A Response to Nuclear Terrorism Skeptics

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EXPERTS IN AND OUT OF government, intelligence analysts, pundits, and presidential candidates from both sides of the aisle are virtually unanimous in their judgment that nuclear terrorism is a real and present danger. As Secretary of Defense Robert Gates explained, "Every senior leader, when asked 'What keeps you awake at night?' agrees it's the thought of a terrorist ending up with a weapon of mass destruction, especially nuclear."[1]

Skeptics, however, abound. The most vocal of them has been John Mueller, a distinguished scholar of international relations who has made important contributions to our understanding of public opinion during wartime, and of the utility of war itself. In contrast to prevailing views, he makes three key claims: (1) the nuclear intent and capability of terrorist groups such as Al Qaeda has "been substantially exaggerated," (2) "the likelihood a terrorist group will come up with an atomic bomb seems to be vanishingly small," and (3) policymakers are guilty of an "atomic obsession" that has led to "substantively counterproductive" policies premised on "worst case fantasies."[2]

During the Cold War, the likelihood of a nuclear Armageddon was judged to be small. Nonetheless, because the consequences of such a calamity would be so catastrophic, policymakers concluded that prudence required acceptance of a categorical imperative: do everything that could feasibly be done to prevent that war. The national security community learned that risk equals likelihood times consequences. Even a small probability of negative consequences, that were essentially infinite, compelled recognition that preventing nuclear war was an essential prerequisite for the pursuit of any other objective.

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Commenting on the nuclear trend lines at the time, President John F. Kennedy issued what became a famous warning. "I see the possibility," he said, "in the 1970s of the President of the United States having to face a world in which 15 or 20 or 25 nations may have these weapons. I regard that as the greatest possible danger and hazard." Mueller highlights Kennedy's forecast as emblematic of "the predictions of generations of alarmists."[3] What he discounts, however, is that Kennedy's warning and refusal to accept this nightmare motivated a surge of international initiatives that created the non-proliferation regime, the centerpiece of which is the Nuclear Non-Proliferation Treaty (NPT).

Thanks to this regime, 184 countries, including 40 that have the technical capability to build nuclear weapons if they choose to do so, have renounced nuclear weapons. Four decades later, there are not 25 nuclear-weapons states, as President Kennedy predicted, but only eight and one half (North Korea, the only self-declared but unrecognized nuclear-armed state, counting as one half).[4]

Those who believe that nuclear terrorism is the single largest threat to U.S. national security today start with what is regarded as a clear-headed recognition of that threat. A single nuclear bomb exploding in just one city would change our world. On a normal workday, half a million people crowd the area within a half-mile radius of Times Square. A noon detonation in Midtown Manhattan would kill them all.

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After the nuclear detonation, the almost automatic reaction would be to block all entry points in an attempt to prevent another bomb from reaching its target, resulting in the disruption of the global "just-in-time" flow of goods and raw materials. Vital markets for international products would disappear, and closely-linked financial markets would crash. Researchers at RAND, a U.S. government-funded think tank, estimated that a nuclear explosion at the Port of Long Beach in California would cause immediate indirect costs of more than $3 trillion worldwide, and further calculated that shutting down U.S. ports would cut world trade by 10 percent.[5]

The negative repercussions would reverberate well beyond the developed world. As former UN Secretary-General Kofi Annan has warned, "Were a nuclear terrorist attack to occur, it would cause not only widespread death and destruction, but would stagger the world economy and thrust tens of millions of people into dire poverty." This would, he observed, create "a second death toll throughout the developing world."[6] Indeed, Henry Kissinger has imagined a future after the first terrorist nuclear bomb that Mueller would find even more terrifying. As he has written: all major powers "should recognize that, after the explosion of just one nuclear bomb in one of their great cities, their publics will demand an extreme form of preventive diplomacy to assure that this

can never happen again."[7]

Given such overwhelming consequences, differences between a 1 percent and 20 percent likelihood of nuclear terrorist attack are relatively insignificant when considering how we should respond to the threat. In contrast, Mueller believes that "just because something terrible is possible shouldn't send us into hysterics thinking it will surely come about."[8] Of course, hysteria is never a good posture from which to make decisions. Kennedy, however, was not hysterical, but realistic. Had President Kennedy adopted Mueller's approach to risk, we would live in a much more dangerous world.

Mueller concedes that nuclear terrorism is a real threat. But he argues that those who regard it as the gravest threat to U.S. national security demonstrate an "inability or unwillingness to consider the difficulties confronting the atomic terrorist."[9] This charge is worthy of serious debate. The issue is certainly one that has been carefully examined by intelligence analysts and nuclear experts who have been working to prevent this from happening. But, the best-informed individuals who have reviewed the evidence have concluded that the difficulties confronting terrorists are not nearly as insurmountable as Mueller would wish. Nobel laureate Enrico Fermi called Richard Garwin, a designer of the hydrogen bomb, "the only true genius I have ever met." Testifying to Congress in March 2007, Garwin estimated a "20 percent per year probability of a nuclear explosion with American cities and European cities included."[10] Harvard Associate Professor Matthew Bunn has created a model that, with plausible numbers for the unknown input parameters, estimates the probability of a nuclear terrorist attack over a 10-year period to be 29 percent—identical to the average estimate from a poll of security experts commissioned by Senator Richard Lugar (R-IN) in 2005.[11]

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The individual in the U.S. intelligence community most respected for his serious, informed, long-term analysis of this issue, Rolf Mowatt-Larssen, has stated his view unequivocally: "Nuclear terrorism is a growing threat that is fueled by broader trends of the 21st century...in the years to come, new terrorist groups will no doubt seek to harness the nuclear genie for its game changing powers. And so, Oppenheimer's nuclear genie will lurk close by, in its ever-mutating forms, appearing when we least expect."[12]

In *Nuclear Terrorism: The Ultimate Preventable Catastrophe* (2004), I offer my own best judgment that if governments stay on autopilot, doing no more and no less than they are doing today, the odds of a successful nuclear terrorist attack devastating one of the great cities of the world within a decade are greater than 50 percent.[13] Former Secretary of Defense William Perry has expressed his own view that this underestimates the risk.[14] Warren Buffet, the world's most successful investor and legendary odds maker

in pricing insurance policies for unlikely, catastrophic events, has concluded that nuclear terrorism is "inevitable." He stated: "I don't see any way that it won't happen."[15]

Most recently, the congressionally-appointed bipartisan Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, chaired by Senators Bob Graham (D-FL) and Jim Talent (R-MO), released its report titled *World at Risk*. Its bottom-line judgment was unanimous and unambiguous: "Unless the world community acts decisively and with greater urgency, it is more likely than not that a weapon of mass destruction will be used in a terrorist attack somewhere in the world by the end of 2013."[16]

What drives Mueller and other skeptics to arrive at such different conclusions? They make four major claims that merit serious examination and reflection.

CLAIM 1: NO ONE IS SERIOUSLY MOTIVATED TO CONDUCT A NUCLEAR TERRORIST ATTACK.

More than a decade ago, no one could have imagined that a Japanese doomsday cult would be sufficiently motivated to disseminate sarin gas on the Tokyo subway. Indeed, at the time of that attack, the consensus among terrorism experts was that terrorists wanted an audience and sympathy—not casualties. The leading American student of terrorism, Brian Jenkins, summarized the consensus judgment in 1975: "terrorists seem to be more interested in having a lot of people watching, not a lot of people dead."[17]

As intelligence officials later testified, an inability to recognize the shifting *modus operandi* of some terrorist groups was part of the reason why members of Aum Shinrikyo "were simply not on anybody's radar screen."[18] This, despite the fact that the group owned a 12-acre chemical weapons factory in Tokyo, had $1 billion in its bank account, and had a history of serious nuclear ambitions.[19]

Similarly, before the 9/11 attacks on the World Trade Center and Pentagon that extinguished 3,000 lives, few imagined that terrorists could mount an attack upon the American homeland that would kill more Americans than the Japanese attack at Pearl Harbor. As Secretary Rice testified to the 9/11 Commission, "No one could have imagined them taking a plane, slamming it into the Pentagon and into the World Trade Center, using planes as a missile."[20] For most Americans, the idea of international terrorists mounting an attack on our homeland and killing thousands of citizens was not just unlikely, but inconceivable. But assertions about what is "imaginable" or "conceivable" are propositions about individuals' mental capacities, not about what is objectively possible.

In fact, Al Qaeda's actions in the decade prior to the 9/11 attacks provided clear evidence both of intent and capability. While its 1993 attack on the World Trade Center succeeded in killing only six people, Ramzi Yousef, the key operative in this case, had

planned to collapse one tower onto the second, killing 40,000. In the summer of 1996, Osama bin Laden issued a fatwa declaring war upon the United States. Two years later, Al Qaeda attacked the U.S. embassies in Nairobi, Kenya, and Dar es Salaam, Tanzania, killing more than 200 people. In October 2000, Al Qaeda attacked the warship USS Cole. Throughout this period, Al Qaeda's leadership was running thousands of people through training camps, preparing them for mega-terrorist attacks.

Notwithstanding Aum Shinrikyo's brazen attack, Al Qaeda's audacious 9/11 attack, and the recent attacks in Mumbai that killed 179 people, Mueller maintains that "terrorists groups seem to have exhibited only limited desire...they have discovered that the tremendous effort required is scarcely likely to be successful." He asserts that the evidence about Al Qaeda's nuclear intentions ranges from the "ludicrous to the merely dubious," and that those who take Al Qaeda's nuclear aspiration seriously border on "full-on fantasyland."[21]

Even scholars who would have been inclined to agree with this point of view have revised their judgment as new facts have accumulated. In 2006, for example, Jenkins reversed the basic proposition that he had set forth three decades earlier. In his summary: "In the 1970s the bloodiest incidents caused fatalities in the tens. In the 1980s, fatalities from the worst incidents were in the hundreds; by the 1990s, attacks on this scale had become more frequent. On 9/11 there were thousands of fatalities, and there could have been far more. We now contemplate plausible scenarios in which tens of thousands might die." Underlining the contrast with his own 1975 assessment, Jenkins now says: "Jihadists seem *ready to murder millions*, if necessary. Many of today's terrorists want a lot of people watching and a lot of people dead."[22] (Emphasis added.)

Al Qaeda has been deadly clear about its ambitions. In 1998, Osama bin Laden declared that he considered obtaining weapons of mass destruction "a religious duty."[23] In December 2001, he urged his supporters to trump the 9/11 attacks: "America is in retreat by the grace of God Almighty...but it needs further blows."[24] A few months later, Al Qaeda announced its goal to "kill four million Americans."[25] It even managed to gain religious sanction from a radical Saudi cleric in 2003 to kill "ten million Americans" with a nuclear or biological weapon.[26]

We also now know that Al Qaeda has been seriously seeking a nuclear bomb. According to the Report of the 9/11 Commission, "Al Qaeda has tried to acquire or make nuclear weapons for at least ten years...and continues to pursue its strategic goal of obtaining a nuclear capability." It further reveals "bin Laden had reportedly been heard to speak of wanting a 'Hiroshima.'" The Commission provides evidence of Al Qaeda's effort to recruit nuclear expertise—including evidence about the meeting between two Pakistani nuclear weapon scientists, bin Laden, and his deputy Ayman al-Zawahiri in Afghanistan to discuss nuclear weapons.[27] These scientists were founding members

of Ummah Tamer-e-Nau (UTN), a so-called charitable agency to support projects in Afghanistan. The foundation's board included a fellow nuclear scientist knowledgeable about weapons construction, two Pakistani Air Force generals, one Army general, and an industrialist who owned Pakistan's largest foundry.[28]

In his memoir, former CIA Director George Tenet offers his own conclusion that "the most senior leaders of Al Qaeda are still singularly focused on acquiring WMD" and that "the main threat is the nuclear one." In Tenet's view, Al Qaeda's strategic goal is to obtain a nuclear capability. He concludes as follows: "I am convinced that this is where Osama bin Laden and his operatives desperately want to go."[29]

Claim 2: It is impossible for terrorists to acquire fissile material.

Assuming that terrorists have the intent—could they acquire the necessary materials for a Hiroshima-model bomb? Tenet reports that after 9/11, President Bush showed President Putin his briefing on UTN. In Tenet's account of the meeting, Bush "asked Putin point blank if Russia could account for all of its material." Putin responded that he could guarantee it was secure during his watch, underlying his inability to provide assurance about events under his predecessor, Boris Yeltsin.[30]

When testifying to the Senate Intelligence Committee in February 2005, Committee Vice-Chairman John Rockefeller (D-WV) asked CIA Director Porter Goss whether the amount of nuclear material known to be missing from Russian nuclear facilities was sufficient to construct a nuclear weapon. Goss replied, "There is sufficient material unaccounted for that it would be possible for those with know-how to construct a weapon...I can't account for some of the material so I can't make the assurance about its whereabouts."[31]

Mueller sidesteps these inconvenient facts to assert a contrary claim. According to his telling, over the last 10 years, there have been only 10 known thefts of highly enriched uranium (HEU), totaling less than 16 pounds, far less than required for an atomic explosion. He acknowledges, however, that "There may have been additional thefts that went undiscovered."[32]

Yet, as Matthew Bunn testified to the Senate in April 2008, "Theft of HEU and plutonium is not a hypothetical worry, it is an ongoing reality." He notes that "nearly all of the stolen HEU and plutonium that has been seized over the years had never been missed before it was seized."[33] The IAEA Illicit Nuclear Trafficking Database notes 1,266 incidents reported by 99 countries over the last 12 years, including 18 incidents involving HEU or plutonium trafficking. 130 research reactors around the world in 40 developing and transitional countries still hold the essential ingredient for nuclear weapons. As Bunn explains, "The world stockpiles of HEU and separated plutonium

are enough to make roughly 200,000 nuclear weapons; a tiny fraction of one percent of these stockpiles going missing could cause a global catastrophe."[34]

Consider the story of Russian citizen Oleg Khinsagov. Arrested in February 2006 in Georgia, he was carrying 100 grams of 89-percent enriched HEU as a sample and attempting to find a buyer for what he claimed were many additional kilograms. Mueller asserts that "although there is a legitimate concern that some material, particularly in Russia, may be somewhat inadequately secured, it is under lock and key, and even sleepy, drunken guards, will react with hostility (and noise) to a raiding party."[35]

CLAIM 3: IT IS EXTREMELY DIFFICULT TO CONSTRUCT A NUCLEAR DEVICE THAT WORKS.

Rolf Mowatt-Larssen, former director of the Department of Energy's Office of Intelligence and Counterintelligence, testified that, "The 21st century will be defined first by the desire and then by the ability of non-state actors to procure or develop crude nuclear weapons."[36] In contrast, Mueller contends that, "Making a bomb is an extraordinarily difficult task...the odds, indeed, are stacked against the terrorists, perhaps massively so."[37]

Mueller argues that his conclusion follows from an analysis of 20 steps an atomic terrorist would have to accomplish in what he judges to be the most likely nuclear terrorism scenario. On the basis of this list, he claims that there is "worse than one in a million" chance of success.[38]

His approach, however, misunderstands probabilistic risk assessment. For example, some of the steps on the list would have to be completed before an attempt to acquire material could begin (therefore, the success rate for any of those steps *during* the path would, by definition, be 100 percent). Other steps are unnecessary, such as having a technically sophisticated team pre-deployed in the target country. Although he assumes that stolen materials will be missed, in none of the 18 documented cases mentioned earlier had the seized material been reported missing.[39]

At U.S. weapons labs and among the U.S. intelligence community, experts who have examined this issue largely agree. John Foster, a leading American bomb maker and former director of the Lawrence Livermore National Laboratories, wrote a quarter century ago, "If the essential nuclear materials are at hand, it is possible to make an atomic bomb using information that is available in the open literature."[40] Similarly, Theodore Taylor, the nuclear physicist who designed America's smallest and largest atomic bombs, has repeatedly stated that, given fissile material, building a bomb is "very easy. Double underline. Very Easy."[41]

Inquiring into such claims, then-Senator Joe Biden (D-DE) asked the major nuclear weapons laboratories whether they could make such a device if they had nuclear

materials. All three laboratories answered affirmatively. The laboratories built a gun-type device using only components that were commercially available and without breaking a single U.S. law.[42]

The Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, known as the Silberman-Robb Commission, reported in 2005 that the intelligence community believed Al Qaeda "probably had access to nuclear expertise and facilities and that there was a real possibility of the group developing a crude nuclear device." It went on to say that "fabrication of at least a 'crude' nuclear device was within Al Qaeda's capabilities, if it could obtain fissile material."[43]

Skeptics argue that terrorists cannot replicate the effort of a multi-billion dollar nuclear program of a state. This claim does not distinguish between the difficulty of producing nuclear materials for a bomb (the most difficult threshold) and the difficulty of making a bomb once the material has been acquired. The latter is much easier. In the Iraq case, for example, the CIA noted that if Saddam Hussein had stolen or purchased nuclear materials from abroad, this would have cut the time Iraq needed to make a bomb from years to months.[44] Moreover, terrorists do not require a state-of-the art weapon and delivery system, since for blowing up a single city a crude nuclear device would suffice.

The grim reality of globalization's dark underbelly is that non-state actors are increasingly capable of enacting the kind of lethal destruction heretofore the sole reserve of states.

CLAIM 4: IT IS TOO DIFFICULT TO DELIVER A NUCLEAR DEVICE TO THE UNITED STATES.

In the spring of 1946, J. Robert Oppenheimer was asked whether units of the atom bomb could be smuggled into New York and then detonated. He answered, "Of course it could be done, and people could destroy New York." As for how such a weapon smuggled in a crate or a suitcase might be detected, Oppenheimer opined, "with a screwdriver." He went on to explain that because the HEU in a nuclear weapon emits so few radioactive signals, a bomb disguised with readily available shielding would not be detected when inspectors opened the crates and examined the cargo.[45]

The nuclear weapon that terrorists would use in the first attack on the United States is far more likely to arrive in a cargo container than on the tip of a missile. In his appearance before a Senate subcommittee in March 2001, six months before 9/11, National Intelligence Officer Robert Walpole testified that "non-missile delivery means are less costly, easier to acquire, and more reliable and accurate."[46]

Citing the 1999–2003 U.S. Congressional Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction (the

Gilmore Commission), Mueller states that transporting an improvised nuclear device would require overcoming "Herculean challenges."[47]

He does not explain, however, why bringing a crude nuclear weapon into an American city would be materially different than the challenge faced by drug smugglers or human traffickers. According to the Government Accountability Organization, an average of 275 metric tons of cocaine have arrived in Mexico each year for transshipment to the United States since 2000. Reported seizures averaged about 36 tons a year, a 13 percent success rate for the intelligence and law enforcement community. Three million illegal immigrants enter the country each year, and only one in three gets caught.[48]

As Albert Carnesale, an arms control expert, quipped, anyone who doubts the ability of terrorists to bring a nuclear weapon into New York should consider that they could simply hide it in a bale of marijuana, which comes into all global cities. The atomic bomb dropped on Nagasaki had six kilograms of plutonium—the size of a 12-ounce soda can. The amount of HEU required for a bomb of similar magnitude could fit in a six-pack.[49]

More than 50 years after Oppenheimer's testimony, we are still not able to detect with any confidence the transport of nuclear material across or within our borders. Much to the chagrin of authorities, an ABC news crew has managed to smuggle a "soda can-size cylinder of depleted uranium" through U.S. ports on two separate occasions since 9/11. Both times border officials targeted and screened the shipment. Both times, they failed to detect the 6.8 kilogram cylinder.

Stakes in this Debate: The Global Nuclear Order

Details in this debate aside, however, the policy implications are what really matter. I share many of John Mueller's main criticisms of the Bush Administration, especially its often exaggerated and misguided reaction to Al Qaeda and the post-9/11 security environment.

However, readers of his judgment that policies aimed at preventing proliferation have been "obsessive" and "counterproductive" should understand the yardstick he uses to judge what constitutes an "overreaction." In his book, *Overblown* (2006), he argues that America's reaction to Pearl Harbor was "exaggerated." Even his judgment that "Japan was under the control of a fanatical, militaristic group" does not give him pause. Indeed, he concludes that "the United States might well have been able productively to exacerbate Japan's dilemma of overexpansion" and "impel it to retreat from its empire" through a policy of "containment and harassment."[50]

In the same vein, Mueller argues that "the effort to prevent proliferation has enhanced the appeal of—or desperate desire for—nuclear weapons for some regimes,

even as it has resulted in far more deaths than have been caused by all nuclear—or even all Weapons of Mass Destruction—detonations in all of history."[51] His primary case in point is the Bush Administration's 2003 decision to go to war with Iraq, a campaign that he labels an "anti-proliferation war."[52]

Mueller is so enraged by the combination of strategic stupidity and duplicity that he fails to focus clearly on the causal factors that led President Bush to attack Iraq. To be clear, I strongly agree with former Senator Chuck Hagel (R-NE) when he characterized the Bush Administration's decision to attack Saddam in 2003 as "the most dangerous foreign policy blunder in this country since Vietnam."[53] But on the issue of why, I believe the evidence is clear: nuclear paranoia played no significant role in Bush's mistake.

First, Iraq had no nuclear weapons and no active nuclear weapons program. This was a consensus view among US, British, French, Russian, Israeli, and all other relevant intelligence agencies. Ironically for Mueller's arguments, among the three states that Bush named as the "axis of evil," he, in effect, gave a pass to the state that had two bombs' worth of plutonium (North Korea); bypassed a state that had a serious nuclear weapons program (Iran); and attacked the only member of the axis that had no nuclear weapons.

Second, Iraq had no operational link with Osama bin Laden and the Al Qaeda terrorists who attacked us on 9/11. The Bush-Cheney campaign confused Americans by harnessing emotions from 9/11 to license a war chosen for other reasons. But the argument that Bush chose to attack Iraq to prevent the transfer of what it did not have to terrorists with whom it had no operational links cannot be seriously entertained.

In tilting at straw men, skeptics have neglected more important questions about the larger global nuclear order.

Third, the last National Intelligence Estimate on Iraq before the war concluded that in the absence of an American attack, the likelihood of Saddam's attacking us with chemical and biological weapons would be "low." On the other hand, it cited a "high" probability that he would do so if he became convinced that we were preparing to attack and topple his regime. In tilting at straw men, skeptics have neglected more important questions about the larger global nuclear order. Could the global nuclear order today be as fragile as the global financial order was 18 months ago when the "masters of the universe" were assuring us that the Wall Street-centered financial system was sound, robust, and resilient? Consider the scorecard on the nuclear accounts President Obama inherited from his predecessor:

- **Kim Jong Il: 8; Bush: 0.** When Bush came into office, North Korea had two bombs' worth of plutonium, 8,000 spent fuel rods that contained plutonium for six

additional bombs, and a reactor at Yongbyon that was frozen. The fuel rods were locked in a facility, fully inspected by the IAEA, and subject to round-the-clock camera surveillance. Today, it has 10 bombs' worth of plutonium, has tested a long-range missile, has conducted a nuclear weapons test, and has proliferated nuclear technologies.[54]

- **Iran: 5,000; Bush: 0.** When the Bush administration entered office, Iran had zero enrichment of uranium, zero centrifuges, zero cascades, and zero low-enriched uranium (LEU). The Bush administration now leaves an Iran that has mastered the technological know-how to build and operate a cascade of centrifuges that has 5,000 centrifuges running today enriching uranium to LEU.[55] It also has the capacity to use the same cascade of centrifuges to enrich LEU to bomb-usable HEU, not to mention 1,390 pounds of LEU—enough, after further enrichment, for its first bomb.[56]

- **A Reconstituted Al Qaeda:** Having entered office with Osama bin Laden plotting mega-terrorist attacks on the United States from medieval Afghanistan, President Bush left with this same madman plotting even deadlier attacks, but now from training camps in nuclear Pakistan.

- **Pakistan:** While Pakistan's nuclear arsenal has tripled in size over the last eight years, political instability, a burgeoning Islamic insurgency, a demoralized army, and an intensely anti-American population put Pakistan's nuclear weapons at increasing risk. As the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism concluded, "Were one to map terrorism and weapons of mass destruction today, all roads would intersect in Pakistan."[57]

- **Reemphasizing the Role of Nuclear Weapons in International Affairs:** The Bush Administration proposed building new nuclear warheads; Russia has sought to overcome weaknesses in its conventional forces by renewed reliance upon nuclear weapons; France recently called its next-generation nuclear arsenal its "national life assurance policy"; and the United Kingdom has announced plans to build a new fleet of nuclear-armed submarines. These policies leave non-nuclear weapons signatories to the NPT asking why nuclear weapons are good for the "haves," but not the "have-nots."

- **"Nuclear Renaissance:"** A growing demand for energy combined with increasing concerns about security of supplies and consciousness about climate change has propelled a "nuclear renaissance." Dozens of nuclear power plants are currently under construction or will be soon around the world, and many additional states

have expressed an interest in building nuclear energy facilities.[58] If the expansion of nuclear-energy reactors leads to a proliferation of uranium-enrichment facilities and reprocessing facilities for separating the spent fuel, this will certainly provide cover for new nuclear-weapons states, significantly increasing the risk of nuclear weapons ending up in the hands of terrorists.

- **Widespread Dissemination of Nuclear Technology:** The relentless advance of science and technology combined with an even more rapid diffusion of knowledge will empower larger and larger numbers of states and individuals to have the capacity to kill massively.

President Obama stands today at a fork in the road, not unlike the one at which John F. Kennedy stood in the 1960s. The architecture that has for four decades held back powerful pressures for the proliferation of nuclear weapons is shaky. Absent a surge of initiative akin to the efforts spurred by Kennedy's warning, the world risks catastrophe. As Henry Kissinger recently observed, "there is no greater challenge to the global nuclear order today than the impending proliferation of nuclear weapons and the increasing likelihood that terrorists may conduct a nuclear 9/11."[59]

The brute fact is that if Osama bin Laden succeeds in his ambition to explode a nuclear bomb, destroying the heart of one of our great cities, we will remember that "meltdown" in global economic affairs as just a metaphor. Faced with the possibility of an American Hiroshima, some seek to escape into skeptical denial; others retreat into paralyzing fatalism. Both reactions are unwarranted and misguided. The good news is that there exists a feasible, affordable checklist of items that, if taken, would shrink the risk of nuclear terrorism to zero. Realism about the seriousness of the risks we face should mobilize actions to stop the countdown to a nuclear 9/11 now.

NOTES

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