

The fox and the hedgehog: Myopia about homeland security in

U.S. policies on terrorism

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Abstract

Following the disasters of 9/11/01 the US government has embarked on what is intended to be a comprehensive response to the hazard of further terrorist attacks on Americans at home and abroad. This paper addresses the homeland component of the response and asserts that both the general approach and the measures being deployed are neither comprehensive nor well-balanced. The broad goal of security is losing ground to the narrower objective of defense; mitigation strategies are being overshadowed by preparedness and response alternatives; expert systems are preferred over grass-roots bottom-up ones; and possibilities for reducing human vulnerability are being ignored in favor of programs that aim to reduce risks or lessen the vulnerability of built structures and infrastructures. Preferences for the use of sophisticated technologies that are intended to quarantine terrorism and minimize its consequences far outnumber efforts to engage with the messier realm of ideas and behaviors related to terrorism. Yet it is the latter that shape the public interpretation of terrorism risks, structure patterns of exposure and affect the coping capabilities of threatened communities. Without substantial changes to policy that take account of these deficiencies, Americans are likely to find themselves little better prepared to confront the challenges of future terrorist attacks on targets in US territory and the nation's ability to address other kinds of hazards may be seriously compromised.

Crossing the Archilochian divide

"The fox knows many things, but the hedgehog knows one big thing."

Archilochus, Greek lyric poet (710-676 BCE)

No one can be sure what Archilochus meant when he wrote these lines but they have been

interpreted by many, including the British philosopher Sir Isaiah Berlin (1951), to illustrate the contrast between those who favor pluralistic outlooks and those who are committed to a single worldview. Such a dichotomy provides an apt metaphor for the general transformation of the U.S. political agenda in the aftermath of 9/11, wherein a complex mix of existing national priorities has been displaced by a preeminent War on Terror. However, the metaphor also captures another kind of transformation that has been proceeding in a less publicized manner. This involves the crafting of national policies and programs that are intended to protect Americans in the homeland. Homeland Security policymakers have ignored interpretations of contemporary terrorism as a symptom of broad societal conflicts, such as those that are associated with globalization, and have chosen to view it as a narrower kind of human pathology. Instead of adding adjustments that might mitigate societal tensions (e.g. by modifying institutional structures, imagery and belief systems that encourage unnecessarily rancorous political, economic and cultural changes – both at home and abroad) - they prefer to rely more or less completely on heightened civilian vigilance combined with a limited range of domestic surveillance, preparedness and emergency response measures.

This paper suggests that such a narrow approach is not in the best interests of the American public (nor in the interests of any population that is similarly threatened) because it does not address fundamental aspects of homeland terrorism and ignores potentially valuable contributions to homeland security. It may also have deleterious effects on programs for reducing other kinds of environmental hazards that fall under the jurisdiction of agencies involved in implementing the present antiterrorism strategy.

US hazard management initiatives before 9/11

The United States has previously faced few major threats of catastrophic terrorism within the country's borders so the national hazards management system has mainly been designed to address natural and technological emergencies as well as epidemic diseases and other health crises. Out of this experience has come a large fund of knowledge about environmental risks and human responses as well as a set of distinctive public policies and institutional arrangements.

The system that has evolved is multifaceted and administratively fragmented, with responsibilities shared among separate federal agencies, different levels of government, public-private partnerships, non-governmental entities and – perhaps most important – individuals, families, neighbors and friends. By the end of the 20th century U.S. approaches to managing natural and technological hazards combined a broad range of means in pursuit of varied - but mutually supporting - ends. Agents of hazard were addressed as well as vulnerable populations; anticipatory policies and programs complemented reactive ones; efforts to engage the underlying causes of hazard were coupled with palliative responses; and behavioral strategies were pursued in consort with coping technologies. Decision-making was increasingly decentralized outwards from government to civil society and devolved downwards from the federal level to the local level, while "partnership" had become an ever-present watchword in most sectors of the hazards community. Various successful efforts were also made to shift more of the burden for protecting against hazard from public agencies to the private sector via widespread criticism of publicly-sponsored disaster relief (Platt 1999) and promotion of insurance as an alternative that might permit individuals to choose their own levels of (economic) protection. Though the system was by no means perfect it addressed the multiple faces of hazard and

the needs of diverse stakeholders. It was also a major improvement on previous policies that had not attempted to engage the full spectrum of hazard issues or to employ the full range of useful adjustments. (Mileti 1999; National Research Council 2002a)

Some examples of existing natural hazard initiatives, drawn from a plethora of available alternatives, include the following:

- ? Legislation that addresses hazards by sector (e.g. National Earthquake Hazard Reduction Act) and by function (e.g. Stafford Disaster Relief Act).
- ? Administrative programs for single hazards like floods, that use single means such as structural protection works (e.g. National Dam Safety Program) or for multifaceted issues like hazard zone occupance, that use multiple means such as agency-based floodplain management systems or inter-agency task forces (e.g. US Flood Plain Management Task Force).
- ? Research and information organizations like universities, national laboratories, think tanks, consulting firms and professional associations that study hazards or processes of risk assessment or systems of hazard management, and disseminate findings to specialized users as well as the lay public.
- ? Non-governmental bodies like the American Red Cross, or the Institute for Business and Home Safety, that organize and publicize knowledge about risks, train hazard professionals or volunteers, and seek to change behaviors that place people and investments at risk or keep them from adopting safer alternatives.
- ? Public-private partnerships that bring together scientists, investors, victims, advocates, regulators, public interest groups and other "stakeholders" to analyze and/or manage

shared hazards (e.g. New York City Consortium for Earthquake Mitigation).

- ? Private voluntary relief organizations and government assistance agencies that act in coordination with FEMA to direct aid to disaster victims and impacted communities.
- ? Fire, police, emergency medicine and other public emergency services that plan for and respond to disasters or threatened disasters.
- ? Science-based agencies like the US Geological Survey and the National Weather Service that study, monitor, predict and forecast geological, hydrological or atmospheric risks and – in cooperation with state, local and non-profit organizations – issue warnings to affected publics.
- ? Mass media news and entertainment organizations that transmit hazard warnings and help to shape public perceptions of risks and vulnerabilities in newspapers, magazines, television, radio, movies and the Internet.
- ? Technology-based agencies like the National Bureau of Standards or regional building code associations that seek to improve hazard-resistant construction practices.
- ? Insurance agencies like the Federal Insurance Administration, that - in partnership with local governments - oversees mapping, and regulation of floodplains and coastal high hazard areas via policies that are variously intended to increase awareness of flood risks, ease the recovery of flood victims and reduce long-term human settlement of areas exposed to significant flood risks.

Before 9/11 the Federal Emergency Management Agency (FEMA) played a leading role in the US hazard management system. Its chief functions had become the coordination of federal responses to all kinds of major disasters and the promotion of improved public policies for reducing losses.

FEMA was itself a product of at least thirty years of tortuous governmental efforts to find a

satisfactory way of addressing problems of disaster. These efforts bore fruit when a narrow civil defense interpretation of the agency's mission was rejected in favor of a much broader strategy that combined reactive policies with anticipatory ones. (Popkin 1990; Platt 1999; Witt and Morgan 2002)

FEMA was one of the success stories of federal governmental reform during the 1990s, an achievement that was repeatedly acknowledged by President Clinton in several State of the Union messages. This status was earned in a number of ways including by streamlining the delivery of disaster services, improving coordination with state and local governments and fostering broad partnerships with NGOs, private sector organizations and public bodies in disaster-affected communities. But its most important initiative was the promotion and adoption of hazard mitigation policies and programs. (Godschalk et al. 1999) As noted in a 1995 report, "For the first time in the history of federal disaster assistance, mitigation – sustained action taken to reduce or eliminate long-term risks to people and their property from hazards and their effects, has become the cornerstone of emergency management." (Federal Emergency Management Agency 1995) In other words, there was a shift away from reactive policies that treat symptoms towards anticipatory strategies that are designed to affect underlying causes of hazard.

Recent changes of emphasis in public policies: From security and mitigation to defense and emergency management

Some FEMA leaders recognized that 9/11 carried the potential for revolutionizing management of hazards and hoped that it might usher in a new paradigm of sustainable hazards mitigation. (Armstrong 2002) Instead, only those aspects of mitigation that apply to the *built* environment are addressed in the

emerging Homeland Security strategy. (Federal Emergency Management Agency 2003) The mitigation of human risks and vulnerabilities is not considered directly. In addition, FEMA has been placed in a new Department of Homeland Security together with units like the Secret Service, Coast Guard and Border Patrol that are primarily concerned with surveillance, emergency preparedness and response. (<<http://www.whitehouse.gov/deptofhomeland/toc.html>>) James Lee Witt, FEMA's former director, advised against this move, and local emergency management officials - who generally are enthusiastic about broad mitigation and prevention programs - are reported to be concerned. (GovExec.com 2002) Despite assurances to the contrary, external observers might be forgiven if they once again construed FEMA as an Emergency Preparedness and Response agency. Moreover the bulk of that restricted focus seems likely to be directed towards just one kind of emergency - terrorist attacks. This will undercut FEMA programs that are intended to reduce the effects of other kinds of hazards.

The narrowing of perspectives that is detectable in the overshadowing of mitigation as a lead policy also shows up in the terminology that is used by stakeholders to characterize the Homeland initiative. Many such groups routinely use the label "homeland defense" to describe their interests and involvements rather than the broader-sounding "homeland security". Among others these include the U.S. Departments of State and Defense, the Center for Strategic and International Studies, The Heritage Foundation, The Brookings Institution, The National Academy of Engineering and publishers of the on-line *Homeland Defense Journal*. This limited purview stands in contrast to the broad interpretations of security that are prevalent among national and international organizations concerned with development, environment, refugees, human rights, disaster reduction, health care, social welfare and other issues. (Harvard School of Public Health 2003) The latter point up notions of *human* security rather than *state* security, look toward the provision of basic human needs - not the validation

of national policy agendas, and give pride of place to a "culture of prevention" instead of a "culture of defense". (Moller1993; Organization for Economic Cooperation and Development 2000; International Institute for Sustainable Development 2003) The differences in emphasis are palpable and portentous. At a time when a new kind of hazard calls for creative and ambitious coping policies, they signal a loss of confidence in non-militarized problem solving capabilities. Without a prevention culture, it is a moot question whether the existing Homeland strategy will be sufficient to quell the anxieties of Americans and keep losses within acceptable bounds.

A blinkered perspective on security against terrorism is also evident in the governmental reorganization that created the Department of Homeland Security. Some of the public agencies that share responsibilities for natural, technological and health emergencies *have* been incorporated into the new department or are closely involved in antiterrorism planning and response efforts (e.g. Federal Emergency Management Agency, US Coast Guard, Centers for Disease Control and Prevention). But others, that have made equally important contributions to improved management of catastrophic environmental risks, remain outside; outside not just the Department of Homeland Security but also on the outer fringes of the larger Homeland Security Strategy. (e.g. US Geological Survey, National Oceanic and Atmospheric Administration-National Weather Service; US Army Corps of Engineers; most of the National Laboratories) In other words, the government is not making the most of its own valuable hazard management expertise.

Moreover the homeland security initiative has reached out for guidance from the hazard research community in a quite selective manner. Expertise from certain of the physical sciences, medicine, engineering and social sciences has been solicited (e.g. National Research Council 2002b) yet inputs

from several vitally important fields are either missing or muted. Among others these include – risk assessment, disaster research, hazards research and sustainability studies (Anderson 2002; Chess and Calia 2002; Haas 2002; Lave 2002; Desiler 2002, Pate-Cornell 2002; Schwing 2002; Slovic 2002; Kunreuther 2002a; 2002b; Wisner 2002; Cutter et al 2003) Programs that address hazards in the context of issues like climate change, sustainability and urban governance (Intergovernmental Panel on Climate Change 2001; Kasperson and Kasperson 2001a; Heiken et al. 2000) could make valuable contributions to the implementation of terrorism vulnerability-reduction measures but they – and their like – are rarely to be found in the prevailing discourse on homeland security. Obviously, the Homeland Security Strategy is still evolving but these initial signs raise concerns about what is to come. Compared with the conceptual breadth and diversity of programs for the reduction of natural and technological hazards, Homeland Security policy exhibits a narrowing of vision and a preference for measures whose scope of application and record of effectiveness are both quite limited.

In view of the preceding signals, national policy on hazards management seems to be reverting to an earlier (Cold War) era. This does not mean that the concerns of that era - surveillance, emergency preparedness and response – or protective measures associated with them, lack value as adjustments to terrorism. They surely remain indispensable for coping with unexpected fast-developing hazards, but they are also incomplete and temporary answers to complex problems like terrorism that continue to fester if underlying causes are left unattended. Public reaffirmation of the need to construct public policy on a firm base of knowledge about hazards would be an appropriate initial step toward correcting this imbalance.

Intended actions: Homeland Security budgets and programs

In two successive years the President of the United States has requested \$37.7 Billion and \$41 Billion respectively for support of efforts to carry out the domestic part of the nation's War on Terror (Table 1). These huge sums dwarf the combined budgets of agencies that have traditionally been responsible for addressing natural and technological disasters. Most of the money is allocated for developing and staffing new or improved information and technology systems that are intended to detect potential terrorists, fight the health effects of bio-terrorism, ensure the safety of critical infrastructures, and help emergency managers respond to attacks that actually occur. A much smaller but difficult-to-measure sum is earmarked for reducing the vulnerability of so-called "critical infrastructures" (e.g. water supply networks, energy production & supply lines, data and information systems).

Sixty-nine percent (69%) of budget funds are intended for agencies that guard U.S. land and water borders or transportation systems. Emergency Preparedness and Response consumes a further 17%. Less than 5% is allocated for information analysis, infrastructure protection, science and technology, with the balance to miscellaneous other - mainly housekeeping - purposes. (*New York Times*, February 4, 2003). However, much of the funding for emergency management actually will consist of training, equipment and pass-along programs that target the 2 million-strong body of emergency "first responders" (i.e. fire, police, medical and rescue services).

TABLE 1 ABOUT HERE

Technological fixes are strongly preferred. Among these are the following: personal protective

equipment; chemical and biological detection systems; interoperable communications gear; a National Pharmaceutical Stockpile; new vaccines, medicines and diagnostic tests; technologically advanced vehicle and ship tracking equipment; an Entry–Exit Tracking System for foreign visitors; enhanced defenses for critical high-risk vessels and coastal facilities; 21 e-government initiatives that will provide better protection of databases; a National Infrastructure Protection Center; a Cyberspace Warning Intelligence Network, a wireless priority access program for certain cellphone users; a National Infrastructure Simulation and Analysis Center and a national "Cybercorps." The scale of the projected spending is such that it presents defense industry corporations with greatly expanded opportunities to secure lucrative contracts for research, development, production, installation and operation of new technology systems (*New York Times*, March 20, 2002, p. C1 and C12).

Present budget spending categories are strongly driven by a concern for identifying and managing risks associated with terrorism and for coping with threatened or actual attacks. Policy makers hope to keep terrorists and their weaponry at arms length, preferably outside US borders where they might be dealt with by military means but - failing that - by superior intelligence and detection capabilities within the homeland. If these measures prove inadequate, emergency workers and emergency management systems are expected to minimize subsequent losses. This can be described as a top-down, expert-led, directive approach for the implementation of risk-reduction measures backed up by improved post-attack responses. But one of the central lessons of the American experience of coping with natural and technological hazards is that bottom-up, lay-inspired, voluntaristic approaches have been just as important, especially when applied to the reduction of vulnerability.

The importance of vulnerability

$$\text{Hazard} = (\text{Risk}) \times (\text{Vulnerability})$$

$$\text{Vulnerability} = (\text{Exposure}) \times (\text{Resistance}) \times (\text{Resilience})$$

It is well known that, in every population affected by hazards, some people are better able to absorb losses and bounce back from them than are others. This capacity has been labelled "vulnerability" although the meaning of that term to hazard specialists goes beyond vernacular connotations. "Vulnerable" is derived from the Latin for "wound" and can roughly be translated as the potential for experiencing loss. As used in connection with natural hazards, "vulnerability" includes the interrelated notions of exposure, resistance and resilience. In other words, it indicates the human capacity for responding to loss as well as the potential for experiencing loss. Populations that combine high exposure to risk, low levels of resistance and weak resilience are most vulnerable to hazards.

Although the concept of vulnerability is most commonly associated with constraints on the agency of social groups (Blaikie et al. 1994; Enarson and Morrow 1998; Fothergill et al. 1999), it also applies to individuals, to non-human entities (e.g. plants, animals, buildings) and to social structures or environmental contexts. For example, institutions like families, voluntary organizations, communities, markets, firms, public agencies and governments are differentially vulnerable. So too are all kinds of human and technological systems, including those that make possible the operation of complex urban communities (e.g. buildings, data banks, utility networks). When many different groups are engaged in the simultaneous or sequential use of the same location, the vulnerabilities of place and time may be more useful analytical constructs than those of people and objects. (Hewitt 1997; Kaspersen and

Vulnerability may sometimes be a function of individual behavior but it is just as often a byproduct of societal processes that have differential effects on human populations; processes like - knowledge production, information flows and communication networks; patterns of migration; demographic trends; the structure and performance of economic systems; status, power and influence relationships; access to opportunities for advancement; belief systems etc. Whereas risk-reduction strategies usually seek to modify the phenomena that inflict losses (e.g. storms, fires, explosions) or to separate them from populations at risk, vulnerability-reduction strategies focus on improving the capabilities of affected populations to avoid, prevent, resist, absorb and recover from loss. (In a general sense the difference is between keeping threats away from people – risk reduction, versus keeping people away from threats - vulnerability reduction.)

Vulnerability may be reduced in many ways. Most of those that have been adopted by government agencies involve training, prediction, evacuation and structural strengthening. But the biggest opportunities for reducing vulnerability (and for bringing down losses generally) focus on changing knowledge, behavior and societal impediments to protective action. Some of the ways the latter may be accomplished include:

- 2 Improving information upon which decisions are based by:
 - o Undertaking research that identifies and analyzes vulnerabilities and vulnerability-producing mechanisms
 - o Raising awareness of vulnerabilities among policymakers and the general public
 - o Altering attitudes or beliefs that affect vulnerability and security

- o Providing exposed populations with accurate information about vulnerabilities and appropriate adjustments

- ? Promoting a wider range of choices that reduce vulnerability by:
 - o Developing innovative institutions and technologies
 - o Facilitating collective action by separate stakeholders
 - o Modifying societal structures that fail to take account of vulnerability or that increase vulnerability
 - o Removing barriers to the adoption of appropriate prevention, avoidance or protection measures
 - o Ensuring that the most vulnerable have the resources to adopt needed adjustments

Though risk-reduction has tended to have first claim on the attention of policy makers and hazards managers in the USA, vulnerability-reduction eventually becomes an essential complementary goal. The order in which these strategies are typically adopted probably owes something to the ease with which risk can be represented (in Western cultures) as an externalized "other" that threatens a neutral "us" and the slower-to-emerge, uncomfortable realization that humans themselves (including perpetrators, victims, helpers, leaders, and publics unaffected by hazard) construct the conditions that make for vulnerability. Policies that address only one set of variables (risks or vulnerabilities) are, at best, seriously compromised and, at worst, recipes for failure.

During the past decade vulnerability analyses have begun to show up as complements to risk analyses in hazard assessment procedures around the world. Organizations like FEMA, NOAA

(National Oceanic and Atmospheric Administration), EPA (Environmental Protection Agency) and the IPCC (Intergovernmental Panel on Climate Change) have all developed their own variations and others are in the pipeline. For example, the UNDP (United National Development Program) is about to publish the first in an annual series of World Vulnerability reports that will provide guidance about vulnerability reduction in a broad array of economic development contexts. These initiatives variously incorporate, into the calculus of hazard, the human capacity to create or modify risks by consciously or inadvertently manipulating factors of exposure, resistance and resilience. (IPCC 1997; United National Development Program. 2003) Initially, the interpretations of vulnerability that were employed were limited in scope, referring mostly to vulnerable structures like homes, business and utility lines – phenomena that could be mapped as fixed entities in a risk-prone environment. Gradually these minimalist interpretations are being augmented by broader analyses that measure the vulnerability of people - both at rest and in motion - first as individuals, then as genders, families, groups and institutions, as well as the vulnerability of other species and nonliving entities that are deemed of special value. Different kinds of functional vulnerabilities of human communities are now being uncovered. (Mitchell 2003b) Feedback processes that take account of synergisms among and between elements of society and nature are also being added to the mix.

Growing national awareness of "vulnerability"

Since 9/11 it has been common to hear about a heightened sense of vulnerability that is experienced by Americans as well as a real shift by the country towards a more precarious and uncertain future. These sentiments are shared by people as different as the New York Times' columnist Frank Rich and the President of the United States:

"We live in a different America today than we did only the day before Tuesday.we have lost our untroubled freedom of movement that we consider a birthright. We have lost our illusion of impregnability. But beneath those visceral imperatives an entire culture has been transformed. This week's nightmare, it's now clear, has awakened us from a frivolous if not decadent decade long dream, even as it dumps us into an uncertain future we had never bargained for."

Frank Rich, 2001. *New York Times*, September 15

"...the characteristics of American society that we cherish – our freedom, our openness, our great cities and towering skyscrapers, our modern transportation systems – make us vulnerable to terrorism of catastrophic proportions. America's vulnerability to terrorism will persist long after we bring justice to those responsible for the events of September 11."

President's FY 2003, budget message

When used in this way the underlying meaning of vulnerability seems to be a hidden state of passive fragility that has just recently been rendered visible by unforeseen events. This is far-removed from specialist understanding of the term. Neither is there much evidence that the framers of Homeland Security policies and programs recognize the importance or the complexity of the concept as so understood.

The construction of vulnerability to terrorism

Vulnerability to terrorism is a direct outgrowth of how humans construct their societal institutions and how they conduct their daily lives. It reflects the choices that we as individuals make about where, when and how to reside, work, travel and relax as well as the local and global structures that society has evolved to accommodate those choices. Terrorists exploit the opportunities for inflicting harm that such choices create. Consider the example of commuting - a daily activity cycle that engages many millions of people.

Commuting involves a diurnal shift of population because jobs and residences are located in different parts of urban areas and workers must move between them. The forces that create these disparities of land use and activity have causal chains that can reach far across time and space and are deeply embedded in broad social, economic, political and cultural processes. The resulting movement of commuters brings people together in concentrated groups that have been favorite terrorist targets. Here the history of bombings and gas attacks on trains and stations in London, Tokyo, Paris and Bologna is dismally illustrative. At the urban end of the commute individuals redistribute themselves among high-rise offices, public buildings, street level stores, restaurants, parks, entertainment complexes and tourist venues. These are the kinds of places favored by car bombers and suicide bombers, as residents of Bogota, Colombo, Jerusalem, Manchester, Moscow or Oklahoma City can clearly attest. (In September 2001 they were also the targets aimed at by airplane hijackers who struck New York and Washington DC.) Though the United States has little experience of terrorist attacks in the residential neighborhoods to which commuters return in the evening, other countries do.

Deliberately planted explosives have toppled apartment towers in Moscow and community centers in Buenos Aires; social clubs have been fire-bombed and machine-gunned in Belfast; pubs have been blown up in Birmingham, targeted victims and passersby engaged in leisure pursuits have died in shoot-outs, kidnappings and assassinations in Tijuana, Rome, Madrid, Athens and Cairo.

For individual commuters, types and levels of vulnerability to terrorism change from place to place, throughout the day and over longer periods. They also vary in accordance with the amount of knowledge about risks and vulnerabilities that commuters possess; the degree to which they can avail themselves of protective resources; their access to alternatives; and the willingness of society to facilitate different choices about where and how they work, live or recreate. Above the level of individuals, various kinds of collective vulnerabilities exist – each responsive to its own array of exposure, resistance and resilience factors.

Beyond the realm of dangers to life and property lie other – more systemic – vulnerabilities. For example, the cities that terrorists so often target are not just homes, workplaces and economic engines. They are also highly specialized ecosystems, learning environments, symbolic territories, performance spaces and muses. (Mitchell 2003b) These and other urban **functions** are differentially affected by terrorism in ways that most people recognize as intuitively important but they are rarely taken account of by formal hazard-coping systems. Symbolic losses are an obvious case; it may matter little to the efficiency of a community that a historical monument or a community symbol is destroyed by terrorism but the psychic impacts of such a loss may be sufficient to galvanize reactive behaviors that greatly amplify the effect of the initial attack. Likewise, fear of further terrorism may alter the public "performances" that characterize urban street life or human interchanges of other sorts and are just as

essential to the continuance of a city as reliable public services and safe buildings.

Stunted conceptions of vulnerability in the Homeland Security problematique

In the present Homeland Security strategy what little attention is devoted to vulnerability concerns the vulnerability of things rather than the vulnerability of people. Mostly the goal is to reduce the vulnerability of "critical infrastructures" such as pipelines, bridges, airports, electricity production and distribution systems as well as the electronic data networks that undergird telecommunications and the financial services industry. (Haimes and Longstaff 2002) The intent is to minimize physical damage to public property and "loss of service" to users. Unfortunately, this leaves many aspects of vulnerability unaddressed.

Budget priorities pay very little attention to the vulnerabilities of Americans in their homes, neighborhoods, workplaces and leisure surroundings or to the potential for successfully adjusting private behaviors and public policies in light of new terrorism threats and the full range of appropriate responses. Nor do they take account of the fact that, like the global society as a whole, vulnerabilities in different parts of the world are increasingly interconnected.

To a significant degree the President's budget priorities reflect decisions to treat terrorism in the homeland as if it were an infectious disease whose periodic outbreaks must be identified, isolated, controlled and preferably eliminated. The experience of anthrax attacks during 2001 and the advice of experts on biological warfare and public health (e.g. Centers for Disease Control and Prevention) were undoubtedly suggestive in this context. Such a model complements the military "War on Terror" that

is being waged abroad and it is useful for understanding certain types of terrorism that might occur in the United States, especially those that involve biological weapons or the contagion-like spread of misinformation. But when applied more broadly, the limitations of the disease model are clear. Rather than resembling a biological process, terrorism is innately human in its causes and consequences. Its vulnerabilities (and risks) are human constructed; its aims and purposes are bound up with emotions, symbolism, ideas and values. Its targets are chosen as much for their psychological connotations as for their material ones. Reflexivity and social learning are key processes for perpetrators and victims alike. In other words, Homeland Security strategists need to take account of the expansive dimensions of socially constructed vulnerabilities. As part of that task it is time to consider how untapped resources might be mobilized both to reconceptualize the hazard of terrorism in ways that allow humans to live with increased uncertainties and to reduce the underlying vulnerabilities that contribute to a broad spectrum of hazard-related societal losses.

Towards a vulnerability-reduction component of Homeland Security strategy

More can be done to reduce the vulnerability of people in the American homeland than is currently being undertaken. The details of an improved strategy will take time to work out but the following points might be useful points of departure.

A first step is to recognize the complexity of vulnerability to terrorism and to plan accordingly in light of this knowledge.

Some of the complexity exists because factors that contribute to terrorism vulnerability in the

homeland are often well separated from their effects in time, in space and in societal contexts. This calls into question a policy of strong dependence on domestic (i.e. within country – and especially local) capacities to analyze and address vulnerability issues.

Other aspects of complexity involve the setting of vulnerability thresholds and the relativity of multiple vulnerabilities. Vulnerability is not simply an absence of physical safety either of people or property. It is a relative potential for losses from different risks above a socially acceptable minimum. Humans are at risk to a wide suite of environmental threats, from natural extremes to accidents to diseases and beyond; some of these are included on official national agendas for action and others are not. Like risks, we choose the vulnerabilities and the levels of vulnerability that will trigger action as well as the ones that will be denied or subject to tacit indifference. (Douglas and Wildavsky 1982; Douglas 1992) Clearly terrorism is now part of the US national agenda but the *levels of acceptable loss and the length and makeup of the total agenda are not at all obvious nor are there signs that a public dialogue on what the agenda should include is taking place.* What other vulnerabilities might merit attention? Based on which indicators of expediency or severity? Using what criteria to take account of the differences between known chronic hazards and surprising acute ones? Should the others receive more or less attention than terrorism-related vulnerabilities? Simultaneously or sequentially? As part of a narrow campaign against seemingly **unambiguous agents** that threaten immediate human **safety** at **home** or as a broader strategy against **ambiguous structures and agents** that undermine long and short-term bases of human **security** at **home and abroad**? Without a clear sense of what else merits societal response, not only does a war on the risks of terror become detached from a war on terrorism vulnerability but also from the context of other (comparative) hazards vulnerabilities. An inherently complex decision space would thereby be reduced to a menu of

misleadingly simple choices among alternative risk-reduction technologies.

It is important that lay populations become active partners with governments and experts in efforts to reduce vulnerabilities (and potential losses) from terrorism.

Earlier it was pointed out, with respect to commuting, that the form, content and operational procedures of transportation modes, work spaces, living quarters and entertainment facilities used by commuters are products of decisions taken by diverse people who design, build, manage or occupy them. Therefore, it is reasonable to expect that efforts to reduce vulnerability will also need to involve many of the same groups. Not only will this enact the valuable principle of keeping responsibility for action in the hands of those who are likely to be most affected by terrorism, it will also help to dispel public illusions about the hazard that are based on fear of unknowns, it will temper discussions of security policy that might otherwise be ceded to unrepresentative activist groups with doubtful agendas, and it will engage a broad cross-section of society in shared projects that have therapeutic as well as protective value. Such a strategy requires a far greater level of shared knowledge about terrorism threats and vulnerabilities - and an openness to voluntary lay inputs - than presently exists. It also requires a willingness to take account of both the domestic aspects of vulnerability and those that are connected with the reach of US institutions and influences outside the country.

Conclusion

In seeking to craft an effective Homeland strategy there can be no getting around the fact that security, mitigation and vulnerability are major – but poorly understood - components of the problem.

Unfortunately they do not seem to have received the breadth of scrutiny and debate from researchers, policymakers and the general public that they deserve. Instead the emerging strategy is based on notions of terrorism that hark back to earlier and less productive ways of thinking about hazards.

The evolving policy for Homeland Security seems firmly rooted on the narrow side of the Archilochian dichotomy. More concerned about defense than security, tentative towards mitigation as a policy alternative, blinkered both about the concept of vulnerability and the use of vulnerability-reduction measures, it is also overwhelmingly reactive, palliative and reliant on technological fixes; in sum, deeply reminiscent of previous flawed (and sometimes quixotic) attempts to permanently eliminate specific hazards from the roster of public policy problems without addressing their causes. The federal government is now betting the collective security of Americans on stunted concepts and a truncated range of adjustments to hazard. Hard won lessons about the value of broad human-centered approaches to hazards-reduction appear to have been forgotten or set aside in favor of narrowly targeted programs that objectify risks and place responsibility for public safety in the hands of technological elites or emergency experts. The hedgehog has, in effect, replaced the fox at the cutting edge of American hazard management. Such a change bodes ill for efforts to tackle the increasingly complex hazards of the 21st century, including terrorism. A reassessment of Homeland Security policy, that makes room for foxes as well as hedgehogs, is urgently needed.

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TABLE 1

U.S. Homeland Security budget FY' 03

Spending category	US\$ Billions (109)
"First responder" needs	3.5
Bio-terrorism initiatives	5.9
Security of US borders	11.0
21st century technology	17.3
Total	37.7

Source: (http://www.whitehouse.gov/homeland/homeland_security_book.html)