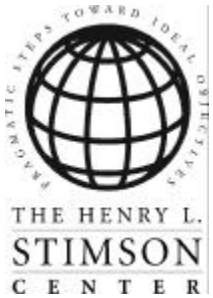

Searching for National Security: Threat and Response in the Age of Vulnerability

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William J. Durch is a senior associate at the Henry L. Stimson Center in Washington, D.C., where he co-directs the project on Reducing Nuclear Dangers and Building Co-operative Security and previously directed work on US foreign policy and United Nations peacekeeping. A graduate of the Georgetown School of Foreign Service with a doctorate in political science from MIT, Durch has taught at Georgetown and at Johns Hopkins' Nitze School for Advanced International Studies, has lectured widely on the application and limitations of peacekeeping, and was principal author, most recently, of a study of technology's impact on American interests and policy ("Alternating Currents: Technology and the New Context for U.S. Foreign Policy"). Prior to joining the Stimson Center, Durch was assistant director of the Defense and Arms Control Studies Program at MIT, where he wrote *The ABM Treaty and Western Security* and a companion Adelphi Paper for the London-based International Institute for Strategic Studies. Durch came to the MIT program from Harvard's Center for Science and International Affairs, where he was a research fellow, project administrator, and editor of *National Interests and the Military Use of Space.* As a foreign affairs officer at the US Arms Control and Disarmament Agency during the Carter administration he worked on missile defense and arms transfer-related issues, coming to government service from the professional staff of the Center for Naval Analyses. He is editor and coauthor of *The Evolution of UN Peacekeeping* (St. Martin's Press, 1993) and *UN Peacekeeping, American Policy, and the Uncivil Wars of the 1990s* (St. Martin's, 1996). He also coauthored Stimson Center studies of naval arms control, conventional force reductions in Europe, and strategic air and missile defense as part of the Center's assessment of US military roles and missions for the twenty-first century.

Preface and Acknowledgments

The Stimson Center is grateful to the Ford Foundation for its grant in support of the Center's project on Reducing Nuclear Dangers and Building Cooperative Security, from which this report derives. We are particularly grateful in this regard to Christine Wing. The project and this report build on previous work also made possible by the Ford Foundation: the Stimson Center's Project on Eliminating Weapons of Mass Destruction (EWMD, 1994–98) and the Foreign Policy Project (1995–97), which Stimson conducted in collaboration with the Overseas Development Council. EWMD sought to legitimize serious discussion and study of the phased elimination of all weapons of mass destruction, motivated by a belief that the changing international strategic environment necessitated a fresh look at US nuclear policy and doctrine. Highlighting that changing environment and its broader implications for US policy was the objective of the Foreign Policy Project. Its final report analyzed international trends in technology, population, and economics, concluding that continued US leadership was vital to maintain the international system built up by the West over the last half-century but that US leadership could only be effective in partnership with other countries and institutions. This report looks at the international security environment in particular and at the need for cooperative management of old and new security challenges. US public opinion and policy responses to the emerging security environment emphasize new sources of threat — especially terrorists and rogue states that may acquire mass destruction weapons — but without restructuring institutions accordingly or giving sufficient priority to eliminating serious, older threats that linger.

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Executive Summary

As the United States faces the new century, its security environment has expanded from a fairly stable world of mostly interstate threats to a wheeling kaleidoscope of forces and actors evolving in ways only partly susceptible to public policy planning, prediction, or control. Transnational threats — those emanating from sub-state groups, market and other forces, and structures of belief — and ecological threats — the often inadvertent results of human interaction with the natural world — constitute the up and coming array of twenty-first century challenges to national security. The security tools of the Cold War — including nuclear deterrence and strategy keyed to containing interstate threats — are slowly surrendering pride of place to strategy that is keyed to prevention, defense, and minimized vulnerability to these more diffuse and proliferated sources of danger.

Threat and Threat Management

Humanity evolved coping with the threats and risks posed by the natural world. The reflexes it developed in doing so are the same ones now used to cope with dangers that arise from human agency. Effective management of both natural and man-made (or "manufactured") threats has always been a collaborative effort, first within and between kinship groups, then within and between larger social groupings. The scope of collaboration varies with the scope of the threat, the commonality of group interests, and the level of intergroup trust. So-called unilateral action to promote US security is the product of collaboration by millions of Americans. Even so, US security over the past 60 years has been far from a unilateral enterprise. During World War II and the Cold War, the US government took great pains to ensure that it did not fight alone. Alliance structures, security treaties, and efforts to create military forces that could operate together were all integral parts of US "grand strategy." The need for such international collaboration may even be more acute now than in the era left behind us.

It is not coincidental that the transnational threats feared most by US planners emanate from groups and places that democracy has failed to penetrate, where respect for human rights is nil, and where economic globalization, frustratingly, has either hit very hard or not at all. The angriest avatars of radical change look to the past not the future for their models, either inspired by ancient principles offering psychic certitude in a world of relentless uncertainty, or wistful for decades past when women and minorities were many societies' quiet, invisible supporting casts. Greed, meanwhile, drives both criminal cartels and the corrupt officials they suborn. Publics and policy makers alike in the West worry about the damage potential that the greedy may wheedle from the frustrated to sell to the inspired.

Frustration, crime, and corruption all afflict Russia, which thus far enjoys neither the prosperity of the West, nor its freedom from armed transborder threats, nor its internal stability or look-ahead optimism. Coming across Russian borders is Afghanistan's revenge, a rising tide of narcotics transported in part by corrupt or criminal elements within the Russian military. The Russian military has lost its ideological bearings, more than half of its end strength, its position in society, and the war in Chechnya. It has neither housing for its troops nor enough money to pay them but does control billions of dollars worth of weaponry, ammunition, technology, and information. If recent analyses are even roughly accurate, then significant elements of the Russian government and military are at steadily cumulating risk of coming under organized criminal influence, which could directly affect American security by increasing the danger of nuclear, chemical, or biological weapons-related materials or technologies reaching the international black market; and by halting or constraining international cooperation needed to secure Russian nuclear forces and reinforce military command and control.

Public Opinion and National Strategy

In a democracy, public opinion shapes public policy by indicating how people may eventually vote, but on any given issue it may take several forms. For example, while more than 80 percent of the public agreed, when asked in 1998, that terrorism is a "critical threat" to the United States, less than a third worry much about terrorist acts occurring in this country, and only 8–12 percent *volunteer* terrorism as one of the top three international problems facing the United States. Public opinion leaders are even less vocal in volunteering terrorism as an important problem. These volunteered views have not changed (within sampling error) for over a decade, even as public policy has wheeled to face the perceived terrorist challenge at home.

Other views, however, have changed substantially. When the Chicago Council on Foreign Relations polled the public in 1986 on the most important problem facing the United States, 31 percent volunteered "war" or "the arms race with the Soviet Union." In response to the same question in late 1998, 21 percent (the largest block) said "*don't know*."

Common perceptions on the part of US and European publics and opinion leaders are important to crafting and sustaining collaborative threat management. Polls suggests a future competitive-cooperative relationship, with each side tending to its economic interests but with grounds for joint endeavors against weapons of mass destruction (WMD), terrorism, drug trafficking, and organized crime. (The prospects for joint US-European efforts to secure energy

supplies — an important priority for US leaders and the public — are not measurable from European Union polling.)

Official US threat perceptions have evolved in ten years from a close focus on the Soviet threat, nuclear deterrence, and Soviet-inspired instabilities abroad, to an emphasis on threats from regional powers, proliferation of WMD, and the risk of terrorists acquiring such weapons. Deterrence has become a generic capacity to dissuade, and nuclear forces "serve as a hedge against an uncertain future." In other words, the United States retains its most powerful weapons to confront the unknown.

Preparations for major theater war (MTW) with conventionally-armed forces continue to absorb the greatest share of security-related federal spending but spending is down by one quarter compared with ten years ago. Nuclear-related spending is down by two thirds in the same period and no longer overshadows other non-MTW security spending; indeed, the fight against illicit drugs now captures almost as many federal resources as do nuclear programs. Spending on "lesser military contingencies" like peacekeeping in Bosnia and actions with other members of the North Atlantic Treaty Organization (NATO) against Yugoslavia is likely to equal or exceed the cost of the fight against drugs in fiscal 1999, if all relevant support costs are allocated, reflecting the increased preoccupation of US forces with operations of this type.

NATO's collective action comports with the US public's invariably strong preference for multilateral over unilateral military action. While one suspects that the public may simply want to pay less for overseas engagement rather than do more of them, its preference points toward allied or coalition action as the way ahead for conventional military engagements of large size or long duration. The very high fraction of security dollars devoted to MTW may otherwise be misspent, as public support for sustained, unilateral engagement of those forces could be difficult to generate.

While the US *National Security Strategy* separates interests and values in the time-honored fashion of realpolitik, the most vital US interest lies in maintaining the country not just as a chunk of populated land but as an entity with a particular configuration of political power (representative democracy), economic relations (open markets), legal structures, and personal rights, that is, a particular configuration of values. That the global "spread of modernity" in politics, economics, and human rights supports America's vital interests is clear if one takes but a moment to appreciate that states with weak, corrupt governments and destitute, repressed

populations become sources and transit points for, among other things, international narcotics. Nature may abhor a vacuum but the drug trade loves it.

Fear of the unknown or uncontrollable threat appears to be hard-wired into our psyches. It abets worst-case planning and helps to account for the swelling emphasis on domestic counter-terrorism and critical infrastructure protection, programs designed to cope with potentially high-cost events of unknown probability. Just as uncertainty about post-Soviet interstate threats plagued defense planners in the early 1990s, uncertainty about transnational threats seems to be making vulnerability the pacing factor of US policy as the decade closes. The worry behind the policy is that Americans have built for themselves an ultimately undefendable way of life. The object of new policy is to reduce that worry but, without a realistic measure of true threat, there is a risk of creating a vulnerability-response cascade that may pose its own challenge to the open society.

Measuring Threat and Response

There is a widely recognized need for better approaches to threat assessment in the new national security environment. Important dimensions of security threats include their damage potential, how much warning we may have of their occurrence, and a sense of their overall probability or "strategic likelihood," not the likelihood of any particular action but a measure of predisposition to act. To compare disparate threats — interstate, transnational, and ecological — ten-point scales were devised for warning time and four separate dimensions of damage potential (depth, breadth, ripple effect, and recovery time). Averaged scores on these five scales produce simple index of threat. Sample indices for historical and hypothetical events appear in the table below. (Likelihood estimates are not factored into these numbers but may be found in the main text.)

Of the sample threats evaluated, political-military decay in Russian sufficient to weaken its nuclear command and control system, increase the probability of an accidental launch of some fraction of its remaining nuclear forces, or increase the probability of WMD falling into terrorist hands, could have the most devastating consequences for the United States. While attacks such as that by the Bin Laden group against US embassies in 1998 were deadly, and serious, their damage potential to the United States is less than that posed by economic collapse in Mexico, or information attacks that succeeded in disabling some significant element of US infrastructure.

Examples rated by threat index

Russian political/military decay, impact on US, longer term	9.50
Catastrophic eruption, Mt. Rainier	7.70
Information attack, unprotected power grid	7.50
US-Iraq, January 1991, impact on Iraq	7.50
North Korea nuclear-tipped ICBM against US city	7.50
Hurricane vs US Southeast	6.80
Global climate change	6.70
Mexican migration pressure in econ. crisis	6.60
Bin Laden-US embassies, 1998	6.20
Information attack, protected power grid	2.30

While policy debates focus on manufactured threats, nature can inflict damage as severe as a limited nuclear attack. Compare, for example, the threat index of a North Korean nuclear attack on a Northwestern city with the index for a nearby natural threat, Mt. Rainier. A volcano like Rainier can explode with a force equivalent to tens or hundreds of megatons and devastate its surrounding area (as this one did just 150 years ago). There is no defense against such a threat but life in Seattle goes on, and policy makers do not mobilize national resources on the scale of, say, a national missile defense, to prevent its occurrence.

What policy options should be selected to meet priority threats? A simple utility model can help answer that question. An illustrative application using the issue of terrorism assessed the comparative utility of threat/vulnerability management, crisis management, and consequence management for minimizing the probability of an attack and minimizing damage should an attack occur. Active threat management seems to have the highest total utility in the former case and a combination of active and passive threat and vulnerability management in the latter case.

A similar illustration evaluating various levels of international cooperation suggests that bilateral arrangements have the highest utility for advancing current US strategy. Should national priorities change, to emphasize ecological threats like global warming, for example, then working through global institutions may well return the highest total utility.

A true test of these models would employ panels of experts to set up and evaluate policy options, objectives, and their relative importance. But this tool, applied at successively greater levels of specificity, could be used by policy makers to evaluate options, to rate the utility of various forms of international cooperation in carrying out selected options, and thus to build

consensus within the national security community on policy implementation. The framework for measuring threat levels, together with this approach to analyzing response utilities, could be especially useful if coupled with research into the cost-effectiveness of policy options, facilitating choice between similarly effective options of differing cost, or between options of equal cost that may turn out to have very different total utility.

The need for interagency and international cooperation to meet the new array of security challenges does not imply that structures exist to meet that need. The structures that have been built over the last half-century are designed to promote stability of relations among the world's industrial democracies and to limit the exercise of state power. This structure may be adaptable to the management of ecological threats, provided it tackles them before they exceed a critical damage threshold, but adapting to faster-moving threats may be more difficult. In the latter case, consensus builders are constrained, as was NATO in Kosovo, to the use of the tools at hand in the manner practiced, even if the tools and techniques are too blunt for the task.

Overshadowed politically by the rising new threats are the still-dangerous arsenals of the Cold War. Even having been reduced in size from their late Cold War levels, the measurable threat posed by alerted nuclear arsenals — that portion ready to launch on short notice — outweighs that of *any* element of the new threat array. Deterrence does not work against chance occurrences, and no planned defenses would blunt the impact of a substantial, if accidental, Russian missile launch. Consequence management would be nightmarish, leaving prevention as the only good option. No US security objective, therefore, could be more imperative than support for political and economic stability in Russia, for its fight against the organized crime networks that undermine that stability, and for taking alerted arsenals off-line. Indeed, only when the United States, Russia, and other nuclear powers find their way past these monuments to the twentieth century's most dangerous standoffs can they say that they are ready to address the threats of the future.

Searching for National Security: Threat and Response in the Age of Vulnerability

William J. Durch

As the new century approaches, the world's industrial democracies and their former enemies have emerged from a fifty-year combat crouch and have shed their fears of imminent nuclear annihilation to face historically novel circumstances: Countries of the Western Hemisphere and Europe, in particular, face no imminent threats either to their sovereignty or to their independence from other states or their militaries. As a result, defense spending has been cut substantially (in the United States, by 23 percent below average Cold War levels).[1] Yet new and less familiar threats to national and international security seem to loom all around the horizon: terrorism, loose nukes, "infowar," and global warming. Do these sightings indicate a deteriorating global order, reflexive worst-case analysis from institutions that need new work, or greater and closer attention being paid to problems that quietly festered while the Cold War pre-occupied industrial countries' leaders, institutions, and publics alike? The answers would seem to be: yes, yes, and yes. Some elements of order appear to be deteriorating. Many Cold War institutions are indeed looking for new work (including the media, banking on consumer adrenaline to boost shares in increasingly competitive markets). And with the imminent threat of nuclear Apocalypse having receded, time, attention, and resources have been freed to focus on other issues.

As the United States faces the new century, the security tools of the Cold War — including nuclear deterrence and strategy keyed to tangible and relatively stable interstate threats — are surrendering pride of place to strategy that is keyed to prevention, defense, and minimized vulnerability to more diffuse and proliferated sources of danger. Some of the threats the United States faces today still emanate from states, in the time-honored tradition of "realpolitik," but many emanate from sub-state groups, from market and other forces, and from structures of belief that are only loosely connected with states and their governments.

The three objectives of this paper are to sort through the maze of new challenges, to assess public and official views of those challenges, and to suggest approaches to framing and selecting effective policy responses. Each is the subject of a major section of the paper.

The first section puts threat and threat management in historical perspective, groups threats into major categories, addresses the unique roles of weapons of mass destruction (WMD) in the current security environment, and reviews sources of transnational threats, with special focus on the situation in Russia. The second section assesses public and elite perceptions of current and looming threats in the United States and the European Union (EU), and then documents and analyzes the US government's search for security in the 1990s. It puts US national security strategy and spending under the microscope, briefly contrasting Reagan and Clinton administration strategies circa 1988 and 1997, then evaluating the latest US strategy, published in October 1998, which reoriented security planning toward deflection of potential terrorist Armageddons on US soil.

The third section charts a path through the threat maze, the complexity of which makes it difficult to analyze comparatively and inhibits the wise allocation of scarce response resources. This section offers a framework for comparing disparate threats and a methodology to support rational choices among policy tools and among levels of international cooperation, for purposes of threat management.

To summarize the paper's conclusions very briefly: we live in a world that functions on several levels, namely, rich and poor, state and non-state, loosely-networked and strongly structured. They co-exist within every country, in differing proportion. Most of the challenges that this world poses to the security of the United States and its people cannot be met by unilateral action, and some cannot be met by governments alone. Maintaining US security in such a multi-level, interpenetrated world requires an adaptive strategy that enlists the cooperation of other states and groups and pays attention not only to the fast-moving threats that may cause trouble next month but the slow-moving ones whose highest costs will be felt by the next generation. Overshadowed politically by the rising new threats are the still-dangerous arsenals of the Cold War. Even having been reduced in size from their late Cold War levels, the measurable threat posed by alerted nuclear arsenals — that portion ready to launch on short notice — in the United States and Russia, in particular, outweighs that of *any* element of the new threat array. Deterrence does not work against chance occurrences, and no planned defenses would blunt the impact of a substantial, if accidental, Russian missile launch. Consequence management would be nightmarish, leaving prevention as the only good option. No US security objective, therefore, could be more imperative than support for political and economic stability in Russia, for its fight against the organized crime networks that undermine that stability, and for taking alerted arsenals off-line.

THREATS AND THEIR MANAGEMENT

Fear is a powerful motivator of human behavior and the responses that it generates have long had survival value for a species that many believe evolved as nimble, crafty scavengers in a world of fearsome predators (sort of like Public Broadcasting). Fear is driven by a combination of vulnerability (exposure to potential harm, attack, or damage) and threat (an indication of pending infliction of injury or damage), which combine to create risk ("possibility of loss or peril").[2] Had early humans lacked a keen sense of vulnerability, a keen eye for threats, or a sensitive, discriminating, fight-or-flight reflex, the risks inherent in the natural world alone would have ended humanity's march long ago, a result either of routinely ignoring mortal danger or of standing fast against very bad odds. Fear of the unknown, in particular, of the threat over which we have no control, has been hard-wired into our psyches by several million years of evolutionary trial and error. [3]

Fear of the unknown, in particular, of the threat over which we have no control, has been hard-wired into our psyches by several million years of evolutionary trial and error.

Today, we have a planet teeming with humans who share this common threat response heritage. But long ago, the growing complexity and rootedness of human settlement and the investment in making it run altered the collective fight-or-flight calculus. Large human settlements — city-states, kingdoms — fought to survive and, surviving, grew. From a mid-level snack in the planetary food chain, humanity evolved into the planet's top predator with a cyclical history of conquest and civilization, threat and threat management.

Natural and Manufactured Threats

Threats to human well-being have two basic sources: other human beings and the natural world, its variegated life-forms (from grizzly bears to viruses) and its impersonal processes (from local weather to plate tectonics). Since threats arising from human action are the products of human hands, these will be referred to collectively as "manufactured" threats. Contemporary external manufactured threats to the well-being of the United States and its citizens can be subdivided into those stemming from government agency ("interstate" threats); those that arise from other sources but cross state borders ("transnational" threats); and those that arise as the often inadvertent results of human interaction with the natural world ("ecological" threats).

Natural threats, those not a byproduct of human action, were at one time the primary category of threats that humanity faced. Storms, volcanoes, earthquakes, and droughts once were the subject of sacrifices to the angry gods presumed to be their cause — an early attempt at threat control. While the actual origins of these events are now better understood, humanity's ability to alter their impact remains limited to tweaking the building codes, not putting settlements knowingly in harm's way, and rebuilding afterwards. Drought, for example, can still defeat the most energetic of human responses, since we cannot, as yet, command the rains to start. Nor can we will them to stop, making flood control the preoccupation of some of the earliest civilizations on record.

Humanity and civilization of course evolved to the point where manufactured threats eventually posed as great a danger to human longevity as did Earth's tempestuous weather and buckling crust. In each cycle of civilization, ever-more-sophisticated technology and wit have been focused on the manufacture of threat. Traditionally, its tools and techniques have been those of organized combat — swords, cannon, blitzkriegs, and bombing — plus the odd bit of vicious gossip, later perfected as propaganda (the earliest form of information warfare). Over centuries of competitive struggle, people have used the destructive tools of combat (and propaganda) to gain or to defend their positions in territory, resources, and the world of beliefs and ideas. Marauding hordes, migrating tribes, overweening monarchs, and crusading believers have time and again posed dire threats to cities, countries, and cultures. In the last few hundred years, manufactured threats have emanated primarily from "sovereign" states, Europe's seventeenth century solution to a series of vicious wars of religion.

[S]overeignty's "enclosure movement" is nearly complete, but...plenty of people have been enfolded within states that they refuse to call their own.

Only in the last half-century, however, has most of humanity had a state to call its own. With decolonization nearly over, sovereignty's "enclosure movement" is nearly complete, but as continuing turmoil in post-colonial and post-imperial locales attests, plenty of people have been enfolded within states that they refuse to call their own. Issues of religion, ethnicity, kinship, and equity drive an ongoing crisis of legitimacy within many new states that has erupted periodically in civil war, produced millions of refugees in the last two decades in Asia, Africa, and more recently in southeastern Europe, and contributed to the rise of international terrorism.[4] With the shadow of the Cold War removed, the actions of terrorist groups, organized crime

cartels, and the subset of organized crime that deals in illicit narcotics, have caused the industrial world's governments to focus more closely on transnational threats.

In recent years, finally, it has become clear that humanity's raging success as a species has been such as to affect the natural systems — the ecology — first of regions, then of the planet at large, in sufficient depth and breadth as to qualify as a new category of manufactured threat, albeit manufactured at the margins. Most of this impact has been inadvertent. Thus, while human communities have worked energetically throughout history to control floods, human action has also served to make them worse, or has traded flood control for other woes. Upland watersheds cleared of trees, as in China, cannot hold as much water and thus flood downstream regions with some regularity. Human settlements were developed on historical US flood plains prone to catastrophic loss in a "500-year flood," which finally occurred in the Mississippi Valley in 1993. Dams may prevent floods altogether but promote salinization of downstream agricultural lands, as farmers in Egypt's Nile delta learned to their chagrin.

Humanity now has sufficient, and growing, heft as a species...to have become an amplifier and modifier of the natural world on a global scale.

Humanity now has sufficient, and growing, heft as a species, in its numbers and technologies, to have become an amplifier and modifier of the natural world on a global scale. Its overall reproductive success and inventiveness; its skill at tapping fossilized energy sources and building societies that run on them; the creation of novel chemical compounds (halons and chlorofluorocarbons [CFCs], to name just two families) and even new elements (for example, plutonium), have made humanity a force to be reckoned with. Its successes have given the human race the power to influence global systems in ways that are still only partly understood, because the rhythms of the Earth itself are only partly understood. Sometimes the impact is readily demonstrable, as in CFCs' weakening of the atmosphere's shield against solar ultraviolet light, or in the creation of tons of plutonium to fuel the cores of nuclear weapons. Other impacts (on climate, for example) are strongly suspected and scientific evidence is growing.[5] Finally, as scientific knowledge of the human genome advances, and as the biotechnology industry grows and spreads around the globe, the capacity to engineer pathogens for political purposes and the risk of the release of such bugs into the biosphere, inadvertently or not, will grow along with it.[6]

A signal property of many ecological threats is their gradual but cumulative nature. Each step in the growth of the phenomenon builds upon the previous one, becoming an acute problem only when some critical threshold is passed, a threshold that may or may not be knowable in advance. The effects of such cumulative processes can be hard to reverse once established. Damage may be considerable before it is noticed and therefore costly to remedy; conversely, early preventive or remedial action can be difficult to justify because the causes of early damage may be difficult to sort out. Once sorted out, they may be small by comparison to damage yet to be done, which may stem from different causes or at least different actors. International efforts to address climate change have been the subject of such wrangling between rich states and poor over past and future contributions to the problem and who should pay for them.[7]

Collaborative Threat Management

Historically, the tools and techniques to manage manufactured threats have tended to be combat-oriented, inasmuch as most manageable threats were those arising from human action. Trenches, archers, artillery, and aircraft all have served defensive purposes at one time or another.[8] Indeed, the adaptability of strategy and weaponry to many different ends has hampered every attempt to categorize individual weapons (as opposed to strategies) as exclusively suited to offense or defense. In the twentieth century, for example, the tank and its various armored siblings gave the offense a set of mobile fortifications that could flow around and hence make obsolete almost any kind of fixed fortress. On the other hand, despite the development of myriad anti-armor missiles and projectiles, the tank itself remains for many military planners the best defense against others of its kind.[9]

One Lear railing against the flood has no effect; a corps of engineers has at least a fighting chance.

Efforts to manage natural threats have a history nearly as long and must be collaborative to be effective. One Lear railing against the flood has no effect; a corps of engineers has at least a fighting chance. Moses did all right, of course, but he had backup. Barring such high-level intervention, science and its methods give us the best tools to identify cause and effect in nature and to separate issues into those that we might safely ignore, those we might successfully manage, and those we must either prevent or endure. As science and engineering expand their respective bases of knowledge and technique, the array of natural threats potentially amenable

to management grows, as does our knowledge of the costs and limits of prevention, mitigation, and remediation.

Effective management of manufactured threats also has been a collaborative effort throughout human history, first within and between kinship groups, then within and between larger social groupings. Ancient collective self-defense efforts led, in many variations across time and cultures, both to the evolution of warrior castes and to intergroup alliances for mutual support against common foes. European feudalism was such a cooperative self-defense construct, as were the various European alliance systems of the nineteenth and twentieth centuries. The League of Nations and United Nations (UN), formed after the First and Second World Wars, extrapolated the selective mutual support of the alliance systems into global collective security organizations whose conceptual reach far exceeded their military grasp. Both organizations' effectiveness was hostage to contemporary interstate politics, but by virtue of having all major powers and most other states as members, the UN survived the Cold War as a valued public forum. Moreover, during the Cold War it sponsored or hosted measures that kept the margins of international security from fraying any further or faster under the pressure of East-West competition. These included sundry peacekeeping operations as well as multilateral treaties that both sides of the competition found useful. After the Cold War, scholars looked for alternatives to both competitive and collective security schemas and derived an alternative called "cooperative security," whose program combined reductions in the offensive potential of national armories with a commensurate increase in international enforcement capacity.[10]

Although attempts to manage the tools rather than the politics of military threat can be traced at least as far back as papal efforts to banish the crossbow, concerted international efforts are products of the twentieth century.[11] At the lower end of the scale of hurt, treaties have attempted to outlaw some particularly cruel anti-personnel devices, such as expanding bullets, non-metallic land mines, and lasers designed to burn out the retinas of enemy troops. At the upper end of the scale, control efforts have grappled with strategic armaments (capital ships in the 1920s, intercontinental missiles since the 1970s) and weapons of mass destruction (WMD).

Agreements controlling the size or disposition of general purpose forces—those elements of military power that seize territory and, historically, win wars—have tended to be the products, not the progenitors, of political breakthroughs. Force separation arrangements on Israel's northeastern and southern frontiers, for example, followed heavy US diplomatic intervention after the October 1973 War. Similarly, East-West accord on a treaty reducing conventional ground and air forces in Europe followed by less than two years Mikhail

Gorbachev's decision, announced at the United Nations in December 1988, to end the decades-long Soviet military occupation of central and eastern Europe. That rapid negotiating outcome was in stark contrast to fifteen years of frustratingly glacial NATO-Warsaw Pact talks on "Mutual and Balanced Force Reductions" in pre-Gorbachev Europe.

The Special Case of Weapons of Mass Destruction (WMD)

The impetus to constrain WMD derives in part from the nature of the weapons themselves, partly from the observed consequences of their use, and partly from projected consequences should use in war occur again. The Geneva Protocol of 1925 banned the use of lethal chemical arms eight years after the carnage of World War I. The Chemical Weapons Convention (CWC) banned their possession after yet more carnage in the Iran-Iraq War (1980-88). Biological and toxin weapons were banned by treaty in 1972 but measures to verify or enforce compliance have yet to be enacted. Acceptance of all these accords has been incomplete, and circumvention of the third accord was substantial, with a continuing Soviet/Russian program revealed by President Boris Yeltsin in 1992, and a vigorous Iraqi CBW program damaged but not destroyed by American bombing and subsequent United Nations inspection/destruction efforts.[12]

Nuclear weapons, the third major category of WMD, have been subject to numerical, acquisition, and testing constraints. Under the Nuclear Non-Proliferation Treaty (NPT), many states promised to forego their development and possession in exchange for access to civilian nuclear technology. Under the Comprehensive Test Ban Treaty, opened for signature in 1996, states agreed to forego explosive testing of nuclear weapons. Washington and Moscow sought to manage the longer-range elements of the Cold War nuclear arms race and to continue weapon reductions — with mixed results — in the post–Soviet era. While substantial numbers of nuclear weapons in Russia and the United States are slated for eventual demolition, several thousand warheads still remain fitted to the tips of the former Cold War's biggest spears. The destructive capacities of these residual arms, appropriately targeted, still suffice to end much of the human project in a fortnight, and roughly 4,500 remain on hair-trigger alert.[13]

Agreements controlling the size or disposition of general purpose forces have tended to be the products, not the progenitors, of political breakthroughs.

There is, arguably, an international norm against use of nuclear arms in combat, based on a half-century's passage without one being detonated in anger, even in the Middle East, where it has long been presumed to be Israel's ultimate sanction. But there are no agreements comparable to the Geneva Protocol, CWC, or BWC for nuclear arms; no treaties that have stripped away their combat legitimacy. The differences in treatment of these weapons by governments raise interesting questions about perceptions of threat versus utility, utility versus morality, and the trade-offs made among these factors in crafting national policy. Is the difference in treatment a function of the relative military utility of different WMD? Is it a function of the gruesomeness of the killing mechanisms; of the potential for stealthy attacks; or of the relative difficulty of keeping capabilities exclusively in state hands?

The *utility* of nuclear weapons has been debated within and outside of US policy circles for a very long time, with two conclusions commonly drawn: nuclear weapons are too useful (for the US) to give up but too dangerous (to the US) to pass around liberally. That is also the nub of the philosophy embedded in the NPT. Weapons too dreadful to use, they are nonetheless prized as deterrents to others of their kind and as symbols of military-scientific advancement. The recent, rapid growth of the information technology and biotechnology industries, to name just two areas, suggest that there are other, newer symbols of such advancement. The United States originally developed nuclear weapons to end one war and to prepare to fight another. Those preparations were in time linked to the strategy of deterrence and the decades-long standoff between Moscow and Washington.

There is, arguably, an international norm against use of nuclear arms in combat...but no treaties have stripped away their combat legitimacy.

But deterrence presupposes risk and threat: the risk that an adversary may take deliberate action damaging to one's interests, and a threat projected back to him intended to reduce the probability of such action. During the Cold War, there were endless debates about whether deterrence was really deterring anything. It may have done so, or at least induced caution in both capitals. In 1999, however, the answer would seem clear: the Russian Federation has no global design, no armies on the march. The risk it poses to US interests is one of political implosion and/or decay in command and control sufficient to allow the launch of nuclear weapons through accident or insanity, or in connection with criminal extortion of a scope that would make Ian Fleming blush. The likelihood of such events cannot be changed by posing

now-traditional threats of reprisal in kind; other policy tools are needed. (Some are being applied. The US-Russian Cooperative Threat Reduction [CTR] program is one example.[14])

Chem-bio weapon stockpiles were at one time also viewed as deterrents to use of like arms by others, but their military utility is more openly questioned. They can slow down but not stop an enemy that uses protective gear, and they slow down one's own forces, equivalently protected, almost as much. Difficult to target precisely, chem-bio weapons pose their greatest risks to unprotected troops and civilian populations. Iraq used chemical arms to blunt Iranian mass infantry assaults but even though the use was tactically defensive, Baghdad earned no plaudits from abroad. It may be the sense that these weapons only work in an unfair fight, with results akin to mass murder, which the Baghdad regime also committed against the Iraqi Kurdish village of Halabja, that heightens revulsion against them.[15]

Since ...the early 1970s, the terrorist toll against American targets...has been due almost exclusively to the use of conventional high explosives.

It is not clear that nuclear arms would be viewed in any different light, if used against forces not equivalently armed or against civil society whatever the capabilities of a country's military. Yet fixed civil/industrial structures are precisely the sorts of targets most readily threatened by small nuclear arsenals for purposes of establishing deterrence. Thus, in the looking glass world of nuclear armaments and ethics, the more moral option — targeting mobile military forces rather than fixed, possibly civilian targets — entails a *larger* arsenal of lower yield, more accurately delivered weapons. *Mutatis mutandis*, only first generation weapons and missile delivery vehicles are truly immoral, because they are inaccurate, and continuing research and development is needed to produce more moral arsenals. Cutting the nuclear budget before *advanced* systems have been deployed in quantity is, from this perspective, the least moral option unless the weapons can be done away with altogether.

It may be the sense that [chem-bio] weapons only work in an unfair fight that heightens revulsion against them.

In terms of *killing mechanisms*, few deaths are more gruesome than those from acute flash burns or radiation poisoning, in which dying may take from minutes to weeks, depending

on the flux/dose intensity. Yet nuclear weapons still do not target life itself as directly as chem-bio weapons do, which may be something else that singles out the latter, and raises greater than usual objections to nuclear arms similarly targeted. In the latter 1970s, the United States produced "enhanced radiation weapons" intended to incapacitate the crews of attacking Soviet tanks. Although designed to do less damage to Germany than other nuclear weapons already in US arsenals and likely to be used in the event of East-West conflict, the new arms were tarred by protestors as bombs that "killed people but left buildings intact." They seem never to have lived down their life-targeting image, were never deployed to Europe, and were dismantled by 1992.[16]

The *stealthy quality* of bio-weapon threats may especially suit certain terrorist purposes. Terrorists' potential to acquire or build crude but workable weapons and delivery systems because of the *inherently dual-use nature* of biotechnology (with applications that are both civilian and military) may help to explain the current surge of US government interest in and strategies for dealing with chem-bio terrorism.[17] Yet since terrorism became a visible international problem in the early 1970s, the terrorist toll against American targets (1983 in Beirut, 1988 over Lockerbie, Scotland (Pan Am Flight 103), 1993 in New York, 1995 in Oklahoma City, 1996 in Saudi Arabia, and 1998 in Nairobi and Dar es Salaam) has been due almost exclusively to the use of conventional high explosives. Is there some sea change underway, either in access to technology or in the attitudes of the groups of greatest concern, that suggests that the likelihood of chemical or biological attacks has substantially increased? The answer is a matter of disagreement among non-governmental experts who follow these issues.[18] That is, the identifiable threat of chem-bio attacks tends to trail the pervasive sense of societal vulnerability to such attacks.

In a 1999 survey of terrorist incentives and disincentives to use weapons of mass destruction, done for the Monterey Institute of International Studies, Prof. Jerrold Post of The George Washington University discussed a spectrum of terrorist groups and their proclivities to use mass violence to advance their objectives:

- **leftist social revolutionaries** may attack government symbols and installations with abandon but need to win over, not massacre, the general populace in order to succeed;

- **nationalist-separatists** engaged in bitter and prolonged struggles against a dominant ethnic group may target opponents and "collaborators" ruthlessly; splinter factions are particularly "capable of rationalizing extreme acts in the service of their cause";

- **religious extremists** seek to "maintain or create a religious social and political order," to further either "a radical fundamentalist interpretation of mainstream religious doctrines" or a "new religion"; the leader is "seen as the authentic interpreter of God's word... endowing the destruction of the defined enemy with sacred significance"; and

- **right-wing groups** that seek "to preserve the dominance of a threatened ethnic majority or to return society to an idealized 'golden age' in which ethnic relations more clearly favored the dominant majority."[19]

Of the four categories, Post assessed the latter two to be both more motivated to use WMD to further their goals and less constrained about the consequences of such use. "[R]eligious fundamentalist groups... are threatened by secular modernism and seek to defend their faith by attacking those groups or nations which they see as threats. Thus they are not constrained by counter-productive effects of their violence, including mass violence. Their only audience is God." The objectives of far-right groups in the United States, meanwhile, have taken on the quasi-religious overtones of "Christian Identity," which "combines traditional elements of fundamentalist Protestantism with a paranoid explanation and a paranoid set of policies" that not only teaches "Aryan" superiority but prepares its believers for the final struggle against other races and non-believing whites.[20]

"[R]eligious fundamentalist groups... are not constrained by counter-productive effects of... mass violence.

So not every would-be terrorist has an interest in causing mass casualties but some may, and for them, WMD could be the apocalyptic weapons of choice, given only the necessary skills and access to the requisite materials for building such weapons. Dealing with the potential threat they pose to open societies poses a major challenge for national security strategy.

There is no disagreement about the potential for great loss of life should a serious chemical or biological terrorist attack occur. The 1984 explosion at Bhopal, India, of an industrial storage tank holding several thousand gallons of methyl isocyanate killed perhaps 3,800 people and injured 11,000, demonstrating that chemicals need not be weaponized to be lethal on a large scale.[21] The 1995 nerve gas attack on the Tokyo subway would have been far more lethal had the agent used contained fewer impurities and had the means of delivery been more efficient or sophisticated. With a latency period of hours to weeks, biological agents

released into crowded locales could present authorities with time-delayed epidemics whose perpetrators' could be long gone, should they desire anonymity.

Similarly, the great destructive power of nuclear explosions and the danger that even a non-explosive radiological weapon (e.g., plutonium in powdered, inhalable form) could pose to public health mean that even marginally credible terrorist threats purportedly involving such weapons could not be ignored. Such threats could be used to repeatedly disrupt everyday life in a targeted city or country, on a much greater scale than the "anthrax envelope" hoaxes perpetrated in Los Angeles since late 1998. Concern that nuclear materials or weapon might fall into the wrong hands impel CTR programs in the former Soviet Union, the bulk of the nuclear non-proliferation regime, and voluntary high-technology transfer regimes like the Wassenaar Arrangement and the Missile Technology Control Regime. These share a common objective of keeping nuclear arms, fissile materials, delivery systems, and technical expertise away from states or non-state groups that might like to acquire them.[22] Stemming the spread of such technology to states like Iraq, Iran, or North Korea, or to terrorist groups, is a focus of American policy partly because these entities reject the status quo that America fitfully leads.

However, because the fissile materials for nuclear weapons do not exist in usable form in nature, cannot be created by combining common household substances, nor be made to self-replicate, chem-bio threats seem the more out-of-control branches of WMD regardless of the state of formal arms control accords.

Transnational Threats and Transitional States

The Cold War's winners fought for openness in politics, trade, information, and communications — and they got it. Principles of democracy and respect for human rights have become the prevailing though not universal norms of international law and discourse, the most vocal exceptions muted somewhat by the 1997–98 Asian economic crunch. International trade is more open than at any previous time. Information and telecommunications networks are spreading rapidly to all parts of the globe and for all kinds of purposes. This wheeling kaleidoscope of markets and networks is evolving in ways only partly susceptible to political planning, prediction, or control. The outlooks and threat perceptions of governments and peoples outside the developed industrial world are rather different than within it, the closest connection being that developing countries and countries transitioning from Communist rule, especially Russia, are coming to be viewed as principal reservoirs of threats to the developed industrial world.

Huddled Masses, Critical Masses

Essentially all growth in the size of the human population in the next half-century will occur in poor countries, whose populations are projected to expand by three billion in that time period.[23] For about one third of humanity today, poverty and lack of economic opportunity are the primary daily threats to be faced and are far more threatening than either the prospect of proliferating nuclear weapons and missiles, or the long-term deterioration of global climate. For this fraction of humanity, moreover, migration holds not a threat but a promise. Those who are sufficiently dissatisfied with their plight leave the bare subsistence of rural areas to create a new, slightly less marginal life for themselves on the edges of their own country's cities.[24] A smaller but still substantial group risks everything for a shot at life in Europe or America. Some have entry visas and simply overstay them. The rest join the thousands of undocumented/irregular migrants who seek ways through the border controls of richer countries every day. These streams of uprooted people are often "guided" or co-opted by a stunning variety of criminal organizations.[25]

A wheeling kaleidoscope of markets and networks is evolving in ways only partly susceptible to political planning, prediction, or control.

Blended into the streams of economic migrants are refugees from civil wars and other forms of political persecution. The international refugee regime, crafted in the West in the middle of the twentieth century to accommodate people who were fleeing Communist rule, has been overburdened for a decade and is increasingly frayed. For refugees in the late twentieth century, according to the UN High Commissioner for Refugees, safety, let alone political asylum, is increasingly difficult to find.[26] As Europe and America both put up higher and stronger barriers to economic migrants, asylum seekers are caught in the process. As developing countries tire of hosting those who are displaced by regional conflicts, refugee camps are forcibly emptied and borders are closed.[27]

It is not coincidental that the dangerous behaviors industrial states fear most emanate from groups and places that democracy has failed to penetrate, where respect for human rights is nil, and where economic globalization has either hit hard or not at all.[28] Nor is it coincidental that the angriest avatars of radical change look to the past more than the future for their models, to ancient principles offering psychic certitude in a world of relentless uncertainty, or they look just to decades within memory when women and minorities knew their place and kept it clean. There are, to parody Marshall McCluhan, many global villages, not one, and some of them

specialize in historical re-creations of the most invidious sort: The Taliban, for example, expound eighth century thought through twenty-first century technology.[29] Hamas would like to rebuild Palestine at the turn of the *last* century (minus Turkish dominion), when Jews were a small minority. American and German skinheads who have trouble competing in a globalizing world rage against non-whites instead of their own lack of skills or initiative. Self-designated white "militias" in the rural United States arise as a shifting economy draws wealth into multi-hued urban areas. "Integrate globally, fragment locally" could be the bumper sticker version of the problem, which has drawn the attention of scholars and policy makers alike.[30]

It is the prospect, however, of stealthy, life-targeting armaments falling into in the hands of ruthless, non-territorial, non-state groups that has made comprehensive, real-time intelligence and communications, pro-active preventive or disruptive measures, and instant response to danger the Western threat manager's new holy grails. In that quest, the tools and techniques of the "revolution in military affairs" are applied in earnest, in hopes of making the new threats visible, trackable, and more readily controlled or eliminated.[31] These tasks are tougher when the posers of threats are hard to highlight, highly dispersed, difficult to localize, and thus very hard to pre-empt. Yet these tougher targets are the sort that pre-occupy US policy planners at the end of the twentieth century. For the weapons they might use against targets in the West, most eyes turn to Russia.

Russia's Struggles

The Russian government is increasingly hard-pressed for resources, either to pay its foreign debts or to pay its civil servants and soldiers. American CTR programs aim at reinforcing Russian security measures for WMD while seeking to maintain the livelihoods of Russian scientists and engineers. The worry is that these programs may be too little, too late, and no more effective in the long term than Yossarian's futile efforts to hold in Snowden's shot-up guts.[32] For while democracy, open markets, and an equally open society may in fact be the recipe for global peace and prosperity, the process of achieving a functional, institutionalized democracy, well-regulated and stable markets, and a functioning civil society is fraught with risk, as Russia and its newborn neighbors have learned. Post-Soviet Russia enjoys neither the prosperity of the West, nor its freedom from armed transborder threats, its internal stability, or its look-ahead optimism.[33]

When the Soviet Union broke up, the Commonwealth of Independent States (CIS) was put forward by Moscow to maintain common central control of armed forces for all of the new states born of the break-up. Plans for joint control of what had been Soviet military forces on these states' territories had fallen apart by 1996 in favor of locally-controlled forces, except in the matters of air defense and border control.[34] On the latter subject, Armenia, Belarus, Georgia, Kyrgyzstan, Russia, and Tajikistan signed an accord in Minsk in May 1995.[35] A little over a year later, Russia, Armenia, Kyrgyzstan and Tajikistan signed a further agreement permitting Russia to recruit local citizens to serve in Russian Border Service (BPS) units stationed in their countries, creating a kind of Russian-officered Foreign Legion to guard those states' portion of the outer boundaries of the CIS. By 1998, however, the border control system was fraying, as both Georgia and Kyrgyzstan took steps to opt out.[36]

Post-Soviet Russia enjoys neither the prosperity of the West, nor its freedom from armed transborder threats, its internal stability, or its look-ahead optimism.

Coming across those borders is a rising tide of narcotics, especially heroin from the poppy fields and processing plants of Afghanistan, transported in part by corrupt or criminal elements within the Russian military.[37] Cash-poor, the Russian military still controls billions of dollars worth of weaponry, ammunition, technology, and information. Tons of guns and ammo have been finding their way into black markets for more than a decade, even where, as in Chechnya, "losing" one's weapon could mean death for one's compatriots.[38] Such collectively self-destructive behavior reflects broken or non-existent bonds at the small unit level, the bonds that make a modern army work under fire. Having lost its ideological bearings, more than half of its end strength, its position in society, and the war in Chechnya, and having neither housing for its troops nor enough money to pay them, but with lots of valuable assets in its arsenals, the Russian military has been characterized as increasingly vulnerable to criminal corruption and penetration by organized crime.[39]

The Russian mafia — weaned on a black market economy that evolved to evade the rules of the Soviet *nomenklatura*, and schooled cutting deals for that same bureaucracy — thrives in and has every interest in maintaining the current climate of proto-democracy, quasi-markets, and ill-conceived and ill-enforced laws and regulations, where bad money really does drive out good.[40] A recent North Atlantic Assembly report indicated that organized crime groups spend up to 30 percent of their income bribing Russian officials and politicians and may control

up to one-half of the Russian economy. The number of Russian gangs is thought to have grown from 2,600 in 1992 to at least 6,500 by 1997, infesting all sectors of the economy and engaging in "trade of stolen raw materials, weapons theft from Russian military installations, prostitution, smuggling of humans and body parts, privatization scams, asset stripping, the illegal export of capital, and financial fraud."[41]

Once the mafia establishes market power in a sector, it is well-positioned to build monopoly control over it, unless government intervenes to project legitimate enterprise. Where government is weak, the mob can bribe, intimidate, or murder its way into influence over the governing process. Where bureaucracy is too powerful, a culture of corruption invites mob influence of key officials long accustomed to think and behave in an essentially criminal manner (taking bribes under the Soviet system, skimming institutional assets or profits today).[42]

If analyses of Russian criminal groups and the scope of their influence over business and government are even roughly accurate, then — given what is known about how organized crime works and the circumstances in which it flourishes — significant elements of the Russian government and military are at steadily cumulating risk of coming under the influence of Russian criminal syndicates. The history of organized crime suggests that even the most effective, uncorrupted governments find mafia influence difficult to root out, due in no small part to organized crime's stringent rules about secrecy and the penalties attached to breaking them — rules not unlike those of the old Soviet system. Such degeneration of governance could directly affect American security by undermining cooperative threat reduction programs, by increasing the danger of WMD-related materials or technologies reaching the international black market, and by halting or severely constraining the international cooperation needed to fight transnational crime and terror.

Even if organized crime is kept at bay in Russia, economic decay and rising nationalism may hold the potential for major disruption of the country's attempted transition to market democracy. As Tufts University professor Tony Smith has observed about the twentieth century's three-way struggle for dominance among fascism, communism, and democracy, democracy's apparent triumph is neither complete nor irreversible. While communism may have been vanquished, fascism — the tyranny of the majority at the expense of minority interests and rights — remains a tempting fallback in many places where democracy fails to deal effectively with the forces that political and economic liberalization unleash.[43]

* * * * * * *

As the twentieth century closes, an array of challenges not stemming from governments have become a focus of public policy. Frustration and inspiration seemingly impel the emergent threats — frustration from not sharing the material revolution sweeping the globe, and inspiration from the good books to purify that world by any means necessary. Either motivation lends itself to the development of groups with grudges sufficiently large to encompass mass punishment of the well-off or the unbelieving. Greed, another perennial human motivator, drives both criminal cartels and the corrupt officials they suborn. Publics and policy makers alike in the developed world worry about what the greedy can wheedle from the frustrated to sell to the inspired.

CHANGING PUBLIC, ELITE AND OFFICIAL PERCEPTIONS OF THREAT

In a democracy, public opinion may not really drive policy, but it is a component of policy making. National leaders who ignore public surveys risk a rude awakening at the next electoral cycle. Legislators take their constituents' pulse with some frequency. Scholars who have tracked US public opinion on foreign policy issues have found much more consistency than might be expected, from year to year.[44] Periodically, pollsters compare the results of surveys given to random samples of the public at large with similar surveys of presumed public opinion leaders, that is, professionals in business, government, academe, and the media. The following segments examine public and elite perceptions in the United States and the European Union, home to most of the rest of the world's industrial democracies, and compare the results, looking for a basis for sustained US-European collaborative threat management.

Official US government threat perceptions and response strategies are contained in an annual report from the White House to the Congress, the *National Security Strategy*. Although it is no secret that the international security environment has changed over the past ten years, a comparison of late-Reagan and mid-Clinton strategy documents demonstrates just how much official US perceptions have altered in a decade. But in some respects the most interesting changes have come about within the second Clinton administration, between early 1997 and late 1998, when attention to transnational terrorist threats in particular greatly increased, matching, as it were, public policies to apparent public fears.

Public and Elite Opinion in the United States and Europe

This assessment of opinion in the United States draws data primarily from surveys conducted by the Pew Research Center for the People and the Press in September 1997, supplemented by data from the quadrennial opinion surveys published by the Chicago Council on Foreign Relations and some surveys by the Gallup Organization.[45] The second segment analyzes results from a similar survey conducted in May 1996 by EOS Gallup Europe for the European Union.[46]

Threat Perceptions in the United States

The sorts of threats that Americans name as most troubling vary with how the question is posed and (in the case of elites, for whom such data is available) what the respondents do for a living. Issues that loom very large when respondents are asked to pick from a list may dwindle

in significance if answers are open-ended (that is, volunteered without specific prompting). The differences between volunteered responses and answers to specific questions are particularly startling with respect to terrorism. Since just 35–40 percent of the US public in the late 1990s feels that events in *any* location abroad have much impact on their lives, this difference between what seems to be on people's minds routinely, and what they may think *ought* to be on their minds when asked by a pollster, is perhaps to be expected.[47] But it also argues for caution in interpreting high response levels, particularly those related to terrorism.

The public's volunteered priorities on domestic problems are fairly consistent over time, while their views of some foreign threats change more. When asked, for example, in the 1986 Chicago Council poll to name the three "most important problems" of any sort facing the country, respondents named drug abuse (27 per cent), unemployment (26 per cent), war/peace/defense (25 per cent), crime (10 per cent) and, far down the list, terrorism (5 per cent).[48] The same question posed in late 1998 elicited crime (26 per cent), "the President" (22 per cent), drug abuse (21 per cent), and education (15 per cent). A similar April 1998 Gallup poll question elicited essentially the same responses, with slight variations in order and intensity: crime and violence (20 percent), issues of ethics and morality (16 percent), education (13 percent), and drugs (12 percent). The economy in 1998 was good and unemployment was mentioned by few.[49]

When the Chicago Council on Foreign Relations asked people about the "most important international problem," the largest block answered "don't know."

When the Chicago Council asked people to name "America's most important *international* problem" in 1986, public respondents named war/the arms race with the USSR (31 per cent), terrorism (15 per cent), "general foreign policy" and the US economy (tied at 13 per cent). When the Council asked the same question in 1998, "*don't know*" led the pack (21 per cent), followed by terrorism (12 per cent), and the world economy (11 per cent). The public, in other words, having lost the beacon of the Soviet threat, has no singular focus for its worries. Opinion leaders in the 1986 and 1998 polls ranked terrorism as their sixth or seventh most important international concern, respectively, with 5 per cent and 10 per cent volunteering concern. Given sampling errors in these polls (roughly plus-or-minus three percent for the public and plus-or-minus five percent for leaders) the percentages of Americans spontaneously concerned with terrorist threats appear not to have changed at all in a decade.[50]

Table 1: Comparative Threat Perceptions of US Opinion Leaders and Public

Issues:	**Opinion Leaders:**		**Public at Large:**	
America's Most Important International Problem (open ended question: percentage of respondents who volunteered each response)	**Dealing with China**	**(12%)**	**Terrorist threats**	**(8%)**
	US leadership	(8%)	Drug trafficking	(7%)
	Nuclear proliferation	(6%)	Arab/Israeli situation	(6%)
	Maintaining peace	(6%)	Maintaining peace	(4%)
	Encouraging development	(6%)	Encouraging development	(3%)
	Global economics	(5%)	Controlling immigration	(3%)
	Arab/Israeli situation	(5%)	US leadership issues	(3%)
	Chaos/ethnic conflict	(4%)	Chaos/ethnic conflict	(2%)
	Terrorist threats	**(4%)**	**Dealing with China**	**(1%)**
Greatest Dangers to World Stability (first choices)	**Nationalism/ethnic hatred**	**(36%)**	**Intl. drug & crime cartels**	**(32%)**
	Proliferation of WMD	(24%)	Proliferation of WMD	(19%)
	Population growth	(12%)	**Nationalism/ethnic hatred**	**(16%)**
	Religious fanaticism	(10%)	Environmental pollution	(11%)
	Intl. drug & crime cartels	**(8%)**	Religious fanaticism	(8%)
	Environmental pollution	(5%)	Population growth	(7%)
	Trade conflicts	(4%)	Trade conflicts	(3%)
Satisfaction with the way things are going:**				
in the World		58%		29%
in the United States		73%		45%
in my Life		n/a		77%

Source: The Pew Research Center for the People and the Press, *America's Place in the World II*, results from a national survey conducted September 4–11, 1997. Internet: http://www.people-press.org/apw2rpt.htm and http://www.people-press.org/apw2que.htm. Downloaded January 22, 1999.

** From Gallup News Service, October 23, 1998 (http://www.198.140.8/POLL_ARCHIVES/981023.htm)

The diffusion of views also appears in the Pew Center's 1997 polling. Replies to its open-ended query on the "most important international problem" facing the United States are presented in the first row of table 1. Eight percent of the public volunteered terrorist threats and seven percent drug trafficking, while drugs do not register with opinion leaders and terrorist threats concern just one percent. Similarly inverted are public and elite views of China. Just one percent of the US public sees it as an important international problem, while for elites it stands out as most frequently mentioned. But China's standing as a problem is driven by the views of foreign affairs specialists, media people, business people, and Capitol Hill staffers. Just 12 percent of international security specialists surveyed cited China as a problem — no more than average — and for governors, mayors, religious and labor leaders, Beijing barely registered. (For a detailed percentage breakout of elites' views, please see appendix tables A.1 and A.2.) Note that proliferation of nuclear weapons rated mention by six percent of elites

surveyed but was not on the public's mind at all.

When elites and public were asked by the Pew Center's researchers to choose two "dangers to world stability" from a pollster-provided list, opinion leaders stressed nationalism and ethnic hatreds, while the public stressed drug and crime cartels (table 1, second row). The next most frequent mention by both groups was proliferation of WMD.

The public seems much less satisfied than are opinion leaders with "the way things are going" in either the world or the country (bottom row of table 1), even though satisfaction with "my life" is at an all-time high.[51] The further a subject is from people's daily lives, it seems, the freer people feel to believe that things are bad. Perhaps they conform their beliefs to what they see in mass media, which tend to treat good news as no news in favor of crime, fires, and malfeasance at home, and disasters, corruption, and conflict abroad. Opinion leaders are more likely to consult specialized news sources or to have direct experience of foreign affairs upon which to build their views.

This public pessimism about things "out there" also manifests itself in public ratings of America's likelihood of involvement in a nuclear war in the next ten years. Some 37 percent now think it at least "fairly likely," the highest percentage since Ronald Reagan's first year in office (1981) and nearly double the number who thought so right at the end of the Cold War (1991). About the same percentage believe that the United States is at least "fairly likely" to be attacked with nuclear weapons by a foreign country in the next decade, and half believe the country will be the target of nuclear terrorists in the same period. Seven in ten anticipate nuclear weapons being used in a regional conflict.[52]

While only about one third of the public worries much about terrorist acts in general occurring in the United States, according to Pew's polls, three quarters thinks there is "a chance" that terrorists could use WMD against an American city when the question is put to them directly (how great a chance is undefined).[53] In the latest Chicago Council survey, moreover, 84 percent of the public agrees, when asked, that terrorism is a "critical threat" to the United States (up 15 points since the 1994 survey) and 61 percent of opinion leaders concurred. Contrast these numbers with the low and steady percentages of respondents who spontaneously cite terrorism as a most important issue for the United States. One interpretation is that this is an issue that does not impinge directly on most Americans' lives — a perception that is correct — but one that holds such occasionally horrific potential — as the series of bombings noted earlier clearly attests — that people readily validate it as a threat when invited to do so. Much

the same is true for nuclear weapon proliferation (volunteered by just 6 percent of opinion leaders in Pew's survey but validated by 67 percent in the Chicago Council's).[54]

How do the beliefs and fears of those surveyed translate into priorities for US foreign and security policy? The Pew Center asked elites and public to assign priority (high, some, or none) to each of thirteen international issues. On average, elites assigned highest priority to stemming proliferation of WMD; to insuring US access to adequate energy supplies; and to combating international drug trafficking, all issues explicitly involving active threat management. Beyond the first two issues, however, the various groups of influentials had very different priorities (see table 2). A majority of foreign affairs and defense experts assigned high priority to nothing but proliferation and energy access. Governors, mayors, business leaders, and union leaders emphasized the need to protect American jobs (presumably from foreign competition), but only governors and mayors assigned high priority to reducing illegal immigration. Religious leaders were the only group to assign high priority to improving standards of living in poor countries, and only religious and labor leaders gave high priority to promoting human rights. No group assigned high priority to promoting democracy abroad, to aiding US business interests overseas or, in generic terms, to protecting weak states from aggression.[55]

The public generally assigned priorities to these issues that were very similar to the elites' views, differing only on the priority to be given to protecting American jobs (see table 3). While good economic times mean that most Americans do not feel threatened economically at the moment, they want the government to assure that this remains the case, even as it blunts proliferation, combats illegal drugs, and keeps the energy flowing. Interestingly, however, only a bare majority of the public would use force to stop another Iraqi invasion of Saudi Arabia (and thus, presumably, keep a big source of US energy from falling into the wrong hands). That is, the connection between the desired goal, and what it might take to achieve it, seems only tenuously drawn.[56]

Table 2: Priority Assigned to Possible Long-Term Foreign Policy Goals by US Opinion Leaders

	Media	Business	Foreign affairs	Security	Governors & Mayors	Think tank, Academic	Religious	Scientist, Engineer	Labor Union	Capitol Hill Staff
Prevent spread of weapons of mass destruction	*High*	*High*	*High*	*High*	*High*	*High*	*High*	*High*	*High*	*High*
Insure adequate US energy supplies	*High*	*High*	*High*	*High*	*High*	*High*	*High*	*High*	*High*	*High*
Combat international drug trafficking	---	*High*	---	---	*High*	---	*High*	---	*High*	*High*
Improve global environment	---	---	---	---	*High*	*High*	*High*	*High*	*High*	---
Protect American jobs	---	*High*	---	---	*High*	---	---	---	*High*	---
Reduce trade deficit	---	---	---	---	*High*	---	*High*	---	*High*	---
Strengthen UN	---	---	---	---	---	---	---	---	---	---
Reduce illegal immigration	---	---	---	---	*High*	---	---	---	---	---
Improve living standards in LDCs	---	---	---	---	---	---	*High*	---	---	---
Promote democracy abroad	---	---	---	---	---	---	---	---	---	---
Promote/defend human rights	---	---	---	---	---	---	*High*	---	*High*	---
Aid interests of US business abroad	---	---	---	---	---	---	---	---	---	---
Protect weaker states from aggression	---	---	---	---	---	---	---	---	---	---

Source: Pew Research Center for the People and the Press, America's Place in the World II, Q.17

The same failure to recognize that good outcomes may in fact be costly to achieve pervades public attitudes about terrorism. Nearly two thirds of the US public agree that federal anti-terrorism laws are "too weak." By the same majority, however, they deny that stronger anti-terrorism measures could impinge on civil liberties.[57] The implication is that Americans believe that stronger anti-terrorism measures could keep determined terrorists from doing damage to what remains an open society without in the process affecting its openness.

Table 3: US Opinion Leaders and Public Assigning High Priorities to Issues

(percentages assigning high priority)	Opinion Leaders	Public at large
Prevent spread of weapons of mass destruction	0.86	0.70
Insure adequate US energy supplies	0.61	0.58
Combat international drug trafficking	0.61	0.67
Improve global environment	0.58	0.50
Protect American jobs	0.43	0.77
Reduce trade deficit	0.40	0.42
Strengthen UN	0.40	0.30
Reduce illegal immigration	0.37	0.42
Improve living standards in developing countries	0.35	0.23
Promote democracy abroad	0.33	0.22
Promote/defend human rights	0.33	0.27
Aid interests of US business abroad	0.29	0.16
Protect weaker states from aggression	0.26	0.16

Source: Pew Research Center, America's Place in the World II

Threat Perceptions in the European Union

Effective collaboration in threat management requires some commonality of views about what constitute important threats. Do elites and publics among the European members of NATO and other members of the EU see a distinctly different threat environment than their counterparts in the United States? If they do, what does that imply for future trans-Atlantic security cooperation?

The EU polled "top decision makers" in the public and private sectors in 1996 about threats facing the Union and what the EU's public policy priorities should be. Asked to rate, on

a scale of 1 to 10 (from "no threat" to "great threat"), a list of potential challenges to the EU over the next ten years, decision makers on average emphasized religious fundamentalism and nuclear proliferation (tied for first place), the rise of extremist nationalism outside the EU and heavy immigration into the EU (tied for second), and conflict within Europe or a Chernobyl-like nuclear accident (tied for third; see table 4).

The EU's report noted that its Mediterranean members, who are most exposed to the sorts of challenges listed in table 4, "recorded higher levels of concern" on most of these issues, while Germany, Sweden, and the Netherlands recorded the lowest levels. Similarly, while Russian military power is less scary to European decision makers in general than is the economic power of the US or Japan, the EU's larger members and those, like Finland, bordering Russia showed greater concern about its residual military power. The EU's smaller, poorer southern members (Spain, Portugal, Greece) worried more about US and Japanese economic clout. Finally, China's rise to power is seen as a middling mid-term challenge to Europe, somewhat lower billing than given by US elites.

Table 4: European Union Top Decision Makers on Threats to the EU in Next Ten Years

Progression of religious fundamentalism	6.2
New nuclear powers (beyond Perm Five)	6.2
Rise of extreme nationalist movements outside EU	5.9
Heavy immigration from outside EU	5.9
Increased ethnic or territorial conflict inside Europe	5.8
A Chernobyl-like nuclear accident	5.8
Rise of extreme nationalist movements inside EU	5.4
Development of China to a world power	5.4
Economic power of the USA	5.1
Economic Power of Japan	5.1
Remaining military might of Russia	4.8

Note: 10 = very great threat, 1 = absolutely no threat.
Source: EOS Gallup Europe, "The European Union, 'A View from the Top."

European publics tend to be pessimistic about prospects for global violence and warfare in the next century (as does a majority of the American public) and worry that poverty and high unemployment will continue or worsen.[58] Publics and elites do, however, have similar views about what the EU's policy priorities, including its security priorities, ought to be (table 5). For elites, peace is the top priority, while the public places slightly greater stress on jobs; the quest for peace and the struggle against terrorism, drug trafficking, and organized crime tie for second place in the public's priorities, followed by respect for law and justice, and protection of the environment.

Since this was an EU rather than a NATO poll, issues related to NATO's future and potential out of area engagements did not arise. Nor were European respondents asked about energy access and its potential tie-ins to security issues in the Persian Gulf. It is not clear whether European governments' responses to public or elite demands to maintain access to Persian Gulf oil necessarily would be military in nature. Not asking the question, however, to some extent obviates governments' need to consider such a response: Didn't ask, can't tell.

Table 5: Comparing Foreign Policy Priorities of European Union "Top Decision Makers" and Public

	Average TDM priority, on scale of 1>10	Fraction of TDM assigning a 10 to the issue	Average public priority, equivalenced to a scale of 1>10	Fraction of public assigning high priority to the issue
Establish/maintain peace throughout Europe	8.9	0.59	9.7	0.88
Fight unemployment	8.4	0.44	9.7	0.89
Fight terrorism, drug trafficking, organized crime	8.3	0.43	9.7	0.88
Promote economic growth	8.1	0.31	9.0	0.74
Guarantee individual liberties to EU citizens	8.1	0.44	9.0	0.81
Protect the environment	8.0	0.32	9.3	0.83
Promote social welfare	7.6	0.28	9.0	0.77
Ensure respect for law and justice	7.6	0.35	9.3	0.86
Defend EU interests throughout the world	7.5	0.28	8.3	0.66
Reduce regional inequalities (within EU)	6.9	0.16	8.0	0.56
Ensure adequate income for EU farmers	5.8	0.11	7.7	0.52

Note: Public responses rescaled from a 3-point response for comparative purposes.

Source: EOS Gallup Europe, "The European Union, 'A View from the Top."

Comparing Policy Priorities

Common perceptions on the part of US and European opinion leaders are important to crafting collaborative approaches to threat management. Common perceptions among US and European publics would seem necessary to sustain such cooperation through more than one electoral cycle. What do the polling results just reviewed suggest in that regard?

Among the top four "dangers to world stability" named by US elites, and the top four "threats to the EU" named by European elites were extreme nationalism, proliferation of WMD, religious fundamentalism or fanaticism, and demographics. On the latter issue, the two groups were offered different choices: population growth for the Americans (in the Pew survey), and immigration for the Europeans. In the Chicago Council's 1998 survey, immigration was deemed a "critical threat" by just 18 percent of US opinion leaders.[59] The differences on illegal immigration merit a few words of explanation.

Although the southwestern US border has been fortified increasingly in recent years with layers of barriers, sensor fields, aerial surveillance, and mobile patrols in an effort to stop illegal immigrants (and illegal drugs), just six US states host 83 percent of illegal immigrants. This degree of concentration helps account for illegal immigration not being viewed as a major threat by American opinion leaders in general.[60]

The EU's immigration problems are more complex, reflecting the higher levels of strife on its southern and eastern peripheries and substantial pressures from economic migrants at all points of the compass. Control of immigration at the EU's outer borders has been made more urgent by the "Schengen system," intended to create a common external border within which there is freedom of movement for citizens of EU member states.[61] The Union has thousands of kilometers of maritime border on the Mediterranean and Baltic Seas and shorter but sensitive land borders facing southeastern Europe and the reaches of the former Soviet Union. Hundreds of thousands of refugees from fighting in Bosnia and Kosovo combine with equivalent numbers of economic migrants from North Africa, the Middle East, and elsewhere to threaten the cohesion and stability of Europe's long experiment in economic and political integration.

In terms of relative policy priorities, US and European elites were presented with different sets of choices so the results are not directly commensurate (table 6). The top three priorities of European elites were closely focused on Europe. Of these, only peace received a high priority rating from a majority of those surveyed. Tied for second were jobs, liberty, and the fight against terror, drugs, and organized crime. For US opinion leaders, fighting

proliferation of WMD was a nearly unanimous priority, as it might have been for the Europeans, had they been asked, given the issue's high standing as a threat. Majorities of American elites also assign high priority to secure energy supplies, fighting drug traffickers, and improving the global environment. In general, US elites are in closer agreement on their priorities than are EU elites, which is not unexpected since the EU polls draw data from 15 different countries.

Table 6: Comparing Policy Priorities of US and European Elites

High Priority Goals of US Public Opinion Leaders	**Fraction assigning high priority**	**High Priority Goals of European "Top Decision Makers"**	**Fraction assigning high priority**
Prevent spread of weapons of mass destruction	0.86	Establish/maintain peace throughout Europe	0.59
Insure adequate US energy supplies	0.61	Fight unemployment	0.44
Combat international drug trafficking	0.61	Guarantee individual liberties to EU citizens	0.44
Improve global environment	0.58	Fight terrorism, drug trafficking, organized crime	0.43
Protect American jobs	0.43	Ensure respect for law and justice	0.35
Reduce trade deficit	0.40	Protect the environment	0.32
Strengthen UN	0.40	Promote economic growth	0.31
Reduce illegal immigration	0.37	Promote social welfare	0.28
Improve living standards in LDCs	0.35	Defend EU interests throughout the world	0.28
Promote democracy abroad	0.33	Reduce regional inequalities (within EU)	0.16
Promote/defend human rights	0.33	Ensure adequate income for EU farmers	0.11
Aid interests of US business abroad	0.29		
Protect weaker states from aggression	0.26		

These results suggest a competitive-cooperative relationship between the United States and members of the European Union in the coming decade, with each entity tending to its respective economic interests, but with grounds for joint endeavors against WMD, terrorism, drug trafficking, and organized crime. Although Europe is dependent on oil supplies from the Persian Gulf and elsewhere abroad, the prospects for joint US-European efforts to secure energy supplies are not measurable from this data.

Sustaining US-European cooperation will require public support on both sides of the Atlantic. The EU polling portrays a public rather more unified in its views than Europe's elites, and with an emphasis on security issues comparable to that of the US public (table 7). So long as competitive economic issues do not get in the way, this rough match up suggests that political leaders could expect to sustain cooperative security ventures to deal with the new threat prospectus.

Table 7: Comparing Policy Priorities of US and European Publics

High Priority Goals of US Public at Large	**Fraction assigning high priority**	**High Priority Goals of European Public at Large**	**Fraction assigning high priority**
Protect American jobs	0.77	Fight unemployment	0.89
Prevent spread of weapons of mass destruction	0.70	Establish/maintain peace throughout Europe	0.88
Combat international drug trafficking	0.67	Fight terrorism, drug trafficking, organized crime	0.88
Insure adequate US energy supplies	0.58	Ensure respect for law and justice	0.86
Improve global environment	0.50	Protect the environment	0.83
Reduce illegal immigration	0.42	Guarantee individual liberties to EU citizens	0.81
Reduce trade deficit	0.42	Promote social welfare	0.77
Strengthen UN	0.30	Promote economic growth	0.74
Promote/defend human rights	0.27	Defend EU interests throughout the world	0.66
Improve living standards in LDCs	0.23	Reduce regional inequalities (within EU)	0.56
Promote democracy abroad	0.22	Ensure adequate income for EU farmers	0.52
Aid interests of US business abroad	0.16		
Protect weaker states from aggression	0.16		

Assessing US National Security Strategy

Consistent with, although not necessarily influenced by, public opinion, American security strategy at the end of the twentieth century is focused increasingly on transnational threats, in particular on the risk that WMD might be acquired or used against the United States or against US interests by organized crime or terrorist organizations. US strategy has changed a great deal in the past decade, and this section begins with a brief overview of those changes, before analyzing the latest version in greater detail. What it reveals is a threat focus, and a strategy, that entails greater than ever requirements for international cooperation — agency to agency, government to government, and governments to international institutions — in order to be implemented effectively.

Reagan and Clinton Strategy, 1988 and 1997

The January 1988 *National Security Strategy* document reflected the Cold War perspective of the second Reagan administration. Entering the fourth year of the Gorbachev regime, containing the Soviet threat remained priority number one for the administration, and in the strategy document the end of East-West competition was not in sight.[62] Gorbachev's reforms were "a new, continuing, and more sophisticated challenge" to the West (see appendix table A.3, page one). Regional security problems of concern were those thought bestirred by Moscow. Low intensity conflicts, terrorism, nuclear proliferation, economic instability, and environmental problems could make regional security problems worse, but the baseline for evaluating their seriousness for US interests was their relationship to the East-West struggle.

The primary mechanism for holding the global Soviet challenge at bay was nuclear deterrence, backed by development of the Strategic Defense Initiative, which then aimed at creating a system to defend the country against massive Soviet missile attack (table A.3, page two). Secondary containment mechanisms included robust ground and air forces in NATO Europe, support for anti-Communist insurgencies in places like Nicaragua and Afghanistan (table A.3, page three), and concerted counter-propaganda efforts. Policy favored asymmetric arms control measures — those requiring greater reductions on Moscow's part to achieve an even balance of forces. Such agreements were reached for intermediate-range missile forces in 1987 (all such missiles were eliminated) and for conventional armed forces in Europe in 1990, during the Bush administration.

Spending Priorities, FY 1989

The federal budget for fiscal year 1989 — the budget submitted to Congress shortly after this security strategy was released — matched its rhetorical priorities (see fig. 1). Although total security-related spending authority had already declined somewhat from its 1985 peak, the proportion of such spending assigned to nuclear weapons and forces was very impressive. (All budget numbers portrayed in these charts are in 1999 dollars.)

Fig. 1 and the three charts that follow it reflect composite best estimates of spending in major functional, security-related categories. Defense budgets, for example, are not presented in the categories used in these charts; the closest approximation is the program budget, which lists strategic forces, general purpose forces, and a number of combat support and service support categories, from intelligence and communications, to airlift and sealift, to Guard and Reserve, maintenance, training, and special forces.[63] These program numbers were distributed proportionately to "major theater war"or to "nuclear weapons," except where the nuclear role was probably minimal (e.g., lift, reserves, special forces), in which case the whole program amount was added to major theater war. The nuclear weapons category includes all of the relevant defense-related activities of the Department of Energy and its national laboratories.[64]

The primary mechanism for holding the global Soviet challenge at bay was nuclear deterrence.

General preparations for major theater war (with composite spending authority of roughly $320 billion) far outdistanced spending in any other security programing category in 1989. For ease of comparison with the other spending categories, fig. 2 replicates the1989 budget minus major theater war. This chart shows more clearly the dominance of nuclear programs over all remaining security-related spending items, at more than $60 billion. Security and economic development assistance took second and third place at roughly $17 billion in toto, with a substantial fraction earmarked for Israel and Egypt, while anti-drug activities, immigration control, and fighting organized crime together totaled about $7 billion. (The 1989 budget did not provide breakouts for anti-terrorism spending.)

Fig. 1: Estimated US Government Budget Authority to Counter Security Threats, FY 1989

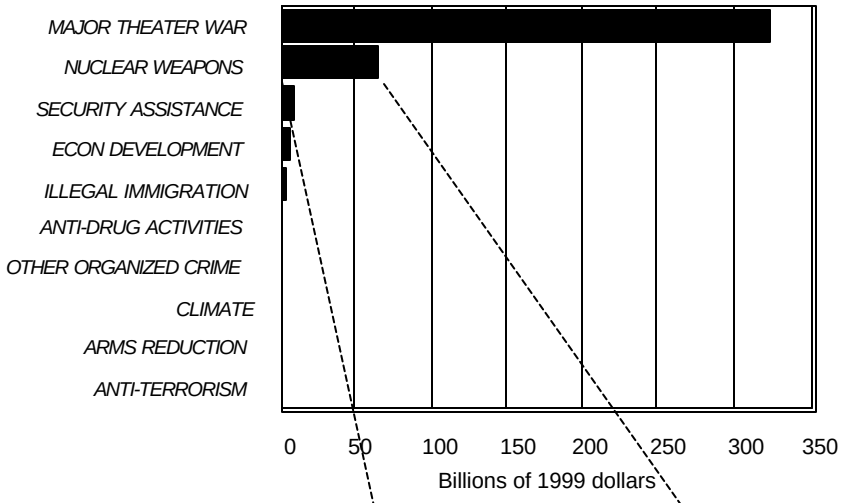
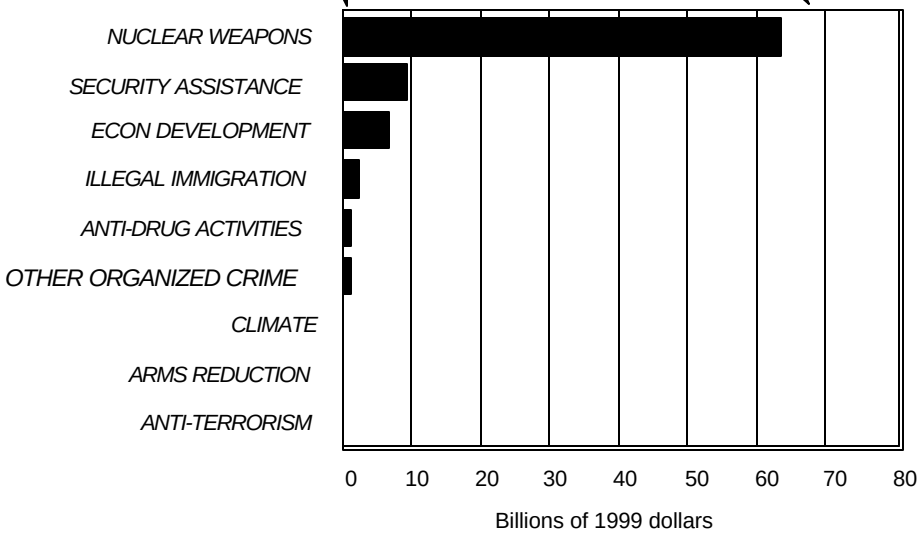


Fig. 2: Estimated US Government Budget Authority to Counter Security Threats, Less Major Theater War, FY 1989



Clinton Strategy, 1997

In 1997, early in the second Clinton administration, national security strategy looked much different. The Soviet challenge was, of course, gone. Coercive threats from regional powers like Iraq had replaced it at the top of the threat list, followed by a much more extensive list of transnational threats — terrorism, illegal drug and arms trafficking, organized crime, and so on — all divorced from central control, and emanating from non-governmental sources. Shorn of what Pres. Reagan once dubbed "the focus of evil in the modern world," American strategy could not look to a master puppeteer as the cause of the problems of the late 1990s, nor look to its defeat as the solution to those problems. Strategy itself became as broad as the issues it was trying to address.[65]

The closest analog in the 1997 strategy to the old centrality of the Soviet threat was the destructive potential of WMD, "the greatest potential threat to global security," embodied both in existing Cold War-era arsenals and in proliferation to outlaw states of technologies for WMD and/or systems to deliver them at long range (details in table A.3, page one, right column).

To cope with the uncertainties posed by the new international security environment, the Clinton administration adopted a three-part response that remained its basic framework two years later, consisting of measures to "shape" the environment, to respond to crises, and to "prepare now for an uncertain future." Shaping measures in 1997 included diplomacy, foreign aid, arms control, and non-proliferation initiatives. Last on the list of shaping tools were military measures like forward presence (keeping forces routinely deployed abroad near trouble spots), deterrence (presented generically as an ability to retaliate that dissuades bad actors from performing bad acts), and a "robust triad" of strategic nuclear forces to "hedge against an uncertain future." In other words, much like the US public, the administration's basic view of the next big thing, at least as far as nuclear forces are concerned, was "don't know," and the biggest weapons in the US arsenal were being retained in some quantity to deal with it.[66]

The 1997 Clinton strategy committed the United States to maintain the ability to fight two major theater wars starting from a day-to-day posture of global engagement (that is, with forces spread around the world). But the strategy document flagged a tradeoff between "shaping and responding" on the one hand, and "preparing," on the other. That is, given then-available resources, the country could maintain its presence abroad and maintain full readiness to fight today only at the cost of reduced investment in the technologies that would enable it to maintain its fighting edge tomorrow.

The worlds, the world views, and the instincts of the Reagan and Clinton administrations could in some ways hardly be more different. Yet in important respects they retained much in common: NATO, for example, remained the political-military glue of Western industrial state relations and, in the 1990s, US policy spread that glue liberally to cement relations between the West and those former Soviet allies in Europe whose transition to market democracy was most nearly complete. The US-Japan Security Treaty remained in force and was in the process of being enhanced. US forward military presence, moreover, continued to be seen as key to regional stability in Europe and East Asia.

Deployments and purposes had changed far more dramatically in Europe, where the old battle lines are gone, than in Asia. The focal point of European security concern had shifted from the old inner-German border to the shrinking borders of Yugoslavia to cope, tardily, with the ethnic feuding and instincts for self-determination and self-destruction that had motivated fighting there since 1991. In Asia, on the other hand, the Taiwan Strait, the 38th parallel in Korea, and intermingled national claims to potential oil deposits in the South China Sea remained unresolved regional flashpoints, and US deployments remained much as they were in the late 1980s.

Clinton and Clinton, 1997 versus 1998

In October 1998, two months after the terrorist bombings of the US embassies in Kenya and Tanzania, and after retaliation-by-cruise-missile against Sudan and Afghanistan, the Clinton administration issued a revised *National Security Strategy*.[67] The new document's threat assessment doesn't change the order of threat presentation (regional/state-centered, transnational, spread of WMD) but does alter priorities within those categories (see appendix table A.4, page one). Terrorism remains the number one transnational threat, especially terrorists with weapons of mass destruction. International organized crime has become the number two transnational threat, with drug trafficking now treated as a principal mob activity rather than as something set apart. Terrorist threats to critical national infrastructure (power, transport, finance, and information) have been added to the list of high priority transnational threats. Counter-proliferation has new priority, ahead of dangers posed by existing nuclear arsenals. And two new threat categories have been added: high-tech snooping by foreign intelligence agencies and the international consequences

US strategy continues to "shape, respond, and prepare," but the 1998 document is far more pro-active.

of failed or failing states.

US strategy continues to "shape, respond, and prepare," but the 1998 document is much less diffident in its treatment of actions to be taken to meet the challenges it describes, is much more detailed, and is far more pro-active. Rhetorically, it is much less reluctant than its predecessor to use the military, or at least air power, which the administration did subsequently use in significant campaigns against Iraq and Yugoslavia. While diplomacy is still a "vital tool" for shaping the international environment, it is no longer a "first line of defense," and "cannot solve all our problems" (table A.4, page two). Foreign aid is no longer something to help us avoid intervention abroad but a tool to help build democracy abroad and stem organized crime. Arms control is recast as a conflict preventive measure. Nuclear weapons get first mention among military tools, again as reserve capacity against unspecified future need. While deterrence remains an "important," generic component of US "shaping" strategy, the rise of potentially undeterrable adversaries (terrorists, gangs) is seen to require greater ability on the part of US military and law enforcement entities to defend against, or to retaliate for, the damage such adversaries might inflict. Thus, the 1998 strategy adds international law enforcement and environmental initiatives to the roster of principal shaping tools: Global law enforcement networks are needed to fight equally networked entities of crime and terror, while linked environmental policies and programs are needed to deal with region-wide and longer-term environmental challenges that the US and other individual states cannot meet alone.

Spending Priorities, FY 1999

Have federal national security spending priorities altered substantially since the Reagan years? In the sense that major theater war, as costed out here, still dominates all other security spending by a wide margin, gross priorities have not changed (see fig. 3). However, overall annual spending authority is down by roughly 23 percent (approximately $94 billion) in ten years and funds for major war forces are down roughly 26 percent.

Bigger changes are visible, however, when major theater war is taken out of the chart (fig. 4). Funding for nuclear weapons and forces is down by two-thirds since 1989. Readily visible funding for anti-drug activities has risen from a little less than $2 billion to $17 billion. That apparently dramatic expansion may be attributable in part to the founding since 1989 of the Office of National Drug Control Policy and to its vigorous efforts to account for and publicize federal spending related to any aspect of the illicit drug problem, from source eradication to public education.

Fig. 3: Estimated US Government Budget Authority to Counter Security Threats, FY 1999

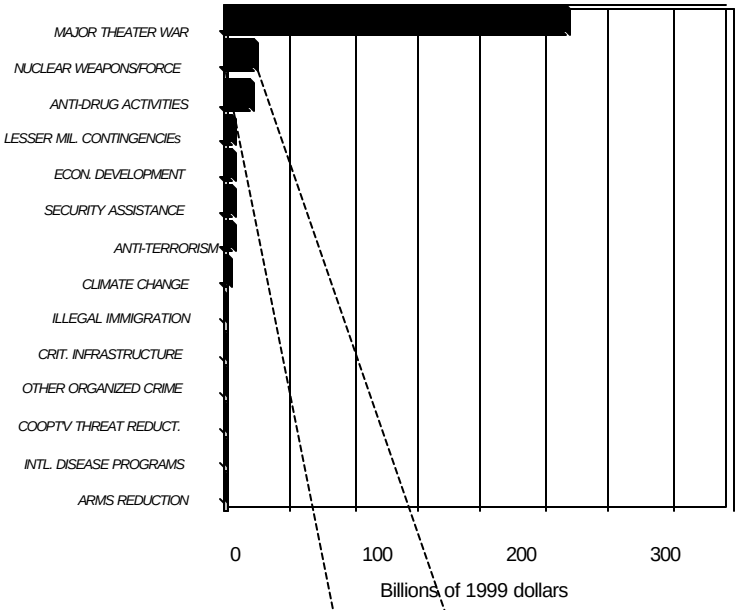
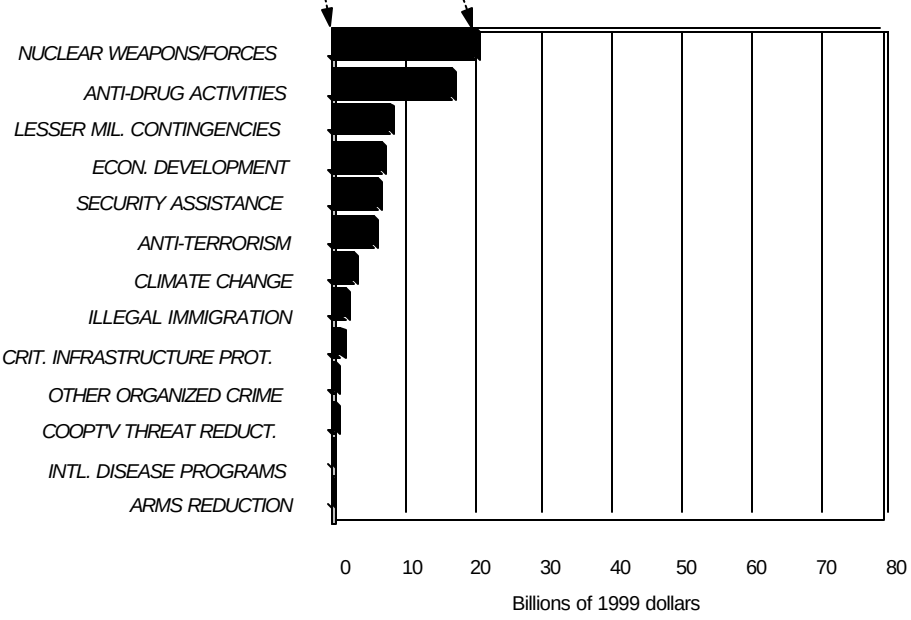


Fig. 4: Estimated US Government Budget Authority to Counter Security Threats, Less Major Theater War, FY 1999



Lesser military contingencies — what significant elements of the US military have been most busy covering since the end of Operation Desert Storm — now have their own visibility. For fiscal year 2000, the Clinton administration requested $2.9 billion for contingency operations against Iraq and in the Balkans (before the Kosovo crisis erupted). A comparable level of expenditure for 1999 may be assumed as well. Pro-rating support account monies to it produces a total estimated level of effort in 1999 for lesser contingencies of about $8 billion.

Anti-terrorist efforts have greater visibility in 1999 than a decade earlier, with an aggregate effort of just over $6 billion. Climate-change-related research and development activities total roughly $2.5 billion, and assistance to developing countries to reduce greenhouse gas emissions are another $500 million and discussion of climate change issues and initiatives is much more extensive in the 1998 document than in its predecessors. (See table A.4, page two.) Control of illegal immigration, critical infrastructure protection, organized crime, C TR, international disease control programs, and arms reduction (formerly arms control) programs occupy the trailing end of fig. 4.

Comparisons of this sort cannot answer the question, “how much is enough?” for any of the categories. But they do highlight a de facto shift in resources from traditional, Cold War security spending categories to begin to meet the transnational and ecological challenges of coming decades. Nuclear weapons-related spending, for example, was about 260 percent of all other non-MTW spending in 1989; in 1999 it is about 38 percent. With NATO action against Yugoslavia, the year-end “lesser military contingencies” bar for fiscal 1999 is likely to more than double and overtake anti-drug activities.

Conventional forces, whether used for lesser or major contingencies, devour funds rapidly when they swing into action. Each of the other categories in these charts reflects what it costs to fulfill that category’s function — patrolling the borders, interdicting drugs, fighting organized crime, securing Russian nuclear weapons, or eradicating disease. The major theater war category represents just a force in being, waiting to be called upon. Its $213 billion budget represents not the cost of major war but the price of admission or, if you will, the self-imposed surcharge for being a superpower in the twenty-first century.

Whether that amount is too much or not enough depends on what those forces are called upon to do, how often, and with what kinds of international help, fiscal or material. A substantial fraction of the costs of the Gulf War, for example, was defrayed by those whom we helped; a fraction of the cost of action in Yugoslavia will be absorbed by other NATO members; and a fraction of the cost of contributing troops to United Nations peacekeeping missions is

reimbursed. US public opinion invariably prefers multilateral to unilateral action, but with an eye, one suspects, for paying less rather than doing more; for spreading the risk; and for sharing the blame. But public preference for multilateral action, together with the enhanced political legitimacy associated with collective security efforts, would seem to make allied or coalition action the way ahead for conventional military engagements; if it is not, then the huge levels of spending devoted to keeping conventional forces ready to fight may in be misspent, given other, rising security priorities.

Interests and Values.

Both the 1997 and 1998 strategies differentiate among *vital* interests (those affecting the physical security of US and allied territory, safety of US citizens, or the country's economic well-being); *important* interests (those affecting "national well-being or the character of the world in which we live"); and *humanitarian* interests (cases of "natural or manmade disasters or gross violations of human rights" where "our nation may act because our values demand it"). The newer strategy document elevates "protection of critical infrastructure" to the level of a vital national interest, and adds to the humanitarian interests category support for other states' efforts to build democracy and promote civilian control of the military, support for humanitarian demining, and support for sustainable economic development.

Given the way the three tiers of interests are defined, it is hard to escape the conclusion America acts in support of its core values only in non-vital, unimportant cases.

Great care is taken to assure that these words are not used lightly, as a look at presidential speeches relating to the crisis in Kosovo would demonstrate. In a major foreign policy address in February 1999, President Clinton labeled the fights against proliferation, terrorism, and drugs "important," ratification of the Comprehensive Nuclear Test Ban Treaty "very important," and construction of ballistic missile defenses "most important." The crisis in Kosovo was addressed but not as a formally important issue; nor were any subjects deemed "vital" to the United States. The president's March 24th address announcing air action in Kosovo did characterize ending the conflict there as a "moral imperative" that was "also important to America's national interest." No subsequent presidential speech addressing Kosovo, through the first six weeks of the NATO air campaign, raised its status any higher.[68]

Given the way the three tiers of interests are defined, it is hard to escape the conclusion that humanitarian action is neither vital nor important to the country. Relegating activities like democracy-building, foreign civil-military relations, demining, and development to the category of humanitarian interests suggests — perhaps unintentionally — that the United States considers these areas *less than important*, and suggests that America acts in support of its core values only in non-vital, unimportant cases.

The sort of triage attempted in the *National Security Strategy* separates "interests" and "values" in the time-honored fashion of realist foreign policy, as though one did not inform the other. Yet they do: The United States values its own survival not just as chunk of populated land but as an entity with a *particular configuration* of political power, economic relations, and personal rights. Although that configuration has evolved since the founding of the Republic — with the diffusion, given time and struggle, of power, wealth, and rights to broader segments of the population — the basic combination of representative democracy, market-based commerce, and personal liberty has endured. In this century, the United States and other industrial democracies opposed first National Socialism and then Communism not just because of the threats posed by Nazi or Soviet military power but because of the invidious values driving that power. Neither World War II nor the Cold War were simple replays of old balance of power scenarios with new, interchangeable participants. Who won each conflict made a difference to human history.

Moreover, the global "spread of modernity" in politics, economics, and civil society supports America's interests *as* an industrial market democracy whose proper functioning requires social tolerance and respect for human rights.[69] Having similarly-structured states throughout the international system bolsters those interests, which is easy to see with the aid of imagination. Visualize a world beyond US borders where jack-booted tyranny (the real kind, not the stuff of militia fantasies), central economic diktat, and arbitrary arrest, torture, and death are the universal tenets of political, economic, and civic life. How long, in such a world, would an America familiar to any of us last? Such a world could ill abide a reservoir of freedom, and the burdens of defending itself against such all-encompassing threat would likely alter the country in very basic ways.

Failing states with weak, corrupt governments and destitute populations also become sources, targets, and transit points for regional and international narcotics traffickers. Nature may abhor a vacuum but the drug trade loves it. Moreover, argues former Brookings analyst Paul Stares, curbing this "global habit" will require the international community's "willingness to address much larger concerns to which the drug problem is inextricably linked," concerns that

usually fall under the rubric of "development" or "economic opportunity." After looking at the problem in detail, Stares concluded that, "the attractiveness of trafficking... is not going to diminish while the economic prospects of so many people look so bleak."[70] So the issues that US strategy tucks into the humanitarian category actually have important, if not vital, implications for US security.

Promoting economic development and growth overseas is treated in a section of *National Security Strategy* that is separate from "enhancing security," yet it is a policy "twofer," something that accomplishes more than one objective. As Tufts University's Tony Smith observes, "liberalization of market forces" may be the "single most effective reform from the point of view of promoting democracy," because it "curtails the patronage power of the state while freeing social groups to bargain independently." But unless economic empowerment is in fact accompanied by a new social contract and appropriate governmental institutions to support it, the end result may be anarchy and backsliding toward authoritarian rule.[71] Politics and economics, like interests and values, are mutually supportive.

Military Supremacy and Asymmetric Threats

There is some irony in the following statement from Clinton administration's 1998 strategy document:

> *Due to* our military superiority, potential enemies, whether nations or terrorist groups, may be more likely in the future to resort to terrorist acts or other attacks against vulnerable civilian targets in the United States instead of conventional military operations... Adversaries may thus be tempted to use unconventional tools, such as WMD or information attacks, to threaten our citizens and critical national infrastructures.[72] (Emphasis added.)

America's very superiority in the tools and techniques of conventional warfare leads its would-be adversaries to adopt asymmetric responses, that is, to "not fight fair." This is not, on its face, a revelation. Neither Vietnamese nor Algerian forces fought fair against the French, nor did the Viet Cong against American forces, nor did Afghanistan's *mujahedeen* or Chechnya's guerrilla bands against the Russians. But all of these struggles were fought on the guerrillas' home turf against interlopers — well-intentioned or not. The current race is to prepare against the expectation that asymmetric warfare may be waged against the US homeland, either in cyberspace or in real space. The extent to which such attacks are motivated by frustration with US military power raises potentially troubling issues regarding the larger morality of a policy whose apparent effect is to direct foreign reprisals at American civilians because the American military is too hard a target. One might reply that in a century of total war, civilians have been exposed repeatedly to such reprisal, not least during the whole of the Cold War, when the

execution of nuclear war plans on either side would have entailed substantial, though not necessarily deliberate, civilian casualties. "Super terrorism," a strain concerned with inflicting mass casualties, could be considered a variant of total war, finally brought to American soil.

Some observers of current policy trends suggest that the best way to minimize asymmetric threats to America's interests is to intervene less in others' affairs. Let the Gulf States and South Korea defend themselves against now-weakened opponents in Iraq and North Korea. Reduce the probability of "a retaliatory strike on the US homeland by rogue states or terrorist groups using [WMD] ... by ending unneeded and provocative US military intervention abroad." That is the prescription of the libertarian CATO Institute: risk reduction through risk avoidance.[73] While a risk avoidant strategy may reduce the probability of attacks, a purely avoidant strategy does not alter the potential for damage if attacks still occur and may even leave the country and its interests open to extortion.

America's superiority in the tools and techniques of conventional warfare leads its would-be adversaries to "not fight fair."

A step beyond risk avoidance by withdrawal would be long-term risk reduction through democratization and development. In a world of potential super terrorists, it would seem to be in America's vital interests — not merely its humanitarian interests — to encourage the opening up of economies to increase opportunities for the angry and unemployed; to support the evolution and institutionalization of democracy abroad to provide peaceful channels for dissent; and to promote respect for basic human rights, so that governments become more responsive and more legitimate in the eyes of their peoples.

Vulnerability in the Drivers Seat

There is heavy new emphasis in the 1998 strategy on actively countering terrorism at home and abroad, reflecting policy established by Presidential Decision Directive (PDD) 62 in May 1998. The domestic preparedness and critical infrastructure protection segments of the strategy are also new and reflect PDD 63, also signed in May 1998.

An assessment of these new policies by the engineering consultants Hicks & Associates noted that, "a growing perception of US vulnerabilities may be driving perceptions of the threat. High vulnerability doesn't always mean high threat, though there is often concern that vulnerabilities tend to generate threats that will exploit them."[74] Vulnerabilities to physical or

information-based attacks, in particular, are also much easier to discern than are the capabilities or intentions of those who might launch them, or the timing of such attacks. Without better threat assessment, and better understanding of the motivations of potential foes, vulnerability assessment drives policy to conclude that much is vulnerable, and much needs protection.

The new federal preparedness initiatives gained impetus from a sequence of events in which terrorists did exploit vulnerabilities to cause major damage to physical structures and major casualties among the people in them. PDD-39, *US Policy on Counterterrorism*, was issued several months after the April 1995 bombing of the Murrah federal building in Oklahoma City. It outlined three basic elements of policy: threat/vulnerability management (preventing attacks and reducing the potential for damage); crisis management (response and reprisal); and consequence management (immediate relief, restoration of services, protection of public health and safety). The President's Commission on Critical Infrastructure Protection (PCCIP) was empaneled in July 1996, soon after the Khobar Towers bombing in Saudi Arabia. The Defense Against Weapons of Mass Destruction Act (Title XIV of the Fiscal 1997 Defense Authorization Act), known in shorthand as Nunn-Lugar-Domenici, also provided funding to improve federal, state, and local abilities to respond to incidents involving WMD. Under Nunn-Lugar-Domenici, the Defense Department established a Domestic Preparedness Program with a goal of training "the 120 largest US metropolitan areas" in how to respond to WMD incidents by the end of 1999.

"A growing perception of US vulnerabilities may be driving perceptions of the threat."

But blue-ribbon commissions and policy planners rapidly moved beyond threats that terrorists had implemented to date, to fasten on things that they might do in the future, given the growing global information infrastructure and given, in particular, access to materials needed for chemical or biological weapons. The October 1997 PCCIP report stressed, for example, not the dangers of physical attacks but the dangers of cyber-attacks against the country's interlinked information, financial, transportation, and utilities infrastructures, noting the need for new tools for assessment of threat and vulnerability posed by such attacks.[75] PDD-63, in turn, set a 5-year goal for critical infrastructure protection; distributed lead responsibility for various sectors among eight federal agencies; and created both a National Coordinator of Security, Infrastructure Protection, and Counterterrorism within the National Security Council staff, and a series of supporting groups, offices, councils, and centers.[76] Coordination of policy implementation under PDD-63 is the job of the Critical Infrastructures Assurance Office (CIAO, easily the hands-down winner for best new government acronym in a decade).

Worst-case planning has thus begun to outpace worst-case experience, because the experiences that can be imagined are far worse than anything in the case books to date. Where trillion-dollar Cold War arsenals and (sporadic) civil defense plans were designed to deter and to protect against a low-probability but high-cost event (East-West nuclear war), the new initiatives for counter-terrorism and critical infrastructure protection are designed to cope with potentially high-cost events of *unknown* probability. Just as uncertainty about the international threat environment plagued defense planners in the early 1990s, uncertainty about vulnerability to transnational threats at home seems to be the policy driver for the coming decade.

The worry behind it all is that Americans have built for themselves an ultimately undefendable way of life.

The worry behind it all is that Americans have built for themselves an ultimately undefendable way of life. The object of the new policies is to reduce that worry, without, one would hope, posing new risks of its own, that is, without creating a threat-vulnerability-response cascade that poses its own challenge to the open society. Israeli author Ehud Sprinzak, writing from the perspective of a society that has endured frequent terrorist attacks, warns that a focus on the very worst possible cases, the super terrorism scenarios, which, he argues, are likely to be rare, can serve to induce panic when the more likely cases — using conventional arms, conventional explosives, or even CBW on a relatively small scale — do occur. Such panic responses and unwarranted slippery-slope assumptions that small events imply large ones down the road may lead to politically "irresistible demands to fortify the entire United States," at whatever cost.[77]

* * * * * *

The turbulence of the 1990s, with its periodic crises and conflicts in crumbling states, and the anticipated spread of mass destruction weapons into unfamiliar hands, have produced a divide among analysts. There are those who see growing chaos and disorder in the world, and those who believe their effects are exaggerated. The recent work of Robert Kaplan, especially his *Ends of the Earth*, a bleak survey of life and decaying governance in a string of impoverished countries in Africa and Asia, is often cited as evidence by those who perceive growing chaos.[78] Sprinzak argues from the other side of that divide, as does Johns Hopkins University Middle East scholar Yahya Sadowski, in his recent work, *The Myth of Global Chaos*.[79] This is a debate to be noted and not resolved here, but it points to the need for better ways to measure the dangers that US publics, opinion leaders, political leaders, and military institutions see out there

in the looming world of the twenty-first century. These disparate challenges need to be placed into common perspective, the better to decide how best to allocate resources and choose among competing policy responses. First steps toward such an analytical framework are the subject of the next section.

TAKING THE MEASURE OF THREAT

There is a recognized need for better approaches to threat assessment in the new national security environment. One month before the promulgation of PDD-62 and -63, the congressional General Accounting Office (GAO) published a review of US efforts to combat terrorism under the Nunn-Lugar-Domenici (NLD) program. The GAO observed that threat and risk analyses were not used to inform programs in any of the 11cities that first received NLD funding, and noted several obstacles to using funds effectively, including lack of specificity in intelligence community threat analyses and the sheer "complexity and magnitude of a large city as a subject of a threat and risk assessment."[80] Shortly after GAO issued its report, an international working group of government and private sector experts on cyber threats met under the auspices of the International Centre for Security Analysis (ICSA) at King's College, London. The group concluded that policies and practices to promote information assurance — the ability to assure the security and integrity of information systems against a variety of intruders — would have to be based on vulnerability assessments for the foreseeable future because of "the distance we still have to travel in constructing effective threat assessment and early warning mechanisms."[81]

The GAO report noted that industry and the US Department of Defense (DoD) both have used threat and risk assessments for devising strategies to protect their physical plant and bases from criminal and/or terrorist activity. GAO urged that this experience be incorporated into NLD implementation so that available resources could be put to use where they might be most effective.[82]

DoD has standard definitions of probability and severity level for potentially catastrophic events (see tables 8 and 9). Multiplying probability times severity generates a "risk assessment matrix" to guide planning and action (table 10). A risk management strategy would try to decrease probability of attack through pre-emptive, deterrent, or retaliatory measures, and to decrease the severity of an attack through passive or active security measures at or on behalf of the target.

Table 8: Probabilities for Undesired Events

Probability Level	**Specific Event**
A. Frequent	Likely to occur frequently
B. Probable	Will occur several times
C. Occasional	Likely to occur sometime
D. Remote	Unlikely but possible to occur
E. Improbable	So unlikely it can be assumed occurrence may not be experienced

Table 9: Severity Levels of Undesired Event Consequences

Severity Level	**Characteristics**
I. Catastrophic	Death, system loss, or severe environmental damage.
II. Critical	Severe injury, severe occupational illness, major system or environmental damage.
III. Marginal	Minor injury, minor occupational illness, or minor system or environmental damage
IV. Negligible	Less than minor injury, occupational illness, or less than minor system or environmental damage.

Source: *Combating Terrorism: Threat and Risk Assessments*, GAO/NSIAD-98-74, p. 7.

Table 10: GAO Risk-Assessment Matrix

Probability of Occurrence	**Severity Level**			
	I Catastrophic	**II Critical**	**III Marginal**	**IV Negligible**
A. Frequent	I-A	II-A	III-A	IV-A
B. Probable	I-B	II-B	III-B	IV-B
C. Occasional	I-C	II-C	III-C	IV-C
D. Remote	I-D	II-D	III-D	IV-D
E Improbable	I-E	II-E	III-E	IV-E

Unshaded = Unacceptable risk (reduce through countermeasures).
Light shade = Undesirable risk (requires management decision).
Medium shade = Acceptable risk with review by management.
Dark shade = Acceptable risk without further review.

Source: *Combating Terrorism: Threat and Risk Assessments*, GAO/NSIAD-98-74, p. 8

There are many other risk assessment approaches geared to specific classes of risks (e.g., equipment failures, human error, seepage of toxic chemicals, radiation exposure) and to specific targets with identifiable vulnerabilities (e.g., nuclear reactors, skyscrapers, military facilities, communities near landfills).[83] But for purposes of allocating federal money and other resources effectively, it would be useful to have a threat analysis framework that would allow users to create a broader (if therefore fuzzier) picture of threats to national security and well-being, to raise the focus of analysis from the tactical to the strategic level, not replacing but complementing tactical and operational risk assessment techniques of the sort just noted. Moreover, it would be good be able to discuss, within a single framework, widely differing threats. The sections that follow, therefore, attempt to do just that, first arraying threats in a systematic fashion and then describing a prototype framework for comparing and rating such threats, and a draft methodology for evaluating both the utility of different approaches to the mitigation of threat or loss and the utility of different levels of cooperative threat management.

A Systematic Threat Array for the Prudent Paranoid

Clearly there are many ways to portray bad things that can happen to good countries and people. The *National Security Strategy* sets out one typology of security threats, namely, state-based, transnational (including environmental), WMD, foreign intelligence probing, and failed states — a mixed bag of sources that could be presented more clearly. Let me suggest a rearrangement, consistent with the discussion of threats in the first section of this paper, making the first divide between natural and manufactured threats.

Natural Threats

Threats in this category capable of causing severe damage to human lives and interests include earthquakes, hurricane-like storm systems, volcanic eruptions, tornados, and drought (see table 11). The effects of earthquakes often are felt within the borders of a single country, but often occasion the need for international relief efforts because of the scope of devastation. Large storm systems may create similar humanitarian needs as well as military-supported relief efforts such US Operation Sea Angel, following a cyclone that devastated Bangladesh in 1991, the more recent relief efforts in Central America following Hurricane Mitch, or domestic relief operations after Hurricane Andrew devastated a wide swath of southern Florida. Volcanic eruptions devastate lives locally and can have direct military consequences, as in the case of Mt. Pinatubo in the Philippines, which effectively entombed nearby Clark Air Base. There is, as yet, no defense against ash except to avoid it. Droughts may envelop entire subregions of continents, as was the case with eastern Africa in the mid-1980s and the first half of the 1990s, contributing

in the latter instance to the collapse of Somalia as a state and the insertion of international military forces to support the provision of relief. Patterns of violent weather, with or without tornado accompaniment, may be associated with global warming and hence become a more familiar feature of the twenty-first century threat scape. Animal predation is included merely as a reminder of where we have come from and of what once was humanity's primary daily fear. In fact, if microscopic animals are included in the definition, natural predators remain a primary daily challenge to a majority of the human race.

Table 11: Threat Examples

Manufactured Threats			**Autonomous Natural Threats**
Interstate	**Transnational**	**Ecological**	
Interstate nuclear war (global, regional) Interstate war involving chemical/biological weapons Interstate war with conventional arms Interstate border conflict Information warfare (state-based) Proliferation of weapons of mass destruction	Organized crime C drug cartels C migrant smuggling C arms trafficking C money laundering C information hacking Terrorist groups C nationalist motives C political motives C transcendental motives C "super terrorism" Proliferation of weapons of mass destruction Illegal immigration Severe wealth and information disparities Sudden refugee flows Financial market panics.	Over-population Regional water and/or food shortages Damage from seasonal flooding, wildfires Transborder air and water contamination Emergent infectious diseases Invader species, including disease vectors Diminishing biodiversity Stratospheric ozone depletion Climate change, global warming and its regional and local effects	Volcanic eruption Earthquake Hurricane or typhoon Tornado Drought Animal predation

Manufactured Threats

Threats of human origin were cast earlier as interstate, transnational, and ecological. *Interstate* threats have traditionally involved armed foreign military capability. To that could now be added foreign-government-based information warfare activities, which blur into intelligence collection and incorporate the *National Security Strategy*'s concerns about foreign intelligence agencies with high-tech tools.

Transnational threats include organized crime in all of its manifestations, from drug cartels and migrant smugglers to money laundering or other collusion between US and foreign criminal organizations. Terrorist groups were profiled earlier, groups of the greatest concern being those with transcendental motives for their behavior (for example, apocalyptic or millennial creeds, quasi-religious programs of racial cleansing, or militant religiosity without secular political purpose).

Transnational threats also include phenomena without leaders, that do not stem from an identifiable point source. These include wealth and information disparities that can eventually trigger upheaval among the have-nots at the expense of the haves; or refugee flows that, while stimulated by conflict or other disaster at home, are themselves streaming, often non-directed phenomena. Finally, the worldwide markets of the global economy are, as yet, under-regulated by domestic standards and capable of wide swings in value, especially in national currencies, the exchange of which involves the equivalent of $1.5 trillion per day sloshing around in the largely electronic currency markets.[84]

Transnational threats also include phenomena without leaders.

Ecological threats have begun to get more attention and money in US strategy and budgeting. Some ecological threats pose a dilemma for decision makers: Policy decision *flexibility* is never likely to be greater than it is right now but — especially in areas where knowledge and understanding are incomplete — policy decision *wisdom* is never likely to be worse than right now. The race is between growing understanding and innovation, on the one hand, and what may be cumulating response costs, on the other, which argues for interim policies with the potential to slow accumulation without either breaking the bank or locking policy into a what could soon prove to be an obsolescent response.[85]

Human population growth is an ecological threat that is well-understood. The people who will create the next generation of humanity are already living and their reproductive habits can be estimated based on historical experience, current surveys, and projected behavior. Several things are therefore clear: the general trajectory of population size (upward); the socio-economic mix (mostly poor); and the fact, for any given place on earth, that this trajectory is alterable only by changing rates of birth, death, and migration. As former Christian Science Monitor reporter George Moffett noted, the tools for doing so are also well-known: "Economic development, which will help reduce the demand for large families, will be one important component of a comprehensive strategy to reduce fertility and further slow rates of population growth in developing countries... Another will be narrowing the inequities between the sexes that are prevalent in many developing nations." Places that do best in managing population growth tend to be those where gender bias is least pronounced, where women have access to education and options beyond motherhood, where children have access to health care, and where"safe and effective family planning methods are made universally available." Population growth, Moffett concludes, is no longer a problem looking for a solution but a solution looking for resources."[86]

"Population growth is no longer a problem looking for a solution but a solution looking for resources."

Climate change, on the other hand, is an issue area where remaining scientific uncertainties are sufficient to give stakeholders worried about the costs of mitigation considerable leverage in the policy debates. Indeed, because of the high stakes involved, climate models and modelers have been subject to strong criticism from large economic stakeholders, who foresee not only direct financial losses to themselves but a larger role for government in the economy as a consequence of climate change policies, which would reverse a twenty-year trend.[87] The controversy about climate change will only increase if, as a recent National Research Council report warns, steps are not taken to rehabilitate old data-collection technologies and networks that were designed for other purposes (such as local weather forecasting) but that feed irreplaceable data into climatological studies.[88]

Climate incorporates chaotic local variations that make isolation of valid trend lines even more difficult. Some of the same trends that cause damage in one place may bring benefits to another: stronger storms, for example, but longer growing seasons. Such variability makes international coalitions more difficult to build, as do ongoing issues, noted earlier, of how to

allocate response costs.

The climate change debate illustrates how politics affects the interpretation and actionability of knowledge. For such a complex issue, the only antidote to interest-based politics is the steady accumulation of better data and valid predictive models by a broad array of "intelligence generators," and the broad dissemination of those results to build an equally broad supporting consensus of opinion, public and private. Such breadth is necessary because most ecological threats cannot be met by government action alone. Thus they differ considerably from traditional military threats, or even newer terrorist threats, in both requiring active implementation support from the private sector and requiring the widest distribution of intelligence and warning. In the case of interstate and transnational threats, the distribution of most intelligence must be *limited* if responses are to be effective, and government is the principal responding actor.

A Methodology for Making Comparisons

The following segment adapts a methodology developed for analyzing the conditions under which international peace operations might be most likely to generate successful outcomes.[89] The adapted version uses five variables for framing and comparing interstate, transnational, and ecological threats to US national security, and five variables to estimate strategic likelihood, or overall propensity of an actor to take threatening action. This framework is then used to generate and compare illustrative threat/likelihood indices for historical and hypothetical events.

Component Variables

Important dimensions of security threats include their damage potential, how much warning we may have of their occurrence, and a sense of their overall likelihood.[90] A phenomenon with no damage potential is not much of a threat and so damage potential would seem the primary variable of concern. Warning is key to alerting us to potential danger. Without it, our fight-or-flight reflexes are useless. Likelihood, as used here, is a further tool for gauging the urgency of response. For threats of equal damage potential, those with shorter warning times and greater likelihood will tend be seen as more dangerous and deserving of attention and resources.

Damage potential

Among the dimensions of damage are: *depth* (seriousness of primary damage to targets), *breadth* (the geographic extent of primary damage), *ripple effects* (the geographic, social, or economic extent of strong secondary impacts of an event), and *recovery time* (how long it takes to restore or replace the damage wrought). The first and second dimensions are clear: events of concern might do great damage to a relatively small place (e.g., a pipe bomb); relatively superficial damage but to a large area (e.g., intermittent but persistent disruption or commandeering of commercial television or radio broadcast frequencies);[91] or great damage to large areas (e.g., a multiple-warhead nuclear missile attack or an outbreak of lethal disease readily spread by human contact).

The third dimension, ripple effects, is intended to capture the fact that many of the threats of greatest current concern involve networked institutions (such as banking, communications, and transport) that may be affected by an attack at some remove from the point of initial assault. An event that shut down Chicago's O'Hare International Airport, for example, would disrupt a significant fraction of US air traffic and ripple into international air traffic as well. Some networks are designed to be resilient (the Internet, for example), while others demonstrate a disturbing tendency to crash when stressed (such as certain regional power grids). Society is also a network, and fear can be a great disruptor of social relations.

Among the dimensions of damage are depth, breadth, ripple effects, and recovery time.

The fourth dimension, recovery time, measures how long it takes to rebuild after the precipitating event is over. It is treated as a component of damage (rather than damage control) because it helps further distinguish the severity of different threats. For example, while physical damage from conventional high explosives can be severe, once the damage is done it can be repaired or structures can replaced without further delay traceable to the nature of the threat mechanism. After flood waters recede, on the other hand, they may leave communities at continuing risk of cholera, e-coli contamination, or other disease from the contents of flooded-out sewage treatments that have been deposited all over town. Similarly, after a chemical or nuclear incident, residual toxic or radioactive materials — which may contaminate every exposed building surface, road surface, and soil surface — will need to be washed down, scraped down, or removed before the area can be re-used. If that is not feasible, recovery time

will be at least as long as the half-life of the incident's longest-lived radioactive waste product, or as long as it takes for the chemicals or toxins involved to break down in the open environment.

These variables are listed in table 12, together with a series of labels that describe different levels of damage associated with each of them, in order of severity. Each label has been assigned a scale value ranging from 1 (least severe damage) to 10 (the most severe).

Table 12: Evaluating Seriousness of Potential Threats

	WARNING TIME	DAMAGE POTENTIAL			
Scale Values		**Depth of damage per attack**	**Breadth of damage per attack**	**Extent of strong ripple effects**	**Recovery time**
10	less than a minute	death or destruction of target	nationwide	nationwide	months to years
7.5	less than an hour		statewide		weeks
5	day to a week	serious functional impairment of target	metropolitan area	citywide	days
2.5	weeks to months		several city blocks		hours
1	years	minimal functional impairment of target	a building, crowd, or person	immediate firm or family	minutes

Warning

Threat warning is commonly divided into two classes, strategic and tactical. Strategic warning notes the existence and development of a potential threat, monitors its status, and may be the basis for initiating a long-term program of countermeasures. Tactical warning notes the actuation of a threat. Tactical warning time is that between detection of actuation and the initiation of damage; the time, for example, between detection of an incoming missile and its detonation at its target.

It might seem preferable to have separate strategic and tactical warning variables in this model but their respective scales would tend to measure a single time continuum (from several years to several months for strategic warning, and from several weeks to several seconds for tactical warning). Some kinds of threats, moreover, yield odd results when measured with two warning variables. The United States had years of strategic warning, for example, with regard

to the Soviet nuclear arsenal (thus rating a "1" on a hypothetical strategic warning scale of 1 to 10). The missile components of that arsenal could be delivered with 30 minutes or less of tactical warning (a "5" on a first-cut tactical warning scale). Having both variables present in the model, even when combined with the very high damage potentials associated with general nuclear war, would have diluted the resulting threat index considerably, making the prospect of general nuclear war look more like Operation Desert Storm than the end of the known world.

Obviously, strategic warning is important. If US intelligence had had no advance knowledge of the Soviet long-range ballistic missile program, the armed services would have had less incentive to build a detection network able to provide tactical warning of ballistic missile attack. But lively imaginations and the worst-casing process would very likely have projected a Soviet missile program based on what the United States itself was building, and projected as well the need for a missile early warning system.[92]

Alternatively, consider the case of cyber threats to US infrastructure. General knowledge that such attacks might be possible suffices to stimulate countervailing measures, whether or not US intelligence is aware of a specific group of hackers beavering away to produce code designed, say, to hold the US banking system hostage. The more important thing to know is that such attacks will move at nearly the speed of light, taking whatever brief time is required to pass through switching nodes and transmission queues en route to their targets. Possibly unique to cyber threats, greater distance between threat and target or greater complexity of attack route may improve the probability of success by masking the origin of the attack and thereby facilitating attacks of longer duration and perhaps greater damage. That is one reason why information warfare and potential threats to information- and computer-based infrastructure have begun to attract urgent attention from governments: attack warning time has "collapsed."[93]

In the case of information- and computer-based infrastructure, attack warning time has "collapsed."

In general, the shorter the attack warning associated with a particular threat, the more difficult it will be for defenders to mount a response that reacts in time to do some good. For that reason, in evaluating threats on the warning variable, detection of an actualized threat — a launched missile rather than a merely deployed one — is emphasized as the better indicator of true danger posed by a threat.

Strategic likelihood

Gauging the likelihood that a threat will be actualized — at all, much less at a given point in space or time — is probably the most difficult task in the intelligence business. The history of international relations is dotted with risk assessment and prediction failures: in August 1914, regarding the expected duration of war in Europe; in 1939, regarding Hitler's intentions to use force; in 1964, regarding the potential efficacy of US intervention in Vietnam; and in 1980, regarding what was planned in Washington as a quick hostage rescue operation, and what was planned some months later in Baghdad as a very short war, both cases involving Iran. (Note that the US operation succumbed not to Iranian countermeasures but to equipment failures made worse by sandstorms, a natural threat.[94])

The variable scales associated with the calculation of strategic likelihood are presented in table 13. The first column lists likelihoods associated with a given scale value as they might be assigned by an expert analyst who carries within his or her head a model of threat bearer behavior and motive that is far more complex than anything presented here. The expert's ability to assign even a rough probability to a particular action at a particular time or place far exceeds the ability of this framework. The framework is intended, rather, to use structural variables to estimate the behavioral tendencies of different kinds of bearers of manufactured threat. Except for "history," different variables apply to governments ("official" threat-bearers) and to non-governmental groups ("unofficial" threat-bearers). As a result, strategic likelihoods and threat-likelihood indices for interstate and transnational threats should be compared to one another with caution. (No attempt has been made to estimate the likelihood of natural events.)

Conflict history is one of many variables that influence the course of interstate relations.[95] Such history may not predict well if governments and societies have changed substantially since conflict last occurred, but a knowledgeable analyst can take such a threshold effect into account in rating relationships on this variable. While it discounts novelty — the past cannot predict to what has never happened — the history variable does capture the sense of the past that contributes to the nursing of grievance and, potentially, to a lower threshold of conflict and nastier fighting once conflict breaks out. With three wars since independence, and continuing tension and periodic low-level conflict over Kashmir, for example, India and Pakistan would rate a seven or eight on history.

The scaling of official threat-bearer objectives borrows from the work of the Correlates of War project and the scaling measures for its Militarized Interstate Dispute (MID) data set.[96] These measures distinguish states that support the status quo from states that seek policy change

in another state, a change of government in another state, or territorial gain or recovery. To these objectives I have added "religious or ideological conversion," to cover entities like the Soviet Union, revolutionary Iran under the Ayatollah Khomeini, or perhaps Afghanistan under the Taliban, that seek to extend their community of belief. Implicit in the scaling is that countries with grander objectives are more highly motivated to act to achieve them.

The governmental pairing variable seeks to build on the "democratic peace" thesis, which observes that democracies, so far, have not gone to war with one another. Democracies have fought non-democracies with some frequency (for example, allies versus Central Powers, WWI; allies versus Axis, WWII; United States and coalition partners versus North Korea, 1950–53, and North Vietnam, 1959–75; United Kingdom versus junta-ruled Argentina, 1982; a mixed Gulf War coalition versus Iraq, 1991). Non-democratic states have fought each other with regularity, throughout history (in this century, Hitlerian Germany versus Stalinist Russia, or Saddam's Iraq versus revolutionary Iran). The scale basically assumes, subject to further refinement, that the less free the people, the more likely the fight.[97]

The governmental pairing variable seeks to build on the "democratic peace" thesis, which observes that democracies, so far, have not gone to war with one another.

For transnational threats, table 13 makes different assumptions about threat-bearer motives and how they might affect the likelihood of attack. Groups with economic motivations conduct their activities (licit or not) routinely: markets flush money around the globe, mobs launder it, and drug cartels ship product. Thus the likelihood of these actions is essentially unity: happens all the time; scale value 10. Apocalyptic cults like Aum Shinrikyo or angry sub-groups within an organization like Hamas in the West Bank and Gaza may exist only to strike at their enemies or to purify society. They will strike eventually, but maybe not today, so they are ranked below routinely-operating markets in likelihood of action. Secular political groups such as social-revolutionaries or contract terrorists may pick their targets and space their attacks more carefully than a driven cult or religious group.

Table 13: Approaches to Calculating Likelihood of Manufactured Threats

		Alternative likelihood calculations for manufactured threats (in lieu of the expert method):				
		For all calculations:	**For interstate threat likelihood only:**		**For transnational threat likelihood only:**	
Scale Values	**Composite Expert's Likelihood Estimate**	**History of threat bearer-threat target hostilities**	**Official threat bearer's objectives**	**Governmental pairing**	**Unofficial threat bearer's motivation**	**Mass casualty propensity**
10	very high; will happen	frequent; long history of hostile relations	seeking religious or ideological conversion	two totalitarian governments	economic (market, cartel, the mob), recreational (hacker)	Religious extremists
7.5		several prior instances; years of tense relations	seeking territorial gain/recovery	two non-democratic governments	religious or ideological (cults, zealots)	Right-wing revanchists
5	50-50 chance	two prior instances	seeking regime/govt change	one democracy, one non-democracy	secular political (revolutionary or contract terrorists)	Leftist social revolutionaries, Nationalist-separatists
2.5		one prior instance	seeking policy change by target	one stable democracy, one transitional govt.		
1	very low; little chance	no history; novel threat	satisfied, status quo power	two stable democracies		Organized crime

Also included is a variable estimating propensity to cause mass casualties, drawing on the work of Jerrold Post, cited earlier. Religious extremists and right-wing revanchists are viewed by Post as least reticent to cause mass casualties, whether with conventional explosives or WMD. Leftist revolutionaries may target government but are less likely to target "the people" and WMD make it difficult to avoid "collateral" damage in the population at large. Separatists want to be regarded as legitimate makers of new government, a goal more difficult to reach were they to use WMD in support of their cause, although irrational acts in the heat of battle certainly cannot be ruled out. Finally, organized crime might well seek to make a profit from peddling WMD and related materials, but extortionist threats with WMD are likely to quickly focus official attention that previously has been otherwise engaged on the tracking down and elimination of any gang responsible for perpetrating such a threat or attack: Bad for business,

hence less likely, although one would not want to rule out WMD-based extortion efforts on the part of, say, foreign gangs operating in a wealthy third country.

Generating Sample Data

In calculating the indices, each element of damage potential is treated as a separate variable; thus damage potential's impact on the threat index is much stronger than that of warning. The threat index is a simple average (statistically, the "expected value") of the five threat variables. Similarly, the likelihood index is an average of its three component variables, and the composite threat/likelihood index is an average of threat and likelihood. Until evidence arises that a more complicated formula would be advisable, Occam's Razor suggests sticking with expected value. The result is also a model wholly transparent to readers.

Measuring Manufactured Threats

The results of plugging some numbers into the framework can be found in table 14, which has separate sections for interstate, transnational, and ecological threats. The transnational threats include physical terrorist attack, cyber attack, financial crisis, and population pressure.

To illustrate the model, consider an historical case of interstate conflict, Operation Desert Storm, January 1991. The coalition telegraphed its attack for weeks (scale value 2.5), with UN Security Council resolution 678 setting the time for expiration of the coalition's ultimatum to Saddam Hussein to withdraw from Kuwait or face the consequences. The coalition action caused serious damage across much of the country (both scale values 7.5), with ripples throughout Iraqi society (10), recovery from which would have taken months to years (10), even without continuing international sanctions on Iraqi assets and trade. Overall damage potential: 8.75 on a scale of 10, kept from going any higher largely by the US-led coalition's limited political objectives and consequent US military self-restraint.

The threat index is a simple average of the five threat variables.

Operation Desert Storm was not a particularly "likely" event (index 4.5). The United States and Iraq had no recent history of conflict; indeed, the United States had been comparatively friendly toward Baghdad during the Iran-Iraq War, failing to react in anger even when an

Iraqi pilot fired Exocet missiles at the frigate USS *Stark* in 1987, ostensibly by accident, causing major loss of life. The retrospective likelihood of US action would drop even further were its objectives evaluated not as territorial recovery (on behalf of Kuwait, a 7.5 on the objectives scale) but as a change in Iraqi government war policy (a 2.5) netting a likelihood index of 2.67. If Saddam Hussein was making similar mental calculations in Baghdad in the fall of 1990, his failure to withdraw forces from Kuwait in the face of US threats appears somewhat less irrational.

Other, not very far-fetched assumptions on his part might have reduced the anticipated depth and breadth of damage in the event of US attack. The last air raids by US forces, against Libya in 1986, were short-lived and the previous major US bombing campaign, in Southeast Asia, had started slowly and with many political restrictions on targets. So a 5.0 for depth, breadth, and ripple effects (potentially serious damage but confined to areas nearest Kuwait) would not have been unreasonable, netting a threat index of 5.5 and a threat-likelihood index of about 4.1 — less than what is estimated here for the immediate impact of Russia's 1998 financial crisis on the US economy.

Hypothetical instances of interstate threats included in table 14 are the prospect of further political-military decay in Russia leading to accidental or unauthorized launch of nuclear forces, and a North Korean threat consisting of an intercontinental-range ballistic missile carrying a nuclear fission warhead. The Russian strategic arsenal remains capable of devastating the United States, with perhaps 2,000 warheads on alerted delivery vehicles, as noted earlier. Its raw damage potential is thus extremely high. Even if some missiles failed to launch, failed to properly release their warheads, or otherwise exhibited characteristics common to badly maintained complex mechanical systems, the few *hundred* remaining warheads that reached US soil and detonated would have widespread, deadly consequences, with national if not global ripple effects, and a recovery time measured in decades.[98]

A nuclear-armed North Korean missile could utterly destroy what it struck, but receives less than a 10 on depth of damage on the assumption that its guidance would be such as to give it a miss distance at least as large as the radius of its target, which is assumed to be an urban area. The resulting destruction would be city-wide, at least in its direct effects (that is, about a 5 in breadth). The strongest ripple effects of a nuclear detonation on US soil would be substantial — at least regional — and the impact on daily life and commerce in the region where the detonation occurred would be heavy. Recovery time for the attacked area would be lengthy. But as a single warhead rather than several hundred or even several dozen, its damage potential

would be far less than that of even a partial, errant launch of remaining Russian nuclear forces. Its likelihood, on the other hand, at least as a deliberate act, might well be higher.

This likelihood index is geared to such deliberate acts, and therein lies a limitation. It cannot make estimates of accidents or other non-willful behavior. The risk of Russian warheads landing on the United States may depend in future as much on the robustness of the Russian command and control system in the face of a short circuit, a miscommunicated command, or some other event that might accidentally transmit a launch order, as it would on Russian political attitudes toward this country. Assigning a meaningful probability to such an event, even as an exercise, however, would require much more information than is available to the author.

Among the sample transnational threats in table 14, the highest threat indices (7.5, equivalent to Desert Storm or the Korean ICBM scenario) are associated with a hypothetical information attack against an unprotected US power grid and with the impact of last summer's financial crisis on Russia. The information attack assumes relatively easy access to such a grid's administrative systems, sufficient to shut it down or otherwise interrupt service to customers region-wide (the Northeastern United States, for example). Such a shut down might do severe economic damage, depending on the amount of time the grid is offline, and have severe implications for criminal activity. Recovery might take days at best, longer if there has been serious looting during nighttime power outages.

The strategic likelihood of such a threat would seem to be pretty high, with hackers of varying motives and skill levels trying to crash into such systems with some degree of frequency, although not necessarily with the objective of causing mass casualties (that variable is left unrated in this case, because a lack of such propensity would not necessarily decrease the likelihood of hacking). A similar, well-protected grid might be able to increase attack warning time and keep intruders out, but would likely remain the subject of entry attempts; it would present, if anything, a greater challenge. The unprotected scenario is what might unfold if managers of a vulnerable grid did not act to reduce their system's vulnerabilities.

Table 14: Evaluating Selected Threats

Manufactured Threats	WARNING TIME	========== DAMAGE POTENTIAL ========== Depth	Breadth	Extent of strong ripple effects	Recovery time at best effort	Damage Potential (Average)	THREAT INDEX (Average)
Interstate							
US-Iraq, January 1991	2.5	7.5	7.5	10	10	8.75	7.50
Russian political/military decay, impact on US, longer term	7.5	10	10	10	10	10.00	9.50
North Korea-US, nuclear-tipped ICBM launch	7.5	7.5	5.0	7.5	10	7.50	7.50
Transnational							
Bin Laden-US embassies, 1998	10	7.5	1.0	2.5	10	5.25	6.20
Aum Shinrikyo-Tokyo, 1995	7.5	5.0	2.5	2.5	5.0	3.75	4.50
Information attack, unprotected power grid	10	7.5	7.5	7.5	5.0	6.88	7.50
Information attack, protected grid	7.5	1.0	1.0	1.0	1.0	1.00	2.30
Russian financial crisis, 1998	2.5	5.0	10	10	10	8.75	7.50
Russian financial crisis, impact on US, near term	5.0	1.0	7.5	1.0	1.0	2.63	3.10
Mexican migration pressure, future economic crisis	5.0	5.0	7.5	7.5	8.0	7.00	6.60
Ecological							
Global climate change	1.0	2.5	10	10	10	8.13	6.70
Natural Threats							
Catastrophic eruption, Mt. Rainier	7.5	10	6.0	6.0	9.0	7.75	7.70
Hurricane vs US Southeast	5.0	8.0	6.0	7.5	7.5	7.25	6.80

	STRATEGIC LIKELIHOOD, INTERSTATE				
Manufactured Threats	History of bearer-target hostilities	Threat-bearer's objectives	Pairing of regime types	LIKELIHOOD INDEX (Average)	THREAT-LIKELIHOOD (Average)
Interstate					
US-Iraq, January 1991	1.0	7.5	5.0	4.50	6.0
Russian political/military decay, impact on US, longer term	2.5	2.5	2.5	2.50	6.0
North Korea-US, nuclear-tipped ICBM launch	7.5	7.5	5.0	6.67	7.1

	STRATEGIC LIKELIHOOD, TRANSNATIONAL				
Transnational	History of bearer-target hostilities	Threat-bearer's motivation	Mass casualty propensity	LIKELIHOOD INDEX (Average)	THREAT-LIKELIHOOD (Average)
Bin Laden-US embassies, 1998	5.0	7.5	10	7.5	6.9
Aum Shinrikyo-Tokyo, 1995	5.0	7.5	10	7.5	6.0
Information attack, unprotected power grid	7.5	10		8.8	8.1
Information attack, protected grid	7.5	10		8.8	5.5
Russian financial crisis, 1998	7.5	10		8.8	8.1
Russian financial crisis, impact on US, near term	1.0	10		5.5	4.3
Mexican migration pressure, future economic crisis	5.0	10		7.5	7.1

The Russian financial crisis of 1998 has higher intrinsic damage potential for Russia than the posited information attack has for the United States, but the latter attack involves much shorter warning time, which drives up its threat index. The Russians, arguably, could see that the 1997 Asian economic crisis would eventually hit their own weak economy, hence warning time for this scenario is set at "weeks to months" in table 14. Its near-term impact on the United States is not very noticeable, but the effects of the financial crisis, if not undone, could eventually contribute to economic and political instability in Russia that could, in turn, increase the risk of something going awry with the country's nuclear forces. The current framework does not specifically account for such temporal ripple effects.

The attacks by the Bin Laden network against American embassies in Africa were locally deadly but confined in geographic extent. The threat index for such action is pushed up by the extremely limited warning time involved. Aum Shinrikyo's gas attack, as carried out, rates a lower damage potential than the embassy bombings; more people were sickened but far fewer died. The two groups are rated as similarly motivated, with similar attitudes toward mass casualties, hence their identical likelihood ratings.

Turning to ecological threats, substantial population growth will occur in Mexico in the next half-century. An Indonesian-style economic crisis or a disaster on the order of Hurricane Mitch could send waves of destitute and desperate people surging against border walls in the US Southwest and into states adjacent to the border. This scenario describes the transformation of a slow-moving ecological threat — over-population — into an urgent transnational threat of major proportion by a transnational triggering event (e.g., gyrating international financial networks) or by sudden force of nature. Its rise time is estimated at about one week. Regional economic and social recovery might take a good deal longer.

Climate change presents an interesting example of a phenomenon with relatively high damage potential despite a depth-of-damage rating that is less than serious. It was given this rating because that may be how global warming's effects will be experienced, as a sequence of changes that require adaptation but cause severe damage quite selectively (to low-lying coastal areas, for example, or to certain regions, that experience more severe droughts or flooding). The changes it induces may be quite widespread and longlasting, however, hence the ratings of 10 on breadth, ripple effect, and recovery time, which might be interpreted in this instance as "adaptation" time, instead.

Measuring Natural Threats

The model was used to generate threat indices for two natural threats, for comparative purposes: a hurricane that strikes the US Southeast, and the eruption of Mt. Rainier, in the Northwest. With modern weather forecasting, coastal areas may receive several days' warning of a hurricane's approach. Where it hits, the damage can be near total, can affect a significant portion of one or more states, and may ripple through a region, especially in terms of economic disruption. Its direct damage may take weeks or months to repair.

An eruption of Mt. Rainier could occur with much less warning, or at least much less heeded warning (since volcanic activity is rare compared to hurricanes and since predictive models are less far advanced than weather models). Assuming that an eruption of Rainier would be larger than that of nearby Mt. St. Helens in 1980, devastation within its immediate region could be complete, reach out dozens of miles, and billow ash clouds for hundreds of miles.[99] Its threat index works out to be the second highest in table 14. (It is visually easier to compare the various sample threats by looking at table 15, where the samples are ranked by threat index and damage potential.)

Comparison of the numbers for such an eruption with the numbers for a North Korean nuclear attack on a Northwestern city is apt. A volcano like Rainier can explode with a force equivalent to tens or hundreds of megatons and there is no defense against it, but few if any resources are devoted to preventing it and life in Seattle goes on. With respect to North Korea, defenses are as yet years away from deployment, but food and fuel deliveries and construction of nuclear power reactors are part of a large international effort to dissuade North Korea from completing work on a nuclear weapon suited to its missiles. There remains, in short, a certain fatalism about highly damaging natural threats that voters and policy makers would not and do not tolerate with respect to manufactured threats. Yet if Rainier were to erupt, or the geological fault lines under Seattle, Los Angeles, or San Francisco were to rupture, the damage would be enormous. Policy responses tend to be limited to reinforced building codes and the training of emergency response teams, and publics tend to treat likelihood as though nature plays dice, all rolls produce snake eyes, and the probability of an event on any given day is the same as any other, rather than slowly but steadily cumulative.

Table 15: Ranking the Sample Threats

Examples rated by threat index

Russian political/military decay, impact on US, longer term	9.50
Catastrophic eruption, Mt. Rainier	7.70
Information attack, unprotected power grid	7.50
Global financial crisis, impact on Russia, 1998	7.50
US-Iraq, January 1991, impact on Iraq	7.50
North Korea nuclear-tipped ICBM against US city	7.50
Hurricane vs US Southeast	6.80
Global climate change	6.70
Mexican migration pressure in econ. crisis	6.60
Bin Laden-US embassies, 1998	6.20
Aum Shinrikyo-Tokyo, 1995	4.50
Russian financial crisis, impact on US, near term	3.10
Information attack, protected grid	2.30

Examples rated by raw damage potential

Russian political/military decay, impact on US, longer term	10.00
US-Iraq, January 1991	8.75
Global financial crisis, Russia, 1998	8.75
Global climate change	8.13
Catastrophic Eruption, Mt. Rainier	7.75
North Korea-US, nuclear-tipped ICBM	7.50
Hurricane vs US Southeast	7.25
Mexican migration pressure in econ. crisis	7.00
Information attack, unprotected power grid	6.88
Bin Laden-US embassies, 1998	5.25
Aum Shinrikyo-Tokyo, 1995	3.75
Russian financial crisis, impact on US, near term	2.63
Information attack, protected grid	1.00

A Methodology for Choosing Among Policy Responses

While the foregoing threat assessment model can help sort through a wide variety of potential troubles, it does not itself suggest how to deal with them. Ideally, a decision assistance tool would also help policy makers choose the most effective approaches to implementing policy and the most cost-effective ones. What follows is an approach to judging relative response effectiveness, for different substantive policy options and for different forms of international cooperation. Limited time and resources relegate measures for costing and cost-effectiveness to future research, but an assessment of what works is a necessary step toward that more complete analysis.

Describing Multi-Attribute Utility Analysis (MAUT)

This segment applies a variant of multi-attribute utility analysis (MAUT), as described in Posavac and Carey (1989) and presented by the University of Oklahoma's Department of Family and Preventive Medicine.[100] MAUT is used a good deal in the health policy analysis field, where subjective judgments of the efficacy of treatments and other decisions under conditions of uncertainty are a frequent necessity. Some authors have also used it to evaluate weapon systems in the context of efforts to devise conventional arms transfer restraint schemes that take into account regional military power balances.[101] Since the worlds of public health and national security seem to be converging in the area of domestic responses to terrorist violence, it seems only fitting that the methodology be applied to the problem of optimizing, or at least prioritizing, choice of policy response to such threats.

MAUT is a decision-analysis tool that identifies the decision-maker(s), the issue(s) to be addressed, and the policy options to be evaluated. The evaluator(s) determine the decision-maker's overall policy goal and the subsidiary objectives (or "dimensions of value") that will help to achieve it. These objectives are then evaluated in terms of their perceived importance to achieving the overall goal.

Objectives are first rank-ordered. By convention, the least important objective is given a rank of 1 and assigned a weight of 10. Each successive objective is assigned a weight corresponding to judges' views of how much more important it is than the least important objective, in terms of achieving the overall goal. This is a step toward transforming the rank-ordering into an interval scale of values, which is in turn necessary for the weights to have comparative meaning. (Otherwise, in any set of five objectives, the top-ranked one would always be five times as "important" as the least valued objective, the next one four times, and

so on.) The final step is to standardized the weights so that they sum to 100 (sum the original weights, divide each weight by the sum, and multiply by 100).

Judges then assign subjective probability estimates to each policy option's potential to maximize or minimize each objective. Judges might estimate that option X has a very good chance of maximizing objective Y and assign it a probability of 70 or 80 percent; or they may estimate that it has a poor chance of doing so and assign it a probability of 10 or 20 percent. Weights and probabilities for each combination of option and objective are multiplied to create probability-adjusted weights. These adjusted weights (or utilities) are summed over objectives for each policy option to create a measure of total utility for each option.

The rank-orderings, weightings, and probability estimates may best be done by Delphi method, with experts independently ranking the objectives, then assigning weights, then assigning probabilities. The same groups of experts need not, and perhaps should not, assign both the weights and the probabilities. The sample results presented in table 16, on the other hand, reflect only the author's first cut and as such are strictly illustrative.

Gauging the Utility of Threat Responses

Two passes at the problem of dealing with terrorist threats to US people, property, and territory are illustrated in table 16. The first pass sets an overall goal of *minimizing the likelihood of attack*. The second pass sets an overall goal of *minimizing damage if an attack occurs*. The component variables of the threat index described in the previous section were used as policy objectives, with depth and breadth of attack collapsed into "raw damage potential," and with the addition of a further objective of minimizing the threat's potential to act.

This added variable seemed the most important objective for the first goal, followed by maximum warning time (with more time, a disruptive response might be launched), and then minimized raw damage potential, ripple effects, and recovery time. Since the latter two are post-attack objectives, both were assigned a weight of 10 for this pass. Minimizing potential depth and breadth of damage might have an impact on likelihood of attack if that potential were so reduced that an attack would not have the desired impact; so it was rated as four times as important as the first two objectives. Warning time was rated slightly higher still, while minimizing action potential was deemed most important.

The three categories of action mentioned in PDD-39 were chosen as policy options. Two sub-options were evaluated for each: passive and active approaches to threat/vulnerability

management; direct defense and retaliation as approaches to crisis management; and immediate versus longer-term approaches to consequence management. Each of these sub-options in turn has a number of alternatives that could themselves be subject to MAUT.

Probabilities were assigned to each option-objective pairing just once, since the option's relationship to the objective ought not change with a re-weighting of the objective, provided the *issue* stays the same. Probabilties could change considerably, however, for a different issue, that is, for something other than protection against terrorist attack.

As an example of how probabilities in table 16 were assigned, look at the column of numbers for passive vulnerability management. It received a probability of 10 percent with respect to minimizing action potential and maximizing warning time (rather than zero, as it could conceivably have a marginal, indirect impact on either one). It received a much higher probability of minimizing raw damage potential (60 percent), as this is what vulnerability management is supposed to do. Since threats evolve and adapt, such protection is unlikely to be perfect. Similarly, passive techniques might help to stem some but not all ripple effects and, by reducing direct damage, might also contribute to post-attack recovery (40 percent and 50 percent probability, respectively).

The results in table 16 are instructive, even as examples. For the first pass, aimed at minimizing the likelihood of attack, active vulnerability management has far greater utility than any other option, because it has the only reach-out role of the options evaluated. Referring to its sub-components, pre-emption refers to striking a would-be attacker as the attack is about to be launched. Prevention refers to reducing at the source the conditions that contribute to the emergence of support for terrorist groups. Such actions are the focus of economic and political development (economic opportunity, open markets, responsive government, and the like).

For the second pass, minimizing damage if an attack occurs, the total utilities for the various options change considerably because the weights for the five objectives change. The primary objective is to minimize raw damage potential, which could be helped by better warning time, and by actions to minimize ripple effects. Minimizing recovery time is rated as less important than halting ripple effects, and minimizing action potential is unimportant in this pass, as the attack is posited to be underway.

Table 16: Applying Multi-Attribute Utility Theory to Threat/Response Management

	POLICY OPTIONS:			**Vulnerability Management**		**Crisis Management**		**Consequence Management**	
ISSUE: protecting US people, property, territory from terrorist attack and damage				Passive (barriers, structural strengthening, filtration systems, shelters)	Active (intelligence, prevention, deterrence, pre-emption)	Direct defense	Retaliation	Site clean up, victim care, ripple control	Site rebuilding, service restoration
Dimensions of Value:									
FIRST PASS: minimize likelihood of attack	Rank	Weight	Normal (sum to 100)	Subjective probability estimates for each option/objective pairing					
Minimize threat's action potential	5	60	35.29	0.1	0.6	0.1	0.5	0.1	0.1
Maximize warning time	4	50	29.41	0.1	0.7	0.2	0.1	0.1	0.1
Minimize raw damage potential	3	40	23.53	0.6	0.3	0.5	0.1	0.4	0.3
Minimize major ripple effects	2	10	5.88	0.4	0.2	0.4	0.2	0.5	0.7
Minimize recovery time	1	10	5.88	0.5	0.2	0.5	0.1	0.5	0.6
				Probability estimates multiplied by objectives' normalized weights, first pass					
Minimize threat's action potential				3.5	21.2	3.5	17.6	3.5	3.5
Maximize warning time				2.9	20.6	5.9	2.9	2.9	2.9
Minimize raw damage potential				14.1	7.1	11.8	2.4	9.4	7.1
Minimize major ripple effects				2.4	1.2	2.4	1.2	2.9	4.1
Minimize recovery time				2.9	1.2	2.9	0.6	2.9	3.5
Sum total utility, 1st pass:				25.9	51.2	26.5	24.7	21.8	21.2
SECOND PASS: minimize damage if attack occurs	Rank	Weight	Normal (sum to 100)	Subjective probability estimates for each option/objective pairing					
Minimize raw damage potential	5	80	38.10	0.6	0.3	0.5	0.1	0.4	0.3
Maximize warning time	4	60	28.57	0.1	0.7	0.2	0.1	0.1	0.1
Minimize major ripple effects	3	40	19.05	0.4	0.2	0.4	0.2	0.5	0.7
Minimize recovery time	2	20	9.52	0.5	0.2	0.5	0.1	0.5	0.6
Minimize threat's action potential	1	10	4.76	0.1	0.6	0.1	0.5	0.1	0.1
				Probability estimates multiplied by objectives' normalized weights, first pass					
Minimize raw damage potential				22.9	11.4	19.0	3.8	15.2	11.4
Maximize warning time				2.9	20.0	5.7	2.9	2.9	2.9
Minimize major ripple effects				7.6	3.8	7.6	3.8	9.5	13.3
Minimize recovery time				4.8	1.9	4.8	1.0	4.8	5.7
Minimize threat's action potential				0.5	2.9	0.5	2.4	0.5	0.5
Sum total utility, 2nd pass:				38.6	40.0	37.6	13.8	32.9	33.8

Active and passive vulnerability management are essentially neck and neck in total utility for this pass, followed closely by direct defense, then by the two forms of consequence management, with retaliation trailing badly. In this pass, the utility of active vulnerability management is increased by its impact on warning time but decreased by its relatively low assigned probability of affecting damage potential. (As conceived here, active vulnerability management is envisioned as a pre-attack process with little active trans-attack role. With a different conceptualization, results would be different.)

Readers are invited to replicate the table and experiment with different weighting and probability schemes to suit their own estimates, as well as substitute other policy options or objectives (which could of course be more specific than "minimizing" or "maximizing"). The more experience and the better the data brought to bear on such an effort, the greater the validity of the utility assessment. The more expert judges agree on weights and probabilities, the greater their reliability, reinforcing validity.

Gauging the Utility of International Cooperation

This paper has argued at many points along the way that cooperation between governments is needed to deal effectively with the array of challenges that the United States and the rest of the international community will face in the twenty-first century. But what level of cooperation works best for which challenges? This segment illustrates how multi-attribute utility theory might be used to craft an answer. The issue in question is a broad one: implementing elements of the *National Security Strategy*. The overall goal is to minimize threats to US security. The array of objectives contributing to that goal (see table 17) focus on the threats emphasized in the *NSS*, with rankings deduced both from the language of the *NSS* and from US spending priorities. The policy options are generic in nature: unilateral action, bilateral actions and agreements, and multilateral arrangements (including informal regimes and networks of cooperation, regional organizations and treaties, and global organizations and treaties). For examples of each form of cooperation in different substantive fields, see table A.5.

Because the options are generic, the subjective probability estimates assigned to each of them with respect to each policy objective are, for this example, based on a mental average over several relevant cases. For dealing with regional threats, for example, bilateral partnerships (as with Turkey, Kuwait, Saudi Arabia, or Bahrain with respect to Iraq; or with South Korea with respect to the threat from the North) are rated in a dead heat with regional organizations (the category that encompasses NATO). Unilateral action has a lower estimated probability of success because the United States could have difficulty sustaining a *wholly* unilateral policy (no

allies, no partners, no base rights) to contain or to punish a regional power at any great distance from US territory. Military options would be confined to naval forces and long-range bombers, and domestic political support could be difficult to sustain, given the public's strong preferences for multilateral action. Regimes like the Missile Technology Control Regime can be useful tools for constraining problematic states' access to advanced technology. Global organizations like the United Nations sometimes have high utility for dealing with rogue states, and the UN Security Council proved especially helpful in reinforcing the legitimacy of Operation Desert Storm in 1991, but that utility is highly issue-dependent as Council action is subject to veto by any of its five permanent members (China, France, Russia, the UK, and the United States).

Stemming the proliferation of nuclear weapons to additional states is essentially undoable by unilateral action. We might threaten each new proliferator with pre-emptive destruction but such threats would not be credible. Bilateral relationships can be important in key instances: US pressure in the 1970s brought a halt to nuclear weapon programs in South Korea and Taiwan.[102] But exclusively bilateral arrangements would be an inefficient and potentially expensive approach to non-proliferation worldwide. Voluntary supplier restraint regimes could be somewhat more efficient but are not politically binding. Regional agreements are binding, and examples include the Treaty of Tlatelolco, establishing a nuclear weapon-free-zone in Latin America, and several other nuclear-free zones in areas of the world that include no current nuclear weapon states. Finally, global treaties include the flagship Nuclear Non-Proliferation Treaty and the 1996 Comprehensive Test Ban Treaty. (Were this proliferation objective broadened to include chemical and biological weapons, global agreements would also include the Chemical Weapons and Biological and Toxin Weapons Conventions.)

Stemming nuclear weapons proliferation is essentially undoable by unilateral action.

All other option-objective pairings were assessed in similar fashion, weighing achievements and possibilities against gaps and failures. The result is the matrix of illustrative probability estimates in the upper half of table 17. The probability-adjusted weights for each option-objective appear in the lower half of the table. Overall, in this sample evaluation, a bilateral, that is, one-to-one or hub-and-spoke, approach to cooperative threat management arrangement ends up having slightly greater total utility than other options. This is more or less the traditional approach to cooperation taken by the United States and might be the expected preference of a country with the United States' position of leadership, with all roads leading to

Washington. But bilateral arrangements are followed closely in total utility by regimes and other networks of cooperation, appropriate to an increasingly networked world. Regional organizations and treaties, unilateral action, and global organizations follow in total utility.

Policy priorities of course matter a great deal in evaluating policy options. If, for example, nonproliferation and climate change were given much higher national priorities than table 17 asserts they enjoy now, and the weights given policy objectives were reassigned accordingly, then global institutions would have the highest total utility for US policy, followed by regimes, bilateral arrangements, regional organizations, and unilateral action.

This tool, with widely agreed weightings and probabilities, applied at successive levels of specificity, could be used by decision makers to build consensus within the national security community for the choice or evaluation of policy options against priority threat objectives, and for rating the utility of various forms and levels of international cooperation in carrying out selected options. Questions to be asked would include: What really are our best, data-supported estimates of the respective utilities of prevention, defense, and damage repair or adaptation in each area of threat? Which threats are most "malleable," or amenable to active management, and which malleable elements are most cost-effective to address, by what means? (If none are malleable, or such an effort would clearly be less cost-effective than managing our own vulnerability to a threat, then policy would concentrate on vulnerability management.)[103]

Such cost-effectiveness research, applying both the threat-level analysis framework and the approach to analyzing response-utility laid out in this paper, could facilitate choice between similarly effective options, or between options of equal cost that turn out to have differing total utility. Such research might ask how much it would cost to, say, increase warning time for threats to critical infrastructure by one notch on the warning scale, and what such increased warning might buy in terms of flexibility or efficacy of response. Or it might look at the cost to decrease the depth or breadth of damage expected, or the cost to minimize the ripple effects or the recovery time. It could evaluate the cost-effectiveness of such action taking into consideration the relative utility of policy options for meeting specific objectives in a specific circumstance. Finally, it might investigate the relative utility of each response option in the context of different degrees of cooperative international threat management.

Table 17: Evaluating the Utility of Cooperative Action Against Priority Threats

	POLICY OPTIONS:			**Unilateral Action**	**Bilateral Actions**	**Multilateral Arrangements**		
ISSUE: promote US national security					Single or multiple partners	Regimes, cooperative networks, info sharing	Regional Organizations and Treaties	Global Organi-zations and Treaties
NSS priorities (minimize threats to US posed by):	Rank	Weight	Normal (sum to 100)	Subjective probability estimates for each option/objective pairing				
Rogue states/major regional threats	11	120	21.43	0.4	0.6	0.4	0.6	0.4
Terrorists with WMD	10	100	17.86	0.4	0.4	0.4	0.4	0.4
Nuclear weapons (current arsenals)	9	70	12.50	0.5	0.6	0.3	0.3	0.2
Organized crime (drug cartels)	8	70	12.50	0.2	0.5	0.4	0.3	0.4
Nuclear proliferation (to states)	7	50	8.93	0.2	0.3	0.4	0.5	0.6
Threats to critical infrastructure	6	50	8.93	0.6	0.4	0.6	0.3	0.3
Illegal immigration	5	30	5.36	0.6	0.5	0.3	0.3	0.3
Climate change	4	20	3.57	0.1	0.3	0.5	0.3	0.8
Organized crime (other activities)	3	20	3.57	0.2	0.5	0.6	0.3	0.2
Foreign intelligence agencies	2	20	3.57	0.8	0.2	0.5	0.1	0.1
Problems of failed and failing states	1	10	1.79	0.2	0.2	0.3	0.4	0.5
				Probability estimates multiplied by objectives' normalized weights				
Rogue states/major regional threats				8.57	12.86	8.57	12.86	8.57
Terrorists with WMD				7.14	7.14	7.14	7.14	7.14
Nuclear weapons (current arsenals)				6.25	7.50	3.75	3.75	2.50
Organized crime (drug cartels)				2.50	6.25	5.00	3.75	5.00
Nuclear proliferation (to states)				1.79	2.68	3.57	4.46	5.36
Threats to critical infrastructure				5.36	3.57	5.36	2.68	2.68
Illegal immigration				3.21	2.68	1.61	1.61	1.61
Climate change				0.36	1.07	1.79	1.07	2.86
Organized crime (other activities)				0.71	1.79	2.14	1.07	0.71
Foreign intelligence agencies				2.86	0.71	1.79	0.36	0.36
Problems of failed and failing states				0.36	0.36	0.54	0.71	0.89
Sum total utliities:				39.1	46.6	41.3	39.5	37.7

SUMMARY AND CONCLUSIONS

We live in a world of Dickensian qualities, a world of opposites out of *A Tale of Two Cities*. Our "London" is a world of soaring stock markets, amazing technology, expanding wealth, job opportunity, growing gender equality, and increasing life expectancy; a world of representative government, respect for human rights, and legal due process. Our "Paris" is a world of soaring population, creaking infrastructure, stagnant income, maldistributed wealth, high unemployment, gender discrimination, debilitating disease, and dropping life expectancy; a world of indifferent or corrupt governance, lip service to human rights, and arbitrary law enforcement. Moreover, our two "cities" are not entirely separate. They describe the conditions for groups of humanity, one small and stable, the other large and growing, who are distributed throughout the world. In the United States, there are large pockets of "Paris" in most inner cities. In China and India, Brazil and South Africa, there are large pockets of "London." The worlds are interpenetrated by trade, transportation, communications, finance, and the spillover of conflict, by population growth, the movement of peoples, and the transmission of disease. They cannot be separated. Should our "Paris" dissolve in violence, "London" would not be immune. Indeed, we fear that the revolution in "Paris" is already underway and reaching out in the furtive movements of terrorist cells, the wealth-draining actions of organized crime, and the outpourings of refugees from political and economic collapse.

We live in a world of Dickensian qualities [but] our "two cities" ...cannot be separated.

Most of the challenges that this country faces in the century to come, whether they emanate from "Paris" or "London," cannot be met by unilateral US action, and certainly not by unilateral action alone. Some very big ones, like climate change, or protecting national infrastructure from deliberate damage, cannot be met by governmental action alone.

Cooperative threat management has a long history, with the scope of cooperation defined by the scope of the threat and by the trustworthiness of potential allies (first kin, then fellow nobles, then subjects, then citizens, then other states and their citizens). Over the last few centuries, as European-style states were declared in every part of the world, states became the principal sources of external security for their peoples and the principal sources of external insecurity to other states. Cooperative interstate threat management has evolved among the major industrial democracies to such an extent that mutual military threats have essentially

disappeared. Other state-based military threats to the major democracies' interests emanate largely from a relative handful of countries — for example, North Korea, Iraq, and of late, Yugoslavia — that remain outside global trends toward political and economic openness and pose military threats to their neighbors or their own people.

Cooperative action against egregious violations of humane norms of governance like the violent ethnic cleansing (1998–99) of the province of Kosovo by the federal government of Yugoslavia is a relatively new phenomenon that poses a three-way dilemma with which states are just beginning to grapple. Such intervention pits traditional principles of sovereignty against more recently evolved principles of self-governance and human rights, and the latter against the prospective costs of intervention to the West in terms of Western money and lives. Yugoslav actions in Kosovo attracted a NATO response in part because they took place on NATO's doorstep, continuing the saga of Yugoslavia's breakup in which NATO was already deeply involved and where sovereignty had already been compromised. NATO also responded in part because its target was not a powerful peer, which reduced the cost and risk of intervention. That is, Western principles and Russian fears notwithstanding, NATO will not replay its Kosovo response should another Chechnya brew up within the Russian Federation. But in making cost minimization a driving criterion for their choice of policy options, NATO members forsook options with potentially greater utility for achieving the alliance's objectives. As a result, what began as preventive threat management metamorphosed quickly into crisis management and, with violent Serb actions against the Kosovar population, into costly interim consequence management as refugees surged over borders into neighboring, unstable, dirt-poor states. More systematic early analysis of policy options and objectives might not have overcome basic political barriers to certain courses of action, such as early use of low-altitude air power, special forces, or ground forces, but at least there would have been a clearer going-in sense of what NATO was buying into.

For policy options aimed at the new challenges confronting national security, we need a much better sense of what works and how well.

There needs to be such a clearer going-in sense of effectiveness, and cost-effectiveness, for policy options aimed at many of the new challenges that now confront national security. We need a much better sense of what works and how well. We need to be able to compare unlike threats, and unlike responses, to be able to allocate limited resources most effectively. It is frequently said, by advocates of preventive measures, that prevention is cheaper than cure. We

need the comparative data to support that statement if resources are to be shifted from crisis management to prevention. It may prove too expensive to attempt to address the political or economic conditions abroad that help drive the avatars of the old and sacred to punish the profane and presumptive, including those who presume to build diverse or open or pluralistic or democratic societies. But even if prevention proves costly, the projected costs of crisis management or remediation might be so high, once calculated, that prevention still seemed a comparatively good deal. And there may even be unsung, unglamourous, cost-effective preventive measures whose impact could be multiplied at relatively little cost.

Although the US government engages in hundreds of international cooperative ventures on a daily basis, its structure for dealing with a rapidly evolving, interlinked world is far from ideal. Large institutions are notoriously slow to change. Responsibility for dealing with each of the major, high-priority threats in the *National Security Strategy* may be spread among eight or nine large departments and twenty or thirty programs. The overhead alone of managing threat responses with that number of actors involved is significant. As the number of actors increases, a growing proportion of effort is spent on consensus-building and consensus-management, drawing time and resources from application to the actual policy objective. Such consensus-building extends, unavoidably, to the networks of international institutions built largely since the Second World War to deal with security, trade, finance, transport, development, and a host of other issues. As Penn political scientist John Ikenberry has argued, this "Western liberal political order" has persisted and grown because the institutions return benefits to their members, binding their interests together, and because there are "decreasing returns to power": in the system's basic bargain, secondary states agreed to participate and the United States agreed to place limits on its exercise of power — in a word, to play by the rules.[104]

But the same solid consensus-building, institution-building order that is designed to promote stability of relations and to limit the exercise of power between states may not be conducive to flexible, nimble responses to fast-moving, adaptive challengers. It may be able to deal with ecological threats provided it tackles them while they remain relatively slow-moving, that is, before they are pushed across some threshold that may change the nature of the problem. It may have more difficulty adapting to networked transnational threats or facing down the leaders of pariah states whose ruthlessness forces would-be interveners to confront their own limited levels of commitment. Moreover, the consensus builders are constrained, as in Kosovo, to the use of the tools at hand in the manner practiced, at cost levels previously judged acceptable, even if the tools and techniques are too blunt for the task and costs to the interveners are kept manageable at the expense of populations intended to be saved.

Finally, in a world of transnational threats and regional conflict what do several thousand nuclear weapons deter? Do they do it better than several hundred or several dozen? Can *uncertainty* be deterred? Nowhere in the current national strategy are these questions answered or even addressed. Reserving options for rapid, large-scale, first use of nuclear weapons, for example, against one former foe whose main enemy now is entropy; against another power whose still-small stock of long-range weapons is mostly not on alert; or against small regional proliferators that could, frankly, be reduced to slag by half the war load of one missile submarine, seems not only unnecessary but logically incomprehensible. Substantial arsenals in the United States and Russia remain on alert, even as political and economic order in Russia seem increasingly problematic, and even though the American arsenal is targeted on the unknown. Nuclear doctrine and force structure, both offense and defense, need to be revisited and fundamentally re-evaluated by individuals without a stake in the current structure. Only when the United States and the other nuclear powers find their way past these monuments to the twentieth century's most dangerous standoff can they say that they are ready to address the threats of the future.

Notes

1.Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates*, for fiscal years 1999 and 2000 (Washington, D.C.: March 1998, March 1999), tables 6-4 and 6-5. On the Internet at: http://www.dtic.mil/comptroller/. The post-Cold War reductions in US Defense Department total obligational authority bottomed out in fiscal year 1998 at 23 percent below the average for the last 30 years of the Cold War (fiscal years 1963–1992, the last of which incorporated the breakup of the Soviet Union in late 1991). FY 1998 authority was 35 percent below the peak year of the Reagan buildup, 1985. All percentages based on budgets in constant FY 1999 dollars.

2.Definitions drawn from *Merriam-Webster's Collegiate Dictionary*, 10th ed. (Springfield, Mass: Merriam-Webster, Inc., 1995).

3.Evolutionary psychology stresses that the cranial circuit that modern human beings use in living their lives evolved very slowly over geological time. See Leda Cosmides and John Tooby, *Evolutionary Psychology: A Primer* (Santa Barbara: Center for Evolutionary Psychology, University of California, 1997). Internet: http://www.psych.ucsb.edu/research/cep/primer.htm. For a recent treatise on fear and human behavior, see Stephen S. Hall, "Fear Itself: What we now know about how it works...and what it tells us about our unconscious," *New York Times Magazine*, February 28, 1999, pp. 41–47 ff. For perhaps the same reason that Hollywood turned out two comet/asteroid disaster movies last year, two books appeared in 1998 on the same subject, with the same title, but different emphasis. See Rush W. Dozier, Jr., *Fear Itself: The Origin and Nature of the Powerful Emotion that Shapes Our Lives and Our World* (New York: St. Martin's Press, 1998), and Nancy L. Schultz, ed., *Fear Itself: Enemies Real and Imagined in American Culture* (West Lafayette, IN: Purdue UP, 1998).

4.See, for example, Michael E. Brown, ed., *The International Dimensions of Internal Conflict* (Cambridge, Mass.: The MIT Press, 1996), and Martha Crenshaw, ed., *Terrorism in Context* (University Park, Pa.: The Pennsylvania State University Press, 1995).

5.With a rapidly-changing issue such as climate change, the Internet can be a prime source of recent data. See, for example, the website of the International Energy Agency Greenhouse Gas R&D Programme, at http://www.ieagreen.org.uk/. For efforts to model the economic impact of climate change, see the report of the Organization for Economic Cooperation and Development (OECD), "Economic Modeling of Climate Change," report of a workshop held at OECD headquarters, September 17–18, 1998. Internet: http://www.oecd.org/env/online.htm.

6.Graham S. Pearson, "The Threat of Deliberate Disease in the 21st Century," in Marie I. Chevrier, et al., *Biological Weapons Proliferation: Reasons for Concern, Courses of Action* Report No. 24 (Washington, D.C.: The Henry L. Stimson Center, January 1998), pp. 27–30.

7.William K. Stevens, "Greenhouse Gas Issue: Haggling Over Fairness," *New York Times*, November 30, 1997.

8.For an excellent history, see William H. McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago, Ill: Univ. of Chicago Pr., 1982).

9.For a good discussion of offensiveness and defensiveness, see Jack S. Levy, "The Offensive/Defensive Balance of Military Technology: A Theoretical and Historical Analysis," *International Studies Quarterly* vol. 28 (1984), p. 226. The debate about whether an offense-defense balance can even be usefully calculated was renewed in 1998–99 in the pages of the journal

International Security. See Stephen Van Evera, "Offense, Defense, and the Causes of War," *International Security* vol. 22, no. 4 (Spring 1998), pp. 5–43; and Charles L. Glaser and Chaim Kaufmann, "What is the Offense-Defense Balance and Can We Measure It?" Ibid., pp. 44–82. Critiques from James W. Davis, Jr., Bernard I. Finel, and Stacie E. Goddard, with replies from the original authors, may be found in "Correspondence: Taking Offense at Offense-Defense Theory," *International Security* vol. 23, no. 3 (Winter 1998–99), pp. 179–206.

10.Janne E. Nolan, et al., "The Imperatives for Cooperation," in Janne E. Nolan, ed., *Global Engagement: Cooperation and Security in the 21st Century* (Washington, D.C.: The Brookings Institution, 1994), pp. 37–38.

11.Bernard and Fawn M. Brodie, *From Crossbow to H-Bomb* (Bloomington: Indiana Univ. Pr., 1973), pp. 35–37.

12.For an update on Russian programs that is more alarmist in its title than its text, see Judith Miller and William J. Broad, "Germ Weapons: in Soviet Past or in the New Russia's Future?" *New York Times*, December 28, 1998, p. A1.

13.Committee on Nuclear Policy [CNP], *Jump START: Retaking the Initiative to Reduce Post-Cold War Nuclear Dangers* (Washington, D.C.: The Henry L. Stimson Center, February 1999), pp. 6–7, 12.

14.For an overview, see the Cooperative Threat Reduction (CTR) homepage on the Internet: http://www.ctr.osd.mil/index.html. Accessed April 39, 1999. According to Senator Richard Lugar, who is regarded, along with former Senator Sam Nunn, a founding father of the CTR program (also known as "Nunn-Lugar"), the program as of late 1998 has "facilitated" the destruction of 339 former Soviet ballistic missiles, 286 launchers for those missiles, 37 bombers, 96 submarine missile launchers, and 30 submarine-launched ballistic missiles. Some 4,838 warheads formerly on "strategic delivery systems aimed at the United States" have been deactivated with assistance from Nunn-Lugar funding. (Office of Senator Richard G. Lugar, "Press Conference Statement, November 24, 1998," mimeo.)

15.For extensive analysis of chemical weapons use in that war, see Gordon M. Burck and Charles C. Floweree, *International Handbook on Chemical Weapons Proliferation* (New York: Greenwood Press, 1991), ch. 2, esp. pp. 110, 115.

16.The United states built about 700 ER weapons and stored them on bases at home. See William M. Arkin, Robert S. Norris, and Joshua Handler, *Taking Stock: Worldwide Nuclear Deployments 1998.* (Washington, DC: Natural Resources Defense Council, March 1998), appendix A. See also Federation of American Scientists, "Complete List of All U.S. Nuclear Weapons," Internet, http://www.fas.org/nuke/hew/Usa/Weapons/Allbombs.html. Downloaded January 25, 1999.

17.For a good, recent primer on threat agents and available countermeasures, see Institute of Medicine and National Research Council, *Chemical and Biological Terrorism: Research and Development to Improve Civilian Medical Response* (Washington, D.C.: National Academy Press, 1999), esp. chs. 4–6.

18. See, for example, Richard A. Falkenrath, "Confronting Nuclear, Biological, and Chemical Terrorism," *Survival* (Aut. 1998), pp. 43–65, and "WMD Terrorism: An Exchange," *Survival* (Wtr 1988–99), pp. 168–183, critiques of Falkenrath by Karl-Heinz Kamp, Joseph F. Pilat, and Jessica Stern, with a reply by the author. Recent time-series research concludes that "there is virtually no

evidence of an upward trend in transnational terrorism," based on analysis of numbers of terrorist incidents, 1970–1996. The authors do not weight incidents by number of casualties generated, however. Walter Enders and Todd Sandler, "Transnational Terrorism in the Post-Cold War Era," *International Studies Quarterly*, vol. 43 (1999), pp. 145–167.

19.Jerrold M. Post, "Weapons of Mass Destruction Terrorism: Psychological Incentives and Constraints," mimeo. Forthcoming as a chapter in Jonathan B. Tucker, ed., *Toxic Terror: Assessing the Terrorist Use of Chemical and Biological Weapons*, BCSIA Studies in International Security (Cambridge, Mass.: The MIT Press, fall 1999).

20.Ibid. See also Bruce Hoffman, *Inside Terrorism* (London: Victor Gollancz, 1998), pp. 199–205.

21.Jessica Stern, "Apocalypse Never, but the Threat is Real," *Survival* (Wtr 1998–99), p.177. The highest number of US casualties due to terrorist violence have stemmed from singular events like those listed in text linked to note 18, especially the 1993 Trade Center bombing, and the 1996 bombing of the Khobar Towers apartment complex in Saudi Arabia. But a total of 55 Americans were killed in terrorist incidents, including these two incidents, between 1992 and 1997. US Department of State, Office of the Coordinator for Counterterrorism, *Patterns of Global Terrorism: 1997* (Washington, D.C.: April 1998). In 1996 alone, on the other hand, other examples of what the public health community calls "external" (non-disease-related) causes of death led to the demise of 112,300 Americans; causes included motor vehicle accidents (43,469), firearms (34,040), "alcohol-induced" (19,770), and "drug-induced" (14,843). Kimberley D. Peters, Kenneth D. Kochanek, and Sherry L. Murphy, "Deaths: Final Data for 1996," *National Vital Statistics Reports*, vol. 47, no. 9 (Atlanta: US Center for Disease Control and Prevention, National Center for Health Statistics, November 10, 1998), tables 12, 18–20. These casualties accumulate slowly over the course of a year, and in many places, and so do not have the concentrated visual of media impact of a terrorist explosion.

22.US Department of State, Office of the Spokesman, "The Wassenaar Arrangement," address by Under Secretary of State for Arms Control and International Security Affairs Lynn E. Davis, at the Carnegie Endowment for International Peace, Washington, D.C., January 23, 1996. See also the Wassenaar Arrangement's Internet website, at http://wassenaar.org/doc/press_3.html. For text of the Missile Technology Control regime, see the website of the former US Arms Control and Disarmament Agency, http://www.acda.gov/export.htm. The text of the Nuclear Nonproliferation Treaty and other arms control accords may be found at http://www.acda.gov/treaties.htm. Accessed April 28, 1999.

23. *UN Wire*, "Population: UN Predicts 3 Billion Increase by 2050," Internet: http://www.unfoundation.org/unwire/unwire.cfm, March 23, 1999, p. 7.

24.George Moffett, *Critical Masses: The Global Population Challenge* (New York: Viking, 1994), pp. 28–31.

25.William J. Durch, "Keepers of the Gates: National Militaries in an Age of International Population Movement," paper prepared for the conference on Demography and Security, Center for International Studies, MIT, Cambridge, Mass., December 11-12, 1998.

26.UN High Commissioner for Refugees, *The State of the World's Refugees, 1998.* On the Internet at: http://www.unhcr.ch/refworld/pub/state/97/ch2.htm#REFUGEE RIGHTS AT RISK. For global data on refugees, see http://www.unhcr.ch/un&ref/numbers/numbers.htm. Current as of as of July 1,1998.

27.Ibid., "Safeguarding human security," http://www.unhcr.ch/refworld/pub/state/97/ch1.htm.

28.Larry Diamond, *Promoting Democracy in the 1990s: Actors and Instruments, Issues and Imperatives*, a report to the Carnegie Commission on Preventing Deadly Conflict (New York: Carnegie Corporation,1995). Available online at: http://www.ccpdc.org/pubs/diamond.

29. To view the Taliban web page, see http://www.ummah.net/taliban/.

30.James N. Rosenau, *Turbulence in World Politics* (Princeton, NJ: Princeton Univ. Pr., 1990). Benjamin R. Barber, *Jihad vs McWorld: How the Planet is both Falling Apart and Coming Together and What This Means for Democracy* (New York: Times Books, 1995); The Intelligence Project, Southern Poverty Law Center, "Hate Groups Top 500," *Intelligence Report* No. 93, Winter 1999.

31. For discussion, see Jeffrey R. Cooper, "Another View of the Revolution in Military Affairs," in John Arquilla and David Ronfeldt (eds.), *In Athena's Camp: Preparing for Conflict in the Information Age* (Santa Monica, Calif.: RAND, 1996), esp. pp. 107–111.

32.Joseph Heller, *Catch 22* (New York: Simon and Schuster, 1961).

33.Michael R. Gordon and Celestine Bohlen, "...But Twilight Cloaks Russia," *New York Times* January 3, 1999, p. A1.

34.International Institute for Strategic Studies, *The Military Balance*, annual, 1992–93 through 1996–97 (Oxford: Oxford Univ. Pr., 1992–96).

35.Azerbaijan, Kazakhstan, and Moldova opted not to do so, and Russian border guards in Ukraine reportedly only "monitor" rather than "guard" its borders. Kevin P. O'Prey, "Keeping the Peace in the Borderlands of Russia," in William J. Durch, ed., *UN Peacekeeping, American Politics, and the Uncivil Wars of the 1990s* (New York: St. Martin's Press, 1996), p. 412, 450 (n. 11).

36.Saidkasym Kiyampur, "Georgia Starts Protecting Its Borders: Celebrations in Poti May Turn Out to Be Premature," *Russkiey Telegraf (Moscow)*, July 17, 1998, p. 8. "Kyrgyzstan Will Guard Its Own Borders," *RFE/RL Newsline, Transcaucasia and Central Asia*, August 25, 1998, relaying a report from ITAR-TASS.

37.The Russian press reported in 1994 that the "main route of transit of Afghan opium is... the military transport aviation of Russian troops based in Tajikistan." Graham H. Turbiville, Jr. "Mafia in Uniform: The Criminalization of the Russian Armed Forces," Center for Army Lessons Learned, Foreign Military Studies Office, Ft. Leavenworth, Kansas, 1995. Internet: http://call.army.mil/call/fmso/fmsopubs/issues/mafia.htm. Downloaded February 5, 1999.

38.Turbiville, "Mafia in Uniform."

39.Richard F. Staar, "Russia's Military: Corruption in the Higher Ranks," *Perspective* Vol. IX, No. 2 (Nov-Dec 1998). Internet: http://www.bu.edu/iscip/vol9/Staar.html. Downloaded February 5, 1999.

40.Annelise Anderson, "The Red Mafia: A Legacy of Communism," in Edward P. Lazear, ed., *Economic Transition in Eastern Europe and Russia: Realities of Reform* (Stanford, Calif: Hoover Institution Press, 1995). Available on the Internet (downloaded February 24, 1999): http://andrsn.stanford.edu/Other/redmaf.html.

Anderson defines a mafia as "a group that is characterized by profit-oriented criminal activity, that uses violence or the threat of violence, that expends resources to discourage cooperation of its members with the police, and that corrupts legitimate governmental authority." As a result, "government may lose, if it ever had, the power to protect citizens and legitimate businesses from

criminal activity. ...[S]ubversion of the criminal justice system allows the mafia to run protection rackets, that is, to extract payments from, control entry into, and mandate conditions of operation of legitimate business enterprises."

41.North Atlantic Assembly, Economic Committee, *Transnational Organised Crime – an Escalating Threat to the Global Market*, special report, Mr. Kees Zijlstra, general rapporteur, November 1998. Internet: http://www.naa.be/publications/comrep/1998/ar278ec-e.html. Downloaded February 19, 1999.

42.Anderson, in "Red Mafia," argues that "excessive bureaucratic power and discretion provide the basis for corruption – for bribery, shakedowns, and extortion..." and that the Soviet Union was a model of such excess, in which "bribes were necessary to secure everything from drivers' licenses to medical care." Such institutionalized corruption typified a bureaucracy "'unfettered either by the law or by public opinion.'" (Quoted from Konstantin Simis, "The Machinery of Corruption in the Soviet Union," *Survey: A Journal of East & West Studies* vol. 23, no. 4 [Autumn 1977–78].) See also Roy Godson and Phil Williams, "Strengthening Cooperation Against Organized Crime," *Survival*, vol. 40, no. 3 (Autumn 1998), pp. 66–70. NAA, *Transnational Organised Crime*, part VIII.

43.Tony Smith, *America's Mission: The United States and the Worldwide Struggle for Democracy in the Twentieth Century* (Princeton, NJ: Princeton Univ. Pr., 1994), p. 343–44.

44.Benjamin I. Page and Robert Y. Shapiro, *The Rational Public : Fifty Years of Trends in Americans' Policy Preferences* (Chicago: Univ. Chicago Pr., 1992).

45.The Pew Research Center for the People and the Press, *America's Place in the World II*, results from a national survey conducted September 4–11, 1997. Internet: http://www.people-press.org/apw2rpt.htm and http://www.people-press.org/apw2que.htm. Downloaded January 22, 1999. A companion survey was taken in 1993 and its results are posted online together with those from 1997. "Opinion leaders" in the 1997 survey included 591 people in the news media, business and finance, foreign affairs, defense and security affairs, state and local government, think tanks and universities, religious leaders, science and engineering, labor unions, and congressional staff. The Chicago Council on Foreign Relations' 1998 survey on a similar array of subjects was released too late to be analyzed in detail for this report but its basic findings are used to supplement the analysis of the Pew Center's data. See John E. Rielly, ed., *American Public Opinion and U.S. Foreign Policy 1999* (Chicago, Ill.: Chicago Council on Foreign Relations). The Council conducts its surveys every four years; the 1995 and 1999 reports may be found online at http://www.ccfr.org/publications. Downloaded April 26, 1999.

46.For details, see European Union, Directorate-General X, *Top Decision Makers Survey Report*, Internet: http://europa.eu.int/en/comm/dg10/infcom/epo/polls.html. Materials downloaded February 18, 1999. (And yes, for all I know, the directorate's motto may well be, "the truth is out there.") The EU polls tapped what it calls "top decision makers," including elected politicians, "high level" civil servants, business and labor leaders, the media, and leaders in "the academic, cultural, and religious life of their countries." The decision makers' survey polled 3,778 individuals. Note the pollsters report that only 11 percent of the sample were women, ranging from a high of 17 percent of elected leaders surveyed to just 3 percent of top business people. So the European decision makers poll represents primarily the opinion of upper-strata males (average age: 52).

47.Pew Center, *America's Place*, Q. 41–44 (public).

48.John E. Rielly, ed., *American Public Opinion and U.S. Foreign Policy 1987* (Chicago, Ill.: Chicago Council on Foreign Relations, March 1987), chs. 4 and 6.

49. Frank Newport, "No Single Problem Dominates Americans' Concerns Today," *Gallup Poll Archives*, May 2, 1998. Internet: http://198.175.140.8/POLL_ARCHIVES/980502.htm. Downloaded January 21, 1999. Rielly, *American Public Opinion ...1999*, p. 7. The Council's report lists only double-digit responses, and terrorism is not among them.

50.Rielly, *American Public Opinion...1987*, p. 11, and Rielly, *American Public Opinion...1999*, p. 12.

51.The life-satisfaction number in table one is a composite of responses that ranged from 91 percent satisfaction with personal family life to 56 percent for personal financial savings. Satisfaction with "the future facing you and your family" was 76 percent. Frank Newport, "Americans' Satisfaction and Well-Being at All-Time High Levels," *Gallup News Service*, October 23, 1998. Internet: http://www.198.140.8/POLL_ARCHIVES/981023.htm. Downloaded January 21, 1999.

52.David W. Moore, "Nuclear Tests by India and Pakistan Have Little Effect on Public Opinion," *Gallup News Service*, June 19, 1998. Downloaded January 21, 1999. Internet: http://www.198.140.8/POLL_ARCHIVES/980619.htm.

53.Pew Research Center for the People and the Press, "77% Fear Nuclear, Biological Terrorism," Internet: http://www.people-press.org/apr97mor.htm. Downloaded January 21, 1999.

54.Rielly, *American Public Opinion...1999*, p. 15.

55.Invariably, however, when a majority of these and other groups failed to assign high priority to an issue, they gave it "some" priority rather than none at all, the third choice. Pew Center, *America's Place*, Q.17 (elites).

56.Eighty six percent of opinion leaders, on the other hand, would defend Saudi Arabia from Iraq. Pew Center, *America's Place*, Q.27 (elites), Q.34 (public).

57.Pew Center, "77% Fear Nuclear, Biological Terrorism."

58.European Union, Statistical Office of the European Communities, "Standard Eurobarometer 49." Internet: http://europa.eu.int/en/comm/dg10/infcom/epo/eb/eb49/eb49.html. Released September 1998. Downloaded February 19, 1999. And Rielly, *American Public Opinion...1999*, p. 23.

59.Rielly, *American Public Opinion...1999*, p. 15.

60.The US Immigration and Naturalization Service (INS) estimates that about 5 million undocumented immigrants resided in the United States as of October 1996. California was host to 40 percent of the total, followed by Texas (14 percent), New York (11 percent), Florida (7 percent), Illinois (6 percent), New Jersey (3 percent) and Arizona (2 percent). See INS, "Illegal Alien Resident Population," Internet: http://www.ins.usdoj.gov/stats/illegalalien/index.html. Downloaded February 19, 1998. See also Timothy J. Dunn, *The Militarization of the US-Mexico Border 1978–1992: Low-Intensity Conflict Doctrine Comes Home* (Austin: University of Texas Press, 1996).

61.The system, which draws its name from the town in Luxembourg where a core group of countries signed the original common borders agreement in 1985, became official EU policy in 1997. It provides for a common visa policy, international police and judicial cooperation, and computerized data sharing on cross-border crime (e.g., on drug smuggling and illegal immigrants), but also requires

effective controls on the system's external borders. Since virtually every member of the EU but Luxembourg shares some part of the EU's outer border, making the Schengen system work requires the closest cooperation of all states in the Union. "Background to Schengen Agreement," Special Report, and "Britain and Ireland Opt Out," both *BBC News Online*, November 28, 1997. Internet: http://www.news.bbc.co.uk/. For an unofficial translated text of the Schengen agreements, see Internet: http://users.patra.hol.gr/~cgian/schengin.htm.

62.The White House, *National Security Strategy of the United States* (Washington, D.C.: January 1988).

63.DoD, *National Defense Budget Estimates for FY 1999*, table 6.5; US Office of Management and Budget, *Budget of the United States Government, Fiscal Year 1990* (Washington, D.C.: US Government Printing Office, 1989), esp. pp. 5-13–19, 5-39, 5-52–53, 5-88, 5-154–155.

64.In proportioning the support budgets, I am following the lead of Robert S. Norris, Steven M. Kosiak, and Stephen I. Schwartz, "Deploying the Bomb," in Stephen I. Schwartz, ed., *Atomic Audit* (Washington, D.C.: The Brookings Institution, 1998), p. 110. After researching the historical costs of strategic forces, they suggested a proportional allocation of support accounts in the absence of any other cost allocation data in open sources. I have used the same approach to allocate support accounts among nuclear, major theater war, and lesser military contingencies.

65.The White House, *A National Security Strategy for a New Century* (Washington, D.C.: May 1997).

66.Measuring the power of US strategic forces is a complex task, and there are several different ways to do it: by counting weapon delivery vehicles (bombers, missiles on land, missile submarines, and missiles aboard submarines), by weapons carried by delivery vehicles or available in the total weapon stockpile, and/or by tallying either the raw destructive power of those weapons against unhardened surface targets ("equivalent megatonnage") or the aggregate ability of delivered weapons to destroy reinforced targets ("hard target kill capability"). Peak capacities on these measures occurred at different times as the force structure evolved. For tabulations of vehicles and weapons, a standard reference source is the annual *Military Balance* published by the London-based International Institute for Strategic studies since the late 1960s. For details on operational capabilities, see Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket, eds., *Managing Nuclear Operations* (Washington, D.C.: The Brookings Institution, 1987). By any of these measures, the US strategic arsenal has shrunk considerably from various Cold War peaks, but still holds about 2,600 warheads on alert. CNP, *Jump Start.*

67.The White House, *A National Security Strategy for a New Century* (Washington, D.C.: October 1998).

68.For a list of presidential addresses, see the White House website. Internet: http://www.whitehouse.gov/WH/New/. Accessed April 30, 1999.

69.See Barry M. Blechman, William J. Durch, David F. Gordon, and Catherine Gwin, *The Partnership Imperative: Maintaining American Leadership in a New Era,* final report of the Foreign Policy Project (Washington, D.C.: The Henry L. Stimson Center and the Overseas Development Council, 1997), p. 12.

70. For extensive analysis, see Paul B. Stares, *Global Habit: The Drug Problem in a Borderless World* (Washington, D.C.: The Brookings Institution, 1996, ch. 4, esp. pp. 102–103.

71.Tony Smith, *America's Mission*, pp. 343–44.

72.The White House, *A National Security Strategy for a New Century*, 1998.

73.Ivan Eland, "Tilting at Windmills: Post-Cold War Military Threats to U.S. Security," *Policy Analysis* no. 332 (Washington, D.C.: The CATO Institute, February 8, 1999). Summary.

74.Hicks & Associates, Inc., "Homeland Defense: Threats and Politics in Transition," July 15, 1998. Downloaded December 21, 1998 from the Terrorism Research Center. Internet: http://www.terrorism.com/homeland/CT&CIAfinal.html.

75.President's Commission on Critical Infrastructure Protection, *Critical Foundations: Protecting America's Infrastructures* (Washington, D.C.: October 1997). Summary and report available on the Internet at: http://www.pccip.gov/.

76.Ibid. See also, Tim Weiner, "The Man Who Protects America from Terrorism," *New York Times*, February 1, 1999, p. A3.

77.Ehud Sprinzak, "The Great Superterrorism Scare," *Foreign Policy*, Fall 1998, pp. 110–124. For arguments embracing the specter of super terrorism, with recommendations for altering domestic institutions to emphasize meeting it, see Ashton Carter, John Deutch, and Philip Zelikow, "Catastrophic Terrorism," *Foreign Affairs* (November/December 1998), pp. 80–94.

78.Robert D. Kaplan, *The Ends of the Earth: A Journey at the Dawn of the 20th Century* (New York: Random House, 1996).

79.Yahya M. Sadowski, *The Myth of Global Chaos* (Washington, D.C.: The Brookings Institution, 1998). For an "in between" discussion of the applicability of chaos theory and complexity theory — the notion of "self-organizing criticality" in natural and social systems — to national security policy and its environment, see David S. Alberts and Thomas J. Czerwinski, eds., *Complexity, Global Politics, and National Security* (Washington, D.C.: National Defense University Press, 1997).

80.US Congress, General Accounting Office, *Combatting Terrorism: Threat and Risk Assessment Can Help Prioritize and Target Program Investments*, GAO/NSIAD-98-74 (Washington, D.C.: GAO, April 1998). pp. 4–9. Internet: http://www.gao.gov/reports.htm. Downloaded January 5, 1999.

81.International Centre for Security Analysis [ICSA], *Early Warning and Threat Assessment for Defensive Information Warfare*, workshop report, 8–10 July 1998 (London: Department of War Studies, King's College, 1998), esp. pp. 18, 23.

82.US Congress, General Accounting Office, *Combating Terrorism: Threat and Risk Assessment Can Help Prioritize and Target Program Investments*, GAO/NSIAD-98-74 (Washington, D.C.: GAO, April 1998). pp. 4–9. Internet: http://www.gao.gov/reports.htm. Downloaded January 5, 1999.

83.The Department of Energy, for example, maintains a Center for Risk Excellence in cooperation with Oak Ridge National Laboratory, and Oak Ridge hosts the Risk Assessment Information System. Internet: http://risk.lsd.ornl.gov/CRE/. The Society for Risk Analysis provides extensive on-line links to academic, private sector, and governmental web sites on the subject. Internet: http://www.sra.org/.

84.The White House, Office of the Press Secretary, "Remarks by the President on Foreign Policy," at the Grand Hyatt Hotel, San Francisco, February 26, 1999, p. 9. Available on the Internet at: http://www.whitehouse.gov/WH/New/html/19990227-9743.html. Downloaded April 30, 1999.

85.See, for example, Rob Lempert and Steve Bankes, “Making Good Policy Without Good Prediction: The Case of Climate Change.” Internet: htep://mars2.caltech.edu/rand/viz/climate/. Downloaded May 20, 1998.

86.Moffett, *Critical Masses*, pp. 296–97. In addition to Moffett, see Nancy E. Riley, "Gender, Power, and Population Change," Population Bulletin 52, no. 1 (Washington, DC: Population Reference Bureau, 1997); Roger Jeffrey and Alaka Basu, "Schooling As Contraception?" in Girl's Schooling, Women's Autonomy and Fertility Change in South Asia, eds. Roger Jeffrey and Alaka Basu (Thousand Oaks, CA: Sage Publications, 1996), pp. 48-71;and John Knodel and Gavin W. Jones, "Does Promoting Girl's Schooling Miss the Mark?" Population and Development Review 22, no. 4 (1996), pp. 683-702. For further information, see the website of the Population Reference Bureau, at http://www.prb.org. See also the work of the United Nations Development Program and its annual Human Development Report, which for 1997 and 1998 includes “gender development” and “gender empowerment” indices. Internet: http://www.undp.org/hdro/.

87.For an accessible summary of current data on climate change, see the joint report of the World Meteorological Organization and the UN Environmental Program, *Common Questions About Climate Change* (Geneva: United Nations, 1998), reproduced on the website of the International Energy Agency. Internet: http://www.ieagreen.org.uk/. For critical views, see the website of the American Petroleum Institute, http://www.api.org/globalclimate/starta.htm. Accessed November 19, 1998.

88. Commission on Geosciences, Environment, and Resources, Panel on Climate Observing Systems Status, *Adequacy of Climate Observing Systems* (Washington, D.C.: National Academy Press, 1999), exec. summ.

89.The peacekeeping study faced the problem of how to portray comparatively a dozen sets of political-military circumstances in which peace operations had taken or were taking place. Detailed case studies served as the basis for a set of indicators that characterized each conflict, the amount of damage it had caused to local governance and infrastructure, the motivations of the belligerents, their relative willingness to modify their objectives in the interests of peace, and so on. A separate set of indicators measured “sustainable peace.” Each case was scaled on each indicator. Some of the scales were relatively easy to create (e.g., extent of damage to physical infrastructure). Others were necessarily more subjective. The net result was a set of scaled measurements that could be used to compare the “going-in” conditions for each peacekeeping operation, the conditions in the country when the operation left, and the country’s relative stability/peacefulness thereafter. Barry M. Blechman, William J. Durch, and Wendy Eaton, *Effective Transitions from Peace Operations to Sustainable Peace*, study prepared for the Office of Peacekeeping and Humanitarian Affairs (OSD/OASD[S&R]/PKHA), by DFI International (Washington, D.C.: January 1998).

90.British political scientist Barry Buzan suggested six criteria that states use, consciously or not, to evaluate the threat potential of another state, a situation, or an event. His list informed my own thinking about measuring threats. Buzan’s criteria include *specificity* (how well-defined is the possible threat?); *temporal distance* (how soon could it materialize?); *spacial distance* (is it or will it soon be nearby?); *damage potential* (how bad could it be if unleashed?); *probability* (how likely is it to be unleashed?); and *history* (has something similar happened before?). We draw on Buzan’s work but our focus here is more limited. Barry Buzan, *People, States, and Fear*, 2nd ed. (Boulder: Lynne Rienner Publishers, 1991), pp. 134–140.

91.In simulations, Sandia National Laboratory compared the relative costs to the community of a major city of (1) a year-long sequence of power disruptions affecting one-quarter of the city at a time for brief periods; and (2) a closely-spaced series of explosions that destroyed “key substations and then

critical transmission lines." The "explosions" also seriously damaged power generating equipment. The Sandia researchers found to their surprise that the first scenario "was five times more costly to business and to the costs of maintaining the supply of electricity." Long-term, albeit more superficial, disruption caused businesses, for example, to relocate to more stable areas. C. Paul Robinson, Joan B. Woodard, and Samuel G. Varnado, "Critical Infrastructure: Interlinked and Vulnerable," *Issues in Science and Technology* (Fall 1998). Available online at: http://www.nap.edu/issues/15.1/robins.htm.

92.Worst-casing derives in part from the asymmetric downsides to pessimism and optimism. If one is pessimistic but wrong, life is more expensive than necessary but on the whole turns out better than expected, unless the opportunity costs of preparing to meet unrealized threats induce bankruptcy. So even pessimism must be tempered by prudence. If one is optimistic but wrong, on the other hand, life is cheaper and more fun while it lasts, but you lose it quicker.

93.ICSA, *Early Warning and Threat Assessment*, p. 23.

94.David C. Martin and John Walcott, *Best Laid Plans: The Inside Story of America's War Against Terrorism* (New York: Simon & Schuster, 1988), pp. 18–23.

95.For an evaluation of US threat-interactions with other states since the end of the Cold War, see Blechman, Barry M. and Tamara Cofman Wittes, "Defining Moment: The Threat and Use of Force in American Foreign Policy Since 1989," Occasional Paper No. 6 of the Foreign Policy Project (Washington, D.C.: Henry L. Stimson Center and Overseas Development Council, May 1998). Also Internet: http://www.stimson.org/pubs/projpubs.htm#usfp.

96.Daniel M. Jones, Stuart A. Bremer and J. David Singer (1996) ."Militarized Interstate Disputes, 1816-1992: Rationale, Coding Rules, and Empirical Patterns." *Conflict Management and Peace Science,* 15(2): pp.163–213. The data set and information on its coding is also available on-line from website of the Peace Science Society (International). Internet: http://pss.la.psu.edu/MID_DATA.HTM. Downloaded October 1998; reaccessed March 12,1999.

97.James Lee Ray notes work by Stuart Bremer in which war between non-democratic pairs of states appeared to be four times as likely as war between a democracy and a non-democracy. Stuart Bremer, "Dangerous Dyads: Conditions Affecting the Likelihood of Interstate War, 1816–1965," *Journal of Conflict Resolution* 36 (June 1992), pp. 309–341. Cited in James Lee Ray, *Democracy and International Conflict: An Evolution of the Democratic Peace Proposition* (Columbia, SC: Univ. of So. Carolina Pr., 1995), p. 20.

98.For a refresher on the damage potential of different levels of nuclear attacks, see US Congress, Office of Technology Assessment, *The Effects of Nuclear War,* OTA-NS-89 (Washington, D.C.: US Government Printing Office, 1979). An Adobe Acrobat version of the report can be downloaded from an archive site maintained at Princeton University. Internet: http://www.wws.princeton.edu:80/~ota/ns20/alpha_f.html. Click on the "E" listing and scroll to the document.

99.See, for example, Laboratory for Terrestrial Physics, Goddard Space Flight Center, National Aeronautics and Space Administration, "Volcano Topography and Volcanic Hazards: Topographic Characterization and Monitoring of Volcanoes," Internet: http://denali.gsfc.nasa.gov/research/volc2/volc_top.html. Accessed May 6, 1999.

100.University of Oklahoma, Department of Family and Preventive Medicine, Health Sciences Center, "Decision Analysis," Internet: http://www.fammed.uokhsc.edu/Tutor/decanal.htm. Citing Emil. J. Posavac and Raymond G. Carey, *Program Evaluation: Materials and Case Studies* (Englewood Cliffs, NJ: Prentice-Hall, 1989). Accessed April 16, 1999.

101.George W. Torrance, et al., "Multi-Attribute Preference Functions," *PharmacoEconomics*, vol. 7, no. 6 (1995), pp. 503–525. Ronald G. Sherwin and Edward J. Laurance, "Arms Transfers and Military Capability: Measuring and Evaluating Conventional Arms Transfers," *International Studies Quarterly*, vol. 23, no. 3 (September 1979), pp. 360–389.

102.Lewis A. Dunn, *Controlling the Bomb: Nuclear Proliferation in the 1980s* (New Haven: Yale University Press, 1982), pp. 56–57.

103.I would like to thank Peter Almquist for stimulating this line of inquiry.

104.G. John Ikenberry, "Institutions, Strategic Restraint, and the Persistence of American Postwar Order," *International Security*, vol. 23, no. 3 (winter 1998–99), p. 45.

Table A.1: America's Most Important International Problem

	Media	Business leaders	Foreign affairs specialists	International security specialists	Governors & Mayors	Academics	Religious leaders	Scientists & Engineers	Labor union leaders	Capitol Hill staff	Percentage Responses
No. in sample	73	35	69	57	75	93	36	92	24	37	591
China a problem	0.19	0.17	0.25	0.12	0.03	0.11	0.03	0.10	0.00	0.16	0.12
US leadership	0.08	0.09	0.07	0.16	0.03	0.04	0.11	0.09	0.00	0.11	0.08
Nuclear proliferation	0.10	0.06	0.07	0.14	0.01	0.04	0.03	0.05	0.00	0.14	0.06
Maintaining peace	0.04	0.06	0.01	0.04	0.05	0.09	0.08	0.09	0.04	0.11	0.06
Encouraging development	0.03	0.00	0.09	0.05	0.07	0.08	0.11	0.03	0.12	0.00	0.06
Global economics	0.03	0.03	0.07	0.02	0.05	0.10	0.03	0.05	0.12	0.03	0.05
Arab/Israeli situation	0.11	0.03	0.00	0.00	0.04	0.06	0.11	0.06	0.00	0.00	0.05
Chaos/ethnic conflict	0.04	0.06	0.03	0.00	0.04	0.08	0.03	0.02	0.00	0.08	0.04
Terrorist threats	0.03	0.00	0.06	0.05	0.03	0.04	0.03	0.01	0.08	0.08	0.04
Human rights	0.04	0	0.06	0	0.04	0.04	0.19	0.01	0	0	0.04
Trade relations	0.01	0.11	0.01	0.02	0.07	0.02	0	0.03	0.12	0.03	0.03
Trade deficits	0.01	0.03	0.00	0.02	0.08	0.04	0.00	0.01	0.08	0.00	0.03

Table A.2: Greatest Dangers to World Stability

	Media	Business leaders	Foreign affairs specialists	International security specialists	Governors & Mayors	Academics	Religious leaders	Scientists & Engineers	Labor union leaders	Capitol Hill staff	Percentage Responses
Nationalism & Ethnic hatreds	0.38	0.29	0.49	0.30	0.35	0.46	0.39	0.23	0.38	0.22	0.36
Proliferation of WMD	0.23	0.26	0.26	0.49	0.09	0.18	0.22	0.14	0.17	0.54	0.24
Trade Conflicts	0.03	0.11	0.00	0.00	0.11	0.05	0.06	0.02	0.04	0.03	0.04
Religious Fanaticism	0.14	0.26	0.09	0.00	0.07	0.06	0.11	0.15	0.04	0.05	0.10
Environmental Pollution	0.06	0.03	0.01	0.02	0.08	0.02	0.03	0.11	0.08	0.03	0.05
Population Growth	0.08	0.03	0.04	0.12	0.13	0.14	0.06	0.30	0.00	0.03	0.12
Intl. Drug & Crime Cartels	0.07	0.03	0.06	0.05	0.17	0.04	0.14	0.01	0.29	0.05	0.08
Other	0.00	0.00	0.01	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.01

SOURCE: The Pew Research Center for People and the Press, "America's Place in the World II," on the Internet: http://www.people-press.org/apw2que.htm. Accessed 1/22/99.

Table A.3: Reagan and Clinton National Security Strategies

Element of Strategy	*Reagan, January 1988*	*Clinton, May 1997*
Overarching Objective		
	Containment	Prevention
Primary Threats to Security		
	1. Challenges posed by the Soviet Union: C the danger of nuclear warfare; C continuing expansion of totalitarian rule; C Warsaw Pact military buildup and risk of its dominating Eurasia; C propaganda, political warfare against the West; C Third World influence, assistance, subversion; C new directions in Soviet policy that pose "a new, continuing, and more sophisticated challenge" to the West.	
	2. Regional security problems made worse by Moscow and radical regimes (Iran) whose policies "objectively benefit the Soviet Union globally"	1. Regional or state-centered threats (coercive, cross-border threats to vital US interests)
	3. Low intensity conflicts, narco-terrorism, refugee flows.	2. Transnational threats C International terrorism C Illegal drug trade C Illicit arms trafficking C Intl. organized crime C Uncontrolled refugee migration C Environmental threats
	4. Spread of nuclear weapons "could exacerbate regional conflicts" and perhaps draw US-SU into nuclear war	3. Threats from weapons of mass destruction (WMD), "the greatest potential threat to global security," in two categories: C Existing arsenals C Proliferation of advanced weapons-related technology to outlaw states.
	5. Economic instability as wedge for "irresponsible elements"	[Economic problemstreated in the context of "promoting prosperity."]
	6. Poverty, resource depletion, environmental contamination hamper "prospects for world peace and prosperity"	

Continued

Element of Strategy	*Reagan, January 1988*	*Clinton, May 1997*
Primary Response Mechanisms		
	1. Nuclear deterrence, flexible response C Maintain a variety of basing modes for the triad of strategic forces to assure attack survivability C Target Soviet warmaking capabilities C Place at risk Soviet leadership and Communist party cadres. 2. Strategic Defense Initiative (defense against ballistic missiles) C To enhance deterrence by increasing uncertainty of successful attack C To reduce the value of ballistic missiles and encourage arms reduction. 3. Other political-military capabilities: C Substantial ground and air force deployments in NATO and the Pacific C Support for anti-Communist insurgents ("liberation" movements) C Counter-propaganda, informational warfare ("continuing public candor about the nature of totalitarian rule") 4. Arms control measures C Seek "an orderly transition to am more defense-reliant world". C Signed 1987 INF Treaty to cut four times as many Soviet as US warheads C Initiating START to reduce strategic forces by 50 percent C Seek "effective and verifiable global ban on chemical weapons" C Seek inter-alliance talks in Europe to reduce assymetries in East-West conventional force balance C Negotiating implementation of 1974 Threshold Nuclear Test Ban Treaty. C Agreed to establish mutual Nuclear Risk Reduction Centers. 5. Supporting policies: military use of space, intelligence capabilities	1. Shaping the international environment: C Diplomacy C International assistance C Arms control (seek Russian ratification of START II, clarification of ABM Treaty, implementation of Chemical Weapons Convention, and Senate ratification of Comprehensive Nuclear Test Ban Treaty) C WMD non-proliferation initiatives C Military activities (including forward presence, deterrence, and a "robust triad" of strategic nuclear forces) 2. Responding to crises: finite resources mean selective responses in support of "vital," "important," and "humanitarian" interests, in that priority order. C Counter transnational threats in cooperation with other countries. C Prepare for "smaller-scale contingencies" (peacekeeping and other interventions that "vindicate national interests") C Prepare for major conflict in two theaters at once, from a standing posture of "global engagement"; be ready to deal with "asymmetric" challenges 3. Preparing now for an uncertain future C Focus on force modernization, weapons prototyping, high-damage threats C Resource tradeoff: presence, preparedness 4. Overarching US capabilities include intelligence and space assets, missile defense (no third-country threat seen emerging in the foreseeable future), national information infrastructure, and national security emergency preparedness.

Continued

Element of Strategy	*Reagan, January 1988*	*Clinton, May 1997*
Regional Priorities		
Western Hemisphere	C Counter Soviet influence in Cuba and Nicaragua; keep hemisphere free of Communist bloc C Control drug production and trafficking	C Resolve transnational problems through regional cooperation, further integration C Encourage peaceful transition to democracy in Cuba
Europe	C Maintain credibility of NATO deterrent; consolidate unity of alliance C Deepen inter-alliance contact with the Warsaw Pact	C Expand NATO to include former Soviet satellites C Cooperatively address conflict in Balkans, Northern Ireland, Cyprus
Eurasia	C Continue to contain Soviet expansionism; maintain military presence in region C Encourage political and economic liberalization	C Establish NATO/Russia partnership for ethnic, regional threat reduction C Bolster market reforms through trade and investment
Middle East and South Asia	C Broker peace agreement between Israel, Arab nations C Discourage nuclear rivalry between India, Pakistan C Oppose Soviet presence in Afghanistan	C Maintain military forces over Iraq; force Iran and Iraq to abandon terrorism, nuclear weapons programs C Actively support the Mideast peace process
Asia Pacific	C Cooperate with Japan on economic and security matters; maintain forces in South Korea C Engage China, promote market changes	C Sustain dialogue with China, reduce tension in Taiwan Strait; bolster economic ties to region C Foster North/South dialogue, interaction in Korea
Africa	C Counter Soviet influence in the Horn region, control arms trade to Libya C Expand economic assistance & development programs	C Address transnational issues (drugs, terrorism, overpopulation, disease) through sustained engagement C Resolve persistent ethnic conflicts

Table A.4: Clinton National Security Strategy, 1997 and 1998

Element of Strategy	*Clinton, May 1997*	*Clinton, October 1998*
Overarching Objective		
	Prevention	Prevention, Counteraction
Basic Security Vehicle		
	International Cooperation	International and Domestic Cooperation (a "web of institutions and arrangements")
Primary Threats to US Interests		
	1. Regional or state-centered threats (coercive, cross-border threats to vital US interests) 2. Transnational threats C International terrorism C Illegal drug trade C Illicit arms trafficking C Intl. organized crime C Uncontrolled refugee migration C Environmental threats 3. Threats from weapons of mass destruction (WMD), "the greatest potential threat to global security" C Reduce threats posed by existing arsenals C Stop proliferation of advanced weapons-related technology to outlaw states.	1. Regional or state-centered threats (coercion, aggression, acquisition of WMD) 2. Transnational threats C International terrorism, esp. with WMD C International crime, esp. drug trafficking C Illicit arms trafficking C Uncontrolled refugee migration C Environmental threats C Threats to critical national infrastructure, and information infrastructure 3. Spread of dangerous technologies (WMD) C be prepared to deter/counter the use or threatened use of WMD; C reduce threats posed by existing arsenals; C stop proliferation of non-safeguarded dual-use technology to...parties hostile to US and global security interests. 4. Foreign intelligence agencies that are C rapidly adopting new technologies; C using the global information infrastructure. 5. Failed states C expect more to fail, producing: C unrest, famine, deaths, migrations that can "threaten US interests and citizens"

Continued

Element of Strategy	*Clinton, May 1997*	*Clinton, October 1998*
Primary Response Mechanisms		
	1. Shaping the international environment thru C Diplomacy (a cost-effective "first line of defense") C International assistance (which reduces need for costly interventions) C Arms control (which increases military transparency and reduces threats), esp. START II/III, NPT, ABM Treaty, Chemical Weapons Convention (CWC), and Comprehensive Nuclear Test Ban Treaty (CTBT) C Non-proliferation initiatives (which deter the use and spread of WMD), esp. the Wassenaar Arrangement, Australia Group, London Suppliers Group, MTCR C Military activities (including forward presence, deterrence, a "robust triad" of strategic nuclear forces)	1. Shaping international environment: C Diplomacy ("vital tool" of nat'l security that "cannot solve all our problems") C International assistance (has helped build democracy and open markets and "slowed the growth of international crime") C Arms control ("an essential preventive measure for...US and allied security"); verifiable reductions in strategic offensive arms "remain essential to our strategy." < detailed discussion of test ban, CFE adaptation, anti-personnel land mines C Non-proliferation initiatives (as at left) C Military activities: deterrence first < nuclear weapons hedge against uncertainty < range of terrorist/criminal entities "may not be deterred," hence need for effective counteraction < reinforceable forward presence enhances rapid crisis response C International law enforcement cooperation < to meet growing threats from crime and terrorist groups < overseas law enforcement presence develops international networks < critical to train foreign LE officers C Environmental initiatives < Environmental threats (climate change, ozone depletion, transnational movement of dangerous chemicals) "can pose long-term dangers to our security and well-being." < Environmental security initiative seeks global forecasting system. < Kyoto limits on greenhouse gases require "meaningful participation by key developing nations" < Seek increased compliance with Montreal Protocol, ratification of treaties on law of the sea, desertification, persistent organic pollutants, and biodiversity; mitigate nuclear and other pollution of the Arctic.

Element of Strategy	*Clinton, May 1997*	*Clinton, October 1998*
Primary Response Mechanisms, continued		
	2. Responding to crises C Finite resources mean selective responses on basis of: < Vital interests (overriding importance to survival, safety of our nation) < Important national interests (affect well-being of US and character of world) < Humanitarian interests (action demanded by values). C Transnational threats < Counter with intelligence sharing, cooperative law enforcement, use of embargoes and sanctions. < Reduce demand for drugs (prevention, treatment, economic alternatives), eradicate sources, interdict supplies < Fight international criminal cartels	2. Responding to Threats and Crises C First point similar to 1997 but interests are defined sooner and "protection of our critical infrastructures" joins "physical security of our territory and that of our allies, the safety of our citizens, [and] our economic well-being" on the list of America's vital interests. C "Important" and" humanitarian" interests are similar to 1997, but in addition to disaster response, the latter now includes supporting democratization, civil control of the military, humanitarian demining, and sustainable development. C New language on the value of deterrence-in-crisis replaces earlier language on reluctance to use the military in humanitarian emergencies C Transnational threats < Countering terrorism, at home and abroad rises to top of the priority list • New anti-terrorism policy (PDD 62) seeks "to uncover and eliminate foreign terrorists and their support networks in this country; eliminate terrorist sanctuaries; and counter state-supported terrorism and sub-version of moderate regimes" with increased integration of intelligence, diplomacy, law enforcement, and the military. • 1998 G-8 Summit pledged greater counter-terrorism cooperation. < Countering international crime in general (extensive new section). • effective law enforcement cooperation needed to maintain the openness/transparency of international markets, & limit extortion and corruption • concerted international effort to shut down illicit arms trade < Counter drug trafficking (cut supplies in half, work to cut demand)

Element of Strategy	*Clinton, May 1997*	*Clinton, October 1998*
Primary Response Mechanisms, continued		
		C Emerging threats at home < military superiority generates asymmetric responses < Managing the consequences of WMD incidents (PDD 62) involves a major new, interagency Domestic Terrorism Program; bio-warfare threats receive special emphasis, entailing federal-state-local cooperation to respond. < Protecting critical infrastructures (PDD 63) – vulnerability grows with interlinkages; National Infrastructure Protection Center established to integrate planning/response.
	< Address "environmental and security" concerns that are transborder, long-term dangers to security and well-being	C [Environmental threats and initiatives now are part of "shaping" rather than "responding"]
	C Smaller-scale contingencies (peacekeeping, disaster relief, other intervention "vindicate national interests")	C Smaller-scale contingencies "will likely pose the most frequent challenge for US forces"; "appropriate" forces will be "trained, equipped, and organized to be multi-mission capable."
	C Major theater war (in two theaters at once, from a standing posture of "global engagement," ready to deal with "asymmetric" responses)	C Major theater war [same, plus greater emphasis on protecting forces from WMD attack]
	3. Preparing now for an uncertain future C Focus on force modernization, weapons prototyping, high-damage threats C Resource tradeoff: forward presence and preparedness.	3. Preparing now for an uncertain future C Force modernization protects long-term readiness, looking toward "fundamental transformation of our military forces" via the Revolution in Military Affairs and Revolution in Business Affairs (making military management more businesslike). C [Overall, more pro-active, in-control, fixing-the-problem.]
Primary Response Mechanisms, continued		

Element of Strategy	*Clinton, May 1997*	*Clinton, October 1998*
	4. Overarching capabilities include: C intelligence, C space assets, C missile defense (no third-country threat seen emerging in foreseeable future) C info. infrastructure, C national security emergency preparedness.	4. Overarching capabilities include: C *quality people,* C intelligence-surveillance-and-recon-naissance (with a new emphasis on tracking transnational crime and terrorism and monitoring open information flows) C space assets, C missile defense (only Russia, China, or North Korea likely to pose a missile threat before 2010; development program deployment decision in 2000), C (for infrastructure and preparedness, see "Emerging Threats at Home," above) C overseas presence and power projection: presence promotes stability; strategic mobility "essential"; Law of Sea Treaty essential to mobility.
Regional Priorities (*Each regional entry has segments on security, prosperity, and democracy. Hilites only.*)		
Europe	C Expand NATO to include former Soviet satellites C Cooperatively address conflict in Balkans, Northern Ireland, Cyprus	C NATO enlarged by three members C US interest in Bosnia, Kosovo as these conflicts threaten European stability; [Gone: references to a "timely exit."] C New emphasis on special relationship with the Baltic states.
Eurasia	C Establish NATO/Russia *partnership* for ethnic, regional threat reduction C Bolster market reforms through trade and investment C Praise for progress in political and economic reforms.	C Seek "full Russian *participation*" in the Euro-security system, while cooperating to blunt organized crime, proliferation of WMD and delivery systems to outlaws. C gone: cooperation to end regional ethnic conflict and praise for reform; C seeming devolution of region from partners to problems.
Regional Priorities , continued		

Element of Strategy	*Clinton, May 1997*	*Clinton, October 1998*
Asia Pacific	C US-Japan security treaty a "cornerstone" of stability; Korean tensions as principal threat to peace; dialog, deterrence, dismantlement as priorities vis N. Korea. C Sustain dialogue with China, reduce tension in Taiwan Strait; bolster economic ties to region, sustain its "dynamism."	C US-Japan alliance remains cornerstone; new guidelines on defense cooperation and logistical support (de facto, in case of hostilities in Korea). C New political era in South Korea with election of Kim Dae Jung. C Isolating China unworkable and dangerous; mutual non-targeting of nuclear forces; working to strengthen law enforcement cooperation, China's support for international nonproliferation norms, military transparency. C Segment on Asian economic crisis stresses "enormously important" US interests at stake in Asian stability
Western Hemisphere	C Resolve transnational problems like drug trafficking through regional cooperation, further integration C Encourage peaceful transition to democracy in Cuba	C Adds terrorism, corruption as threats; drops political/social conflict as a source of other regional evils C Stresses regional transparency and confidence building measures, civilian control of the military.
Middle East and South Asia	C Maintain military forces over Iraq; force Iran and Iraq to abandon terrorism, nuclear weapons programs C Actively support the Mideast peace process	C Maintain pressure on Iraq; "signs of change" in Iran lead to much more positive assessment, but missile testing a concern. C Actively support the Mideast peace process C Condemn Indian/Pakistani nuclear tests, warn of "self-defeating cycle of escalation," warn against deploying missiles.
Africa	C Address transnational issues (drugs, terrorism, overpopulation, disease) through sustained engagement. C Resolve persistent ethnic conflicts, as in Great Lakes region.	C State-sponsored terror (Libya, Sudan), land mines, plague continent. C New emphasis on US support for regional conflict containment, African Center for Security Studies, trade and investment. C Gone: references to Great Lakes conflict

Table A.5: The United States and the Web of International Cooperation
(samples)

Issue Areas	Current forms of Cooperation	Existing Cooperative Entities		
		Global	Regional	Bilateral
Peace and Security	Alliance partnerships, collective security regimes, confidence & security building measures, peacekeeping operations, joint sanctions against rogue states	United Nations Limited Nuclear Test Ban Nuclear Nonproliferation Treaty International Atomic Energy Agency Biological and Toxin Weapons Convention Chemical Weapons Convention, Organization for the Prohibition of Chemical Weapons Comphrehensive Nuclear Test Ban (pending) Missile Technology Control Regime Wassenaar Arrangement	North Atlantic Treaty Organization Organization for Security and Cooperation in Europe Conventional Forces in Europe Treaty Organization of American States Association of Southeast Asian Nations-Regional Forum Treaty of Tlatelolco (Latin America nuclear free zone)	US-Japan Security Treaty US-Russia Cooperative Threat Reduction programs US-Russia Strategic Arms Reduction Treaties
Trade and Economics	Lowered trade barriers, leveled playing fields, dispute resolution without direct confrontation, pooled grants and loans for economic development and restructuring	World Trade Organization International Labor Organization Organization for Economic Cooperation and Development International Bank for Reconstruction and Development International Monetary Fund	North American Free Trade Agreement Asia-Pacific Economic Cooperation	Most-favored-nation/ normal-trade-relations legislation and “fast track” negotiating authority.

Table A.5: The United States and the Web of International Cooperation (samples)				
Issue Areas	**Current forms of Cooperation**	**Existing Cooperative Entities**		
		Global	Regional	Bilateral
Transportation and Communications	Accords on flight safety and security, telecommunications standards, internet addressing.	International Civil Aviation Organization International Telecommunications Union UN Convention on the Law of the Sea Internet Corporation for Assigned Names and Numbers (an NGO)		
Law Enforcement	Information sharing on crime syndicates, drug trafficking patterns; extradition agreements; cooperative interdiction of contraband and tracking of laundered money	UN Convention on Illicit Traffic in Narcotic Drugs and Psychotropic Substances International Drug Enforcement Conferences (annual) Financial Action Task Force International Criminal Police Organization (Interpol) Narcotics and Dangerous Drugs Information System International Convention for the Suppression of Terrorist Bombings	Declaration of Cartagena Montevideo Convention on Extradition	Mutual Legal Assistance Treaties Multiple bilateral extradition agreements FBI Legal Attaché (Legat) program

Table A.5: The United States and the Web of International Cooperation (samples)				
Issue Areas	**Current forms of Cooperation**	**Existing Cooperative Entities**		
		Global	Regional	Bilateral
Natural Environment	Manage human impact on transboundary pollution and hazardous waste disposal, atmospheric chemistry, water resources, species diversity, global climate	Vienna Convention and Montreal Protocol (Atomospheric Ozone) Convention on International Trade in Endangered Species Framework Convention on Biodiversity Framework Convention on Climate Change, Kyoto Protocol Global Environmental Facility		US-Mexico Agreement on Transboundary Air Quality Management US-Mexico Border XXI Program
Disease Prevention and Public Health	Childhood immunization; elimination of smallpox, polio, measles; containment and treatment of HIV/AIDS; control of hepatitis, malaria, other parasitic diseases. Family planning programs; improved nutrition and child survival.	World Health Organization UN Fund for Population Activities International Planned Parenthood	Pan American Health Organization	CDC bilateral health agreements with 12 countries
Migration and refugee movement	Deter, investigate, break up smuggling rings; provide refugees food, clothing, shelter, and support for repatriation.	UN High Commissioner for Refugees International Organization for Migration World Food Program		US AID Office of Foreign Disaster Assistance

Table A.5: The United States and the Web of International Cooperation (samples)				
Issue Areas	**Current forms of Cooperation**	**Existing Cooperative Entities**		
		Global	Regional	Bilateral
Human Rights	Declarations, conventions, and international commissions to define and support respect for basic rights.	Intl. Declaration on Human Rights Intl. Convention on Civil and Political Rights UN Human Rights Commission	International Criminal Tribunal for the Former Yugoslavia International Criminal Tribunal for Rwanda	