly population centers. Leaders of many potential adversaries, to include North Korea, Iran, Iraq, and Libya, have demonstrated a willingness to gamble and have confessed that they are acquiring WMD and even longer-range missiles to prevent the United States from coming to the aid of regional allies. Hence, enemy missiles could be used as a tool of coercion or deterrence. Weapons of mass destruction and long- or medium-range ballistic missiles could allow regional powers to do three things they otherwise might not be able to do: deter the United States by threatening to damage significantly an urban center of one of our allies; constrain U.S. policy and military operations in a given region; and cause direct harm to the U.S. homeland.

The combined threats of WMD and ballistic missile development face U.S. forces on the Korean peninsula. In the Korean War, North Korea (the Democratic People's Republic of Korea, or DPRK) failed in their efforts to defeat U.S. and South Korean (Republic of Korea, or ROK) forces; fifty years later it has, or may soon have, the capability to broaden the battleground beyond the Korean Peninsula and hit not only Japan and Hawaii but also the Continental U.S. with ballistic missiles.¹⁴² The U.S. intelligence community writes that North Korea's as yet untested Taepo-Dong 2 ballistic missile “is capable of reaching parts of the United States with a nuclear weapon-sized (several hundred kg) payload.”¹⁴³ These weapons increase the leverage of the DPRK against the ROK and U.S.: “[What] ties the hands of the American and the South Korean troops is the capability of the Korean People's Army to turn Seoul and its neighboring areas into a sea of fire at any time....”¹⁴⁴

Weapons of Mass Destruction

Chemical and biological weapons pose a significant threat to U.S. security. Such weapons not only threaten human life, but can be used against agricultural targets (both animals and crops), resulting in enormous economic disruption. Such threats are expected to grow in the coming years as rising numbers of states explore their uses.¹⁴⁵ The Department of Defense considers ballistic and cruise missiles, artillery and military aircraft, and unconventional means such as aircraft, trucks, or boats outfitted with improvised distribution devices potential delivery vehicles for chemical weapons.¹⁴⁶ They can be used for biological weapons delivery as well.

Mass casualty weapons, chemical, biological, radiological, toxic, and nuclear agents, can impose indiscriminate destruction on an adversary's population or armed forces.¹⁴⁷ WMD pose particular challenges to the United States, which seeks to both prevent the spread of these weapons and defend against their use. The various types of WMD have different production and delivery methods, but all can be obtained and weaponized by states and non-state actors.¹⁴⁸

Nuclear weapons release vast amounts of energy through nuclear fission or fusion, which are extremely destructive explosive processes. Radiological weapons disperse radioactive substances but do not produce a nuclear explosion.¹⁴⁹ Chemical weapons are derived from natural and synthetic chemicals that act as general cell poisons or as inhibitors of specialized body control systems.¹⁵⁰ Chemical agents may be in the form of a gas, aerosol, liquid, or solid, and their effectiveness is affected by their own physical properties such as volatility, hydrolytic stability, and vapor density,¹⁵¹ and those of the environment into which they are introduced, such as wind, air, and surface temperature, rain, and humidity.¹⁵² Biological and toxin weapons agents are derived from nature. Biological agents are disease-causing organisms and materials¹⁵³—whether viral, bacteriological, rickettsiae, fungal, or protein—that can cause damage to or death of humans, animals, or plants. Toxins are the harmful chemicals that can be produced by bacteria, marine organisms, fungi, plants, and animals.

A nuclear detonation can cause thousands of deaths and many square miles of devastation. Radiological weapons can contaminate large areas as well, and cause serious illness to exposed living things and lasting effects on the environment. Hundreds of thousands of people can be killed by a disease epidemic—indeed, this is not without precedent in U.S. history.¹⁵⁴ "Dark Winter," a senior-level wargame, studied the development of a scenario in which smallpox had been deliberately introduced in three states in the United States. Analysts determined that should a contagious bioweapon pathogen be used today, containing the spread of disease will present significant ethical, political, cultural, operational and legal challenges, and result in massive civilian casualties, breakdown in essential institutions, violation of democratic processes, civil disorder, loss of confidence in government, and reduced U.S. strategic flexibility abroad.¹⁵⁵ It is important to note that chemical and biological agents need not be fatal to be effective: "terrorist groups could employ biological agents to incapacitate, rather than kill."¹⁵⁶

Economic strength and development are also vulnerable to WMD. The World Trade Center bombings demonstrated that homeland symbolic and economic centers are targets; it is reasonable to assume that the technology-dependent New York Stock Exchange and the computer-networked national banking systems are vulnerable to physical or cyber attack. The threat of WMD use may also generate economic leverage. Plant and animal pathogens used against agricultural targets could create both economic devastation and the possibility that a criminal group might seek to exploit such an attack for economic advantage.¹⁵⁷ Agricultural infection with biological weapons is a concern because it is extremely destructive and relatively easy to carry out.¹⁵⁸ In addition to economic impact and pressure on the government, fear that diseases will be transmitted from animals to people heightens attention to possible agricultural agents.¹⁵⁹

Diseases such as foot-and-mouth disease harm or kill food animals.¹⁶⁰ The U.S. Department of Agriculture has estimated that a limited outbreak of foot-and-mouth disease—one that is limited to 10 or

fewer farms and which is quickly diagnosed and eliminated—would cost the United States a minimum of \$2 billion.¹⁶¹ Major plant crops have been attacked by fungi and other disease-causing agents, resulting in economic losses and, at times, famine. An historic case was the Irish potato famine of 1845-46, caused by a fungus. More than one million people died in the resulting famine, and 2 million more emigrated. Such events have occurred in the past due to the vagaries of nature.

However, there is also a history of diseases and toxins being spread purposefully to debilitate or destroy opponents. Scythian archers used arrows dipped in blood and manure or decomposing bodies in 400 B.C. During the Middle Ages, infected cadavers were catapulted over castle walls by invaders to cause disease and debilitation of those under siege. In 1763, blankets that had been used by smallpox victims were distributed to Native Americans with the intention of spreading the disease to them. In 1952, African bush milk (a plant toxin) was used by the Mau Mau to infect steers at a Kenyan mission station.¹⁶² Pathogens or their toxins could be used to destroy crops, animals, humans, and materials in the U.S. today.¹⁶³ The number of times that the Federal Bureau of Investigation has responded to incidents involving a threat to use biological weapons in the United States has increased dramatically in recent years.¹⁶⁴ And until the September-October 2001 spread of anthrax through the U.S. mail, no deaths caused by the deliberate introduction of biological agents had been reported in the U.S. in twenty-five years.¹⁶⁵

Production of WMD agents utilizes materials, equipment, and knowledge that are dual-use; there is no way to limit the tools or the knowledge to produce WMD. Any nation, group, or individual that wants to acquire such weapons can readily find the pathogen or source for most of the toxins and diseases that could be used as weapons against man, agricultural crops, and animals. Pharmaceutical industries and domestic nuclear power plants also provide the resources for weapons production. The knowledge of how to produce weaponized agents and materials is the same as the knowledge required for legitimate biological, chemical, and nuclear research and production, although some challenges exist for their effective employment.¹⁶⁶

Eco-Vulnerability

Another aspect of American vulnerability that may be exploited is concern for the environment. Recognition of the value of vital resources may be generalized, as the environment is shared in a region, but interest in its preservation cannot be presumed to be shared. When withdrawing from Kuwait, Iraqi forces set off explosive charges on Kuwait's oil wells, "a vengeful act of destruction."¹⁶⁷ It is estimated that between seven to nine million barrels of oil were set free in the Gulf by Iraqis; 590 oil well heads were damaged or destroyed; 508 were set on fire; and 82 were damaged so that oil was flowing freely from them.¹⁶⁸ Damage to the Gulf was not limited to Kuwaiti shores; all coastal states in the Gulf region suffered from the contamination.¹⁶⁹

Russian Views of "Asymmetric" Threats and Warfare

It is tempting to conclude that, after the September 11, 2001, terrorist attacks on the United States, Russia is increasingly appreciative of the U.S. perception of "asymmetric" threats. That conclusion would be premature. Certainly some in Moscow do recognize the confluence of dangers that swirl around American discussions of asymmetry. For example, Kremlin insider Gleb Pavlovsky observes that:

That enemy today has grown; it has become stronger and smarter. That enemy has seized and is holding the initiative, employing a new type of weapon - a "combinational weapon" that, as we see today, can be successfully employed against a big nuclear power.

During his visit to the U.S., Vladimir Putin must by all means take a look at *ground zero* - the place of the terrorist attacks in Manhattan. For it is precisely here that he will see what place the terrorists are preparing for *Russia* in their "new world."

All disputes about precisely who is employing that weapon, i.e., who is upsetting the existing symmetry of forces in the world, are not that important.

Anyone who uses or is ready to use these technologies, irrespective of whether he resorts to hijacking planes, employing anthrax bacilli or simply a Kalishnikov assault rifle is the enemy.

If today we are unable to swiftly check his attempts to interfere in the symmetry of armaments, then it is inevitable that tomorrow, such a method of waging warfare will be used by everyone.

This will be something horrible - a world built not on a symmetrical balance of armaments and international law, but rather a world built on subversive operations that are planned with utmost cynicism, so as to cause the maximum moral damage to the other party.¹⁷⁰

Other evidence suggests this perspective is either of limited appeal in Moscow or a tactical vehicle for the pursuit of more "traditional" objectives in the U.S.-Russian relationship. For example, although there is a clear sense of sympathy for the victims of the tragedy associated with the terror attacks, assessments of Russian elite and public opinion seem to have little consistency. On October 18, *Interfax* wrote that over seventy percent of Russians favor a close alliance between Russia and the United States in fighting terrorism.¹⁷¹ However, another poll by the All-Russian Center for the Study of Public Opinion noted that half of their respondents agreed with the statement: "It served the Americans right, now they will know how the people of Hiroshima and Nagasaki, Iraq and Yugoslavia felt."¹⁷² Other data note a marked difference between elite and public opinion and suggest that Soviet-era propaganda constrains identification with American concerns.

Why then has September 11 precipitated a new Russian interest in rapprochement with the United States? There are several reasons, including:

- Russian intransigence has been unable to dislodge American interest in deploying strategic missile defenses and moving beyond the ABM Treaty;
- Improved relations with the West, in particular the United States, are essential if Russia is to deal with debt issues and economic reform and move beyond an economy dependent on petroleum exports;
- A "handshake with America over the heads" of Europe may be a good lever for improving Russia's relations with the EU and other European institutions on terms more favorable to the Kremlin;
- Russia hopes to legitimize its conduct of the war in Chechnya, or at least temper Western criticism; and
- An exclusively eastward orientation (toward the PRC) limits Russia's diplomatic flexibility.

Note that, with perhaps the exception of Chechnya, Russian solidarity with the U.S. post-September 11 has little to do with shared threat perception.¹⁷³ In fact, Russia's perception of an external threat has, since the mid-1990s, focused on the United States rather than "asymmetric" threats to Russian security. For example, Russia's most recent National Security Concept explicitly identifies NATO and the United States as forces hostile to Russian interests and the international system. Some influential hard-liners even see the U.S. response to September 11 through this prism. According to one influential former Ministry of Defense official, Leonid Ivashov:

[The U.S. response to terrorism] is being done in the name of U.S. interests, in the name of subordination to U.S. policy, in the name of the new world order proclaimed by George Bush, Sr. in 1991. The essence of this world order is: A global Monroe Doctrine or, simply speaking, world domination. And if we go back to the question of the in-depth reasons for the events of 11 September 2001, in my opinion, paradoxical as it may seem, the roots of this tragedy go back to 1991, the breakup of the Soviet union (which did not happen without U.S. involvement). After all, it was the USSR's existence that hampered the realization of the global American dream (in my opinion, a fatal dream) about the United States as a country chosen by God, about its right to expansion and aggression against uncivilized nations.¹⁷⁴

Less extreme views in the Kremlin still regard American policy as the source of Russia's security problems. The "asymmetric" threats that motivate U.S. initiatives like missile defense are of limited relevance in Moscow's strategic calculus (with, perhaps, the exception of the Chechnya case). According to Oleg Chernov, Deputy Secretary of the Security Council of the Russian Federation: "We regard U.S. intention to deploy the National Missile Defense system under the pretext of threats from the so-called rogue states, and to consequently undermine the cornerstone of strategic stability which is the 1972 ABM Treaty, within the same category."¹⁷⁵

At the same time Russia is suspicious of U.S. motives, it also has interests in the countries that the U.S. often identifies as the source of "asymmetric" threats. Countries like Iran and Iraq are interested in purchasing Russian military hardware and technology. Russia's new "strategic partner," China, is even more interested in acquiring Russian military know-how, including ICBM technology. For example, Russia is trying to persuade China to help fund Russia's GLONASS navigation satellites in exchange for access to the system.¹⁷⁶ Other countries like Vietnam are less able to pay the cash that Moscow desires but are otherwise willing to cater to the Kremlin's diplomatic agenda.

If Russia does not perceive the set of threats that the U.S. does—indeed if Russia retains a core of hostility to U.S. influence in the world—then we must ask what sort of threats Russia may pose to the United States. Russia explicitly addresses the term "asymmetry" primarily in the context of a response to the deployment of a U.S. strategic missile defense.

As observed by a popular Russian weekly in 2000:

During a graduation ceremony at the Peter the Great Missile Forces Academy, [then] Strategic Missile Troops Commander-in-Chief Vladimir Yakovlev unexpectedly described the essence of the "asymmetrical measures" to be taken if and when the United States goes ahead with its plans to create a national missile defense system. Firstly, the number of warheads on ICBMs would be increased. As soon as this is done, Yakovlev believes, the American missile defense "will become even more of a myth than it is now." Secondly - and this is a sensation - Yakovlev does not rule out the possibility that Russia may withdraw from the treaty on destruction of mid-range and short-range missiles. Such missiles cannot reach the U.S. (their range is under 5, 500 kilometers), but they can, and will, cover Europe. If the INF treaty becomes history, Europe will revert to its former role of hostage in the standoff between the two major nuclear powers.¹⁷⁷

This sort of "asymmetry" seems less akin to Washington's concerns about "asymmetric" threats than it does to the classic military equation of offense versus defense.

Looking instead to proliferation, we see a Russia that continues to transfer weapons and technology to countries of concern like Iran, Iraq, and China. For its part, Russia insists it complies with nonproliferation pacts like the Missile Technology Control Regime and that illicit transfers, when brought to light, are the work of individuals. However, the recentralization of authority during the Putin era should reinforce the observation that much of the flow of military technology occurs with the tacit or explicit blessing of the government, the Ministry of Defense, or major defense industry entities. Some of this is the result of individual corruption, some clearly the result of policy choices.

While such proliferation may in fact be contrary to Russian long-term interests, it is important to recognize that near term considerations are more important, particularly for nationalist and communist factions that remain influential. For example, the Liberal Democrats, a small extreme nationalist party, submitted a draft law in the State Duma censuring the United States "for its intention to create a National Missile Defense system," and calling for effective counter-measures. In particular, they proposed that "Putin consider the possibility of *canceling the nuclear weapon nonproliferation treaty* and START II. In addition, LDPR thinks that Russia can launch its own program in the airspace sector.... Russia must not rely on symmetrical responses. We must not think that we will be able to destroy American satellites with screw-nuts."¹⁷⁸ [emphasis added]

More directly, the Communist affiliated newspaper *Sovetskaya Rossiya* carried an interview with Yuriy Saveliev, Professor at the Voyenmekh Military Mechanical Engineering Institute. Saveliev stated that

...[T]he most important thing is that in response to the deployment of an American NMD, Russia should leave the Nuclear Non-Proliferation Treaty.... In my opinion, that is the one thing that could force the United States to forego its plans to leave the ABM Treaty and launch a fourth world war....

There are about 15 countries around the world today that possess nuclear technologies, and such countries as Iran and North Korea will have everything necessary to create nuclear weapons and strategic launch vehicles for them literally in 45 years.... Russia should sell its potential allies both missiles and nuclear weapon technologies, simply because they themselves will have it all without our help in a few years anyway. The West is to blame for proliferation.... It is the Americans and not us who have upset world equilibrium, it is they who have left the 1972 ABM Treaty... so we must look for a new foundation for world equilibrium.¹⁷⁹

Russia is searching for a new "world equilibrium" in which it can be considered a great power once again. While Russia retains WMD, computer, and other skills to pose direct asymmetric threats to U.S. interests on a global scale, perhaps the most serious threat from Russia is an indirect one. In searching for a "multipolar" world in which Moscow is Washington's equal once again, the Kremlin may spread the technologies necessary for others to pose challenges to American power.

Chinese Views of "Asymmetry" and Warfare

Strategic thought in the People's Republic of China (PRC) generally does not address "asymmetric warfare" in the same manner as do Western analysts. Rather, the notion of asymmetry is imbedded in the PRC's core understanding of how one should approach the use of force. Some of the central concepts, as described by Tsai and Chen, are:

Sun-Tzu said "the highest realization of warfare is to attack the enemy's plans (*fa mou*); next is to attack their alliances (*fa jiao*); next to attack their army (*fa bing*); and the lowest is to attack their fortified cities (*gong cheng*)." The consummate way to employ one's armed forces is to "subjugate other people's armies without engaging in battle (*fu zhan*)." Once one's military forces are actually used, he should aim to "capture other people's fortified city without attacking them (*fu gong*), and destroy other people's states without prolonged fighting (*fu jiu*)." ¹⁸⁰

This hierarchy of preference in Chinese strategic thought is coincident with a historical period in which modern-day Chinese leaders recognize that the countries they identify as likely opponents (primarily the United States) have significant qualitative superiorities over the People's Liberation Army (PLA). Those conditions dictate the way in which China has pursued *fu zhan* with regard to Taiwan; deploying weapons like ballistic missiles and submarines not easily countered by Taiwanese defenses (*fa mou*); and attempting to undermine U.S. resolve to come to Taiwan's aid in the event of conflict (*fa jiao*).

Some China scholars from the West tend to discount a PRC military threat to Taiwan, absent a provocation like an official Taiwanese declaration of independence. For example, many analysts assert that China does not have the capability to conduct an amphibious invasion of the island and that therefore attack is out of the question.¹⁸¹ Further, it has been a commonly held U.S. view that China's decision to identify economic development as the primary national priority makes a PRC assault on Taiwan particularly implausible. These views generally disregard important trends in Chinese strategic thought suggestions that the leadership in Beijing may be willing to use force against Taiwan in the near future. These same trends suggest that the ways China might choose to use force are relevant to the current U.S. debates over asymmetric threats.

“Human” Factors

Since the 1949 Communist triumph in the Chinese civil war, the country's leaders have consistently emphasized the role of “human” factors in their military assessments. In assessing the balance of forces in a given situation, China's military leaders have emphasized concepts like morale, “political consciousness” of the troops, and “combat spirit.” This view does not ignore the real importance of technology and force structure, but places them in a broader context in which they are subordinate. For example, writing in 1938 about fighting the Japanese, Mao said:

The reform of our military system requires its modernization and improved technical equipment, without which we cannot drive the enemy back across the Yalu River. In our employment of troops we need progressive, flexible strategy and tactics, without which we likewise cannot win victory. Nevertheless, soldiers are the foundation of an army; unless they are imbued with a progressive political spirit, and unless such a spirit is instilled through progressive political work, it will be impossible to achieve genuine unity between officers and men, impossible to arouse their enthusiasm for the War of Resistance to the full, and impossible to provide a sound basis for the most effective use of all our technical equipment and tactics.¹⁸²

Of course the leadership's emphasis on the “human” factors had practical as well as ideological roots. China's military forces, particularly in comparison to the U.S. forces they would face in Korea in the 1950s, were poorly equipped and generally lacked the technical sophistication to incorporate technology even had they wished to so do. Nevertheless, China's experience in fighting the U.S. in Korea confirmed to Mao that his view emphasizing the human and political over technology was correct. In September 1953, Mao observed that “we fought U.S. imperialism, an enemy wielding weapons many times superior to ours ... and yet we were able to win and compelled it to agree to a truce.”¹⁸³

This view of technology, coupled with the notions that Chinese soldiers are able to endure greater hardships and are more committed owing to the righteousness of their ideological and political cause (and that opposing forces are discounted in terms of capability because they do not share these strengths), suggests that the PRC does not rely strictly on assessments of comparative military capabilities (e.g., force exchange modeling) within a particular scenario to assess the balance of forces. With regard to Taiwan, China may be thus willing to use military force even in cases where PLA capabilities would be overmatched by Taiwanese or U.S. forces. This perspective also implies that China might choose tactics or forms of attack tailored to undermine U.S. “human” factors in addition to focusing on niche capabilities designed to challenge particular U.S. technical strengths (e.g., Russian *Moskit* missiles to threaten U.S. carriers).

Surprise

Consistent with the broad view of capabilities described above is the Chinese emphasis on the role of surprise and victory through a single blow struck with perfect timing and precision. According to Arthur Waldron:

Operational plans as we know them must be sound and promise success, even at a certain cost; but the Chinese 'stratagem' is intended to be more like a masterstroke, not just solid but brilliant ... and the point of this ingenuity is to add psychological acumen to operational skill, and thus to secure victory at a far lower cost than might be expected, even at no cost at all....

The Chinese do put great stock in their ability to get more with less, and they do aspire to play the diplomatic and military game with a skill that will assure maximum winnings at minimal cost. The problem is that China's reach regularly exceeds its grasp. The brilliant stratagem turns out in practice to *qiongbing duwu*, or 'exhaust forces in protracted fighting,' as the classical Chinese phrase puts it.¹⁸⁴

For example, during the first Taiwan Straits Crisis of 1954-55, the Chief of Staff for the East China Military Command argued for seizing the island of Yijiangshan as follows:

If we can break into this gate with our first strike, we will surely hit the enemy's serious point, bringing about a huge blow upon the enemy both politically and psychologically.... Under the deterrence of our forces, the enemy probably will withdraw from Dachen to Taiwan without serious resistance. In this case, we can seize all the offshore islands in the Zhejiang coast at minimum cost.¹⁸⁵

Surprise in this context contains the elements of risk-taking or willingness to gamble; an abiding faith in the PLA's ability to flawlessly execute operationally and tactically; and assumptions about the enemy's will and capabilities that seem rather self-serving. The PRC's conflict with Vietnam appears to reflect both this sort of strategic style and the potential it has to disappoint China's expectations. This combination is a recipe for China to take the initiative, even in circumstances in which others might see no clear rationale for so doing. Taiwan, with the issues of sovereignty and national identity that swirl around it for the Chinese, seems to be a case where such assumptions are not only plausible, but also likely.

Magic Weapons and Secrecy

Akin to the value placed on surprise and brilliance in China's strategic style, a number of Chinese military thinkers invest great promise in the PLA's ability to deploy a generation of "magic weapons" to respond to U.S. conventional superiority, particularly naval superiority. These Chinese strategists and military thinkers focus on acquiring the capabilities essentially to "leapfrog" the United States in pursuing the Revolution in Military Affairs (RMA). Some of those capabilities frequently mentioned include: information dominance and information deterrence; use of space for multiple purposes including power projection and space denial capabilities; laser weapons, microwave weapons, electromagnetic pulse (EMP), and ultrahigh frequency weapons and ultrasonic weapons; and robotics, nanotechnology, and UAVs.¹⁸⁶ For example, there have been reports that China has formally decided to pursue a secretive "State Security Project 998" as a response to U.S. interest in missile defenses. The project reportedly includes the following directives:

1. Step up the research and manufacture of new weapons to deal with new strategic tactics;
2. Develop naval ship-launched missiles and cruise missiles;
3. Equip the troops ahead of schedule with electron laser and light beam weapons;
4. Stop discussions with the U.S. on the issue of proliferation;
5. Revise some original policies on not being the first to use nuclear weapons; and
6. Revise the improper policy on "not forming alliance or blocs."¹⁸⁷

Note the continuum of political, policy, and technical methods within the Project. Although the influence of the “RMA School” on overall Chinese decision-making and military investments can be debated, the PLA’s active interest in acquiring advanced military hardware from Russia is evident. This project includes fighter and strike aircraft, surface and subsurface combatants (e.g., SOVREMENNYY class destroyers and KILO submarines), anti-ship cruise missiles, S-300PMU1 and TOR M1 surface-to-air missiles, anti-stealth radar, and other technologies, including ballistic missile technologies.¹⁸⁸ Many of these technologies appear specifically targeted at challenging U.S. power projection capabilities and undermining U.S. technological advantages. For example, the ability to attack U.S. carrier battle groups appears to be a priority for the PLA.

As disturbing as these acquisitions are, the Chinese emphasis on strategic deception, misdirection, and subterfuge means that our ability to accurately determine the pace and scope of the PLA’s progress on modernization is cloudy at best. In the context of Chinese overconfidence described above, it is also possible that the leaders in Beijing might misunderstand the PLA’s abilities as well.

“Unrestricted Warfare”

In terms of “asymmetric conflict,” these trends come together in a way that a recent Chinese treatise has dubbed “unrestricted warfare.” The authors, Qiao Liang and Wang Xiangsui, are Senior Air Force colonels and “theorists” who published a book in 1999 arguing as follows:

During his match with the United States, a great power with a GDP of \$7-8 trillion, a rich Arab by the name of Bin Laden, with assets of no more than \$200-300 million, was able to deliver an incalculable strategic shock to the United States, which is about the top country in the world, by using a very small tactical operation involving a few carloads of explosives. Obviously, even a terrorist act can become an extremely frightening means of war. Given this, we conducted an analysis of some potential non-military forms of combat such as financial attacks, terrorist acts, and hacker warfare. We discovered that it is very possible that, in future warfare, these methods may appear on the battlefield as substitutes for military methods. Or at least these new forms of war may be used to enrich existing approaches.

When one looks at the trends, the emergence of “unrestricted warfare” is entirely possible. We believe that the boundaries of war are in the process of being broken down by more non-military forces. At present, these forces are stepping over the threshold of war.

The concept of “non-military combat operations” that we proposed was only intended to point out this trend, and our study, analysis, and pointing out the possibility of such does not at all equate to approval of it, much less does it equate to the affirmation or advocacy on our part of using any of these methods as the main battle mode for any country or military force. Naturally, as political realists, thinking of the country, if it is facing a survival crisis, we would have to consider putting everything we have into an all-out fight to the finish with the enemy threatening our existence. This is a right that no enemy can take from us.¹⁸⁹

The authors’ willingness to “break the rules” of warfare stems from an understanding that other countries (primarily the United States) do so regularly. “[W]e say that the United States makes rules for their own interests at one time, then breaks them at another time, and the Americans are extremely well-versed in methods in this area.”¹⁹⁰ The implication, for the authors, is to recognize that:

[T]he ethics of war... are continually observed, then continually broken by some powers. The concept of unrestricted warfare that we proposed does not at all mean breaking all the rules. We are simply recognizing that, at present, the one that is doing a fairly good job of sticking to the rules of international warfare just happens to be China, not certain other countries which formulated the rules. This includes the observance of nuclear regulations, regarding which the

threshold set by China itself is the highest, and if a given country is not even willing to promise that it will not be the first to use nuclear weapons, can you still harbor any hopes that it will abide by nuclear or other regulations?¹⁹¹

In one respect, "unrestricted warfare" is an analytical construct intended to lump the United States in with terrorists and others who do not "follow the rules" as well as does the PRC. The authors, in the word of an interviewer, identify the September 11, 2001, terrorist attacks on the United States as examples of "unrestricted warfare":

Although employing such means ... is completely not in line with basic morality of mankind, they do not think of whether it is honorable to do so when it comes to the point of life and death and just expect to achieve their strategic goals using various tactical means. Although the terrorists destroyed only two or three targets in their attacks, the effect was strategic. Such attacks will be one of the major forms of warfare in the 21st century.¹⁹²

In another respect, the concept is an expression of the range of options open to China should a conflict affecting its sovereignty (i.e., Taiwan) come about. The authors pointedly observe that, regarding September 11:

The attacks demonstrated the United States' fragility and weakness and showed that essentially it is unable to stand attacks. The National Missile Defense [NMD] system cannot save it. The attacks also have given the United States a big reminder—live and let others live.¹⁹³

Despite the interest in "unrestricted warfare," the Communist leadership and the PLA appear to downplay the possibility that China might resort to terrorism or similar methods. In part, this is due to the Communist leadership's preoccupation with defeating internal threats to regime stability. To understand the importance of this for the Party, we need only observe that the PRC has, in a novel step, actually joined and helped form a multilateral organization with a significant security component—the Shanghai Cooperation Organization (SCO). The SCO's founding declaration states in part:

The Shanghai Cooperation Organization attaches priority to regional security and shall make all necessary efforts to maintain it. The member States shall engage in close cooperation with a view to the implementation of the Shanghai Convention on combating terrorism, separatism and extremism, including the establishment of a regional anti-terrorist structure of the Shanghai Cooperation Organization with headquarters in Bishkek. In addition, appropriate multilateral documents shall be drawn up on cooperation in curbing illicit trafficking in arms and narcotic drugs, illegal migration and other types of criminal activity.¹⁹⁴

China's interest in suppressing internal dissent, including terrorism by Moslem Uighur separatists in Xinjiang province, predates the U.S. war on terrorism. However, according to reports, the pace of government execution of separatists has quickened since September 11.¹⁹⁵ The crackdown reportedly focuses not just on violent acts, but political dissent as well. China has in the past tried to avoid attention in its arrests and executions in Xinjiang. However, since September 11, China has been aggressive in asserting that its efforts in Xinjiang are similar to U.S.-led operations in Afghanistan. For example, according to a Foreign Ministry spokesman, the "efforts to fight against East Turkestan [Uighur separatists] terrorist forces should become a part of the international efforts and should also win support and understanding."¹⁹⁶

Despite this embrace of U.S. anti-terror objectives as a device for legitimating its activities in Xinjiang, some in China have not hesitated to lay the blame for terrorism, specifically the "threats" China faces, on the United States. For example, one Hong Kong magazine (with reported ties to the PLA) published an article stating that:

The growth of terrorist activities inside China after the end of the Cold War is closely related to the attempts of the United States to divide and westernize China. For many years, even though the United States loudly proclaimed its opposition to terrorism, it has in fact carried out double standards that depended entirely on its own interests. For instance, the Chechen bandits in Russia were clearly supported by the Taliban of Afghanistan and by Usama bin Laden. But before the “11 September incident,” the United States never denounced them as terrorists and instead claimed that they were fighting for national independence. Regarding the terrorist incidents created by the forces of the “East Turkestan Independence” and the “Tibetan Independence” inside China, the United States also never denounced them and instead, both openly and secretly, supported their behind-the-scene forces. Such attitudes not only constitute connivance with the terrorist clique inside China whose aim is to promote ethnic separatism, but it also makes it impossible to reach a genuine international consensus on fighting terrorism. The terrorist cliques such as that of Usama bin Laden exist because of the cracks provided by such double standards, and so in the end, the United States reaps what it sowed.¹⁹⁷

For another example, an article in a weekly published by the official news agency asserted that “international terrorism is actually a parasite that lives on hegemonism ... hegemonism sometimes needs or utilizes terrorism. It supports terrorism openly or secretly It is only when hegemonism feels that the parasite is growing up too fast and that it will eventually be harmed, will it take action against terrorism.”¹⁹⁸ “Hegemonism” is of course a reference to U.S. ambitions.

Although some Western observers have dismissed the popular discussion of “unrestricted warfare” as unauthoritative, it has reportedly received widespread attention amongst senior ranks of the PLA and Party. It is important to view this notion of “unrestricted warfare” in light of the preparations that are already underway for a conflict in the Taiwan Straits. China has made progress on developing its version of “psychological warfare units,” although those forces may have missions more relevant domestically than as a means of moving against Taiwan.¹⁹⁹ China is also paying close attention to “information warfare” and has reportedly stepped up network security initiatives since September 11.²⁰⁰

More significantly, the PLA is steadily building up its surface-to-surface missile capabilities, which suggests that it sees missile attack on Taiwan as one element of the fatal blow to be struck before the United States can come to Taipei’s aid. Another element is taking advantage of China’s superiority in submarines to establish at least a partial blockade of Taiwan and harass naval units operating in the area. These submarines operating in conjunction with special operations and the selective seizure of territory with elite airborne troops, represent Beijing’s most credible option for taking the island by force—a shock-induced fait accompli to preempt serious commitment of U.S. forces to Taiwan’s defense.²⁰¹ To what extent does this approach count on “magic weapons” like EMP or tactical nuclear attacks on U.S. carrier battle groups, information attacks on U.S. infrastructure, and attempts to deny U.S. forces use of space assets? Going further, does this approach extend to threats like sabotage in the U.S. homeland to delay deployments or distract U.S. leaders? The evidence is unclear. However, it is clear that Beijing’s view of military strategy makes integral use of what we refer to as “asymmetry,” even if its preferred term is “unrestricted warfare.”

Summary

For current policy and operational purposes, the ever-growing list of “asymmetrical threats” are understood to be irregular in character. This section has explored the character of “asymmetric threats” in addition to describing a number of means and methods of “asymmetric” conflict, including Russian and Chinese perspectives. Broadly speaking, the threats of interest challenge U.S. strengths and ability to respond effectively by defeating American strategic preferences and exploiting America’s unique cultural and value vulnerabilities. The case studies that follow assess in greater detail some threats usually referred to as “asymmetric” that illustrate the characteristics of the security environment outlined in Section 1 and the threats described in this section.

Section 3: Case Studies

To judge a threat as "asymmetric" is to paint with a very broad brush. This may be useful for top level, very general discussions. But how useful is this to the analyst? If we are to understand "asymmetric" threats, we must undertake a more exhaustive examination of the particulars associated with those threats. This exercise requires an understanding the political-strategic context as well as consideration of key military, economic, and moral factors. The reader will see that questions about what is or is not asymmetric necessarily fade in significance in the analysis as we are forced to pay attention to nuances in the explanation and become (ironically) more considerate of the multiple differences that make up the security world.

For the purposes of this report, we have focused on two case studies out of a number of seemingly endless possibilities. The first study focuses on the potential threat posed by a familiar adversary, namely, Iraq. The second case study is more concrete in that it assesses an all-too-real threat embodied in the September 11, 2001, terrorism attacks on the United States. In both cases, we will consider: the targets of attack; U.S. exploitation points and vulnerabilities; U.S. responses; and general strategic significance.

Case Study 1: Iraq and Biological and Chemical Warfare

Although open source information is scant regarding the WMD capabilities of regional powers such as Syria, Egypt, and even Israel, a great deal is known about Iraq's weapons programs. Iraq has not only used chemical, and possibly even biological, weapons, but it has also sought to improve its WMD capabilities and delivery systems. Iraq's defeat in the Gulf War led to extensive inspections carried out under the auspices of the United Nations Special Commission on Iraq (UNSCOM) and the International Atomic Energy Agency (IAEA). These inspections resulted in the best-documented information available on any individual country's WMD acquisition, testing, and fielding programs. Despite the inspections, conducted from 1991 until December 1998, the full scope of Iraq's WMD capabilities remains unknown. It is believed that extensive concealment and deception efforts by the Iraqi government have been highly effective. One must assume that the unknowns surrounding Iraq's WMD and delivery capabilities have multiplied since Iraq terminated the weapons inspection process.²⁰²

The vulnerability of U.S. power projection forces, cities, and allies to biological and chemical weapons is a source of considerable concern to U.S. policy-makers. As we have seen, writers have classified these weapons, and other weapons of mass destruction, as "asymmetric." The references to "asymmetry" stems from a lack of protection measures, a lack of in-kind offensive response weapons (to include a U.S. commitment to abide by arms control conventions dealing with chemical and biological weapons), and the perception that American leaders are unwilling to use nuclear weapons to retaliate.

Saddam Hussein and his senior advisors continue to view the United States as malevolent and aggressive toward the nation of Iraq. As evidence, they cite Washington's economic sanctions against Iraq, control by U.S. forces of Iraqi airspace, and the U.S. desire to reimpose a weapons inspections regime. As the Deputy Prime Minister of Iraq has summarized U.S. intentions, "The genuine concern of the United States in the [Middle East] region is to control the region, control its wealth, control its resources, and secure Israel's supremacy over the Arab nation and the Arab homeland. The slogans about democracy and human rights are only excuses that the United States is using as propaganda material to justify its imperialist, hostile and tendentious policy against the Arab nation and Iraq in particular."²⁰³ Hawkish comments in the U.S. news media reinforce Iraqi perceptions that war with the United States is inevitable, and that Baghdad may have nothing to lose by using chemical and/or biological weapons.²⁰⁴ In order to prevent further U.S. involvement in the region, the Iraqi leadership is preparing for future conflict with the United States.²⁰⁵

American planners are concerned that in future engagements, Iraq may use chemical, biological, or nuclear weapons rather than face another conventional defeat. The Iraqi Permanent Representative to the United Nations summed up Baghdad's image of the United States, saying that America had been committing "barbaric" crimes against the people of Iraq.²⁰⁶ While this could be dismissed as simple propaganda, it may reflect a genuine perception that the United States undertakes actions that are both illegal and immoral and will use any tactic, no matter how vile.

Target: U.S. and Allied Forces and U.S. Homeland

Discussion of future Iraqi use of WMD is not idle speculation; Iraq used chemical weapons in the past against Iran and its own citizens. In the war between Iraq and Iran from 1980 to 1988, Iraq faced the prospect of losing substantial territory to Iran. To turn the situation to its advantage, Iraq began to use chemical weapons in 1981. The chemical weapons included H-series blister and G-series nerve agents. Iraq incorporated these agents in rockets, artillery shells, aerial bombs, and warheads on Al Hussein ballistic missiles. Mustard-filled and tabun-filled 250 kilogram bombs and mustard-filled 500 kilogram bombs were dropped from fighter-attack aircraft onto Iranian targets.²⁰⁷ Over 3,000 tons of chemical agents were weaponized and expended against Iran, according to official Iraqi declarations. Moreover, various medical and epidemiological researchers have extensively documented the use of chemical weapons against the Kurds in March 1988.²⁰⁸

One of the most worrisome prospects is that Iraq may have produced and weaponized smallpox, which is highly contagious and very deadly. The strongest indicator that it might have done so is that Iraq manufactured smallpox vaccine. Making this vaccine is not necessary, as the disease has been eradicated, unless Iraq were producing or attempting to produce smallpox virus. Vaccination of U.S. civilians as well as military personnel ended decades ago,²⁰⁹ thus smallpox would be a highly effective weapon in an environment in which one's own personnel were immune.

While U.S. forces in theater, as well as those of allies, would be in immediate danger of attack, the U.S. homeland could be targeted as well. Iraq could develop or acquire a long-range missile delivery capability; with its shorter-range capabilities it could threaten or attack U.S. allies as it did during the Gulf War.²¹⁰ In its resolution 687 (1991) of 3 April 1991, the Security Council required Iraq to accept unconditionally the destruction, removal, or rendering harmless of all ballistic missiles with a range greater than 150 kilometers, plus related major parts, and repair and production facilities. Nevertheless, at present there are no inspections and Iraq may retain the proscribed longer-range missile components and systems as well as substantial missile production capabilities.

Further, as of 1999, the year after UNSCOM inspections were ended by Iraq, the CIA reported that Iraq was continuing work on its L-29 unmanned aerial vehicle (UAV) program.²¹¹ These aircraft probably have been modified for delivery of chemical or, more likely, biological warfare agents. Additionally, Iraq has other cruise missiles and unmanned aerial vehicles that also might be used for biological weapons delivery.²¹²

In conjunction with resource-intensive ballistic and cruise missile programs, Iraq could opt to attack U.S. civilians and/or agriculture with biological weapons.²¹³ Iraq, which has BW capabilities, may sponsor terrorists to act independently or in Baghdad's interests. There is some evidence that the terrorists who acted on September 11 were interested in acquiring crop dusters, which could have been used to spread BW agents.²¹⁴

If Saddam Hussein's life were threatened directly, or the United States were in a position to overthrow his regime, he might reach the point where he perceived that he had nothing to lose by using WMD. If this is a plausible scenario, then why was WMD not used in the Gulf War against the United States and its allies? The answer given by senior Iraqi officials is that they were afraid of retaliation in kind, or with

nuclear weapons, by either Israel and/or the United States.²¹⁵ Although nuclear deterrence may be seen to have worked for the United States in 1990-91, it may not do so in a future conflict with Iraq.²¹⁶

Exploitation Points

Vulnerability is the inability or unwillingness of the potential victim to defend himself. Marshalling political support from the public and Congress for the introduction of U.S. ground troops on behalf of Kuwait was difficult in 1990. There was tremendous reluctance over becoming involved even in a conflict in which U.S. or allied lives might be lost in conventional warfare. In addition, many in the U.S. government assumed that Iraq had no nuclear or biological weapons and very poor delivery systems and doctrine for chemical weapons use. Beyond concern for the troops' safety, future hesitation to act in the region could be reinforced by the fear that Iraqi WMD use may necessitate U.S. nuclear retaliation. There is a general perception within the U.S. policy-making community that a president would want to be the first since 1945 to order the use of nuclear weapons.

Aside from the issue of U.S. use of WMD in retaliation, allies and partners may determine that the costs of intervening in Iraq are simply too high. In order to keep the coalition intact during the Gulf War, Israel absorbed Iraqi missile attacks with conventional warheads and has been concerned with subsequent chemical or biological threats from the same source.²¹⁷

Allies also may be unwilling to participate in high-stakes intervention in Iraq based on domestic considerations. The United States' action in Afghanistan and efforts with some partners around the world to combat terrorism has increased tension between governments and Islamic minorities. Germany, France, and the United Kingdom are home to 10 million of the European Union's 15 million Muslims; they are under enormous pressure to work with the U.S. while protecting themselves from internally-launched terrorist acts.²¹⁸ In a conflict with Iraq, that tension could lead allies and coalition partners to contribute minimal support or tacit approval in lieu of more robust contributions. Economically, competition to trade with Iraq has grown despite UN sanctions, and these ties naturally would complicate a state's actions in wartime.²¹⁹

Given U.S. reluctance to become involved in a ground conflict with a WMD-armed Iraq, U.S. military options could be limited primarily to air operations. Time and distance presented another challenge to U.S. intervention in 1991; after the invasion of Kuwait in August, the U.S. took four months to build up coalition support and forces in theater.²²⁰ It is unlikely that Saddam Hussein will allow the United States to stage forces in the region without interference, disruption, or interdiction a second time.²²¹

Homeland security and economic interests may also be threatened. The scenarios of BW attack against agriculture and water are fearsome, but they would not likely strike the same level of terror or fear that would be expected to arise following a BW attack against a population. Most BW agents can be countered effectively by donning a protective mask. Of course, the potential victim must have the mask and know in advance that it is to be put on, which requires foreknowledge, planning, and accurate, timely intelligence and detection.

Although the United States has developed some capability to ascertain rapidly that a cloud containing organic material is present, it is not yet possible to detect all types of agents. Agents that are not known or that are genetically altered will not be in the "library" of the detector. Another problem associated with agent detection is that while battlefield use of BW may be anticipated, it is not practical to have such detectors in millions of locations across a vast geographic expanse. Attackers are likely to know which diseases have effective vaccines; a clever adversary will avoid using agents for which sufficient stockpiles exist. If the attacker were to use an agent against which there were an antidote or a treatment, the effects of the attack possibly could be mitigated. Effective treatment is reliant on rapid, accurate diagnosis. It would also depend, of course, on the rapidity with which authorities could respond and the amount of medication or treatment available. Unfortunately, in the case of some diseases and toxins, the victim

must be treated immediately upon detection. Overall, U.S. capabilities to protect against the purposeful spreading of diseases, regardless of the type and means of delivery, are very limited.

To return to the agricultural scenario, U.S. food supplies are at risk especially in the production stage. The spread of diseases to commercial crops by spraying them with pathogens is an inexpensive means by which an adversary can wreak havoc on the U.S. economy. Put simply, there is no way for the United States to protect against purposeful biological attacks against crops.

To understand the risk to agriculture of a biological attack, one need only look at the impact of a recent natural outbreak of Karnal Bunt on wheat in the United States. In 1996, Karnal Bunt—a smut disease caused by *Tilletia indica*, which, incidentally, was researched and may have been weaponized by Iraq—was discovered on wheat kernels from Arizona. In this case, extremely quick action was taken to quarantine and clean up the affected crops, a process that cost approximately \$45 million. As a result, international trading partners agreed not to halt our \$6 billion in annual exports. There are a host of diseases that could devastate U.S. “breadbasket” crops so rapidly that their control would be difficult, if not impossible, to effect before catastrophic damage is inflicted.²²² Animals—chickens, cattle, swine, fish, etc.—are also potential agricultural targets.

There are also numerous BW agents that can contaminate water supplies, depending on when and where they are introduced into the supply system. While standard treatment processes can eliminate many agents, others require expensive means beyond those in normal use by U.S. water utilities. Physical protection against sabotage of water supplies would be an enormous undertaking, requiring many reservoirs to be covered or protected. Major pipelines to the consumer would also need physical protection. Water utilities have not extensively undertaken such measures, not only because of their expense, but also because attacks against water are generally thought to be less attractive to adversaries than attacks directed against humans or agriculture.

The United States does not have means to prevent or neutralize the effects of BW agents. It does not have sensors or detectors that can tell us with certainty when such agents are used. Although masks can be effective against BW agents, providing them to the entire population is presently viewed as infeasible, and even if we were all to have them we might not have sufficient warning to use them. Repetitive false alarms could lull the public into a sense of complacency regarding the threat before it is actually used. Vaccinations and prophylactics against agents likely to be used do not yet exist. Medical treatments and countermeasures may exist for some agents, but their effectiveness would depend on many variables, including knowledge as to which agent was used and availability of appropriate supplies and medical personnel.

U.S. Response and Strategic Significance

Stand-off precision air strikes during the 1991 Gulf War did not rid Saddam of his WMD arsenal. After Iraq violated the terms of the peace agreement by barring U.N.-led WMD inspections of its territory, the United States and United Kingdom then conducted air strikes on Iraq from 16 to 19 December 1998 during “Operation Desert Fox.” The declared objectives of Desert Fox were twofold: to reduce the Iraqi regime’s capability to develop and deliver WMD; and, by striking at Iraq’s WMD production facilities, minimize the threat that Iraq posed to neighboring states.

Most observers agree that Desert Fox did not seriously impair Iraq’s WMD production capabilities. Then-Secretary of Defense William Cohen stated that Iraq’s missile program had been set back a year. Given the amount of effort the U.S. and Britain put into Desert Fox, the outcome appears to be marginal at best. For example, of 11 WMD industry and production facilities struck, only one was destroyed, 1 severely damaged, 5 moderately damaged, and 4 lightly damaged.²²³ Indeed, such retaliatory responses have had adverse political consequences for the United States. One undesirable result of Desert Fox was the

rise of political, economic, and in some cases military support for Iraq from France, Russia, and China. Adding to the political negatives, the United Nations' Secretary General criticized the campaign.

On the positive side, the U.S. military has made considerable strides in force protection since 1991. For example, a U.S. Defense Threat Reduction Agency program, in conjunction with U.S. Pacific Command, is designed to speed technology and equipment to aid U.S. troops in the event of a CBW attack. The \$58 million program is designed to improve defenses and reaction procedures and reduce the impact of CBW use.²²⁴ Nevertheless, the United States still could face large-scale casualties if WMD were employed against it. There is no certainty that U.S. forces will be able to detect the range of chemical and biological agents that could be used, nor is there certainty that defensive gear will be effective in protecting personnel. Additionally, there is a possibility that Iraq might employ a radioactive-material spreading device. If the conflict were to take place in a few years, Iraq could conceivably field a limited fission or "dirty" radiological weapon.²²⁵ The effects of nuclear use would include not only loss of life and terror, it could render U.S. equipment and electronics unusable.²²⁶

If Iraq were to become increasingly bold and aggressive, and if there were no U.S. response to its behavior, other potential adversaries would take notice. Such adversaries would know that, with the threat of WMD use, they could act with impunity and reduce the prospects of U.S. interference. As the late General Sunderji of India stated, "We learned from the Gulf War that one should not take on the United States unless one has weapons of mass destruction."²²⁷ Thus, the incentive to other nations to acquire one or a few WMD capabilities would be enhanced.

In the past, the Iraqi government may have been deterred from using WMD for fear of nuclear retaliation by the United States or Israel. A credible proportional response usually is viewed as scaling the level of retaliation to the level of damage caused by WMD attacks. Yet given U.S. reluctance to use the nuclear weapon, it may be fairly argued that it is not credible to deter small-scale chemical or biological attacks with the threat of large-yield nuclear weapons designed to destroy massive, hard Soviet-era missile silos.

Biological weapons are seen as attractive counters to U.S. strength for a variety of reasons. First, the United States has no chemical or biological weapons of its own, having destroyed them in compliance with arms control agreements. This means that any U.S. retaliation will not be in kind. Second, unless a BW attack against the United States were to cause mass human casualties, it is unlikely, with currently stated U.S. policy, that nuclear retaliation would be used. Third, nations are likely to be aware of the extreme aversion in Washington to troop losses. Thus, the mere possession of BW in one's arsenal may be enough to deter U.S. intervention abroad. Fourth, it is clear from information in the mass media that U.S. capabilities for detecting the use of BW, and its ability to vaccinate troops against many agents, are limited.

U.S. deterrence may not work and any future conflict with Iraq might indeed prompt Iraqi use of BW. On one hand, Iraq has bolstered its defenses against U.S. conventional military capabilities. To assure its own survival, the regime has built deeply buried bunkers and has moved other assets to secure locations. In the case of direct threats to Saddam Hussein, news media reports suggest that he holds closely his personal schedule, entrusting no one individual with the knowledge, in addition to using "doubles."²²⁸ The leaders of the regime are no longer very vulnerable to attacks by U.S. missiles and aircraft. While the Iraqi regime would probably fear a U.S. military ground invasion, there are some reasons that they might take a different viewpoint. The Iraqis are well-aware, after all, of the U.S. aversion to casualties. Moreover, advocates of war with the United States may believe that plans to deter U.S. ground engagement by threatening to use BW in the United States or CW against U.S. forces might be sufficient to prevent a rerun of Desert Storm.

Statements by U.S. officials, news media, and arms control advocates since the Gulf War have offered reassurance to Iraq that the United States would not use nuclear weapons. Perceptions, and not the

“truth,” or accurate information, guide action. The current U.S. policy of ambiguity regarding nuclear use may be said to undermine deterrence by communicating uncertainty on Washington’s part.

While nuclear deterrence may work vis-à-vis BW threats stemming from a conflict situation, it will be impotent against a terrorist BW threat. In the case of terrorists seeking martyrdom, deterrence is enormously difficult because there is little that they are likely to hold dear. Although the families of such terrorists could be threatened, such actions conflict directly with American values and ideas of “fair play.”

Case Study 2: Terrorist Attack against the U.S. Homeland

On September 11, 2001, terrorism struck America in a way previously thought unimaginable—thousands of Americans dead and a tectonic shift in defense priorities. While the foregoing case study suggests potential repercussions and U.S. responses to the hypothetical “asymmetric” challenge of Iraqi chemical and biological attack upon U.S. forces and civilians, “catastrophic terrorism”²²⁹ attacks on the homeland can be examined in light of actual events and Washington’s responses to them.

Targets

Attacking or credibly threatening to attack the population or symbolic targets can influence the will, positively or negatively, of many polities. As mentioned in the preceding section of the report, the goal of terrorism is to generate fear among a population, undermine resolve, and provoke a response. Although it is still too soon to know with any degree of certainty the specific goals of the September 11 attacks, the rationale for the attacks can be gleaned from published statements, extrapolating from previous actions of al Qaeda, the results of ongoing investigations, and reflections on the rationale motivating other terrorist groups.

In contrast to the armed forces of many states or even some guerrilla groups, terrorist groups often possess very limited resources. Such groups usually attack the targets of opportunity based on resources available to them. For example, if the resources are scant, detonating a car or truck bomb in a crowded city center can generate fear.²³⁰ State-sponsored groups may have the backing of the full resources of the state, but their limited numbers and need to remain hidden in open society often leads to additional lines of communication that can be penetrated and offsets any increase in resources.

Yet terrorism is aimed at more than just generating fear through indiscriminate violence; the act might also deliver a message that attempts to offset the horror. Terrorists can take hostages, treat them humanely, and demand that their grievances be publicized, thereby generating sympathy and support for their cause.²³¹ Alternatively, terrorists can target symbols of authority or symbols of political, military, social, and economic power.

Washington is the political center of the United States of America and it is filled with symbolic targets: the White House, the U.S. Capitol, the Washington Monument, and the Pentagon among others. The attacks on the World Trade Center struck at symbols of American economic power specifically, and Western power generally.²³² Osama bin Laden expressed the rationale for targeting succinctly: “There is America, hit by God in one of its softest spots. Its greatest buildings were destroyed.... There is America, full of fear from its north to its south, from its west to its east.... What America is tasting now is something insignificant compared to what we have tasted for scores of years. Our nation [the Islamic world] has been tasting this humiliation and this degradation for more than 80 years.”²³³

In an era of near-instant global media communications, many terrorist planners place high importance on the “shock value” and images generated by the attack to demonstrate their own skill and power, as well as their adversary’s weakness. The images generated by the attack on the World Trade Center, shown repeatedly on broadcast and electronic news services after the attack, were a substantial propaganda

coup for al Qaeda, although it should be noted that these same images helped generate the considerable political will behind the current campaign against terrorism and which led to the substantial destruction of al Qaeda networks in Afghanistan.²³⁴ Text-generated images, showing an aircraft and a building, were circulating on cellular telephones in the Middle East within three days of the attack.²³⁵ The images of American vulnerability generate a powerful message to potential adversaries of the United States outside the Islamic world; in at least one case, footage of the attack has been utilized by state media services to show "a humbling blow against an arrogant nation." For example, Chinese premier Jiang Zemin allegedly (as did many Americans) "obsessively watched and re-watched pictures of the aircraft crashing into the World Trade Center" and the Xinhua information agency, Beijing Television, and China Central Television have compiled popular digital video disks using footage from the attack.²³⁶

Beyond revenge, causing casualties, and demonstrating power, *al Qaeda* is attempting to coerce the United States into recognizing the legitimacy of an independent state of Palestine, removing American forces from "holy" lands in Saudi Arabia, withdrawing its support for "corrupt" secular leaders in the Gulf states, and provoking a U.S. foreign policy response that so outrages the Muslim world that it unites under *al Qaeda's* leadership.²³⁷ In summary, the September 11 attacks were targeted specifically at symbols of U.S. power to generate fear, demonstrate the vulnerability of the United States, damage its credibility, and weaken U.S. resolve.

Exploitation Points

As suggested in the previous section of this report, threats considered "asymmetric" only "work" with the unwitting cooperation of the intended target, by exploiting recognized vulnerabilities. The September 11 attacks utilized the following exploitation points: the openness of American society and the American political system; the demands of the globalized economy; the United States' so-called "holiday from history" (the period of time prior to September 11, 2001, when the U.S. homeland was attacked and when many in the United States were suddenly made aware that their nation faces external dangers)²³⁸; and, the unique American cultural perspectives on war.

No other political or social system is as open as America's. Recalling the discussion of self-imposed constraints from Section 1, the leaders and citizens of the United States place a premium on the right of the individual to assemble, speak, and practice his or her religious beliefs. There is a deliberately engineered "dysfunction" in the American political system that acts as a hedge against tyranny, but it also creates substantial vulnerabilities that terrorists and others who might threaten national security can exploit.

The openness of the American system also presents seams that terrorists have exploited. As the standard-bearer for free market capitalism and the globalized economy, the United States places as few restrictions as possible on individuals, goods, and services that enter and leave the country. Barring some restrictions on flight around military sites and some government facilities (such as the White House), an "open skies" policy allows aircraft from other countries to transit U.S. airspace freely in order to reach their destination and cut down on travel mileage and time. The geographic size of the United States, including its common borders with Canada and Mexico, as well as the sheer volume of goods, services, and individuals entering and leaving the country overwhelm the ability of the local, state, and Federal authorities to monitor them all with any degree of close scrutiny.²³⁹ When terrorists have been stopped, chance generally has been the deciding factor.²⁴⁰

History, geography, and certain elements of American culture contribute towards a general apathy towards and ignorance of events outside the United States. Prior to the September 11 attacks, the United States had not suffered from foreign invasion since British forces burned the unfinished Capitol building in 1814. Often a target for adversaries, the United States has not been subjected to serious assault since December 7, 1941.

Although some of the specific details of the events will never be known, the hijackers who conducted the September 11 attacks clearly understood the vulnerabilities of peacetime America and exploited them to the fullest extent. The educated and relatively affluent leaders²⁴¹ of the group entered the country from countries for which it is easier to obtain travel visas.²⁴² They sought to arouse as little suspicion as possible during the planning phase of the attack.²⁴³ They achieved certification and the training skills used during the attack in the United States.²⁴⁴ These are opportunities that are available to all in an open society who can afford to pay for them.²⁴⁵ The groups were kept dispersed and unknown to one another, with largely untraceable communications maintained.²⁴⁶ The terrorists were able to move freely within the United States; there was little to distinguish them from other, law-abiding immigrants.

Group leaders compiled information on flights that was readily available in a free market system.²⁴⁷ A combination of factors, including the sheer number of daily flights and a cultural intolerance for imposition of delays, intrusion on personal privacy, and infringement of personal rights, meant that domestic security screening procedures were almost nonexistent.²⁴⁸ The supposed leader of the group, Mohamed Atta, also knew enough about airport security procedures²⁴⁹ to book connecting flights from regional airports with even more lax screening procedures.²⁵⁰ FAA regulations prior to the attack permitted passengers boarding aircraft to carry on their person a knife with a four-inch blade.²⁵¹ As a result, the terrorists were able to bring aboard box cutters and knives with which to seize control of the aircraft.²⁵²

Security onboard the aircraft was minimal, reflecting both confidence in the existing screening procedures mentioned above and the market demand for competitive airfares and corporate profit growth. A considerable body of legislation already permitted protection measures aboard aircraft. For example, the sky-marshal program, instituted in the United States in response to numerous skyjackings, had subsequently languished.²⁵³ In addition, to save weight, thereby increasing the range, cargo, and number of passengers each flight could carry cockpit doors had minimal security devices.²⁵⁴ Competitors in a free market system extended professional courtesies and perquisites to ensure return customers; such conveniences included access to the cockpit for fellow pilots and some customers.²⁵⁵

The nineteen hijackers also exploited American comprehension of the “rules” and methods of terrorism.²⁵⁶ Tactically, the terrorist leaders maintained security in the air by convincing the flight crew, the passengers, and perhaps some of the terrorists themselves that the hijackings were “routine.”²⁵⁷ In other words, the passengers and crew understood according to the “rules” that they would not be harmed if they complied with the hijackers’ orders. The terrorists also took advantage of exploitation points regarding methods of attack, including the perception that terrorists could only mount pinprick attacks;²⁵⁸ the belief that terrorists do not innovate or adapt and therefore the best defensive preparation against terrorism is to defend against types of attack that have already taken place;²⁵⁹ and the propagation of extreme, technically infeasible terrorism scenarios to boost programmatic funding. By exploiting American understanding of the “rules” of terrorism, as well as demonstrating a keen awareness of the unique structural weakness of the World Trade Center buildings²⁶⁰ and the operating methods of the American news media, the hijackers sent a convincing message with perfectly horrific imagery worldwide about the limitations of American dominance and the power of a handful of “true believers.”

U.S. Responses and Strategic Significance

The U.S. responses to September 11 are well known, including a display of national unity and patriotism unmatched since the 1941 attack on Pearl Harbor. The U.S. economy showed its resilience when U.S. Dow Jones stock levels climbed to pre-attack levels within two weeks. The President built on the strength of unambiguous political agreement at home by declaring war on terrorism, building support for the swift passage of legislation providing funds to combat terrorism, and initiating new organizations and approaches to strengthening U.S. domestic security. The North Atlantic Treaty Organization invoked for the first time Article 5 on mutual defense in support of the United States, a sign of the outpouring of support from nations around the world for the United States and for Washington’s decision to respond vigorously to the infamous acts of terrorism. The considerable U.S. and allied diplomatic efforts resulted

in, inter alia, the use of airfields in Pakistan and other countries bordering Afghanistan to prosecute the war effort. A vigorous U.S.-led military invention that combined air, ground, and special operations offensive resulted in the destruction of the Taliban regime that had provided a sanctuary for al Qaeda.²⁶¹

The planners of the attack almost certainly did not anticipate the actual American response. Although the exact rationale may never be known, it is likely that the attackers expected the United States to respond in one or more of the following ways: doing nothing despite the provocation, proving the impotence of American superpower;²⁶² responding in character, through its "cowardly" use of cruise missiles and bombs;²⁶³ assassinating Osama bin Laden, thereby creating a martyr for the faith;²⁶⁴ and/or retaliating massively, including the use of nuclear weapons.²⁶⁵ In addition to having struck icons of American military and economic power, Osama bin Laden, al Qaeda, and the Taliban hoped to achieve another result: the uprising of unified, ideologically pure Islamic resistance to the United States and/or Israel.²⁶⁶ Some early reports suggested that the attacks were spurring a "clash of civilizations," but the anticipated revolutionary response never materialized.²⁶⁷ Indeed, there is some evidence that the pressure provided by air and ground forces has caused severe fissures between *al Qaeda* senior leaders and Taliban fighters.²⁶⁸ In this specific case, "catastrophic terrorism" achieved a symbolic victory that has proven pyrrhic for *al Qaeda* and the Taliban.

Although a terrorist organization headquartered a world away exploited technology and the vulnerabilities inherent to American society, forcing changes like the routine use of military air cover over the continental United States,²⁶⁹ the attacks on the Pentagon and the World Trade Center demonstrate another reverse side of the "asymmetry" issue: the threshold that separates a self-constrained United States from an avenging one will be crossed should adversaries cause massive numbers of U.S. casualties.

Section 4: Concluding Thoughts

This is not the place to investigate the origins of "asymmetry" as a popular security concept. It is sufficient here simply to note that references to "asymmetric" threats and strategies did not gain currency until after the end of the Cold War. Analysts and policy-makers have latched onto the asymmetry concept for want of a coherent central threat, such as that once posed by the Soviet Union, to explain and lend coherency to the security situation of the United States and to help order defense priorities.

Generally what gives us pause when we consider the security environment today is the very uncertainty and ambiguity of the threats that are frequently, and often casually, characterized as "asymmetric." We once operated within a security framework supported by a concept of deterrence that had at its core a clear, universally understood axiom: "whatever would bury us would also bury you." With the passing of the Cold War, we are no longer certain what can keep "the enemy" in check. References to "asymmetric" threats frequently are used to fill this intellectual void and have served to galvanize the attention of the policy and defense elite in the United States, who are motivated to answer the basic security question: how can we deter enemies in the new age? There is, in other words, a sensible and prevailing concern about preserving national security by ensuring the relevance of the armed forces for countering existing and projected threats, maintaining calm and order at home in a world where Americans are increasingly aware of "different" or "unfamiliar" threats (that, in any case, have always existed), and cultivating the conditions that permit vibrant political-diplomatic and economic intercourse to occur on a global scale.

Yet even if we were to answer the question about the origins of "asymmetric," we would still be left with a more compelling question to answer: so what? How useful is this concept of asymmetry to political leaders, policy-makers, security analysts, defense planners, military specialists, and defense watchers? This study provides at least a partial, if not entirely satisfactory, answer to this question.

In our judgment, this answer, though complex, is straightforward. It is clear that "asymmetry" has some meaning; its prevalent usage in defense and policy circles makes this plain. It has survived as a trade term because it does capture and lump together at a popular level, that is, at a very high level of

generality, the many menaces to national safety that the United States as the global hegemon must face. It reflects the multiple shades of gray, degrees of uncertainty, and the shifting forms of 21st century threats. It speaks to threats for which we are unprepared (psychologically, militarily, organizationally, possibly even strategically) and to vulnerabilities. We may also roll assessments about international security realities into this grab-bag concept, to include recognition of the reality of U.S. international dominance, and the existence of foes who want to harm America by exploiting political, cultural, and moral weaknesses (again, from a historical perspective, observations along these lines present nothing new). "Asymmetrical" is, in other words, a buzz word that draws attention to the myriad security problems facing the United States today, problems punctuated by the September 11 attacks.

So the term may be said to have political utility. The concept will have some value for the politician or anyone who wants to talk very broadly about current threats to the United States with which we cannot cope very easily. The concept can serve to highlight areas of inattention. The president, or a congressman, or the Secretary of Defense can talk about terrorism as one of the "asymmetric threats" we face, and communicate in very rough terms the general seriousness of the threat and its challenging nature (although not all "asymmetric" threats are equally serious or equally challenging).

However, what makes this term attractive to politicians—i.e., it is host to a variety of convenient definitions—is what makes it so unhelpful to analysts. The concept of "asymmetric threats" falls apart under the sheer weight of all that it tries to support and address—from weapons, tactics, and strategies to U.S. self-imposed constraints and assessments of the international security structure. Because it means different things to different people, the concept is necessarily watered down and, ironically, cannot enhance understanding of real-world complexities. So this term, unless it is finely defined and used consistently, must have very limited value to analysts, and consequently it is of very limited utility for those who must steep themselves in defense planning. Analysts, after all, need to draw distinctions between things and associate things is common in order to deduce or infer conclusions.²⁷⁰

We may draw an analogy here with cancer. We can call something "cancerous," but we will not have said anything very significant or meaningful until we receive some answers from a physician to a series of questions. "Cancer of the what?" "Is it benign or malignant?" "Has it metastasized?" "Is there a cure?" "Is it treatable?" "What is the survival rate?" "How long do I have to live?" Just as we need a proper medical diagnosis to really understand what we are up against in the world of cancer and to give meaning to what we call "cancerous," so too we need to understand the context of a security situation in order to make sense of a threat and to give meaning to what we call "asymmetric." Section 3 of this report, which reviews case study particulars, underscores this point.

"Asymmetric" is not, therefore, an ideal lens through which to look to understand the different threat challenges. One can ask—does this term add to our understanding? "Asymmetric" as opposed to what? Could we get along in the world of defense analysis without this term? Insofar as "asymmetric" is a relatively recent term invented to hold together and make sense out of age-old concepts, observations, and axioms (e.g., unorthodox or immoral tactics, surprising or indirect strategies, U.S. institutional vulnerabilities, and such platitudes as "weakness and lack of preparedness lead to war") the answer to this last question, we believe, is "Yes, we can get along without it." Once you get to the particulars in the case studies, references to "asymmetric" threats or the "asymmetry" concept add nothing to the discussion and evaluation.

Are there drawbacks to using the term? Phrasing this question differently: are there penalties for blurring the security picture and oversimplifying complex choices? Clearly, in a politically and strategically dynamic world, a concept as broad as "asymmetry" cannot be an effective analytical tool in isolation. One must quickly discard it, or go beyond it, to make sense out of military actions and the activities and changes in the international security environment. If we want to talk about particularly dangerous weapons, vulnerabilities, or different tactics, we are better served by addressing, for example, particular weapons of mass destruction, the absence of defenses against long-range ballistic missiles, or the rise of

suicide hijackings or terrorism. To the degree one refrains from making distinctions among threats (threats to what? involving which weapons and actors? immediate or general?), political regimes, cultural and tactical approaches to warfare, and strategic differences, one is left with only mind-numbing generality to inform decisions affecting organization, planning, and national security strategy.

Policy choices and choices on defense matters always involve recognizing that different hues and shadings color our political, strategic, and moral understanding and decisions. The world has always been messy in this regard—the conciseness of our understanding of the threat during the Cold War was an aberration in history. There is no evidence that we are now at a historical turning point, one that will allow us to simplify our security world. We cannot neatly tie our national security strategy package with the bow of "asymmetry."

The concept does not appear to help in organizing, planning, and strategizing. Are we designing deterrence strategies around the asymmetry concept? Are we programming force structure based on it? One would have to conclude that the answers to these questions are "no," insofar as "asymmetry" and "asymmetric threats" are not organizing concepts in the September 30, 2001, *Quadrennial Defense Review* (QDR). "Asymmetry" does not appear in the table of contents as a heading or subheading—an odd omission if in fact "asymmetric threats" comprise the principal challenge to U.S. security today. General Henry Shelton, former Chairman of the Joint Chiefs of Staff, used the term only once in his statement appended to the QDR (referring to the September 11, 2001 "asymmetric attack" against the United States—see Appendix 1). One can safely conclude that nothing meaningful would be lost if even this reference to "asymmetric" were dropped from Shelton's statement. So how useful is this concept?

We conclude that the exponential proliferation of references in current defense discourse to "asymmetric" threats has done little to help order defense priorities. As a security concept, "asymmetry" is overrated. The country can gear up to combat terrorism, defend national space assets, invest in detection equipment to help counter the BW or CW threat, or build a missile defense system, but it cannot organize to battle "asymmetric" threats. While the concept undoubtedly came into being to assist planning in a world of multiple threats and complex international interactions, the association of present-day defense challenges with "asymmetric" does very little to assist in this process.

For the moment, this term coexists with planning and analytical concepts that have been around for a while (as a reading of the *Quadrennial Defense Review* makes plain). The authors of this report believe that, given international security realities and the analytical shortcomings of the concept of asymmetry, and given the clear imperative today to clarify national defense priorities, the relatively young concept of asymmetry will fade from defense jargon in the years ahead.

Notes

¹ The term is a modifier and is often used subjectively. As Alan Beyerchen suggests, "Like other members of a large class of terms, 'nonlinear' indicates that the norm is what it negates. Words such as periodic, asymmetrical, disequilibrium or nonequilibrium are deeply rooted in a cultural heritage that stems from the classical Greeks. The underlying notion is that 'truth' resides in the simple (and thus, the stable, regular, and consistent) rather than in the complex (and therefore the unstable, irregular, and inconsistent)." Phrases such as "linear and nonlinear asymmetrical strategies and operations" do little to further our understanding of the situation. Alan Beyerchen, "Clausewitz, Nonlinearity and the Unpredictability of War," *International Security*, 17:3 (Winter, 1992), pp. 59-90 and Robert L. Pfaltzgraff Jr. and Stephen E. Wright, "The Spectrum of Conflict: Symmetrical or Asymmetrical Challenge?" in Richard H. Schultz Jr. and Robert L. Pfaltzgraff Jr., (eds.), *The Role of Naval Forces in 21st-Century Operations* (Washington: Brassey's [US], 2000), p. 23.

² Current usage of the term asymmetry has its roots in the phrase "asymmetric battle," used to describe ways of overcoming tactical superiority, such as countering air superiority with surface-to-air missiles and attacks on airfields. Institute for National Strategic Studies, *Strategic Assessment 1998: Engaging Power for Peace* (Washington: National Defense University Press, 1998), p. 169. See also the pilot study for this report, Kristin S. Kolet, *Asymmetric Threats to the United States* (Fairfax, VA: National Institute for Public Policy, 2002).

³ All strategy is, by definition, competitive. "Competitive strategy" had its roots in 1960s business management theory; it was given prominence by former Secretary of Defense Casper Weinberger in 1986 when he reported to Congress that "I have decided to make competitive strategies a major theme of the Department of Defense during the remainder of this Administration." *Annual Report to the Congress, Fiscal Year 1987* (Washington, DC: Government Printing Office, 1986), p. 87. Competitive strategy is still a term of art; see for example Henry Sokolski, *Prevailing in a Well-Armed World: Devising Competitive Strategies Against Weapons Proliferation* (Carlisle, PA: Strategic Studies Institute, USAWC, March 2000).

⁴ Steven Metz and Douglas V. Johnson II, *Asymmetry and U.S. Military Strategy: Definition, Background, and Strategic Concepts* (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, January 2001), provide an excellent general introduction.

⁵ Americans have won a long series of great contests against "asymmetric" foes, such as the French and Indians (1750s and 60s), the British Empire (1770s and 80s), other Americans (1860s), the Imperial German Empire (1910s), Nazi Germany and the Imperial Japanese (1940s), and the Union of Soviet Socialist Republics (1940s-90s).

⁶ Both Mark W. Woodruff, *Unheralded Victory: Who Won the Vietnam War?* (London: Harper Collins, 2000), and C. Dale Walton, *The Myth of Inevitable US Defeat in Vietnam* (London: Frank Cass, 2002).

⁷ Continuing weapons of mass destructions development in Iraq have plagued the Bush, Clinton, and Bush administrations. Michael R. Gordon and Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston: Little, Brown, 1994).

⁸ See Glenn H. Snyder, *Deterrence and Defense: Toward a Theory of National Security* (Princeton, NJ: Princeton University Press, 1961).

⁹ The theme of Michael C. Desch, "Culture Clash: Assessing the Importance of Ideas in Security Studies," *International Security*, Vol. 23, No.1 (Summer 1998), pp. 141-70, is challenged by Colin S. Gray, *Modern Strategy* (Oxford: Oxford University Press, 1999), ch. 5.

¹⁰ For a summary of events, see the U.S. Department of Defense USS Cole Commission (Crouch-Gehmann) Report available online at <http://www.defenselink.mil/pubs/cole20010109.html>.

¹¹ Although U.S. forces withdrew from both Lebanon (1983) and Somalia (1993) after successful enemy attacks, U.S. policy goals towards both regions nevertheless remained unaltered.

¹² "The United States has no global rival today, nor will it likely face one through at least 2015." William S. Cohen (Secretary of Defense), Annual Report to the President and the Congress (Washington, DC: U.S. Government Printing Office, 2000), p. 2.

¹³ Consider Athens and Sparta, Rome and Carthage, and Britain and France.

¹⁴ Donald Kagan and Frederick W. Kagan, *While America Sleeps: Self-Delusion, Military Weakness, and the Threat to Peace Today* (New York: St. Martin's Press, 2000), p. 2.

¹⁵ Weapons ranged from rocket-propelled grenades to kites. Communications varied from cellular telephones to tribal drums, leading one commentator to call Aideed a clever practitioner of "information warfare." Tactics included the use of women and children as shields and combatants and resulted in several hundred to several thousand Somali casualties. Instead of expressions of gratitude for delivering humanitarian aid, the American public saw images of the corpses of American personnel being dragged through streets by Somalis. Mark Bowden, *Blackhawk Down: A Story of Modern War* (New York: Penguin, 2000) and Martin Libicki, *What is Information Warfare?* (Washington: National Defense University Press, 1995), p. 36, esp. n.31. In another glaring example of a response that challenged successfully the resolve of the United States, a handful of protesters on the dock at Port-au-Prince in

Haiti led to executive recall of the *USS Harlan County* and its load of peacekeepers. For details see Michael Bailey, Robert Maguire, and J. O'Neil Bouliot, "Haiti: Military-Police Partnership for Public Security," in Robert B. Oakley, Michael J. Dziedzic, and Eliot M. Goldberg, eds., *Policing the New World Disorder: Peace Operations and Public Security* (Washington: NDU Press, 1998), available online at <http://www.ndu.edu/ndu/inss/books/policing/chapter7.html>.

¹⁶ The U.S. response, or lack of response, to the unfolding genocide in Rwanda in 1994 was perceived worldwide as resulting from a lack of resolve and a fear of casualties. Evidence from Kosovo of American susceptibility to the "bodybag syndrome" was cited by some in the refusal to commit ground troops and minimum flight altitude restrictions. The Federal Republic of Yugoslavia reprinted a *Guardian* article on its Foreign Ministry website linking the bodybag syndrome to American refusal to clear unexploded munitions left over from Operation Allied Force. See Jonathon Steele, "Death Lurks in the Fields," *The Guardian* (14 March 2000), available at http://www.mfa.gov.yu/Kosovo/Strana/2000/eng/steele140300_e.html and Max Boot, "Will Bush Bury 'Bodybag' Syndrome?" *The Wall Street Journal*, 11 September 2000, p. A44.

¹⁷ *CNN Headline News*, November 30, 2001.

¹⁸ Charles Dunlap Jr. wrote a thought-provoking, if overstated article based on this theme. "How We Lost the High-Tech War of 2007," *The Weekly Standard* (29 January 1996): 22-28.

¹⁹ Keith B. Payne, *Deterrence in the Second Nuclear Age* (Lexington, KY: University of Kentucky Press, 1996), p. 3.

²⁰ Robert A. Page, *Bombing to Win: Air Power and Coercion in War*, (Ithaca, NY: Cornell University Press, 1996).

²¹ "[Military dominance] has given America an opportunity presented to few countries in the course of recorded history: to lead the way in creating the conditions for a long peace." Andrew F. Krepinevich, Jr., "Beyond the Two-MTW Posture," Testimony before the House Armed Services Committee, 107th Cong., 1st sess., 20 June 2001.

²² See for example comments regarding operational tempo and retention rates in The International Institute for Strategic Studies, *The Military Balance 2000-2001* (Oxford: Oxford University Press, 2000), p. 12.

²³ Of the top five military fleets in terms of tonnages, the United States alone possesses three: the U.S. Navy, the U.S. Marine Corps, and the U.S. Coast Guard. The same quantitative superiority applies to air forces. As a maritime power with global interests, the United States requires large fleets in order to protect commerce, uphold laws, and project power. *Ibid.*

²⁴ Concerns over a demonstrated lack of coordination between the services led Congress to pass the Goldwater-Nichols Act of 1986 mandating the establishment of a Joint Staff. Information on the Act are available online at <http://www.ndu.edu/ndu/library/bibs/gol-nich.html>.

²⁵ See for example the resources devoted to joint training on the Joint Training System website: <http://www.dtic.mil/doctrine/training.htm>.

²⁶ Major operations include: Operation Desert Shield (1990-1991); Operation Desert Storm (1991); Operation Desert Falcon (1991-Present); Operation Southern Watch (1991-Present); Operation Provide Comfort I (1991-1994); Operation Provide Comfort II (1991-1996); Operation Eastern Exit (1991); Operation Provide Relief (1992); Operation Restore Hope (1992); Operation Continue Hope (1993); Operation Restore Democracy (1994-1995); Operation Uphold Democracy (1994-1995); Operation United Shield (1995); Operation Northern Watch (1996-Present); Operation Desert Thunder (1998); Operation Desert Fox (1998); Operation Joint Endeavor (1996); Operation Joint Guard (1998); Operation Allied Force (1999); Operation Noble Anvil (1999-Present); Operation Noble Eagle (2001-Present); and Operation Enduring Freedom (2001-Present).

²⁷ 241 Marines died when their barracks were destroyed by a suicide bomber in Beirut on 23 October 1983. During the Gulf War, Americans killed in action totaled 147; of these, almost 20 percent resulted from a single Scud missile strike that hit U.S. barracks in Dhahran, Saudi Arabia. Details of the attack on the Marine barracks can be found in the official report Commission on Beirut International Airport Terrorist Act, *Report of the DOD Commission on Beirut International Airport Terrorist Act, October 23, 1983*, (Washington: Government Printing Office, 20 December 1983). For a discussion of U.S. casualty figures from the Gulf War, see Anthony Cordesman and Abraham Wagner, *The Lessons of Modern War, Volume IV: The Gulf War* (Boulder, CO: Westview Press, 1996), pp. 339, 890.

²⁸ Technology is the engine that will allow U.S. forces to impose "full spectrum dominance" upon its adversaries, according to General John M. Shalikashvili. See Chairman of the Joint Chiefs of Staff, *Joint Vision 2010* (Washington: Government Printing Office, 1994), pp. 25-27 and the updated Chairman of the Joint Chiefs of Staff, *Joint Vision 2020* (Washington: Government Printing Office, 1998). It should be noted that the "spectrum" does not include weapons of mass destruction, in particular, chemical and biological weapons. The United States may be said, strictly speaking, to be inferior to other states in this area.

²⁹ U.S. technological superiority poses challenges for ally and adversary alike. Allies are not concerned that the United States will turn its military power against them, but rather that they will be unable to continue to function effectively in coalition operations with technologically superior U.S. forces. See for example British and French concerns over the "technology gap" in official after-action reports on the Kosovo air campaign. UK Ministry of Defence, *Kosovo: Lessons from the Crisis*, Chapter 5: International Co-operation (London: HMSO, June 2000), available online at <http://www.kosovo.mod.uk/lessons/chapter5.htm> and Ministère de la

Défense Nationale, *Les Enseignements du Kosovo*, III.1 Technologie (Paris: MDN, 2000) available online at <http://www.defense.gouv.fr/actualites/dossier/d36/technologie1.htm>.

³⁰ A small number of adversaries can compete technologically with the United States in a few key areas; China, for example, has a burgeoning biotechnology research and development base. No adversary can match the United States in such fields as biotechnology, nanotechnology, remote sensing, directed energy weapons, precision guidance systems, stealth, and information technology.

³¹ According to the Stockholm International Peace Research Institute, the United States spent more on defense in 1999 than the next ten highest spenders combined. The figures derived for Russia and China are only estimates. SIPRI, "The fifteen major spenders in 2000, 1995-2000," available online at http://projects.sipri.se/milex/mex_major_spenders.html.

³² Three percent of U.S. GDP in 1999 equaled \$275 billion for defense; Russia invested almost four percent of its GDP in defense, yet this only amounted to \$37.9 billion. Other countries put a higher percentage of their GDP into defense; Saudi Arabia, for example, expends 13 percent of GDP for a total of \$18.7 billion. SIPRI, "The fifteen major spenders in 2000, 1995-2000," available online at http://projects.sipri.se/milex/mex_major_spenders.html; SIPRI, "Military expenditure as a share of GDP 1991-99," available online at http://projects.sipri.se/milex/mex_share_gdp.html. Of course, these figures may be misleading, since the countries listed above may not have revealed all true defense expenditures.

³³ While some exploitable vulnerabilities exist due to reliance on key technologies, others reflect societal norms and cultural values. For example, the Victorian English were loath to maintain a large standing army despite numerous far-flung imperial commitments. Part of the reason was financial; large armies can only be sustained in democratic societies by high taxes or funds directed from other programs. For historical and other reasons, the English feared large numbers of garrisoned soldiers who could potentially usurp the ruling authority. All monarchies, constitutional or otherwise, were suspicious of the "revolutionary" potential of domestic garrisons. The fear of soldiers becoming politicized was grounded in Western classical history; part of the downfall of the Roman Empire can be ascribed to the influence of the Praetorian Guard in the rise and fall of a number of later Roman emperors. See Hew Strachan, *The Politics of the British Army* (Oxford: Oxford University Press, 1997) and Correlli Barnett, *Britain and Her Army, 1509-1970: A Military, Political and Social Survey* (New York: William Morrow, 1970).

³⁴ Some general constitutional points support the president's constitutional prerogative to use military force as he sees fit without prior consultation to Congress. The president must "take care that the laws be faithfully executed," meaning that he has the authority to use his instruments of power, including the nation's armed forces, to this end. The right of the president to use force to protect the rights and property of Americans in foreign lands was established in 1854, when the Supreme Court ruled that it is to the office of the president that "citizens abroad must look for protection of person and of property, and for the faithful execution of the laws existing and intended for their protection," and that "this power may be most conveniently executed, whether by negotiation or by force" by using the Department of State or the military services. Edward S. Corwin, ed., *The Constitution of the United States of America: Analysis and Interpretation* (Washington, D.C.: GPO, 1953), p. 487.

³⁵ From 1789-1878, Federal forces were used to: quell labor unrest, put down slave rebellions and enforce slavery laws, assert Federal authority over the Utah Mormons, put down a variety of riots, and "pacify" uprisings in the state of Kansas. Details are available in Robert W. Coakley, *The Role of Federal Military Forces in Domestic Disorders, 1789-1878* (Washington, DC: Center for Military History, 1988).

³⁶ A brief survey of the changes to the Posse Comitatus Act is found in Hans Binnendijk, ed., *1998 Strategic Assessment: Engaging Power for Peace* (Washington: National Defense University Press, 1998), p. 214. See also Senate Armed Services Committee Holds Hearing on Role of Defense Department in Homeland Security, Federal Document Clearing House (FDCH) Transcripts, October 25, 2001.

³⁷ See Paul Schott Stevens, *U.S. Armed Forces and Homeland Defense: The Legal Framework* (Washington, D.C.: Center for Strategic and International Studies, October 2001), pp. 7, 8, 22-27.

³⁸ Rights accorded to suspected terrorists have virtually halted investigations of other possible terrorist cells, as the suspects in question know their legal rights. See for example Christopher Drew and William K. Rashbaum, "2 Found With Box Cutters Sept. 12 Remain Intriguing but Silent Suspects," *New York Times* (24 October 2001), pp. B1-B2.

³⁹ The differences in prisoner treatment were highlighted in an article regarding the refusal of terrorist suspect Zacarias Moussaoui to talk to FBI agents: "The French security services were quick to leak...that they had warned the CIA and FBI in early September...that Moussaoui was associated with al Qaeda and had pilot training. The leak has irritated U.S. investigators in part because 'it was so limited,' one FBI official said. 'Maybe we should give him [Moussaoui] to them,' he said, noting that French security has a reputation for rough interrogations." Walter Pincus, "Silence of 4 Terror Probe Suspects Poses Dilemma," *Washington Post* (21 October 2001), p. A6.

⁴⁰ The reality was recognized by the first U.S. Secretary of Foreign Affairs, Thomas Jefferson, who wrote: "I think . . . that nations are to be governed with regard to their own interests, but I am convinced that it is their interest, in the long run, to be . . . faithful to their engagements, even in the worst of circumstances, and honorable and generous always." *Jefferson to Lafayette*, April 2, 1790. Jefferson was referring to the U.S.' duties under the "Law of Nations," or what is today called international law.

⁴¹ Article 51 of the United Nations Charter acknowledges the right of each state to react to violations of its sovereignty, and Article 2 allows for self-defense. Moreover, the Charter acknowledges indirectly a state's right to determine what constitutes "aggression."

⁴² As Thomas Jefferson noted: "If there be one principle more deeply rooted than any other in the mind of every American, it is that we should have nothing to do with conquest." For an excellent summary of the precepts of just war theory, *jus ad bellum* and *jus in bello*, and the conditions of just war, see Jonathan Canedo, "Analysis: We Are Fighting a Just War," *MichiganDaily.com* (17 October 2001), available online at <http://www.themichigandaily.com/articles.php?uniqid=20011017e3>.

⁴³ The order was signed into force by President Ronald Reagan on December 4, 1981. The complete text is available online at <http://www.fas.org/irp/offdocs/eo12333.htm>.

⁴⁴ *Executive Order 12333*, Section 2.11.

⁴⁵ Robert F. Turner, "Killing Saddam: Would It Be A Crime?" *Washington Post* (Oct. 7, 1990), p. D1; Stephan Kurkjian and Jeff McConnell, "CIA is said to get leeway in policy on assassination," *Boston Globe* (April 3, 1990), p. 1.

⁴⁶ Recall President George W. Bush's statement following the September 11, 2001 destruction of the World Trade Center in New York and the attack on the Pentagon, that he wanted Al-Qaeda leader Usama Bin Laden "dead or alive." See also Caspar W. Weinberger, "When Can We Target The Leaders," *Strategic Review*, Spring 2001, pp. 21-24; Michael R. Gordon and Tim Weiner, "Taliban Leader Is Target In U.S. Air Campaign," *New York Times*, October 16, 2001. See also James Risen, "Lawmakers See Need to Loosen Rules on C.I.A.," *New York Times*, September 16, 2001.

⁴⁷ Keep in mind not only that the President has well-established authority to depart from rules of international law, but also that the assassination ban is contained in an executive order, which does not bind a sitting president and can be modified or suspended by the president at will—publicly or under injunction of secrecy. Most conceivable acts of "assassination" by U.S. government employees would be illegal, because murder is itself illegal. Military personnel would be covered as well by the Uniform Code of Military Justice. There may be jurisdictional issues concerning the behavior of Americans outside the territorial jurisdiction of the United States, but Executive Order 12333 does not make "assassination" *illegal*. It is not a *law*, and the ultimate sanction available to the President would presumably be dismissal barring some secondary authorization.

⁴⁸ On another level, intervention is more a question of degree. All foreign policy amounts to interference in the affairs of other nations. The U.S. network of economic, political, and military ties around the world is too vast and too important to national security and commerce for it to be otherwise. Even in a post-Cold War environment, therefore, the question becomes not whether American will intervene, but how and on what grounds. Much of the opinion on the issue of intervention stems directly from the Vietnam experience. It nevertheless remains the case that the public tends to rally around the president when he chooses to employ force abroad, especially when he exercises positive leadership and actively asserts his policy.

⁴⁹ It is interesting to note that even after Pearl Harbor, a sizeable portion of the American public remained suspicious of U.S. allies in the conflict, especially the United Kingdom.

⁵⁰ William V. O'Brien, "Special Operations in the 1980s: American Moral, Legal, Political, and Cultural Constraints," in *Special Operations in US Strategy*, ed., Frank R. Barnett, B. Hugh Tovar, and Richard H. Shultz (Washington DC: NDU Press, 1984), p. 80.

⁵¹ See, for example, David Wood, "In Unconventional Conflict, U.S. Sticks To 'Laws of War,'" *Newshouse.com*, December 5, 2001.

⁵² President George W. Bush, Remarks at the American Legion's 83rd Annual Convention San Antonio Convention Center, San Antonio, Texas, August 29, 2001 available online at <http://www.whitehouse.gov/news/releases/2001/08/20010829-2.html>. Iraqi President Saddam Hussein said after the September 11, 2001 terrorist attacks that the United States was "reaping the thorns" of its humanitarian, rights-based foreign policy. From a commentary quoted by the official INA news agency on the terrorist attacks the previous day in New York and Washington. 1810 GMT, 091201 (posted on the main page of <http://www.stratfor.com/> Sept 12, 2001).

⁵³ Kim Myong Chol, "Kim Jong Il's Military Strategy for Reunification," *Comparative Strategy*, 20:4 (October 2001): 305.

⁵⁴ "Strategically, this improvement will enable more rapid power projection and reduced logistical tails. Operationally, within the theater, these capabilities will mean a more rapid transition from deployment to full operational capability. As a result, we will improve our capability for rapid, worldwide deployment while becoming even more tactically mobile and lethal." Chairman of the Joint Chiefs of Staff General John M. Shalikashvili, *Joint Vision 2010* (Washington: Government Printing Office, 1994), pp. 13-14.

⁵⁵ The U.S. defeat in Vietnam is the most often cited in this regard, but other current conflicts demonstrate it, such as the ongoing Russian battle with Chechnya and hostilities between Israelis and Palestinians. "But the biggest casualty of what even senior Israeli officials are calling a 'daring' commando raid by two Palestinians over the weekend may be the Israeli Defense Force's reputation of invincibility. Two days after an early morning attack on an Israeli outpost in the Gaza Strip, Israelis are asking how such well-protected soldiers, surrounded by four rings of defenses and the latest high-tech equipment, could succumb to two men armed with the most basic weaponry." Patrick Graham, "Israelis wonder how two men bested army: Raid another sign of the 'Lebanization' of the intifada," *National Post* online edition, August 27, 2001, accessed at <http://www.nationalpost.com/home/story.html?f=/stories/20010827/669071.html>.

⁵⁶ A recent attack on a U.S. reconnaissance plane over Iraq illustrates this principle: “ ‘This shows we can confront their (allied) planes if they come into Iraq,’ Adel Jassim, a store owner, said. ‘All Arabs should be happy when they see that despite all the power Americans have we can still confront their aggression.’ ... Iraq’s Deputy Prime Minister Tariq Aziz was quoted by the Iraqi News Agency as saying his country is ‘determined to inflict more losses on the U.S. and British aggressors.’” Associated Press, “Iraq shoots down U.S. plane: Unmanned reconnaissance craft destroyed,” *The Halifax Herald Limited* online edition, August 28, 2001, accessed online at <http://www.herald.ns.ca/stories/2001/08/28/f213.raw.html>.

⁵⁷ Terrell E. Arnold, *The Violence Formula: Why People Lend Sympathy and Support to Terrorism* (Lexington, MA: Lexington Books, 1988), pp. 121-122; and, Seymour Deitchman, *On Being a Superpower And Not Knowing What to Do About It* (Boulder, CO: Westview Press, 2000), p. 94.

⁵⁸ The six “conditions” for the decisive use of military force in the Weinberger Doctrine are 1. If our or our allies’ vital interests are at stake; 2. With the resources necessary to win; 3. With clear political and military objectives; 4. With a readiness to change the commitment if objectives change; 5. With the support of the American people and Congress; and, 6. As a last resort. A recent, critical commentary on the relevance of the doctrine is found in Jeffrey Record, “Weinberger-Powell Doctrine Doesn’t Cut It,” *United States Naval Institute Proceedings*, 126:12 (October 2000): 35-36.

⁵⁹ The inability or unwillingness of the United States to capture Osama bin Laden prior to September 11 only reinforced his status as a champion of radical Islam against “the Zionist Crusaders Alliance”; success for *Al Qaeda* many be nothing more than avoiding capture and the occasional bombing. Success is framed in broad terms: “The crusader army became dust when we detonated al-Khobar.” Usamah Bin-Muhammad Bin-Laden, “Ladenese Epistle: Declaration of War (Part III),” (23 February 1998), <http://www.washingtonpost.com/wp-dyn/articles/A4511-2001Sep21.html> “Ladenese Epistle, Part III.”

⁶⁰ Bin-Laden, “Ladenese Epistle: Declaration of War (Part III).”

⁶¹ The United States Commission on National Security/21st Century, *Road Map for National Security: Imperative for Change*, The Phase III Report on the Emerging Global Security Environment for the First Quarter of the 21st Century, February 15, 2001, pp. 10-14.

⁶² The shift from a two-major-theater-war strategy is an indication that this focus may be changing. Donald H. Rumsfeld, “Prepared Testimony of U.S. Secretary of Defense,” Testimony before the House Armed Services Committee, 107th Cong., 1st sess., 21 June 2001. See also Elaine M. Grossman, “Is The U.S. Military Ready To Take On A Non-Conventional Terror Threat,” *Inside the Pentagon*, October 18, 2001, p. 1.

⁶³ According to figures calculated by the Center for Nonproliferation Studies, U.S. Federal spending on defense to counter terrorism and weapons of mass destruction for Fiscal Year 2000 was almost \$1.45 billion; spending on defense for the same year was \$287.3 billion. Spending in this area included these activities: law enforcement & investigative activities; physical security of government facilities and employees; physical protection of national population/infrastructure; preparing for and responding to terrorist acts; and, research and development. “Federal Funding to Combat Terrorism, Including Defense Against Weapons of Mass Destruction, FY1998-2001,” accessed at <http://cns.miis.edu/research/cbw/terfund.html>; Executive Office of the President of the United States, *A Blueprint For New Beginnings: A Responsible Budget for America’s Priorities* (Washington: Government Printing Office, 2001), p. 100.

⁶⁴ The *Quadrennial Defense Review Report* of September 30, 2001 reported that the Defense Department was revising its acquisition strategy by adopting a “capability-based” approach, rather than a “requirement-based” approach, for designing and procuring weapon systems. This approach takes threat and technology uncertainty into account.

⁶⁵ Lobbyists, pundits, and analysts suggest several threats worth considering: WMD terrorism; regional crises requiring power projection or peacekeeping forces; ballistic missile defense; and cyberterror. For a recent commentary on why funding should be shifted from missile defense to protection against cyberattack, see Thomas Friedman, “Digital Defense,” *New York Times* (27 July 2001).

⁶⁶ For information on the bombing of the Chinese embassy, see U.S. Department of State, “Oral Presentation by Under Secretary of States Thomas Pickering on June 17 to the Chinese Government Regarding the Accidental Bombing of the PRC Embassy in Belgrade, Released July 6, 1999,” available online at <http://www.usconsulate.org.hk/pas/bkgr/fp/1999/0713.htm>. For an Indian perspective on “the intelligence failure of the decade” that mentions limitations of American satellite reconnaissance coverage, see Nimrat Duggal Khandpur, “Fighting a war without a single shot being fired,” *The Tribune* (7 February 1999), available online at <http://www.tribuneindia.com/99feb07/sunday/head2.htm>. Response to the 1998 Taepo Dong test is covered in Kathleen J. Brahney, ed., *Foreign Media Reaction Daily Digest* (Washington: United States Information Agency, 3 September 1998), available online at <http://www.fas.org/news/dprk/1998/www8903.html>.

⁶⁷ Representative examples of American understanding of the Cold War threat include: Donald Steury, (ed.), *Intentions and Capabilities: Estimates on Soviet Strategic Forces, 1950-1983* (Washington: Central Intelligence Agency, 1996); Department of Defense, *Soviet Military Power: Prospects for Change* (Washington: Government Printing Office, 1989); and, Office of the Chief of Naval Operations, *Understanding Soviet Naval Developments*, fifth edition (Washington: Department of the Navy, 1985).

⁶⁸ Mikhail Alexseev notes: "This shift – from a concern with survival to the monitoring of a kaleidoscope of interests – makes it harder to assess intentions of aggressors and design weighting schemes for indicators of aggression, which are diffused among many interest domains." *Without Warning: Threat Assessment, Intelligence, and Global Struggle* (London: Macmillan, 1997), p. 6.

⁶⁹ Some details of the structure, organization, and operating methods of one cell of Al Qaeda, for example, were released during the trial of the African embassy bombers. Despite a handful of attacks that caused numerous casualties, prior to the 11 September 2001 attacks little was known about the organization, how it is funded, and how it operates. Even details regarding Osama bin Laden himself are unclear; his personal fortune is estimated at between \$10 million to \$1 billion. The difficulty in obtaining reliable information on bin Laden is reflected in Yonah Alexander and Michael Swetnam, *Usama bin Laden's al-Qaida: Profile of a Terrorist Network* (Ardsey, NY: Transnational Publishers, 2001).

⁷⁰ In the early 1990s Aum publications contained more frequent references to the nerve gas sarin and American attempts to poison its leader, Shoko Asahara; from 1987 onwards Aum operated offices in the United States during which time they purchased green-light lasers and lens grinders, stole information on toxins, and attempted to export an interferometer. David Kaplan and Andrew Marshall, *The Cult at the End of the World* (London: Hutchinson, 1996), pp. 99-102.

⁷¹ Abu Sayyef has kidnapped rich, Western tourists vacationing in Malaysia or the Philippines; one hostage crisis was resolved without incident, although Abu Sayyef was reportedly paid \$15 million ransom brokered by Mohammar Ghaddafi. *November 17* has struck American targets in Greece for over a quarter century, including the assassination of a CIA station chief in 1975 and more recently, attacks against American corporate offices in Athens. To date no member of *November 17* has been brought to trial by either the United States or Greece. "Phil troops capture camp, but no hostages found," *AP News* (8 November 2000); Bullitt Marquez, "Bodies of two hostages discovered in the Philippines," *AP News* (23 June 2001); George Kassimeris, "17N: 25 Years and Still At Large," *Jane's Intelligence Review* (December 2000): 12-15.

⁷² Proliferation Study Team, *The Emerging Ballistic Missile Threat to the United States* (February 1993), p. 2; Commission to Assess the Ballistic Missile Threat to the United States, *Report of the Commission to Assess the Ballistic Missile Threat to the United States: Executive Summary* (Washington: Government Printing Office, 1998), pp. 10-17. Available online at <http://www.fas.org/irp/threat/bm-threat.htm>.

⁷³ Systems exported include: Su-27/30 and MiG-29 fighters; A-50E Airborne Warning and Control aircraft (AWACs); Kilo-class submarines, Sovremenny-class destroyers; T-80 and T-90 main battle tanks, and the S-300 air defense system. Hans Binnendijk, ed., *1998 Strategic Assessment: Engaging Power for Peace* (Washington: National Defense University Press, 1998), p. 43; and, Mark Galeotti, "Putin looks to the Orient," *Jane's Intelligence Review* (December 2000): 8.

⁷⁴ The United States also plays a role in proliferation "by foreign student training in the U.S., by wide dissemination of technical information, by the illegal acquisition of U.S. designs and equipment and by the relaxation of U.S. export control policies." *Report of the Commission to Assess the Ballistic Missile Threat to the United States*, p. 18.

⁷⁵ Ballistic missiles are pursued as an alternative to manned bombers. See, for example, Seth Carus, *Ballistic Missiles in Modern Conflict*, Washington Paper No. 146 (Westport, CT: Praeger, 1991).

⁷⁶ *Report of the Commission To Assess the Ballistic Missile Threat to the United States*, p. 8.

⁷⁷ Weapons of mass destruction include nuclear, biological, chemical, or radiological weapons; the latest acronym of choice is CBRN.

⁷⁸ Chinese official quoted in Patrick E. Tyler, "As China Threatens Taiwan, It Makes Sure U.S. Listens," *New York Times* (January 24, 1996), p. A3.

⁷⁹ Testimony of Dr Robert Chandler before the House Military Procurement Subcommittee on the B-2 Bomber, 12 March 1997. Available online at <http://fas.org/man/congress/1997/h970312rc.htm>.

⁸⁰ The Institute for National Strategic Studies at the National Defense University identified the following as WMD "problem states": Algeria, Burma, China, Egypt, India, Iran, Iraq, Israel, Laos, Libya, North Korea, Russia, Syria, Taiwan, and Vietnam. Binnendijk, ed., *1998 Strategic Assessment*, p. 181. A more recent assessment is contained in Office of the Secretary of Defense, *Proliferation: Threat and Response* (Washington: Department of Defense, 2001).

⁸¹ Ken Alibek, former deputy director of Biopreparat, claims that the Soviet Union continued to experiment with modified biological weapons long after the United States destroyed its stockpiles in accordance to the 1972 Biological Weapons Convention. He also adds that Cuba, Iran, and Iraq have benefited from Russian bioweapons experience. Alibek with Stephen Handelman, *Biohazard* (London: Hutchinson, 1999), pp. 270-276.

⁸² Prior to 1995, the most common biological and chemical agent threats were against water supplies. Anthrax and other biological agents presented more of a danger to inexperienced terrorist handlers than they did to potential targets, although this did not prevent groups from making threats or grow their own cultures. For details see Richard Falkenrath, Robert Newman, and Bradley Thayer, *America's Achilles' Heel: Nuclear, Biological, and Chemical Terrorism and Covert Attack* (Cambridge, MA: MIT Press,

1999), pp. 27-96. On the ease of manufacturing biological agents, see Kathleen Bailey, *Doomsday Weapons in the Hands of Many: The Arms Control Challenge of the '90s* (Urban, IL: University of Illinois Press, 1991), pp. 89-90.

⁸³ *Report of the Commission To Assess the Ballistic Missile Threat to the United States*, p. 19.

⁸⁴ North Korea possessed the capability to separate plutonium. This capability, combined with a threat to withdraw from the Non-Proliferation Treaty (NPT), coerced the United States to subsidize the building of new nuclear facilities in North Korea. Raymond Tanter, *Rogue Regimes: Terrorism and Proliferation Regimes* (New York: St Martin's, 1998), pp. 245-247.

⁸⁵ Statement attributed to Hussein Mussawi, former head of Hezbollah, quoted in Nadine Gurr and Benjamin Cole, *The New Face of Terrorism: Threats from Weapons of Mass Destruction* (London: I.B. Taurus, 2000), pp. 132-133.

⁸⁶ Bin-Laden, "Ladenese Epistle: Declaration of War (Part III)."

⁸⁷ Alan Cullison and Andrew Higgins, "Computer in Kabul holds chilling memos," MSNBC News (31 December 2001), available online at <http://www.msnbc.com/news/679996.asp>.

⁸⁸ Privately developed encryption software or techniques, such as Pretty Good Privacy (PGP) and steganography, are difficult or impossible to decrypt by government organizations such as the National Security Agency (NSA). Steganography is the art and science of hiding the fact that communication is taking place.

⁸⁹ LCol Timothy L. Thomas (ret), "China's Electronic Strategies," *Military Review* 81:3 (May-June 2001): 48.

⁹⁰ Oil pipeline overflow valves, for example, could be opened resulting in an environmental crisis; in the case of sabotage, train switches can be controlled resulting in the deliberate wrecking of railcars carrying toxic or highly flammable cargos, passengers, or both.

⁹¹ See <http://www.foxnews.com/story/0,2933,19337,00.html>. See also http://www.infowar.com/mil_c4i/99/mil_c4i_112099c_j.shtml.

⁹² Parts of this section were reprinted in Colin S. Gray, "Thinking Asymmetrically in Times of Terror," *Parameters*, vol. 32, no. 1 (Spring 2002), pp. 5-14.

⁹³ *The Art of War*, Samuel B. Griffith, trans. (Oxford: Oxford University Press, 1963), pp. 66-70.

⁹⁴ The Germans expected the Allies to invade France using the shortest amphibious route across the English Channel at the Pas de Calais. They also anticipated General George S. Patton, the most adept operational commander, to lead the invasion. An elaborate deception operation code-named "Operation Fortitude" exploited brilliantly these expectations and convinced the Germans for two weeks that the Normandy invasion was only a feint designed to draw off German reserves. For details see Roger Hesketh, *Fortitude: The D-Day Deception Campaign* (New York: Overlook Press, 2000).

⁹⁵ A recent illustration of the problem is contained in the following articles published after two different terrorist events a month apart: Joby Warrick and Joe Stephens, "Before Attack, U.S. Expected Different Hit: Chemical, Germ Agents Focus of Preparations," *Washington Post*, 2 October 2001; and, August Gibbon, Analyst Says Strategy Ignored Low-Level Bioterrorism," *Washington Times*, 17 October 2001.

⁹⁶ Consider, for example, the general reception to the conclusions of the Rumsfeld Commission in public and policy-making circles. Commission to Assess the Ballistic Missile Threat to the United States, *Report of the Commission to Assess the Ballistic Missile Threat to the United States: Executive Summary* (Washington: Government Printing Office, 1998).

⁹⁷ This phrase was used metaphorically to describe U.S. counterterrorism policy in Department of State, *Patterns of Global Terrorism, 1999* (Washington: Government Printing Office, 2000). Available online at <http://www.state.gov/www/global/terrorism/1999report/intro.html>.

⁹⁸ In addition to offering Roman civilization to those who capitulated willingly, the Roman Empire undertook the following practices against their adversaries: "Ravaging also occurred after a Roman military victory and continued until the barbarians made peace. The Romans systematically burnt crops and villages and killed or enslaved any inhabitants they could find. This process was deliberately brutal and demonstrated to the entire people the hopelessness of resistance." Hugh Elton, *Warfare in Roman Europe, AD 350-425* (Oxford: Clarendon Press, 1996), p. 223.

⁹⁹ See, for example, Patrick J. Garrity, *Why the Gulf War Still Matters: Foreign Perspectives on the War and the Future of International Security*, Center for National Security Studies Los Alamos National Laboratory, Report No. 16, July 1993.

¹⁰⁰ Major General Robert H. Scales, Jr. USA, "Adaptive Enemies: Dealing with the Strategic Threat After 2010," *Strategic Review*, Vol. 27 No. 1, Winter 1999, pp. 5-14, 11-12.

¹⁰¹ "No future enemy is likely to allow an unchallenged buildup such as Desert Shield. . . . It is highly unrealistic to use the Gulf conflict as a planning model for future major regional adversaries," in Peter A. Wilson, Robert A. Manning, and Col. Richard L. Klass, (Ret.), *Defense in the Information Age: A New Blueprint*, Policy Report No. 26, (Washington, DC: Progressive Policy Institute, December 1995) p. 5. Available online at http://www.pponline.org/ppi_ci.cfm?knlgAreaID=124&subseclD=159&contentID=1314.

¹⁰² Major General Robert H. Scales, Jr. USA, *America's Army in Transition: Preparing for War in the Precision Age*, Army Issue Paper No. 3 (Carlisle Barracks, PA: U.S. Army War College, November 1999), p. 23. For more on consensus building across domestic, allied, and military spectrums in response to the September 11 attacks, see Ann Scott Tyson, "Why the U.S. is moving so deliberately," *The Christian Science Monitor* online, from the October 4, 2001 edition at <http://www.csmonitor.com/2001/1004/p1s2-usmi.html>. Lt. Col. P.H. Liotta, USAF, "A Strategy of Chaos," *Strategic Review*, Vol. 26 No. 2, Spring 1998, pp. 19-30: 20.

¹⁰³ Kenneth H. Bacon, ASD (PA), DoD News Briefing, November 17, 1998, and "Taken Questions- November 17, 1998." This total does not include the Operation Desert Fox bombing in December 1998. Rowan Scarborough, "Record Deployments Take Toll on Military: 48 Missions in '90s Totalling \$30 Billion Strain Personnel, Equipment, Study Finds," *The Washington Times*, March 28, 2000, p. A6. President George W. Bush, Statement at Camp Bondsteel, Kosovo, July 24, 2001, available online at <http://www.whitehouse.gov/news/releases/2001/07/20010724.html>.

¹⁰⁴ Thomas A. Keaney, and Eliot A. Cohen, *Gulf War Air Power Survey, Volume I: Planning and Command and Control* (Washington, DC: Government Printing Office, 1993), p. 64.

¹⁰⁵ *Gulf War Air Power Survey, Volume I*, p. 75.

¹⁰⁶ Robert M. Bryant, former deputy director of the FBI, observed that bin Laden's Al Qaeda presents this unique challenge: "What makes his group different from [covert groups] we've seen before—the Russian and German spying operations of the Cold War, the killers of Islamic Jihad and Hezbollah—is that so many of them are willing to die." From Mark Fineman and Stephen Braun, "Life Inside Al Qaeda: A Destructive Devotion," *The Los Angeles Times*, September 24, 2001 accessed online at <http://latimes.com/news/nationworld/nation/la-000076508sep24.story>

¹⁰⁷ The National Park Service's Pearl Harbor Memorial website lists 2,395 military and civilians killed in the Japanese attack. Accessed at <http://www.execpc.com/~dschaaf/mainmenu.html>. There is not yet a complete count of all the people missing and dead in the September 11 attacks, but it is estimated to be over 3,000.

¹⁰⁸ President George W. Bush, Remarks to Employees at the Federal Bureau of Investigation, FBI Headquarters, Washington DC, September 25, 2001, accessed online at <http://www.whitehouse.gov/news/releases>.

¹⁰⁹ A truck bomber attacked Khobar Towers, a facility housing U.S. and allied forces supporting the coalition air Operation Southern Watch over Iraq, in June 1996. The investigation following the attack found no published DoD physical security standards for force protection of fixed facilities, no guidance provided as to stand-off distance, and poor communications within the building. Local building codes did not require emergency systems such as fire alarms. The U.S. part of the building had a public address system and relied on manual warnings, like knocking on doors. (All information taken from the Downing Report, William Perry, Secretary of Defense, "Report to the President and Congress on the Protection of U.S. Forces Deployed Abroad," submitted to Congress September 15, 1996, available online at http://www.defenselink.mil/pubs/downing_rpt/). This attack focused DoD attention on installation security, but the October 2000 suicide motorboat attack on the USS Cole in the port of Aden, Yemen, demonstrated the vulnerability of in-transit forces. Recommendations focused on deterring aggression against deployed forces and producing focused threat assessments. (From William Cohen, Secretary of Defense, "DoD USS Cole Commission Report," [Crouch-Gehman Report], submitted to the Joint Chiefs of Staff, January 9, 2001, available online at <http://www.defenselink.mil/pubs/cole20010109.html>) The September 11, 2001 attacks prompted the formation of the Cabinet-level Office of Homeland Security.

¹¹⁰ Palestinian suicide bombers have adapted their techniques to exploit evolving Israeli security and counter-terror tactics. The goal is to draw as little attention to oneself as possible until the attack is conducted. These techniques include the use of female suicide bombers, bombers dressed in military uniforms, and bombers with dyed or bleached hair.

¹¹¹ In addition to the military and diplomatic changes described above, measures are underway to make the U.S. homeland less vulnerable. For example, the Canadian Solicitor General Lawrence MacAuley and U.S. Attorney General John Ashcroft pledged cooperation to increase security along the 4,000 mile border between the U.S. and Canada, a crossing that figured prominently in a previous terrorist plot to set off bombs during millennium celebrations. The U.S. Immigration and Naturalization intends to seek additional funds to hire border guards and purchase equipment to strengthen enforcement. From Karen DeYoung and Dan Eggen, "\$100 Million in Terrorist Assets Frozen," *The Washington Post*, October 3, 2001: p. A9.

¹¹² Terrorists have manipulated the freedoms of democratic societies to design, fund, and carry out attacks. See Steven Erlanger, "In Germany, Terrorists Made Use of a Passion: An Open Democracy," *The New York Times*, October 5, 2001: p. B6. In an international effort to cut off money used by terrorists, over \$100 million in assets were frozen in U.S. and foreign banks between the September 11 attacks and October 3. From Karen DeYoung and Dan Eggen, "\$100 Million in Terrorist Assets Frozen," *The Washington Post*, October 3, 2001: p. A9.

¹¹³ Adolf Hitler was more than willing to sacrifice himself and German nation, as evinced in the 'Nero Orders' issued in March 1945, when there was nothing left to lose. "The Führer Order of March 18 called for the removal of all civilians from Western Germany, by foot and without supplies -- a death march. The order of March 19 essentially sought to destroy all the material assets within the Reich necessary for civilian survival." Keith B. Payne, *The Fallacies of Cold War Deterrence and a New Direction* (Lexington, KY: University of Kentucky Press, 2001), pp. 61-77.

¹¹⁴ John Hamre identifies missile defense and WMD terrorism as the “two cogent issues in Homeland Defense.” “A Strategic Perspective on U.S. Homeland Defense: Problem and Response,” in Max G. Manwaring, ed., *...to insure domestic Tranquility, provide for the common defence...* (Carlisle, PA: Strategic Studies Institute, USAWC, 2000), p. 15; Frank Cilluffo, Joseph J. Collins, Arnaud de Borchgrave, Daniel Gouré, and Michael Horowitz, *Defending America in the 21st Century: New Challenges, New Organizations, and New Policies* (Washington: Center for Strategic and International Studies, 2000).

¹¹⁵ Prior to the bombing of the Murrah building in Oklahoma City, the United States weathered terrorist and urban guerrilla challenges from groups such as The Weather Underground, the Symbionese Liberation Army, and the Black Panthers during the 1960s and 70s. For a brief discussion see Walter Laqueur, *Terrorism* (London: Abacus, 1980), pp. 253-255. A detailed discussion of the differences between terrorism and other forms of irregular warfare may be found in James D. Kiras, “Terrorism and Irregular Warfare,” in John Baylis, Eliot Cohen, Colin Gray and James Wirtz eds., *Strategy in the Contemporary World: An Introduction to Strategic Studies* (Oxford: Oxford University Press, 2002), pp. 208-232.

¹¹⁶ This point was highlighted recently by Congressman Ike Skelton in his article “22 American Frontier Wars: Lessons for Asymmetric Conflicts,” *Military Review*, vol. 81, no. 5, September/October 2001, pp. 22-27 and in greater detail in Sam C. Sarkesian, *America's Forgotten Wars: The Counterrevolutionary Past and Lessons for the Future* (Westport, CT: Greenwood Press, 1984).

¹¹⁷ Both Imperial and Nazi Germany conducted minor sabotage campaigns against the United States in wartime. Imperial German saboteurs destroyed the Black Tom munitions depot in New York on 30 July 1916 and considered attacking the Welland Canal; German saboteurs during the Second World War planned to disrupt the water supply system in New York City and destroy the hydroelectric facilities at Niagara Falls, aluminum plants in four states, and rail facilities. Jules Witcover, *Sabotage at Black Tom: Imperial Germany's Secret War in America, 1914-1917* (Chapel Hill, NC: Algonquin Books, 1989); Domenick Micillo, “Axis Offensive Military Operations Against the Continental United States: Opportunity Lost,” unpublished thesis (Newport, RI: Naval War College, February 1999), p. 3.

¹¹⁸ See for example Terrence Kelly, “An Organizational Framework for Homeland Defense,” *Parameters*, vol. 31, no. 3, Autumn 2001, pp. 105-133; Eric V. Larson and John E. Peters, *Preparing the U.S. Army for Homeland Security: Concepts, Issues, and Options* (Santa Monica, CA: Rand, 2001), pp. 45-97.

¹¹⁹ New, or postmodern, terrorism is a term used to describe the rise in religious-inspired, mass casualty violence. See Walter Laqueur, *The New Terrorism: Fanaticism and the Arms of Mass Destruction* (Oxford: Oxford University Press, 1999) and Nadine Gurr and Benjamin Cole, *The New Face of Terrorism: Threats from Weapons of Mass Destruction* (London: I.B. Taurus, 2000).

¹²⁰ Philippine authorities shared information with the United States that fundamentalist Islamic terrorists planned to crash an aircraft into the Pentagon in 1995; members of an Armed Islamic Group, all of whom were killed during a gun battle with counterterrorist forces, hijacked an Air France aircraft on December 24, 1994 in Algeria with the intent of either crashing it into the Eiffel Tower or destroying it over Paris (this was resolved two days later in Marseilles). Edward F. Mickolus with Susan L. Simmons, *Terrorism, 1992-1995: A Chronology of Events and A Selectively Annotated Bibliography* (Westport, CT: Greenwood Press, 1997), pp.742-745, 752. Chris Hansen, “The Lesson of Air France Flight 8969,” *Dateline NBC*, 30 September 2001, available online at <http://www.msnbc.com/news/635213.asp?cp1=1>.

¹²¹ Canadian Security Intelligence Service, “Trends in Terrorism,” *Perspectives*, Report # 2001/01, 18 December 1999; Rohan Gutnaratna, “Suicide Terrorism: A Global Threat,” *Jane's Intelligence Review* vol., 12, no. 4, April 2000, pp. 52-55.

¹²² Millennial groups merge their religious beliefs of an apocalypse or time of judgment with recent events; as true believers, many feel an obligation to destroy either themselves or “unbelievers” in an attempt to facilitate the end of the world. An interesting historical survey of different types of millennialism is contained in James F. Rinehart, *Revolution and the Millennium: China, Mexico, and Iran* (Westport, CT: Praeger, 1997), pp. 17-40.

¹²³ Brian M. Jenkins, “Will Terrorists Go Nuclear?” in Walter Laqueur and Yonah Alexander, eds., *The Terrorism Reader* (New York: Meridian, 1987), p. 352.

¹²⁴ Cohen, *Annual Report to the President and the Congress*, p. 7.

¹²⁵ Eisenstadt, *Iranian Military Power*, p. 75.

¹²⁶ William J. Perry, “Desert Storm and Deterrence,” *Foreign Affairs*, vol. 70 no. 4 (Fall 1991) pp. 66-82: 73.

¹²⁷ Richard J. Harknett and the JCISS Study Group, “The Risks of a Networked Military,” *Orbis*, Winter 2000, pp. 127-143; E. Anders Eriksson, “Information Warfare: Hype or Reality?” *The Nonproliferation Review*, vol. 6 no. 3, Spring/ Summer 1999, pp. 57-64; Bradley Graham, “Military Grappling with Guidelines for Cyber Warfare,” *The Washington Post*, Monday November 8, 1999, pp. A1, A10; Stephen Green, “Threat of Electromagnetic War Has Long Worried U.S. Military Leaders,” *San Diego Union-Tribune*, November 13, 1999; Wilson, Manning, and Klass, “Defense in the Information Age.”

¹²⁸ D. Ian Harper, "Navy investigates hacking theft of missile-guidance software code," *Associated Press*, March 5, 2001, accessed online at <http://www.nandotimes.com> and "Hacker gets hold of top secret U.S. space codes," *Reuters*, March 2, 2001, accessed online at http://dailynews.yahoo.com/hlx/nm/20010302/ts/crime_space_dc_1.html.

¹²⁹ EMP effects only became known after the 1962 "Starfish Prime" atmospheric nuclear test. The U.S. vulnerability to EMP has been the subject of Congressional hearings; a privately built device was demonstrated before the Department of Defense and members of Congress in May 2001. Kenneth R. Timmerman, "U.S. Threatened With EMP Attack," *InsightMag.com*, available online at <http://www.insightmag.com/archive/200105284.shtml>; Kelly Hearn, "Everyday materials used in radio weapon," *United Press International*, 26 April 2001.

¹³⁰ Green, "Threat of Electromagnetic War." The ease with which such devices can be constructed, including crude plans for building various EMP devices, are readily available online in works such as Carlo Kopp, "An Introduction to the Technical and Operational Aspects of the Electromagnetic Bomb," Paper Number 50 (RAAF Base Fairburn, Australia: Air Power Studies Centre, November 1996). Available online from the author's website <http://www.csse.monash.edu.au/~carlo/archive/MILITARY/APSC/wp50-draft.pdf>.

¹³¹ William Graham, Hearing on Electromagnetic Pulse Threats to U.S. Military and Civilian Infrastructure, prepared statement before the Military Research and Development Subcommittee of the House Armed Services Committee, October 7, 1999, transcript available online at http://commdocs.house.gov/committees/security/has280010.000/has280010_O.htm, p. 24-25.

¹³² Lowell Wood, Hearing on Electromagnetic Pulse Threats to U.S. Military and Civilian Infrastructure, prepared statement before the Military Research and Development Subcommittee of the House Armed Services Committee, October 7, 1999, transcript available online at http://commdocs.house.gov/committees/security/has280010.000/has280010_O.htm, p. 33.

¹³³ Commission to Assess United States National Security Space Management and Organization, *Report of the Commission to Assess United States National Security Space Management and Organization: Executive Summary*, January 11, 2001, p. 13.

¹³⁴ *Ibid.*, p. 15.

¹³⁵ Department of Defense, *Quadrennial Defense Review Report*, September 30, 2001, p. 45.

¹³⁶ For more information on preparations for MOUT, see the Center for Army Lessons Learned online, <http://call.army.mil/call/homepage/mout.htm>; the Marine Corps Combat Development Command site, <http://www.geocities.com/Pentagon/6453>; the RAND Corporation has several studies online at <http://www.rand.org/publications>; and the Foreign Military Studies Office, U.S. Army Command and General Staff College posts occasional papers on MOUT online at <http://call.army.mil/call/fmso/fmsopubs/issues/battle.htm>.

¹³⁷ General Accounting Office, *Military Capabilities: Focused Attention Needed to Prepare U.S. Forces for Combat in Urban Areas* (Washington D.C.: General Accounting Office, February 2000), pp. 17-21.

¹³⁸ *Ibid.*, pp. 23.

¹³⁹ *Ibid.*, pp. 6-7.

¹⁴⁰ Defense Science Board, "Joint Operations Superiority," p. 107.

¹⁴¹ Tenet, "The Worldwide Threat in 2000," March 21, 2000. "Some countries are pursuing an asymmetric warfare capability and see biological and chemical weapons as a viable means to counter overwhelming U.S. conventional military superiority. Other states are pursuing BW [biological warfare] programs for counterinsurgency use and tactical applications in regional conflicts, increasing the probability that such conflicts will be deadly and destabilizing."

¹⁴² Kim Myong Chol, "Kim Jong Il's Military Strategy for Reunification," *Comparative Strategy*, Vol 20 No 4, Fall 2001: 324.

¹⁴³ Director of Central Intelligence, *Foreign Missile Developments and the Ballistic Missile Threat Through 2015*, December 2001, p. 7.

¹⁴⁴ Kim Myong Chol, "Kim Jong Il's Military Strategy for Reunification," *Comparative Strategy*, Vol 20 No 4, Fall 2001: 313.

¹⁴⁵ Office of the Secretary of Defense, *Proliferation: Threat and Response*, January 2001, Washington, D.C.: p.114. available at www.defenselink.mil.

¹⁴⁶ Office of the Secretary of Defense, *Proliferation: Threat and Response*, January 2001, Washington, D.C.: p.115. available at www.defenselink.mil.

¹⁴⁷ Richard A. Falkenrath, Robert D. Newman, and Bradley A. Thayer, "Introduction," from *America's Achilles' Heel: Nuclear, Biological, and Chemical Terrorism and Covert Attack* (Cambridge, MA: The MIT Press, 1999), pp. 1-26: 5.

¹⁴⁸ The motivation to acquire and likelihood of use of these weapons is the subject of debate. For more on WMD proliferation, see Scott D. Sagan, "Why Do States Build Nuclear Weapons: Three Models in Search of a Bomb," *International Security* 21 (Winter 1996): 54-86; U.S. Congress, Office of Technology Assessment, *Proliferation of Weapons of Mass Destruction: Assessing the Risks*, OTA-ISC-559 (Washington, DC: U.S. Government Printing Office, 1993); Bradley A. Thayer, "The Causes of Nuclear

Proliferation and the Utility of Nuclear Non-Proliferation Regime,” *Security Studies* 4 (Spring 1995): 463-519; Jonathan Tucker, “Motivations for Biological Weapons Proliferation: Examining Proliferators and Nonproliferators in North Africa and the Middle East,” in *Biological Warfare*, ed. Raymond Zilinskas, (Boulder: Lynne Rienner, 1999); and Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities* (Washington, DC: Woodrow Wilson Center Press, 1995). For more on taboos and the utility of WMD, see Richard Price and Nina Tannenwald, “Norms and Deterrence: The Nuclear and Chemical Weapons Taboos,” in *The Culture of National Security*, ed. Peter J. Katzenstein, (New York: Columbia University Press, 1996): 114-52; Richard M. Price, *The Chemical Weapons Taboo*, (Ithaca: Cornell University Press, 1995), 164-176; and Nina Tannenwald, “The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-use,” *International Organization* 53 (Summer 1999): 433-468.

¹⁴⁹ *Ibid.*, p. 15.

¹⁵⁰ There are two main classifications of chemical weapons: nonlethal or harassing agents, such as tear gas, and lethal, which are described by the route through which they usually act—nerve agents, blister agents, blood agents, and choking agents (p.4). Peter Dunn, “Chemical Weapons: An Introduction,” in Trevor Findlay, ed., *Chemical Weapons & Missile Proliferation with Implications for the Asia/Pacific Region* (Boulder, CO: Lynne Rienner Publishers, 1991), p. 3-7.

¹⁵¹ *Ibid.*, p. 4.

¹⁵² *Ibid.*, p. 7.

¹⁵³ Biological agents are either replicating agents (bacteria or viruses) or nonreplicating materials (toxins or physiologically active proteins or peptides) that can be produced by living organisms. Some nonreplicating biological agents can also be produced through either chemical synthesis, solid-phase protein synthesis, or recombinant expression methods. Office of the Surgeon General, US Army, *Medical Aspects of Chemical and Biological Warfare*, 1997, p. 4.

¹⁵⁴ Even a disease that is now considered commonplace, influenza, can cause tremendous mortality. The influenza pandemic of 1918-19 resulted in more than 500,000 deaths. K.F. Gensheimer, et. al, “Preparing for Pandemic Influenza: The Need for Enhanced Surveillance,” *Emerging Infectious Diseases*, Vol. 5, No. 2 Mar-Apr 1999, p. 297.

¹⁵⁵ From the “Dark Winter” exercise website. The exercise was conducted on 22-23 June 2001 by The Center for Strategic and International Studies, the Johns Hopkins Center for Civilian Biodefense Studies, the ANSER Institute for Homeland Security, and the Oklahoma National Memorial Institute for the Prevention Terrorism, <http://www.homelandsecurity.org/darkwinter/index.cfm>.

¹⁵⁶ W. Seth Carus, “The Threat of Bioterrorism,” *Strategic Forum*, Institute for National Strategic Studies at National Defense University, Number 127, September 1997, accessed online at <http://www.ndu.edu/inss/strforum/forum127.html>.

¹⁵⁷ Tenet, “The Worldwide Threat in 2000,” March 21, 2000. Office of the Secretary of Defense, *Proliferation and Response* (Washington, DC: Government Publications Office, January 2001) pp.64-65.

¹⁵⁸ RAND’s Dr. Peter Chalk explains that, “one of the main factors that appears to have restrained [terrorist] escalation to [biological weapons] has been the difficulty in actually weaponizing pathogens and viable agents and actually accessing suitable strains. With agricultural diseases neither of these conditions hold. Something like foot-and-mouth, for instance, spreads by itself. There is no need to weaponize the agent, it’s so transmissible.” Peter Probst, director of programs for the Institute for the Study of Terrorism and Political Violence, observed that “the American agriculture base [is] the soft underbelly of the American economy. It generates \$1 trillion a year in export revenue, and an attack against beef or swine would be incredibly costly. It would be disastrous.” In Claude Salhani, “Livestock Plagues Could Be Bioterrorist Attack,” April 5, 2001, from <http://www.vny.com/cf/News/upidetail.cfm?QID=174320>, reposted at <http://www.mugu.com/pipermail/upstream-list/2001-April/001673.html>.

¹⁵⁹ Diseases have “jumped” from animal to human hosts; last year, the Rift Valley fever epidemic in Saudi Arabia started in animals and spread to humans, and the West Nile Virus in the U.S. is monitored very closely for the same reason. Barbara Reynolds of the Centers for Disease Control observed that “the issue of bioterrorism has become more of a public health issue.” Claude Salhani, “Livestock Plagues Could Be Bioterrorist Attack,” April 5, 2001, from <http://www.vny.com/cf/News/upidetail.cfm?QID=174320>, reposted at <http://www.mugu.com/pipermail/upstream-list/2001-April/001673.html>.

¹⁶⁰ Foot-and-mouth disease is the most infectious viral disease known. It can spread over 170 miles as an aerosol. One infected animal releases enough virus in one day to infect theoretically 100 million cattle. A 1997 outbreak of the disease in Taiwan resulted in destruction of over 500,000 tons of pork and an overnight drop in the nation’s GDP of 2%. Peter Chalk, “The Political Terrorist Threat to US Agricultural and Livestock,” Paper presented at agro-terrorism workshop, Cornell University, 12 November 2000, pp. 11, 13.

¹⁶¹ Horn & Breeze, “Agriculture and Food Safety,” in Thomas Frazier and Drew Richardson, eds., *Food and Agricultural Security: Guarding Against Natural Threats and Terrorist Attacks Affecting Health, National Food Supplies, and Agricultural Economics*, Vol. 894 (New York: Annals of the New York Academy of Sciences, 1999), p. 14.

¹⁶² Peter Chalk, “Political Terrorist Threat,” p. 18.

¹⁶³ Anti-material agents are organisms that degrade items such as fabrics, rubber, leather and metal. For example, some bacteria produce highly acidic compounds that cause pitting in metals, which could cause problems with stockpiled materiel. See Lester C. Caudle, "The Biological Warfare Threat," in Office of the Surgeon General, US Army, *Medical Aspects of Chemical and Biological Warfare*, 1997, p. 4.

¹⁶⁴ Weapon of Mass Destruction (WMD) type cases, primarily those cases dealing with the threatened use or procurement of chemical and biological materials with intent to harm, have steadily increased. In 1996, 37 cases were opened by the FBI. In 1997, there were 74 cases opened, of which 22 were related to biological agents. By 1998, the FBI opened 181 cases, 112 of which were biological in nature. In 1999 there have been 123 WMD cases, 100 of which have been biological. In 1998 and 1999 combined, over three-quarters of the cases opened have threatened a biological release, and the biological agent most often cited in 1998 and 1999 has been anthrax. See Robert M. Burnham, Chief of Domestic Terrorism Section, Federal Bureau of Investigation, Testimony before the US House of Representatives, Subcommittee on Oversight and Investigations, 19 May 1999.

¹⁶⁵ The Monterey Institute of International Studies reported that since 1975, there have been 154 fatalities from "chemical terrorism," none in the United States, from either chemical or biological attacks. In 342 cases of chemical or biological terrorism worldwide over that time, three or fewer people were killed or injured 96 percent of the time; sixty percent of the time, no one was killed or injured. Reported in Vernon Loeb, "Making Chemical Weapons Is No Easy Task," *The Washington Post* online edition, February 5, 2001, available at <http://washingtonpost.com/ac2/wp-dyn/A19900-2001Feb2>.

¹⁶⁶ Peter Ford, "Biochem terror: a reality check," *The Christian Science Monitor*, 5 October 2001; Alan Judd, "Biow arfare is not as easy as it looks," *The Daily Telegraph*, 27 September 2001.

¹⁶⁷ Department of Defense, *Conduct of the Persian Gulf War*, p. 610.

¹⁶⁸ Department of Defense, *Conduct of the Persian Gulf War*, p. 624.

¹⁶⁹ Iran is urging the United Nations to investigate the damage caused by Iraq and exact compensation for pollution to the Persian Gulf coast, forests, and pastures. "Iran Says Iraq Should Compensate for Polluting Persian Gulf," *Tehran IRNA* in English, June 21, 2001, FBIS transcription in Document ID: IA P20010621000007.

¹⁷⁰ Gleb Pavlovsky, "Are We Prepared to Wait Until the Enemy Hits Us as it Hit America?" Strana.ru (Observer.com), October 20, 2001. See <http://www.russianobserver.com/foreign/relations/2001/10/20/1003576041.html>, (November 2, 2001).

¹⁷¹ *Interfax*. October 18, 2001.

¹⁷² Foreign Broadcast Information Service. "Russian Public Opinion Monitor -- Responses to Terrorism," Document ID No. CEP20010917000302.

¹⁷³ Russian expressions of understanding of or agreement with U.S. threat perception often actually reflect narrower interests. For example, the competition for scarce funding is at issue when Anatolii Basistov, the architect of Moscow's ABM system, makes an argument that might otherwise be expected of a U.S. missile defense advocate: "The concept of nuclear deterrence, based on guaranteed retaliatory strike, was effective only when ballistic missiles were in the possession of a narrow group of states. Today, when ballistic and nuclear weapons are spreading all over the world, the danger of nuclear blackmail and anonymous terrorist attacks from the territories and/or territorial waters of third states, that do not even contemplate engaging in aggressive behavior, is rapidly growing". See: Sergei Goryainov, "We Cannot Do Without the Anti-Missile Defense," *Itogi*, (May 20, 1997), p. 11.

¹⁷⁴ Leonid Ivashov, "Global Provocation: 11 September Tragedy Suits Those Forces in America That Back the Policy of Establishing World Domination," *Nezavisimaya Gazeta*, (October 10, 2001). Ivashov is a retired Colonel General formerly in charge of the MOD's Department of International Cooperation.

¹⁷⁵ Oleg Chernov, "Globalization of World Development Forces Russia to Treat New Missile Threats Particularly Seriously," *Yadernyi Kontrol*, January-February, 2001. See <http://www.pircenter.org/english/news/index.htm>.

¹⁷⁶ Mark Galeotti, "Putin Looks to the Orient," *Jane's Intelligence Review* (December 2000), p. 8.

¹⁷⁷ Oleg Odnokolenko, "Russia Could Be Drawn Into an Expensive Arms Race," *Segodnya* (June 22, 2000), p. 1. For similar material see also Lev Volkov, "Russia Will Find a Response to the ABM Challenge," *Nezavisimoe Voennoe Obozrenie* (March 17, 2000), p. 1.

¹⁷⁸ "Deputies Propose Countermeasures Linked with Washington's Military Expansion," *Parlamentskaya Gazeta*, May 23, 2001: p. 1.

¹⁷⁹ Sergey Ivanov, "Under the Threat of the Bush NMD," *Sovetskaya Rossiya* (May 29, 2001), pp. 3-4.

¹⁸⁰ Michael Tsai and York Chen, "Submarines and Taiwan's Defense," *Taiwan Defense Affairs*, vol. 1, no. 3 (Spring 2001), p. 126.

¹⁸¹ For example, see Michael O'Hanlon, "Why China Cannot Conquer Taiwan," *International Security*, vol. 25, no. 2 (Fall 2000), pp. 51-86.

¹⁸² Mao Zedong, "On Protracted War," *Selected Military Writings of Mao Tse-Tung* (Beijing: Foreign Language Press 1963), p. 259.

- ¹⁸³ Mao Zedong, "Our Great Victory in the War to Resist U.S. Aggression and Aid Korea, and Our Future Tasks," *Selected Works of Mao Tse-Tung* (Beijing: Foreign Language Press 1977), p. 115.
- ¹⁸⁴ Arthur Waldron, "The Art of Shi," *The New Republic*, 216 (June 23, 1997): pp. 39-40.
- ¹⁸⁵ Nie Fengzhi, *Sanjun Huizhan Donghai*, (Nanjing: The PLA Press, 1984): pp. 40-41.
- ¹⁸⁶ See Michael Pillsbury, *China Debates the Future Security Environment*, (Washington DC: National Defense University, 2000), Chapter 6; and Richard Fisher, "The PLA's High Tech Future," *China Brief* vol. 4, no. 1 (August 28, 2001) http://china.jamestown.org/pubs/view/cwe_001_004_002.htm.
- ¹⁸⁷ Wen Jen, "Revealing Secrets of Beijing's 998 State Security Project," *Tai Yang Pao* (June 13, 2000) translated by Foreign Broadcast Information Service, Document ID: CPP20000613000011.
- ¹⁸⁸ For examples of the technology used in live fire exercises during 2001, see: Long Teng, *Guoji Zhanwang*, (July 1, 2001): p. 1 translated by Foreign Broadcast Information Service, Document ID: CPP20010710000215.
- ¹⁸⁹ *Beijing Liaowang*, (March 13, 2000): pp. 55-56. FBIS Document ID: CPP20000322000070.
- ¹⁹⁰ *Ibid.*
- ¹⁹¹ *Ibid.*
- ¹⁹² Ma Ling, *Ta Kung Pao* (September 13, 2001) FBIS Document ID: CPP20010913000078.
- ¹⁹³ *Ibid.*
- ¹⁹⁴ *Declaration on Establishment of the Shanghai Cooperation Organization*, (June 15, 2001) <http://missions.itu.int/~kazaks/eng/sco/sco02.htm>. The SCO membership includes China, Russia, Uzbekistan, Tajikistan, Kyrgyz Republic and Kazakhstan.
- ¹⁹⁵ Craig Smith, "China, in Harsh Crackdown, Executes Muslim Separatists," *New York Times (online)*, (December 16, 2001). See <http://www.nytimes.com/2001/12/16/international/asia/16CHIN.html>, (December 16, 2001).
- ¹⁹⁶ Human Rights Watch, "Xinjiang after September 11," *Backgrounder*, (October 2001). See <http://www.hrw.org/backgrounder/asia/china-bck1017.htm>, (December 14, 2001).
- ¹⁹⁷ Yang Fu, "Review of Terrorism in China, Past and Present," *Chiao Ching*, (November 16, 2001): pp. 44-47. FBIS Document ID: CPP20011116000065.
- ¹⁹⁸ Yu Wanlong, "Terrorism and Power Politics," *Liaowang*, (November 19, 2001): p. 61. FBIS Document ID: CPP20011129000070.
- ¹⁹⁹ China's version of PsyOps reportedly includes "media propaganda to convince citizens of their country's military power [and] blocking enemy propaganda." Fong Tak-ho, *South China Morning Post*, (October 24, 2001). FBIS Document ID: CPP20011024000050.
- ²⁰⁰ "Zhu Rongji Personally Heads Leading Group for Informationization," *Tao Jih Pao*, (October 16, 2001). FBIS Document ID: CPP20011017000092.
- ²⁰¹ Regarding use of submarines to support special operations, see: "Underwater Amphibious Operations Centering on Submarines," *Chiao Ching*, (September 16, 2001): pp. 36-39. FBIS Document ID: CPP20010918000092.
- ²⁰² See, for example, Judith Miller, "An Iraqi Defector Tells of Work on at Least 20 Hidden Weapons Sites," *New York Times On The Web*, (December 20, 2001).
- ²⁰³ Tariq Aziz, Deputy Prime Minister of Iraq, Interview on Al-Jazira Satellite Television (Qatar) on 28 June, Radio Free Europe/Radio Liberty, Volume 2, Number 24 (2 July 1999).
- ²⁰⁴ See for example Khidhar Hamza, "Each Day We Wait, Saddam Grows More Powerful," *Wall Street Journal* (10 December 2001); Lawrence F. Kaplan, "Phase Two: Why the Bush administration will go after Iraq," *The New Republic*, No. 4,534 (10 December 2001): 21-23.
- ²⁰⁵ As the Vice President of Iraq said, "[Saddam Hussein] believes that the Arab nation will emerge victorious no matter how much the enemies gang up on it and no matter how far the aggression goes. We will fight to the last citizen and we will be immortalized by history. They [the United States] will be placed in the garbage dump of history." Taha Yasin Ramadan, Interview in Arabic, Foreign Broadcast Information Service, 19 December 1998.
- ²⁰⁶ "...the ongoing daily aggression in the unlawful no-flight zones; the maintenance of the comprehensive sanctions that have taken the lives of nearly 2 million Iraqis, most of them children and women; and the use of depleted uranium, which constitutes the crime of the epoch and 'moral barbarism' in its most manifest form. This is to say nothing of the American moral barbarism that found expression in the use of nuclear weapons against Japanese civilians at Hiroshima and Nagasaki, in the use of chemical weapons

against the people of Viet Nam and biological weapons against the people of Cuba and in other crimes in all parts of the world." Mohammed Al-Douri, Permanent Representative of Iraq to the United Nations, "Letter to the UN Secretary General, 5 May 2001," S/2001/450, (8 May 2001).

²⁰⁷ For details see Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War, Volume II: The Iran-Iraq War* (Boulder, CO: Westview Press, 1990), pp. 503-518.

²⁰⁸ See, for example, Howard Hu, Robert Cook-Deegan, and Asfandiar Shukri, "The Use of Chemical Weapons: Conducting an Investigation Using Survey Epidemiology," *Journal of the American Medical Association*, Vol. 262, No. 5 (4 August 1989). See excerpt at http://www.phrusa.org/research/chemical_weapons/chemjour.html. What cannot be documented, however, is whether biological weapons were also used. It is possible, for example, that the Iraqi government manufactured aflatoxin for genocidal purposes. This cancer-causing agent would be of little battlefield utility, given that its effects would take years to emerge. Also, employment of aflatoxin in battle would probably go undetected, so its terror factor would be of little use. Yet, aflatoxin would be effective in causing cancer in a target population, and slowly eliminating people over time.

²⁰⁹ "The last naturally acquired case of smallpox occurred in 1977. The last cases of smallpox, from laboratory exposure, occurred in 1978. In the United States, routine vaccination against smallpox ended in 1972. Since the vaccine is no longer recommended, the vaccine is not available to the public. The CDC maintains an emergency supply of vaccine that can be released if necessary, since post-exposure vaccination is effective." From the Centers for Disease Control Website, Frequently Asked Questions about Smallpox, accessed November 8, 2001 at <http://www.bt.cdc.gov/Agent/Smallpox/Smallpox.asp>.

²¹⁰ Avigdor Haselkorn outlines the problem facing U.S. diplomacy when Israel was struck by Iraqi Scud missiles in *The Continuing Storm: Iraq, Poisonous Weapons, and Deterrence* (New Haven, CT: Yale University Press, 1999), pp. 129-130. For a detailed listing of Iraqi Scud attacks on Israel and Saudi Arabia, see "Appendix C: Iraqi Scud Launches During the Gulf War" contained in Bruce W. Watson, Bruce George, Peter Tsouras and B.L. Cyr, *Military Lessons of the Gulf War* (London: Greenhill Press, 1991), pp. 224-225.

²¹¹ Central Intelligence Agency, *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 July Through 31 December 1999* (Washington: Government Printing Office, 2000). This program is to convert L-29 jet trainer aircraft originally acquired from Eastern Europe. It is believed that Iraq may have been conducting flights of the L-29, possibly to test system improvements.

²¹² Details of Iraqi missile programs can be located in Robert W. Chandler, *The New Face of War: Weapons of Mass Destruction and the Revitalization of America's Transoceanic Military Strategy* (McLean, VA: AMCODA Press, 1998), pp. 142-149.

²¹³ Peter Chalk outlines the often-neglected agricultural dimension of terrorism in "The U.S. agricultural sector: a new target for terrorism," *Jane's Intelligence Review*, vol. 13, no. 2 (February 2001): 12-15.

²¹⁴ According to news reports, the leader of the 11 September attack and other "Middle Eastern men" made enquiries and took photographs of crop dusters at a rural airport in Florida. Justin Blum and Dan Eggen, "Crop Dusters Thought to Interest Suspects," *The Washington Post*, 24 September 2001.

²¹⁵ This statement was made by the Iraqi Deputy Prime Minister to one-time head of the Special Commission on Iraq, Rolf Ekeus (private communication with the author, 1995) and by Hussein Kamil in August 1995 (as quoted in Rostker, Bernard, "Information Paper"). Kamil was Saddam Hussein's brother-in-law and former chief of Iraq's nuclear, chemical, and biological weapons programs.

²¹⁶ Iraq now may perceive that the United States is unwilling to use nuclear weapons in any situation other than in retaliation for nuclear weapons use. See Haselkorn, *The Continuing Storm*, pp. 213-217.

²¹⁷ World Tribune.com, "Anthrax-tipped missiles now on Israel's Radar Screen," World Tribune online, posted November 6, 2001 at http://216.26.163.62/2001/me_israel_11_06.html. Also, the Israeli Knesset takes measures to protect its civilian population against unconventional attack, including distributing gas masks, building shelters, and purchasing protective equipment. From Tzvi Lavi, "Israeli Knesset Told 22% of Public Lack Protection against Nonconventional Attack," *Rishon Leziyyon Globes* in Hebrew November 6, 2001, FBIS translation, Document ID GMP20011106000174.

²¹⁸ Daniel Howes, "America Struggles to Hold Its Allies: Friendly nations weigh consequences, diplomatic payoffs," *The Detroit News*, October 21, 2001, accessed online November 7, 2001 at <http://www.detnews.com/2001/nation/01110/21/a01-323749.htm>.

²¹⁹ At a recent trade fair in Baghdad, 1,650 firms from 48 countries participated. Among states participating: Germany, France, Italy, Spain, Sweden, Denmark, Austria, Turkey, and Russia. From Hassan Hafidh, "European firms back in Iraq despite U.N. sanctions," *Reuters*, posted and accessed November 7, 2001 at <http://news.excite.com/printstory/news/r/011107/07/iraq-trade-europe>.

²²⁰ Iraq invaded Kuwait on August 2, 1990. On August 7, the U.S. sent its first deployment to Saudi Arabia (F-15Es from Langley, VA) and launched Operation Desert Storm January 16, 1991.

²²¹ The Gulf conflict was carefully followed and studied as it was the U.S.' first large-scale regional conflict since the end of the Cold War; allies and adversaries observed the capabilities and force projection of the United States and drew various lessons from the engagement. Peter A. Wilson, Robert A. Manning, and Col. Richard L. Klass, (Ret.), *Defense in the Information Age: A New*

Blueprint, Policy Report No. 26, (Washington, DC: Progressive Policy Institute, December 1995) p. 5. Available online at http://www.ppionline.org/ppi_ci.cfm?knlgAreaID=124&subsecID=159&contentID=1314.

²²² For scenarios involving terrorist attacks with biological weapons against U.S. agriculture and other targets, see the novel by K.C. Bailey, *Death For Cause* (Danville, CA: Meerkat Publications, 1995).

²²³ US Department of Defense, "WMD Security BDA," Briefing Charts, 19 December 1998 <http://www.fas.org/news/iraq/1998>.

²²⁴ Clem Gaines, "Restoration of Operations Exercise Looks at New Technologies," Defense Threat Reduction Agency *Connection*, Vol. 3, No. 3, March 2001, p. 4.

²²⁵ Nuclear weapons achieve their effects by fission of heavy radioactive elements or fusion of light ones. A radiological weapon, in contrast, is a relatively simple method of using a regular chemical explosion to scatter radioactive materials.

²²⁶ Nuclear weapons explosions produce electromagnetic pulses that can ruin unshielded electronics.

²²⁷ Statement made by General Sundarji to Kathleen Bailey in 1993.

²²⁸ The use of individuals who bear a resemblance to a leader, or "doubles," has long been a feature of warfare and politics. As well as serving a specific military function, namely, deception and confusion, doubles have been used politically to draw out elements hostile to the regime leader. One of the more fascinating, and open, accounts in twentieth century military history is contained in James M.E. Clifton's autobiographical account *I Was Monty's Double* (London: Rider and Co., 1954).

²²⁹ The phrase is derived from a 1998 Harvard report focusing on the potential threat of terrorism linked specifically with the use of weapons of mass destruction. Ashton B. Carter, John M. Deutch, and Philip D. Zelikow, *Catastrophic Terrorism: Elements of a National Policy* (Boston, MA: John F. Kennedy School of Government Visions of Governance for the Twenty-First Century, Harvard University, 1998). Available online at www.ksg.harvard.edu/visions/Publications/terrorism.htm.

²³⁰ The Real IRA, a splinter group of hardliners from the main Provisional IRA, claimed responsibility, protesting the signing of the Good Friday peace agreement. The car was carrying approximately 500 pounds of explosives. "Omagh bombing kills 28," *BBC News*, 16 August 1998, available online at http://news.bbc.co.uk/hi/english/events/northern_ireland/latest_news/newsid_152000/152156.stm.

²³¹ This method has become less popular with terrorists groups for a number of reasons, including the development of effective counter-terrorist/hostage rescue forces in a number of countries, the relative degree of risk involved (as opposed to remotely detonating explosives) and the high fatality rate among hostage-takers. The rescue of 490 hostages from the Japanese Embassy in Lima, Peru (22 April 1997) and 180 passengers from Air France 8969 in Marseille, France (25 December 1994), at little cost, demonstrate the competence of modern hostage rescue forces. "World leaders back Fujimori after hostage rescue," *CNN.com*, 22 April 1997), available online at <http://www.cnn.com/WORLD/9704/22/peru.reax/>; Edward F. Mickolus with Susan L. Simmons, *Terrorism, 1992-1995: A Chronology of Events and A Selectively Annotated Bibliography* (Westport, CT: Greenwood Press, 1997), pp. 742-743.

²³² According to one analyst: "In this case, the message is that the United States is more vulnerable than you think." Adrian Humphreys, "Plot called ingenious," *National Post*, 13 September 2001.

²³³ "Text of Bin Laden's Speech," *The Washington Post*, 28 October 2001. Victor Davis Hanson registers this bin Laden argument in his new book *Why the West Has Won: Carnage and Culture from Salamis to Vietnam* (New York: Doubleday, 2001). Hanson notes that over the centuries "the Western way of war" has killed tens of thousands of "Others," but Westerners have been outraged when "Others" strike back sneakily as it offends our cultural assumptions about war.

²³⁴ Much like experienced criminals know the response times of local law enforcement, it is highly probable that the attacks on the World Trade Center were staggered during rush hour to focus media attention on the second tower when it was attacked.

²³⁵ A message was included with the image: "It hit and did not miss." Roger Boyes, Charles Bremner, and Roland Watson, "Investigators begin to uncover plot," *The Times (UK)*, 14 September 2001.

²³⁶ Additional images have been used from cult favorite "Godzilla" movies, in which the monster ravages cities. Damien McElroy, "Beijing produces videos glorifying terrorist attacks on 'arrogant' US," *The Electronic Telegraph*, 4 November 2001.

²³⁷ See statements contained in the following articles: Usamah Bin-Muhammad Bin-Laden, "Ladenese Epistle: Declaration of War (Part I)," 23 February 1998, <http://www.washingtonpost.com/wp-dyn/articles/A4342-2001Sep21.html>; idem, "Ladenese Epistle: Declaration of War (Part II)," 23 February 1998, <http://www.washingtonpost.com/wp-dyn/articles/A4435-2001Sep21.html>; idem, "Ladenese Epistle: Declaration of War (Part III)," 23 February 1998, <http://www.washingtonpost.com/wp-dyn/articles/A4511-2001Sep21.html>; and, Philip Willan and Nick Hopkins, "Bin Laden letters order US massacre," *The Guardian*, 18 October 2001.

²³⁸ The phrase was used for an opinion piece the day of the attack. George F. Will, "The End of Our Holiday from History," *The Washington Post*, 11 September 2001.

²³⁹ To gain an appreciation for the scope of the problem, consider the statistics for just a specific "element" in the economic chain: the busiest container seaport in the United States, Los Angeles. In 2000, just over 8 ships per day arrived at the port. The port authorities processed 4.4 million TEU (International Standards Organization twenty-foot equivalent container units), or the equivalent of 12,054 20-foot containers every day. These figures exclude liquid, dry bulk, and palletized cargos and cars. The Port of Los Angeles website, <http://www.portoflosangeles.org/about-facts.asp>.

²⁴⁰ Abdelghani Meskini, who was arrested in the "Millennium Bomb Plot," was caught attempting to enter the United States on the basis of a U.S. Customs Inspector's hunch. A detailed investigative account, albeit one sympathetic to Meskini, is Lorraine Adams, "Stopped at the Border," *The Washington Post Magazine*, 20 May 2001, pp. 10-17, 23-25. Serendipity also played a role in the discovery and arrest of Rizik Amid Farid in Italy in October 2001. Farid was found with false identification, including Canadian airport security passes, in a shipping container outfitted with a number of conveniences bound for North America. Richard Owen and Daniel McGrory, "Business-class suspect caught in container," *The Times*, 25 October 2001.

²⁴¹ "Better educated, less visible because of their comfort in the West, and firmly committed to a goal over years, the hijackers were a group apart from the young, poorly educated men who nurtured their anger in European slums but repeatedly failed to pull off plans for atrocities in Paris, Rome, Los Angeles and Strasbourg, France." Peter Finn, "Hijackers Depicted as Elite Group," *The Washington Post*, 5 November 2001.

²⁴² Highlighting shortfalls in intelligence sharing, as well as the difficulties in identifying individuals with terrorist connections from among the millions who enter the United States every year, is the following quote: "Flight instructors in Florida told the Globe it was common for students linked to Saudi Arabia to get visas to come to the United States for flying lessons with very little scrutiny or background checks by the State Department." "Report: terror plot in works for 5 years," *The Boston Globe*, 14 September 2001.

²⁴³ "By the time [Mohamed Atta and his cousin, Marwan al-Shehhi] moved into an apartment in Coral Springs, Atta was cleanshaven. Police believe it was part of a cover that saw them doing things devout Muslims don't do: drink alcohol, curse, and chase Western women. Investigators believe it was a front, meant to convince anyone who might take notice that they weren't religious." Kevin Cullen, "Atta, now seen as conductor of the attacks, wore many masks," *The Boston Globe*, 19 September 2001.

²⁴⁴ In addition to private flying lessons, some of the hijackers may have refined their skills using readily-available and inexpensive entertainment flight simulator software. Ben Webster, "Hijackers may have learnt to fly using £20 software," *The Times (UK)*, 12 September 2001.

²⁴⁵ Two terrorists paid \$10,000 each for flight training; Huffman International Aviation of Venice, Florida "teaches 800 students a year, four out of five of them foreigners, who go to America because, they say, it is cheaper to learn to fly there." Roger Boyes, Charles Bremner, and Roland Watson, "Investigators begin to uncover plot," *The Times (UK)*, 14 September 2001; Michael R. Gordon, "When an Open Society Is Wielded as a Weapon Against Itself," *The New York Times*, 12 September 2001.

²⁴⁶ The leader of the group, for example, made a cell phone call to a hijacker aboard another aircraft just long enough to give the "go-ahead" signal to proceed with the plan. The hijackers also made substantial use of Internet-based communications, including "online chat rooms and email," to maintain contact. Don van Natta, Jr. and Kate Zernike, "Hijackers' Meticulous Strategy of Brains, Muscle and Practice," *The New York Times*, 4 November 2001.

²⁴⁷ "The leaders had researched their plans so well that they knew just when each of the four cross-country flights would reach its cruising altitude." Don van Natta, Jr. and Kate Zernike, "Hijackers' Meticulous Strategy of Brains, Muscle and Practice," *The New York Times*, 4 November 2001.

²⁴⁸ Edward H. Phillips, Frank Moring, Jr., and Michael O. Lavitt, "Attacks Highlight Faults In Airport Security," *Aviation Week & Space Technology*, vol. 155, no. 12 (17 September 2001): 54-55.

²⁴⁹ In a widely publicized report available online in 2000, the U.S. Department of Transportation's Office of the Inspector General not only commented on their success in gaining access to "secure" aircraft, but they told potential terrorists the most effective methods of doing so: "We tested access control from December 1998 through April 1999 at eight major airports. . . we penetrated secure areas on 117 (68 percent) of 173 attempts. . . we: piggybacked (followed) employees through doors located in non-sterile areas; penetrated other access points in sterile and non-sterile areas by riding unguarded elevators, and walking through concourse doors, gates and jetbridges; walked through cargo facilities unchallenged; and drove through unmanned vehicle gates. Once we penetrated secure areas, we boarded aircraft operated by 35 different carriers 117 times." Individually successful techniques, however, have been redacted from the report. Office of the Inspector General, *Report on Audit of Airport Access Control*, Federal Aviation Administration Report No. AV-2000-017 (Washington: Department of Transportation, 18 November 1999), pp. ii-iii.

²⁵⁰ "Why Portland [Maine]? Again, it might have been protocol: the manual [*Military Studies in the Jihad Against Tyrants*] warns against traveling in large groups and suggests boarding 'at a secondary station' to deflect notice." Don van Natta, Jr. and Kate Zernike, "Hijackers' Meticulous Strategy of Brains, Muscle and Practice," *The New York Times*, 4 November 2001.

²⁵¹ Passengers were also intimidated on at least one flight by the threat of a terrorist bomb onboard the aircraft. Edward H. Phillips, Frank Moring, Jr., and Michael O. Lavitt, "Attacks Highlight Faults In Airport Security," *Aviation Week & Space Technology*, vol. 155, no. 12 (17 September 2001): 54-55.

²⁵² Flight attendants, flight crew, and passengers were either threatened or intimidated into handing over control of the aircraft with edged weapons and the threat of an on-board bomb. Investigators also believe that some of the flight crew were killed. Paul Sperry, "Terrorists slit throats of 2 AA stewardesses," *WorldNetDaily*, 11 September 2001, available online at <http://www.worldnetdaily.com/news/article.asp?24445>; Tom Vanden Brook, "On tape of Flight 93: 'Ladies and gentlemen... we have a bomb,'" *USA Today*, 16 November 2001.

²⁵³ President Richard Nixon responded in 1970 to skyjackings by numerous Marxist-Leninists groups with the sky marshal program. Originally under the Customs Service, the program was transferred to the FAA in 1973. Mimi Whitefield, "Former sky marshals recall days in the air," *The Miami Herald*, 2 October 2001.

²⁵⁴ There was little incentive for airline industry to self-regulate regarding security issues, including improved cockpit security, prior to 11 September 2001. Added security measures would have incurred increased costs and the last reported domestic hijacking took place on 10 January 1987. "FAA Incident Data System" available online at http://nasdac.faa.gov/asp/fw_fids.asp.

²⁵⁵ Courtesy visits to the cockpit were usually given to children and other passengers who requested it. According to one media report, an 11 September terrorist was granted in-flight access to the cockpit of an earlier flight because he was a student pilot. Matthew Brelis and Michael Kranish, "Hijackers reportedly made trial air trips," *The Boston Globe*, 11 October 2001.

²⁵⁶ Media reports have suggested that another potential hijacker was denied entry into the United States on several occasions. Karen Gullo, "Search is on for '20th hijacker' in terrorist attacks, FBI says," *Associated Press*, 15 November 2001.

²⁵⁷ According to one exchange broadcast to air traffic controllers, a hijacker aboard American Airlines Flight 11 told passengers and crew: "Just stay quiet, and you'll be O.K. We are going back to the airport.... Nobody move please; we are going back to the airport. Don't try to make any stupid moves." Matthew L. Wald with Kevin Sack, "'We Have Some Planes,' Hijacker Told Controller," *The New York Times*, 16 October 2001. FBI investigators hypothesized that because only six of the 19 hijackers left suicide notes, the other 13 were brought aboard as "muscle" to subdue passengers and crew. Other al Qaeda suicide plots had unraveled when individual terrorists had second thoughts about the plans in question. Ben Fenton, "Most hijackers 'unaware it was suicide mission'," *The Daily Telegraph*, 10 October 2001. In a video tape subsequently recovered from Afghanistan, Osama Bin Laden stated that the many of the hijackers were not aware they were on a suicide mission.

²⁵⁸ The perception of terrorist incompetence was molded in the United States by the details of the 1993 World Trade Center bombing. Not only did those responsible fail to cause significant damage to the structures, but the group was discovered quickly when one of them returned to a rental agency to claim the deposit placed on the rental van used in the attack. A concise summary of the investigation is located in Dave Williams, "The Bombing of the World Trade Center in New York City," *International Criminal Police Review*, No. 469-471 (1998), available online at http://www.interpol.int/Public/Publications/ICPR/ICPR469_3.asp.

²⁵⁹ The asymmetric component of the U.S. 3rd Fleet's Battle Experiment Echo, conducted in March and April 1999, illustrates the point. Among the asymmetric threats to the fleet were "combat swimmers, small fast boats, personal watercraft, low slow flyer[s], mobile anti-ship missile[s]." The personal watercraft were "bomb-laden suicide jet skis." Aircraft included hang gliders that had been used with mixed results by Hezbollah in Lebanon. U.S. Naval War College, "Third Fleet, Battle Experiment Echo," unpublished briefing, 25 February 1999; Brian Bender, "US Navy prepares for asymmetric defence," *Jane's Defence Weekly*, vol. 31, no. 4, 27 January 1999. For a discussion on how the 11 September terrorists adapted to previous failure, see Peter Slevin and Walter Pincus, "Attackers Studied Mistakes in Previous Assaults," *The Washington Post*, 13 September 2001.

²⁶⁰ "In testimony at the (1997 Ramzi) Yousef trial, potential terrorists learned the twin towers could withstand being hit by a Boeing 707, so they used two heavier planes Tuesday. The two hijacked planes also hit between the 40th and 70th floors, sites calculated to produce the greatest damage." Peter Slevin and Walter Pincus, "Attackers Studied Mistakes in Previous Assaults," *The Washington Post*, 13 September 2001.

²⁶¹ The head of the Taliban, Mullah Mohammed Omar, places the blame for the poor battlefield performance of his soldiers in religious, as opposed to military terms: "Screening the Taliban [for loyalty] is a big task. And these problems may serve to cleanse [errant Taliban] of their sins." "Interview with Mullah Omar – transcript," *BBC News*, 15 November 2001. At the time this report was written, the planners of the attack have not been identified conclusively and the extent to which Osama bin Laden was involved. According to anecdotal evidence, the planning may have been done by bin Laden supporters in Kabul. Cited in Alan Philips, "Bin Laden supporters drew skyscraper plan," *The Daily Telegraph*, 16 November 2001. The governments of the U.S. and the U.K. have published reports establishing Osama bin Laden's responsibility for the attacks: U.S. State Department, *The Network of Terrorism* (Washington: Government Printing Office, 2001), available online at <http://usinfo.state.gov/products/pubs/terrornet/#01>; The Prime Minister's Office, *Responsibility for the Terrorist Atrocities in the United States, 11 September 2001 – An Updated Account* (London: HMSO, 2001), available online at <http://www.fas.org/irp/news/2001/11/ukreport.html>. According to a video statement acquired by Western governments, bin Laden "claims" responsibility for the attack. David Bamber, "Bin Laden: Yes, I did it," *The Daily Telegraph*, 11 November 2001.

²⁶² Previous U.S. responses to attacks sent mixed messages. The bombing of the Khobar Towers complex in June 1996, killing 19 service personnel and contractors and injuring another 500, prompted U.S. legal action and force protection suggestions but no retaliation. The U.S. also did not retaliate for the suicide attack on the USS Cole in October 2000 that resulted in 17 fatalities. U.S. forces withdrew from Beirut (1983) and Somalia (1993) after attacks. U.S. responses up to 1996, or lack thereof, were mockingly

referred to by bin Laden in his 1996 "epistle." Usamah Bin-Muhammad Bin-Laden, "Ladenese Epistle: Declaration of War (Part II)," *The Washington Post*, 23 February 1998, <http://www.washingtonpost.com/wp-dyn/articles/A4435-2001Sep21.html>.

²⁶³ In 1998 the U.S. launched cruise missiles at targets in Afghanistan and the Sudan in immediate retaliation for the bombing of U.S. embassies in Tanzania and Kenya. Although some commentators at the time called for more direct action by special operations forces, it is unlikely that Afghanistan's neighbors would have allowed access or overflight rights, substantially increasing the risk of mission failure.

²⁶⁴ According to one news report, General Pervez Musharraf cancelled a U.S.-backed, Pakistani-led mission to kill or capture Osama bin Laden shortly after taking power in October 1999. Bob Woodward and Thomas E. Ricks, "U.S. Was Foiled Multiple Times in Efforts to Capture Bin Laden or Have Him Killed," *The Washington Post*, 3 October 2001.

²⁶⁵ Some correspondents have suggested that the United States should use nuclear weapons against al Qaeda, while others note that Osama bin Laden might possess nuclear, radiological, biological, and/or chemical weapons. For al Qaeda to use nuclear weapons, according to their own version of Islam and their criteria for *jihād*, they must be struck first in order to defend in kind. Thomas Woodrow, "Time to use the nuclear option," *The Washington Times*, 14 September 2001; Dana Milbank, "U.S. Strategists Begin to Favor Threat to Use Nuclear Arms," *International Herald Tribune*, 6 October 2001; Philip Webster and Roland Watson, "Bin Laden's nuclear threat," *The Times (UK)*, 26 October 2001; Anthony Loyd, "Bin Laden's Nuclear Secrets Found," *The Times (UK)*, 15 November 2001; Michael Dobbs and Peter Behr, "Analysts Debate Next Weapon in Al Qaeda Arsenal," *The Washington Post*, 16 November 2001.

²⁶⁶ Prior to the attack, Robin Wright outlined the broad goals of militant, fundamentalist Islam. "The Chilling Goal of Islam's New Warriors," *The Los Angeles Times*, 28 December 2000.

²⁶⁷ Samuel Huntington believed that future geopolitical conflict lines would be drawn along religious, as opposed to political lines. Anti-U.S. demonstrations were held in Pakistan, Egypt, other Muslim countries and almost 10,000 *jihadis* attempted to enter into Afghanistan. Huntington, "Clash of Civilizations," *Foreign Affairs*, vol. 72, no. 3 (Summer 1993): 22-49; "'Bullseye,' say Egyptians as they celebrate anti-US attacks," *AFP*, 12 September 2001; "'USA against Islam' idea is growing, Turkey's Cem says," *AFP*, 25 October 2001; Eben Black, James Clark and Tony Allen-Mills, "Thousands of fighters flock to Taliban army," *The Sunday Times (UK)*, 28 October 2001.

²⁶⁸ According to preliminary reports, up to 150 Taliban fighters were killed for wanting to defect and/or surrender. David Harrison, "Al-Qa'eda massacre Taliban," *The Sunday Telegraph*, 18 November 2001.

²⁶⁹ Lois Romano, "NATO Lends a Hand With U.S. Sky Patrol: In Role Reversal, Foreign Crews Defend U.S.," *The Washington Post*, 19 November 2001.

²⁷⁰ See for example Socrates' dialogue with Phaedrus: "Well, Phaedrus, I am a great lover of these methods of division and collection as instruments which enable me to speak and to think...." Plato's *Phaedrus* (266) in *Phaedrus and the Seventh and Eighth Letters*, trans. Walter Hamilton (New York: Penguin Books, 1973), p. 82.

Appendix: Selected Definitions and Usages of the Term “Asymmetry”

1. 1994 – “Asymmetrical Battle”

“Recent military discussions have described several alternate future battlefields. Russian writings have focused on a high-tech, symmetrical development along the lines of what the United States achieved in Desert Storm and is seeking with further developments in military technologies. Since few if any future U.S. opponents are likely to be able to respond symmetrically, we anticipate that future battlefields will develop asymmetrically. The extremes in asymmetry may occur if a high-tech U.S. force is countered by a guerrilla force practicing irregular warfare.”

In a footnoted aside, the authors mention that “the importance of asymmetrical battle first came to our attention in the work done by Lieutenant General Phil Shutler, USMC (ret.). General Shutler applied the framework of asymmetrical battle to describe the success of U.S. operations in the Pacific during World War II. He uses the idea of asymmetrical battle in a course he teaches at the National Defense University.” (p. 499, fn. 24)

Source: Bruce W. Bennett, Sam Gardiner, and Daniel B. Fox, “Not Merely Planning for the Last War,” Paul K. Davis, ed., *New Challenges for Defense Planning: Rethinking How Much is Enough* (Santa Monica, CA: RAND, 1994), pp. 499-500.

2. 1997 – “Asymmetric Means and Threats”

“Indeed, U.S. dominance in the conventional military arena may encourage adversaries to use such asymmetric means to attack our forces and interests overseas and Americans at home. That is, they are likely to seek advantage over the United States by using unconventional approaches to circumvent or undermine our strengths while exploiting our vulnerabilities. Strategically, an aggressor may seek to avoid direct military confrontation with the United States, using instead means such as terrorism, NBC threats, information warfare, or environmental sabotage to achieve its goals. If, however, an adversary ultimately faces a conventional war with the United States, it could also employ asymmetric means to delay or deny U.S. access to critical facilities; disrupt our command, control, communications, and intelligence networks; deter allies and potential coalition partners from supporting U.S. intervention; or inflict higher than expected U.S. casualties in an attempt to weaken our national resolve.”

Source: Secretary of Defense, *Quadrennial Defense Review, 1997* (Washington: Department of Defense, 1997), available online at <http://www.defenselink.mil/pubs/qdr/sec2.html>.

3. 1998 – “Asymmetric Strategies”

“In an era when U.S. forces appear dominant across a range of potential conflicts, many observers question whether serious threats still exist. But U.S. dominance generally exists against relatively symmetric threats, where adversaries seek to attack U.S. vulnerabilities using strategies different from the standard U.S. strategies. We refer to such threats as asymmetric strategies.”

Source: Bruce W. Bennett, Christopher P. Twomey, and Gregory F. Treverton, *What Are Asymmetric Strategies?* (Santa Monica, CA: RAND, 1999), p. 1.

4. 1999 – “Asymmetric Strategies and Warfare Campaign”

“[T]omorrow’s opponents will adopt asymmetric strategies that seek to leverage perceived technological cultural weaknesses to inhibit the ability of the United States to attain its military objectives. Sun Tzu, not Clausewitz, will be the frame of reference for opponents planning to counter U.S. conventional superiority. In addition to the use of WMD, as discussed earlier, there are at least four additional areas that future adversaries can be expected to pursue as major components of an asymmetric warfare campaign against the United States (offsetting conventional capabilities, information warfare, denial of space access, and psychological operations).”

Source: Jacquelyn Dave and Michael Sweeney, *Strategic Paradigm 2025: U.S. Security Planning for a New Era* (Washington: Brassey’s, 1999), p. 187.

5. 1999 – “Asymmetric Means and Attacks”

“Second, the United States must be prepared to fight and win under conditions where an adversary may use asymmetric means against us – unconventional approaches that avoid or undermine our strengths while exploiting our vulnerabilities. Because of our conventional military dominance, adversaries are likely to use asymmetric means, such as WMD, information operations or terrorism. Such asymmetric attacks could be used to disrupt the critical logistics pipeline – from its origins in the United States, along sea and air routes, at in-transit refueling and staging bases, to its termination at airfields, seaports and supply depots in theater – as well as our forces deployed in the field.”

Source: The President of the United States, *A National Security Strategy for a New Century* (Washington: The White House, 1999), p. 19.

6. 1999 – “Asymmetric Approaches and Methods”

“Asymmetric approaches are attempts to circumvent or undermine US strengths while exploiting US weaknesses using methods that differ significantly from the United States’ expected method of operations. [Asymmetric approaches] generally seek a major psychological impact, such as shock or confusion that affects an opponent’s initiative, freedom of action, or will. Asymmetric methods require an appreciation of an opponent’s vulnerabilities. Asymmetric approaches often employ innovative, nontraditional tactics, weapons, or technologies, and can be applied at all levels of warfare—strategic, operational, and tactical—and across the spectrum of military operations.”

Source: The Joint Chiefs of Staff, *Joint Strategy Review 1999* (Washington, DC: The Joint Staff, 1999), p. 2.

7. 2000 – “Asymmetric Approaches and Asymmetries”

“[T]he concept of asymmetric approaches in warfare is hardly new; it reflects any non-linear response to the employment of mainstream force and the search for asymmetries, as a fundamental element of military strategy, can be traced back to David’s defeat of Goliath with a sling and a pebble.”

Source: Nicholas J. Newman, *Asymmetric Threats to British Military Intervention Operations*, Whitehall Paper No. 49 (London: Royal United Services Institute for Defence Studies, 2000), p. 1.

8. 2000 – “Asymmetries of Capability and Interest; Asymmetric Strategies”

“Asymmetric conflicts are understood to involve asymmetries of both capability and interest. On capability, the asymmetry in both conventional and nuclear power is much to the benefit of the United States, with the aggressor’s imperative to act in ways that do not motivate Washington to bring to bear its full power

potential. On interest, the asymmetry – as the aggressor might perceive it – contrasts his ostensibly vital concern against U.S. interests that by definition are over-the-horizon. Asymmetric strategies are the means by which the militarily-weaker state tries to bring whatever advantages it has to bear on the critical weak points of the stronger party. The perceived weak points of U.S.-led coalitions include, for example, the need to project power over long distances, the need for partners in regional wars, and casualty aversion.”

Source: Brad Roberts, *Asymmetric Conflict 2010*, IDA Document D-2358 (Alexandria, VA: Institute for Defense Analyses, November 2000), p. S-1.

9. 2001 – “Asymmetry”

“Leveraging inferior tactical or operational strength against American vulnerabilities to achieve disproportionate effect with the aim of undermining American will in order to achieve the asymmetric actor’s strategic objectives.”

Source: Kenneth F. McKenzie, Jr., *The Revenge of the Melians: Asymmetric Threats and the Next QDR*, McNair Paper No. 62 (Washington: National Defense University Press, 2001), p. 4.

10. 2001 – “Asymmetry—Thinking Differently”

“In the realm of military affairs and national security, asymmetry is acting, organizing, and thinking differently than opponents in order to maximize one’s own advantages, exploit an opponent’s weaknesses, attain the initiative, or gain greater freedom of action. It can be political-strategic, military-strategic, operational, or a combination of these. It can entail different methods, technologies, values, organizations, time perspectives, or some combination of these. It can be short-term or long-term. It can be deliberate or by default. It can be discrete or pursued in conjunction with symmetric approaches. It can have both psychological and physical dimensions.”

Source: Steven Metz and Douglas V. Johnson II, *Asymmetry and U.S. Military Strategy: Definition, Background, and Strategic Concepts* (Carlisle, PA: Strategic Studies Institute USAWC, January 2001), pp. 5-6.

11. 2001 – “Asymmetric Advantages”

“Adopting this capabilities-based approach to planning requires that the nation maintain its military advantages in key areas while it develops new areas of military advantage and denies asymmetric advantages to adversaries. It entails adapting existing military capabilities to new circumstances, while experimenting with the development of new military capabilities. In short, it requires the transformation of U.S. forces, capabilities, and institutions to extend America’s asymmetric advantages well into the future.”

Source: Secretary of Defense, *Quadrennial Defense Review, 2001* (Washington: Department of Defense, 2001), p. iv.

12. 2001 – “Asymmetric Warfare and Strategies”

“Asymmetric warfare —that is, countering an adversary’s strengths by focusing on its weaknesses —is not a new concept. Because of U.S. and allied conventional force superiority, some states may see asymmetric strategies, such as the employment of biological or chemical agents, as a means of avoiding direct engagements with dominant U.S. conventional forces and a way to “level the playing field.” This strategy also applies to particular terrorist groups intent on inflicting a large number of casualties or

causing panic, if such groups judge that conventional means are inadequate and they do not fear political or military retaliation."

Source: Office of the Secretary of Defense, *Proliferation: Threat and Response* (Washington: Department of Defense, January 2001), p. 4.

13. 2001 – "Asymmetric Acts of War, Warfare, and Threats" (Congressional Record)

EXPRESSING SENSE OF SENATE AND HOUSE OF REPRESENTATIVES REGARDING TERRORIST ATTACKS LAUNCHED AGAINST UNITED STATES -- (House of Representatives - September 11, 2001)

[Page: H5586]

Mr. BARTLETT of Maryland. Mr. Speaker, Americans must defeat evil and uphold our Constitution. September 11, 2001 will be remembered in history. September 12, 2001, is a national day of unity and mourning.

Today and in the days to come, we must unite in our response to an unconventional asymmetric act of war against our freedom. We must unite in our resolve to take the steps necessary to defeat the forces of evil that deliberately targeted thousands of innocent men, women, and children to perpetuate a barbarous attack upon America's and the world's preeminent symbols of democracy, a free market economy, and its military defense. We must equally be united and vigilant in our resolve to protect and preserve the rights endowed upon us by our Creator.

TERRORIST ATTACKS AGAINST THE UNITED STATES--Continued -- (Senate - September 12, 2001)

[Mr. Bingaman] [Page: S9329]

In the wake of the cold war, military experts around the country began to discuss their concerns about the nation's new vulnerabilities. The prospect of a pitched battle between heavy tanks on the fields of Europe was no longer the most likely threat to which our military forces would be asked to respond. Experts began discussing the idea of "asymmetric warfare"--that is, the ability of America's enemies to attack us where we are most vulnerable. The cold war structure of our military and its weaponry was designed to meet adversaries with similar capabilities--not to meet adversaries who chose different, often less sophisticated ways to get the job done.

Slowly, too slowly, we have begun to understand the full extent of our country's vulnerability. Many are concerned that potential enemies are developing intercontinental missiles with destructive warheads and that we have no missile system capable of thwarting an attack of that kind. Others have warned that our enemies could deliver packages of destruction in suitcases, rental trucks, or on shipboard. Still others have observed our inability to

[Page: S9330]

intercept low flying aircraft or cruise missiles heading to American targets. The events of the past 24 hours demonstrate another horrible scenario of America's vulnerability to terrorist attack, an attack that was indiscriminate in those who were targeted.

FISCAL YEAR 2002 NATIONAL DEFENSE AUTHORIZATION ACT -- (Senate - October 10, 2001)

[Mr Dodd] [Page: S10452]

To that end, it is entirely appropriate and necessary that a major focus of this legislation is combating international terrorism and other asymmetric threats such as terrorism involving weapons of mass destruction, including the use of nuclear, biological, or chemical weapons. In my view, we ought to redouble our efforts and remain vigilant in our counterterrorism activities to prevent these tragedies from occurring and to deter those who contemplate such acts of barbarism.

14. February 2001 – “Asymmetrical Threats” (Rumsfeld)

“And if one thinks of all of the so-called asymmetrical threats -- the kinds of things people would do, or threaten doing, rather than to try to contest Western armies, navies and air forces, which doesn't work, obviously. The Gulf War proved that.

“Terrorism, cruise missiles, ballistic missiles, cyberwarfare, information warfare. These are all things that are cheaper than land wars, and where the technologies are currently available. And the United States has to recognize those emerging threats, and see that we're arranged so that we are not subject to nuclear or terrorist blackmail.”

Source: Secretary of Defense Donald Rumsfeld, Interview on Fox News Sunday, Sunday, February 11, 2001, transcript online at http://www.defenselink.mil/news/Feb2001/t02122001_t0211fox.html.

15. May 2001 – “Asymmetrical Threats” (Rumsfeld)

“So if one looks at the question what [threat] is likely [in the next 10 years], well, you have this asymmetrical threat. Terrorism is a threat. Cruise missiles are a threat. Ballistic missiles are a threat. Weapons of mass destruction are a threat. Information warfare is a threat. The availability of weapons of mass destruction and the variety of delivery mechanisms are a threat that need to be addressed.”

Source: Secretary of Defense Donald Rumsfeld, Secretary Rumsfeld Interview with the New York Times, Wednesday, May 16, 2001, transcript online at http://www.defenselink.mil/news/May2001/t05242001_t0516sdc.html.

16. September 2001 – “Asymmetrical Threats” = homeland defense, WMD, cruise/ballistic missiles and terrorism (Rumsfeld)

“There's no question but that we do need to transform the military, as the president said in his Citadel speech, and as I have said repeatedly since January, to see that we're arranged to deal with the so-called asymmetrical threats -- the homeland defense issues, weapons of mass destruction, ballistic missiles, cruise missiles, and terrorism.”

Source: Secretary of Defense Donald Rumsfeld, Department of Defense News Briefing, Washington, DC, The Pentagon, Thursday, September 25, 2001, transcript online at http://www.defenselink.mil/news/Sep2001/t09252001_t0925sd.html.

17. September 2001 – “Asymmetrical Attack” (Rumsfeld)

“Mr. Russert: What are asymmetrical methods? Talk to the American people about that.”

“Secretary Rumsfeld: Well, a conventional way of approaching another country would be to go after an army or a navy or an air force. The terrorists, who are spreading terrorism across the globe, don't have armies, navies, or air forces, so they can't contest our armies. Instead, they look for seams, if you will. They look for ways that we are vulnerable, and, of course, as a free people, we are vulnerable. We're vulnerable to attack on our homeland, because we don't live in a fortress. We don't spend all of our time in fear of these things, and the examples of an asymmetrical attack would be a ballistic missile, and that's

why so many nations are trying to get them -- the cruise missile, terrorist attack -- increasingly cyber attacks, because we're so technology dependent."

Source: Secretary of Defense Donald Rumsfeld, Interview with NBC "Meet the Press" with host Tim Russert, Sunday, September 30, 2001, transcript online at http://www.defenselink.mil/news/Sep2001/t09302001_t0930sd.html.

18. September 30, 2001 – "Asymmetric Attack" (Shelton)

"...On September 11, 2001, enemies of the U.S. demonstrated the capability to carry out large-scale, non-conventional attacks against the U.S. homeland; asymmetric attack against the sovereignty of the U.S. became a reality."

Source: Henry H. Shelton, Chairman of the Joint Chiefs of Staff, *Quadrennial Defense Review*, September 30, 2001, p. 67.

19. October 2001 – "Asymmetric Threats" = terrorists and ballistic missiles (Rumsfeld)

"Last month, terrorists took civilian airliners and turned them into missiles, killing thousands. If they had ballistic missiles and weapons of mass destruction capable of killing hundreds of thousands, I don't think anyone can doubt but that they would have willingly used them. We've been awakened in recent weeks to new and previously unimaginable dangers. That is why as we prosecute today's war on terrorism, the president has made clear that we also need to be prepared to defend against other emerging asymmetric threats, including the threat of ballistic missile attack against our cities and people."

Source: Secretary of Defense Donald Rumsfeld, Department of Defense News Briefing, Washington, DC, The Pentagon, Thursday, October 25, 2001, transcript online at http://www.defenselink.mil/news/Oct2001/t10252001_t1025rum.html.

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