Right of Boom: The Aftermath of Nuclear Terrorism

Benjamin Schwartz
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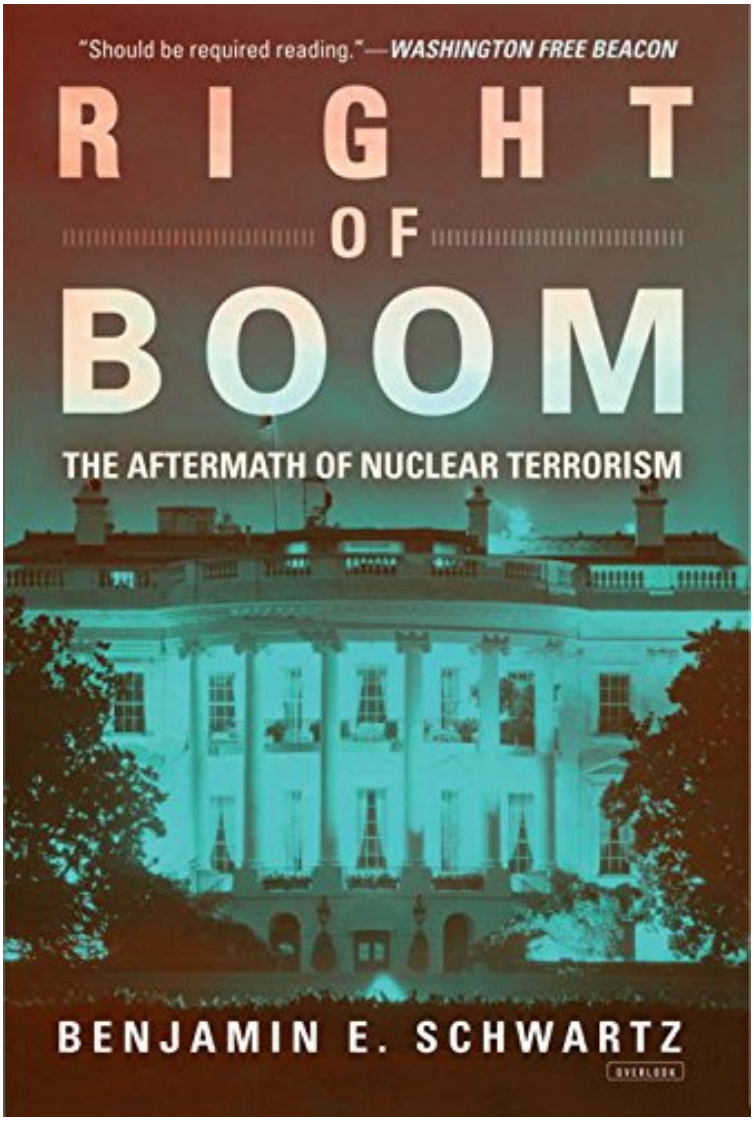

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Benjamin Schwartz : Right of Boom: The Aftermath of Nuclear Terrorism before purchasing it in order to gage whether or not it would be worth my time, and all praised Right of Boom: The Aftermath of Nuclear Terrorism:

1 of 1 people found the following review helpful. A Stong Entry on U.S. Nuclear Policy in the age of TerrorismBy Patrick A. HaydenThe term "Right of Boom" is used in military parlance to refer to to the moment after a bomb goes off. "Left of Boom" is the moment before. In his well written, well researched book, "Right of Boom", author Benjamin Schwartz presents readers with an analysis of what would happen - diplomatically, militarily and politically, after a nuclear bomb is detonated in Washington, D.C by state-sponserd terrorism.The book is structured in a very

interesting way. Each chapter begins with an ongoing account of the attack on Washington and the U.S. and the worlds response. Then Schwartz dives into the history of nuclear weapons and U.S. nuclear policy, how that history informs the current U.S. government policy, and how the old order would be upended if America was subjected to an act of nuclear terrorism. Schwartz approach guides the layman reader through the now 70-year-plus history of nuclear policy with ease and he builds his conclusion on how the U.S. might respond to this sort of attack on a great deal of research. The historical context connects solidly with his conclusion on what a post-nuclear terrorism world would look like and how the entire posture of the U.S. towards nuclear weapons and deterrence would be forced to change to adapt to the new order.As Schwartz writes, no one can really know how the U.S. would respond, but his book is a sober and clear eyed guide, and if you think nuclear terrorism is a possibility, and I believe it is, an interested reader will find a lot to think about the world "Right of Boom"3 of 3 people found the following review helpful. This book provides an excellent overview of the options facing the US government in ...By Jacob WallaceThis book provides an excellent overview of the options facing the US government in the wake of the unthinkable - a nuclear detonation on US soil that cannot clearly be attributed to a foreign power. Ben Schwartz draws on insight from US history and modern political theory to discuss how events would likely be shaped by the critical interplay between politics and foreign policy. After reading this, I'm convinced that international action to improve tracking and identification of nuclear materials would be an important step towards preventing nuclear terrorism and improving the ability of governments to react right of boom. A must read for foreign policy wonks.1 of 2 people found the following review helpful. Right of Boom is a great book, but needs to go further!By Dr. Hugh CortRight of Boom is a very important book, because it warns America what is going to happen soon when Iran gets a nuclear arsenal, which is going to happen unless Iran's nuclear sites are taken out by military strikes (Obama's "Nuclear Deal" is bound to fail).Iran's leaders have a fanatical religious belief that it is their duty and destiny to soon kill millions of Americans and Israelis (infidels) with nuclear weapons, in order to usher in the Coming of their messiah, the 12th Imam. When Supreme Leader Khamenei says, "Death to America", he means it! And the leaders of Iran are like suicide bombers-- they don't care if they die. They have said, "The role of Iran is to be a martyr", and "The Muslim World is big enough to absorb the losses from retaliation". So Mutual Assured Destruction (MAD) will not work with Iran.Right of Boom only described what would happen if Islamic radicals detonated one nuclear weapon in one American city. However, it is more likely that Iran would give terrorists multiple nuclear weapons to smuggle into and destroy multiple American cities (ten or more cities). It will be a devastating attack, and perhaps even a fatal attack.I would suggest to readers that they also get my book on , "The American Hiroshima: Iran's Plan for a Nuclear Attack on the United States".General Tom McInerney, Fox News military analyst, wrote the Foreword to my book.Also I would recommend Dr. Paul Williams' landmark book, "Day of Islam: The Annihilation of America and the Western World". Sincerely, Dr. Hugh Cort

A leading security specialist posits what happens in the event of a nuclear attack In Right of Boom, national security specialist Benjamin Schwartz looks at what could happen after a nuclear explosion takes place in the United States, the event that Presidents Obama and Bush, as well as would-be Presidents Mitt Romney and Hillary Clinton, have acknowledged as the greatest single national security threat we face. Hypothesizing an explosion in downtown Washington, D.C., Schwartz maps out the likely ramifications while going deep into history to explore the limited range of options available to a Commander in Chief. Drawing from his experience as an analyst at the Departments of Defense, State, and Energy, Schwartz offers a fully panoramic view of a terrifying reality.

This is a book every American can and should read. In RIGHT OF BOOM, Benjamin Schwartz writes with the literary skill and imagination of a great novelist, informed by years of experience in the US government agencies responsible for our nation's security. He explains why an instance of nuclear terrorism on American soil is more plausible than every beforeand imagines what will happen if such a terrifying event should ever take place.Alan Luxenberg, President of the Foreign Policy Research Institute In today's international scene, so full of constant surprises, Schwartz in RIGHT OF BOOM does the great service of forcing us to think ahead about what would be the ultimate tragic surprisean attack of nuclear terrorism. With nuclear explosive material today in the hands of more and more countries and with so much of it stored in conditions of questionable security, the scenario he sketches is becoming more plausible almost daily. One cannot read Schwartz's analysis without realizing that this would be an event of transforming importance in international relations, indeed for the world as we know it. Most importantly, the book offers practical thoughts on how to avoid that tragedy and, if it cannot avoided, how to deal with the aftermathadvice our nation's policymakers would do well to heed.John McLaughlin, Distinguished Practitioner-in-Residence, Johns Hopkins School of Advanced International Studies (SAIS) and former Deputy Director and Acting Director, CIA (20002004) RIGHT OF BOOM effectively bridges the gap between an often aloof scholarly literature and the frequently sensationalist and unreliable popular treatments of the danger of nuclear terrorism. Schwartz makes a compelling case for imagining the unimaginable and highlights the urgency to do so before it is too late. His chilling forecast of the all too plausible consequences of our failure to treat nuclear terrorism as an imminent threat, along with lucid explanations of the latent tools that we already have available left of boom that could help to prevent the horrific

scenario that he weaves, offer a valuable and accessible contribution that should be of interest to anyone interested in national security issues." David A. Cooper, Ph.D., The James V. Forrestal Professor and Chair of the National Security Affairs Department of the U.S. Naval War College and the former Principal Director for Homeland Security Integration, Director of Nonproliferation Policy, and Director of Strategic Arms Control Policy in the Office of the Secretary of Defense. RIGHT OF BOOM makes an important contribution to the literature of nuclear terrorism. Rather than focusing on What if?, Ben Schwartz analyzes What then? This is a ground-breaking analysis of the policy dilemmas that would ensue after nuclear terrorism. Like Herman Kahn before him, Schwartz urges us to think about the unthinkable before it happens so we can deal with it more effectively. Mark M. Lowenthal, President of the Intelligence and Security Academy; former Assistant Director of Central Intelligence for Analysis and Production "Are we prepared to face the reality of nuclear terrorism and do we understand the consequences of such an act? How would national and international leadership and citizens around the world respond to such a devastating reality? Would we know who did it; would forensic evidence quickly point to the culprit and more importantly, how would the fear of a next attack change our culture and faith in government? These are just a few of the important issues raised by Benjamin Schwartz in RIGHT OF BOOM. This thoughtful and fresh approach to the prospect of catastrophic and deliberate nuclear destruction is a must read for students and practitioners interested in a range of security related issues from terrorism, deterrence, and homeland security to countering weapons of mass destruction policy and proliferation prevention."Richard A. Love, Professor and Senior Research Fellow, National Defense University "America is about to enter the whole new world of the second nuclear age, a world defined by a quantum leap in the number of threatening nuclear powers. Benjamin Schwartzs masterful book provides us with the light that can guide us through the darkness. RIGHT OF BOOM should be read and internalized by anyone with responsibility for Americas national security. Professor James Kurth, Swarthmore College How would the United States government respond if a nuclear bomb exploded in the heart of Washington, D.C.? With a deep sense of the history of nuclear proliferation, knowledge of pragmatic policymaking, and the growth of terrorism, Schwartz unpacks this nightmarish scenario from the multiple vantage points of the senior policymaker, ally, rogue state, and terrorist. As he adroitly guides us through the various phases of right of boom, Schwartz convinces the reader of the acute limitations of the state in containing nuclear terrorism in the face of insurgencies, nefarious non-state actors, and uncooperative governments. At the same time, Right of Boom smartly identifies a path for governments towards resolution for a doomsday event that no one believes could happenbut as Schwartz emphasizes, is already within the realm of the possible. In doing so, RIGHT OF BOOM contributes to the important dialogue underway on the future of American national security and its relevance in a changing global order.Shamila N. Chaudhary, Senior South Asia Fellow, International Security Program at New America; and former Director for Afghanistan and Pakistan at the White House National Security Council I had the honor or serving alongside Ben Schwartz, whose singular passion for preventing and preparing for weapons of mass destruction terrorist attacks leaps off the pages of RIGHT OF BOOM. It describes a rare event, WMD terrorism, something we must never allow to happen and do everything we can to prepare for if it does.Andy Weber, former Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs In RIGHT OF BOOM, Benjamin Schwartz, a seasoned national security professional and gifted writer, provides an analysis of how to prevent and respond to a nuclear terror attack on the United States, as well as the international political history necessary to place in perspective such an unprecedented calamity. RIGHT OF BOOM is a highly-readable, authoritative, and thought-provoking account of one of the leading security challenges of our time.Matthew Kroenig, Associate Professor and International Relations Field Chair in the Department of Government at Georgetown University, Nonresident Senior Fellow at the Brent Scowcroft Center on International Security at The Atlantic Council, and author of Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons"The book is appropriately unsettling, while remaining a reasoned overview of a hard-to contain problem...The nature of his subject means Schwartz introduces more questions than answers, and he does so in a serious way that will make readers think about myriad aspects of nuclear terrorism." Foreward s"Benjamin Schwartz deserves much credit. Right of Boom, forces us to consider what just one atomic explosion might mean for humanitys future. Even better for a book about public policy, he writes with accessibility for serious readers, neither talking down to us nor assuming that we have technical expertise in his field...Balanced and packed with impressive analysis, it should be required reading for policymakers, and for all those who care about American security." Washington Free BeaconAbout the AuthorBenjamin Schwartzhas served in a variety of national security positions within the United States government, including in the Department of State, Department of Defense, and Department of Energy. This is his first book.Excerpt. Reprinted by permission. All rights reserved.CopyrightThis book is dedicated to the late Harvey Sicherman.A man who understood the power of words and how to wield that power in service of American statecraft.May his memory be a blessing.The opinions expressed herein are those of the author and do not necessarily represent the views or official policies of the US Department of Defense or any other agency of the US government.COPYRIGHTDEDICATIONINTRODUCTIONThe ExplosionONEThe Persistent Danger:Two Days Right of BoomTWOThe New Threats:Three Days Right of BoomTHREEThe Lessons of Nuclear Deterrence:Three Days Right of BoomFOURThe Lessons of Countering Terrorism:Four Days Right of BoomFIVEGlobal Impact:Five

Days Right of BoomSIXThe Red Line:Fifteen Days Right of BoomCONCLUSIONThe New Order:Twenty-Three Days Right of BoomNOTESACKNOWLEDGMENTSINDEXABOUT THE AUTHORINTRODUCTIONTHE EXPLOSIONON AN OTHERWISE CALM AND UNEVENTFUL MORNING, A small nuclear weapon explodes in downtown Washington, DC. The device generates a yield of fifteen kilotons, roughly the same force unleashed by the bomb Little Boy over Hiroshima. The casualty count rises to over a hundred thousand, and the destruction is measured in hundreds of billions of dollars. The blasts electromagnetic pulse burns out electrical components across the metropolitan area. Radiation leaves the center of the city uninhabitable for the first time since it was declared Americas capital in 1790, and the scientific community predicts that it will remain so for a decade. The stock market plunges as investors anticipate draconian customs regimes that will choke global trade. Fear of further attacks paralyzes America and much of the Western world.Hours after the explosion, a little known terrorist group claims responsibility. It is the first time the president, who was not in Washington at the time of the blast, and his surviving cabinet members, including the director of national intelligence, have heard of the group. After searching intelligence databases, analysts report that the group is linked to three hostile governments, all of which have issued statements condemning the attack and denying involvement. It will take weeks for the remnants of the US intelligence community to assess that one of these three governments is probably lying, but even then the US government wont have irrefutable evidence of complicity. Unlike a ballistic missile or bomb delivered by enemy land-, air-, or seacraft, the origin of what analysts will call a container-based improvised nuclear device is difficult to determine and impossible to prove.Nuclear forensics will ultimately provide strong evidence that the fissile material used in the device originated from the country under suspicion. Signals intelligence will record celebrations and praise of the attack by midlevel officials in that countrys military and intelligence establishment. However, the intelligence reporting taken as a whole will suggest that negligence within that countrys weapons industry and at its nuclear complexes is at least as plausible a scenario as a deliberate transfer by government officials to the terrorist group. Yet there is no conclusive reporting that points to either willful negligence or human error. Either way, there is no way to know if the transfer occurred through official policy, the machinations of a venal or ideologically motivated individual, or simple incompetence. There is almost nothing about the origins of the attack that the president of the United States knows for certain.The world awaits a response from the White House. What happens next?Many books have been written on the topic of nuclear weapons, and many others have been written on terrorism. A smaller but still sizable number of authors have focused on nuclear terrorism, particularly since al-Qaedas attacks of September 11, 2001. Purveyors of popular culture, from American novelists to Hollywood directors, have also addressed the subject. Author Tom Clancy envisioned terrorists targeting the Super Bowl with nuclear weapons in The Sum of All Fears in 1991. Hollywood offered us the George Clooney vehicle The Peacemaker in 1997. The acclaimed post-9/11 TV drama 24 presented a bleak, dangerous world in which terrorists were always only a few ticks away from nuclear disaster. Americans have had so much entertainment on the issue that they may feel sufficiently educated.Yet there are very few authors, academics, or entertainers who have really thought through the scenario described above or examined in detail the question of what happens in the days, weeks, and months after such an attack. Presumably, part of the reason for this is that the US governments response to nuclear terrorism is unknowable. Ask anyone who has spent time at the White House on the National Security Council staff and they will tell you that decisions of war and peace are in no small part the product of fickle factors like the personality of the president and the people who surround him. Thoughtful national security practitioners also know that happenstance and dumb luck have a prominent role in shaping discussions in the White House Situation Room. These conditions make realistic speculation difficult to formulate. The wide range of possible scenarios and the salience of unknowable factors make it difficult to anticipate hypothetical policy prescriptions.Another reason that this question hasnt demanded an answer is that most people understandably consider it to be far less relevant than How can nuclear terrorism be prevented? Speculating on responses to a nuclear attack is a bit like contemplating the day after any number of disasters that involve an unprecedented scale of devastation. Does the national security community focus on the US governments potential response to an asteroid striking the planet or the aftermath of a war between China and the United States? It does not, because these types of scenarios fall into the realm of the surreal or at a minimum envision a situation in which there is such massive social disruption and such a severe diminution of US government capacity that it is difficult to even know where to begin. Admitting the limits of American power, particularly the hard power of the US military and intelligence community, is also not a popular pastime. A politician would need to be unusually brave to publicly focus on the day after an act of nuclear terrorism instead of the days before. Accepting nuclear terrorism is an unacceptable position, his opponents would surely retort.There are also no precedents, history, or cases of nuclear terrorism to provide context or demand consideration. Peopleparticularly pundits and politicianswho have not studied much history often use the term unprecedented to describe the unfamiliar, but the scenario laid out above is truly something new under the sun. Since a successful nuclear terrorism event has not happened before, and it is not happening now, there is less appetite for thinking deeply about it than there is for considering more traditional security issues. From the sinking of the Lusitania by a German U-boat, to the Japanese empires attack on Pearl Harbor, to al-Qaedas attacks that culminated in the events of 9/11, Americans are conditioned to contemplate surprise attacks and expect that the US government can respond swiftly and

severely, to manifest the prediction made by Japanese admiral Isoroky Yamamoto that a surprise attack against America would awaken a sleeping giant.People may assume that the answer to nuclear terrorism is tragic but quite straightforward: retaliation with nuclear weapons. But it wont be that simple. First, in a nuclear terrorism scenario the adversary has every incentive to obscure the origins of the attack and to conduct its activities in countries and through entities that are unaffiliated with the belligerency. This approach is consistent with the well-established practice of using civilians and noncombatants as both targets and human shields. Consequently, it wouldnt be clear to the US government who or what to target for retaliation. Second, unlike US retaliation plans developed during the Cold War, an American nuclear response wouldnt necessarily set the conditions necessary to prevent follow-on attacks. The ultimate outcome of the US governments response must be to deny the adversary the ability to access nuclear materials. Given the global nature of the nuclear industry, striking back with atomic bombs wouldnt guarantee that outcome. Third, we dont live in a world where the moral, legal, and political environment is likely to legitimize a retaliation that results in the violent death of hundreds of thousands of people who had nothing to do with perpetrators who could number fewer than a hundred. In 1957 Henry Kissinger wrote a treatise titled Foreign Policy and Nuclear Weapons in which he noted, As the power of modern weapons grows, the threat of all-out war loses its credibility and therefore its political effectiveness. The American people must be made aware that with the end of our atomic monopoly all-out war has ceased to be an instrument of policy, except as a last resort, and that for most of the issues likely to be in dispute our only choice is between a strategy of limited war or inaction. When Kissinger wrote these words he was thinking about the Soviet Union and was concerned about the ability of the United States to prevent communist expansion through coercion and low-intensity conflict, but his words are just as applicable to the type of nuclear terrorism scenario imagined above. Unfortunately, few have thought about what a limited war against nuclear terrorism would look like.The great Prussian military theorist Carl von Clausewitz is renowned for his observation that the fog of war is a permanent condition of armed conflict, but it is also true that the density of this fog shifts over time, growing and dissipating with changing conditionsespecially changes in technology. The atomic bomb has been in existence for six decades and in this time that fog hasnt threatened to obscure the origins of a nuclear attack. In the first two and a half decades after its creation, only five countriesChina, France, the Soviet Union, the United Kingdom, and the United Statespossessed the bomb. The acquisition of the weapon by Israel, India, and Pakistan ushered in what Yale University professor Paul Bracken termed the second nuclear age. During neither period were these weapons and their components completely secure. Accidents happened. In 1961, the US Air Force mistakenly dropped two hydrogen bombs over North Carolina with a multi-megaton combined payloadhundreds of times more powerful than the bombs dropped over Hiroshima and Nagasakiand all but one of the bombs safety systems failed.1 Nevertheless, the second half of the twentieth centurythe high modern industrial agewas an era of strong centralized governments during which a small number of nuclear suppliers were closely watched by government regulators. Massive governments oversaw weapons of mass destruction. In this environment, attribution of a nuclear detonation would have been straightforward and culpability would have been clear.The United States was able to avoid nuclear war during this time, despite repeated standoffs with the Soviet Union and China, because a significant number of Americans thought very seriously about the day after a nuclear attack. Tremendous time, energy, and resources went into planning for nuclear war. The US government made it official policyarticulated publicly by presidents and cabinet secretariesto respond to a Soviet invasion of West Germany with nuclear weapons. It backed up this policy by deploying a massive nuclear arsenal and establishing a comprehensive nuclear command-and-control system. Just as today, during the Cold War no one could truly know how the United States would react if Soviet tanks actually crossed the Fulda Gap. Even presidents and cabinet officials who articulated these threats couldnt know if their vows were promises or bluffs, but their words possessed enough credibility to keep the Soviet Army at bay.In the case of nuclear terrorism, it is not the uncertainty of Americas response options that is notable todayuncertainty has always existed and always willbut the degree of it that is alarming. Since the dawn of the nuclear age and the devastation inflicted on Hiroshima and Nagasaki, the most powerful force preventing the use of nuclear weapons has been the plausible threat of effective retaliation. The articulation of this threatwhich the US defense establishment calls declaratory policyis manifest through public warnings. But words are not enough. To be effective, declaratory policy requires that the target audience understand the threat and that the threat be credible.Credibility rests on a foundation of capability, interest, reputation, and risk propensity. The United States has substantial defense capabilities, but because the use of capabilities accrues costs, credibility requires that US interests be seen to be of such importance that Americans will bear costs and accept risk to defend them. To deter the Soviets, the US government not only declared its intention to use nuclear weapons but also created first- and second-strike capabilities through a nuclear triad. It also deployed American servicemen and -women to serve as a human trip wire in Europe. Having suffered the calamities of two world wars in two generations and having employed two atomic bombs, the American public was perceived by the world as willing to support the use of those weapons in order to protect vital interests of national and international security.Today the United States possesses no comparable credible threat to compel governments to prevent the transfer of nuclear weapons and related materials to terrorist groups. Effective compellence requires both a perception that attribution of identity (where the weapon came from) is likely and the establishment of a return address (a target

that can be held at risk). The inherent opacity of nuclear terrorism frustrates these conditions. Foreign governments dont have much reason to believe they will be held accountable if terrorists exploit their countrys territory, markets, or other resources to attack the United States. Adversarial governments such as the regime in North Korea would be in a much stronger position vis--vis the United States if an atomic bomb happened to go off in Washington DC. Countries that have good relations with the United States, such as China and Malaysia, have even less reason to be concerned than countries like Iran and North Korea because they are unlikely to be targets of a wounded and angry American public in the days after a nuclear terrorism event. Ultimately, the incentive for governments to do nothing can be high. European and Chinese companies make a sizable profit from trading in nuclear-related technology.2 These governments have an incentive to cooperate with the United States just enough to claim due diligence and to avoid responsibility, but not enough to actually eliminate threats emanating from their territory that are directed at the United States.Since the Peace of Westphalia in 1648, international politics has been premised on the principle of state sovereignty, which holds that states are responsible for maintaining the peace or at least preventing the export of violence from the territories over which they are the supreme authority. In truth, this condition has always been honored more in word than in deed. The international security system and the powers that defend it dont really hold the Lebanese government responsible for Hezbollahs actions, the Mexican government responsible for the gang violence in the American Southwest or the US government responsible for the flow of automatic weapons into Mexico. The United States did not retaliate against Germany for hosting many of the al-Qaeda operatives who conducted the 9/11 attacks. Yet this is a gap in the international security system that poses a problem of an entirely different order of magnitude when it comes to nuclear terrorism.Arguably the most likely reason why planning for the day after an act of nuclear terrorism hasnt been the focus of US national security policy is that doing so is difficult. But this is only part of the reason. Another is that the US national security community continues to divide the problem in a manner that obscures the issue. The bureaucratic structure of the federal government is demonstrative in this respect. There are offices with names like Missile Defense that deal with the issue of nuclear weapons primarily by formulating policy to deter nuclear weapons states. There are other offices with names like Counterterrorism that focus on kinetic operations aimed at dismantling al-Qaeda and countering other terrorists who threaten the United States. And then there are Counterproliferation and Nonproliferation offices charged with managing policies to prevent nuclear proliferation. These three types of offices have broader functions, but the point here is that the issue of nuclear terrorism crosses all three yet isnt any single offices primary responsibility. There is no office singularly focused on the problem of state-enabled terrorism or state failure to prevent terrorist use of nuclear weapons that is capable of marshaling all instruments of national power to meet this threat.This isnt the product so much of poor thinking as it is of learned and applied history. The trifurcation reflects the history of three distinct national security problems, each of which spawned specific policies based on unique premises. The problem that gave birth to Missile Defense was the need to manage the US nuclear arsenal in a manner that deters other states from employing nuclear weapons, reassures allies that they are protected under the US nuclear umbrella, and dissuades states from developing and/or expanding nuclear weapons capabilities. Those tasked with addressing this problem are focused intently on providing advice on nuclear declaratory policy and US nuclear weapons posture, which are expressed officially in the Nuclear Posture . As might be expected (and quite appropriately), they are steeped in the literature, philosophy, and traditions of nuclear brinkmanship and international security theory. Such people are committed to the proposition that nuclear war can be deterred and military balances managed in order to promote peace.The US counterterrorism community is a separate and very different tribe. In one respect, these people are the product of al-Qaeda and the post-9/11 wars. But terrorism and the essential premises behind US policy for combating terrorism existed long before Osama bin Laden. The deliberate targeting of civilians and noncombatants with violence to achieve political purposesa standard description of terrorismis far from a novel form of violence. However, the fundamental challenge posed by an unattributable nuclear attack isnt terrorism as a tactic, but terrorism as a phenomenon. Terrorism emerges from a sociological, geographical, and political condition thats been around since the dawn of civilization: the existence of groups that can organize and effectuate violence without occupying fixed territory. Groups like al-Qaeda follow in the footsteps of desert nomads and mountain dwellers who for centuries have harassed settled polities by raiding and then retreating into terrain inhospitable to pacification.3 This dynamic remains the central problem posed by terrorism, and it lends itself to a time-tested response: isolation and preemption. After much trial and error, this has become the de facto strategy of the US counterterrorism community.The weapons of mass destruction (WMD) proliferation people, who represent the third arm of the US national security bureaucracy in question, have a very different mandate from both the missile defense and counterterrorism communities. In essence, they manage two types of approaches: (1) nonproliferation supported by multilateral regimes, treaties, and UN sanctions; and (2) counterproliferation effectuated by military and covert action. The former comprises an alphabet soup of agreements and activities, including the G-8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction, the Global Initiative to Combat Nuclear Terrorism (GICNT), the Non-Proliferation Treaty (NPT), the Nuclear Suppliers Group (NSG), the Nunn-Lugar Cooperative Threat Reduction (CTR) program, the Proliferation Security Initiative (PSI), and UN Security Council Resolutions 1540 and 1874, among others. The latter includes kinetic action such as the US-led invasion of

Iraq (an event that represented only one chapter in a longer counterproliferation campaign dating back at least to the Israeli raid on Iraqs Osirak nuclear reactor in 1981), the US-led interdiction in 2003 of the motor vessel BBC China transporting components to Libyas nuclear program, the 2007 Israeli air strike on Syrias clandestine nuclear reactor, and the covert actions that have reportedly been conducted against Irans nuclear program.4Each of these three tribes in the national security community has done a reasonably successful job of fulfilling its mandates. Nuclear weapons states have deterred each other from employing atomic bombs for nearly two-thirds of a century. Americas military and intelligence professionals removed Osama bin Laden from the battlefield and nearly vanquished al-Qaedas original senior leadership while managing the broader terrorist threat in a manner that preserved Americans way of life with minimal disruptions. By all reasonable measures, the nonproliferators also have exceeded expectations. At the time the Non-Proliferation Treaty was signed in 1968, experts predicted that the world would confront twenty-five to thirty nuclear weapon states within twenty years. Over forty years later, only four states are not parties to the NPT, and they are the only additional states that possess nuclear weapons. Military action played a role in this success. At tremendous cost, the US-led wars against Saddam Husseins Iraq in 1991 and 2003 put an end to that governments ambition to acquire nuclear weapons. Interdictions on the high seas pushed the Libyan and North Korean proliferation efforts back on their heels. Israels raid into Syria appears to have ended Bashar al-Assads nuclear program.Unfortunately, these policies may no longer be able to sufficiently manage the threat posed by nuclear terrorism. Ten years ago, Graham Allisonthe founding dean of Harvard Universitys John F. Kennedy School of Government, adviser to secretary of defense Caspar Weinberger under president Ronald Reagan, and himself assistant secretary of defense under president Bill Clintonwrote Nuclear Terrorism: The Ultimate Preventable Catastrophe. The book achieved international acclaim, becoming the standard on the subject in many colleges and graduate schools as well as think tanks and military academies. In his book, Allison puts forward a doctrine of Three Nos: no loose nukes, no new nascent nukes, and no new nuclear weapons state. While characterized as general conditions, each no was targeted at the activity of a specific country. No loose nukes was a reaction to the proliferation of nuclear materials emanating from the former Soviet Union, principally Russia, Belarus, Kazakhstan, and Ukraine. No new nascent nukes responded to the growth of the Iranian nuclear complex. And his warning about no new nuclear weapons state was directed squarely at the Democratic Peoples Republic of Korea (DPRK, or North Korea).A decade later, Allisons Three Nos have become three yeses. Today North Korea is a member of the nuclear weapons club; it has conducted three live nuclear weapons tests, in 2006, 2009, and 2012. The regime has enough fissile material for anywhere between six and eighteen atomic bombs, according to public estimates, as well as the knowledge acquired from over twenty years of work on nuclear weaponization. The DRPK began a plutonium route to the bomb in the late 1980s when it built a clandestine separation plant at Yongbyon despite signing the NPT in 1985. A uranium enrichment program was later exposed as well, first brought to light in October 2002 when American officials in Pyongyang accused North Korea of having a secret, relatively large such program and then confirmed it in November 2010 when the DPRK invited an American scientist to a production-scale gas centrifuge plant at the Yongbyon site.5With respect to loose nukes, the threat faced today is unprecedented. The good news is that the danger that Allison focused onfissile material leaking out of the former Soviet republicshas been substantially curtailed, though not eliminated. When Allison served in government he was confronted by a slew of nuclear smuggling cases. Between 1992 and 2002, eleven cases of attempted sales of highly enriched uranium and two cases of attempted plutonium sales occurred. In contrast, between 2002 and 2012 there have been only four casesall but one of which was linked to a single country, Georgia. This is a good news story, which is probably due in no small measure to the efforts of the United States to provide rapid security upgrades as part of the Nunn-Lugar Cooperative Threat Reduction program.6Unfortunately, this good news has been accompanied by extremely dangerous developments in Pakistan. The country is in the midst of a massive expansion of its nuclear weapons complex at a time when radicalization is on the rise and its military is under frequent attack from insurgents. Moreover, the size of the nuclear complex is not only expanding but, according to Feroz Khan, a thirty-year veteran of the Pakistani program, the military is also planning to produce miniaturized tactical nuclear weapons, deploy them in a ready-to-launch state, and mate them with new delivery vehicles. From a proliferation perspective this is a frightening prospect, particularly considering that Pakistan has an unparalleled history of proliferation. This is all occurring in a country that hosted Osama bin Laden and the senior leadership of al-Qaeda for over a decade and where the military intelligence service continues to court, co-opt, and coordinate with a wide array of terrorists groups.7With respect to the issue of nascent nukes the Islamic Republic of Iran has progressed well past the point of having uranium enrichment capability. Despite robust international sanctions, Iran has procured a wide range of nuclear-related goods from illicit foreign suppliers. Today it possesses two gas centrifuge plants and has the ability to build more if it chooses to do so. In addition, the Bushehr power reactor is now operational and in 2013 the government nearly completed the Arak heavy water reactor that experts assess is better suited to making plutonium for nuclear weapons than to producing medical isotopes, as the Iranians claim. These facilities are fed by Irans large uranium conversion and fuel fabrication plants. In November 2013, Iran and the P-5 + 1 reached a six-month agreement that eliminated dangerous stocks of low-enriched uranium, granted increased access to International Atomic Energy Agency (IAEA) inspectors, froze expansion of the program, and lengthened the time it would take Iran

to break out of IAEA safeguards and dash to a bomb. Yet Irans massive nuclear infrastructure remains in place and experts publicly estimate that the breakout time has only expanded by a month or so. Using its declared facilities, Iran could produce enough weapons-grade uranium for a bomb in a few months time.8 If ayatollah Ali Hosseini Khamenei gave a green light today for the production of a uranium-based weapon, it is possible that the IAEA would not detect it and the United States would not be able to act in time to prevent Iran from producing sufficient highly enriched uranium for a bomb. The bottom line is that Iran now possesses a sizable nuclear industry composed of multiple facilities spread across the country, some of which have been built deep underground in locations that are difficult for foreign airpower to attack. Iran is a large and wealthy country; Iranian scientists are capable; and the atomic bomb is 1940s technology.9The reality of the three yeses represents a tipping point because the atomic bomb and its ingredients are now so dispersed that loss of government control is both a viable and plausible scenario. The latter condition actually increases the incentive for some governments to exacerbate the former. It is time to think as seriously about the day after nuclear terrorism as Cold War strategists thought about a hot war between the United States and Soviet Union. The fog of war wont be eliminated, but examining the issue can help dissipate it, promote effective preparation, and help identify actions that can be taken prior to a crisis - left of boom in order to diminish the probability of attack. First and foremost, defining and developing credible response capabilities would not only leave the United States with just that but would also boost our ability to compel states to regulate nuclear trade, enhance nuclear security, and increase counterterrorism activities within their own countries.This is uncharted territory, but history is the best guide. The methodology of this work is to integrate lessons from the pastthe successful deterrence of nuclear weapons states, enduring approaches to combating terrorism, and effective counterproliferation regimes in the context of evolving cultural and international legal normsin order to promote practical thinking about the days after a nuclear terrorism attack. The theory and practice of nuclear weapons deterrence, reassurance, and compellence contain lessons for managing the unique dangers of the nuclear age. Centuries of irregular warfare and special operations provide lessons on how to effectively respond to terrorism. The evolution of the legal and political foundations of the international security system is also relevant for consideration because morality, legality, and legitimacy directly affect the political feasibility of retaliatory actions. The issues of morality and justice have direct and tremendous security implications because the political will for a nation such as the United States to engage in violent retribution for WMD terrorism depends on the issue of legitimacy. The threat of total war, which could cost hundreds of thousands or millions of lives, simply isnt a credible response to nuclear terrorism committed by only a few dozen people.Belligerency was clearly transparent when the movement of massive military formations across borders was necessary to inflict massive destruction. This is no longer the case. The worlds reaction in 2013 to chemical weapons use against Syrians is a case in point. Despite clear evidence that Assads government deployed chemical weapons and that sarin-filled rockets were fired from government-controlled territory into opposition areas, culpability still became a contentious issue with Russia and China, whose governments asserted that Syrian opposition forces could be to blame. One can only imagine the potential for disagreement in the event a government chooses to facilitate, rather than directly use, WMD. The transfer of a nuclear weapon by a state to a nonstate actor violates treaties and UN resolutions and comes closest to a direct act of aggression, but what about less direct assistance? For example, is the transfer of fissile material a form of aggression? What about the transfer of funds? Or simply providing a sanctuary? If terrorists utilize a banking or transportation system to support their operations, are companies culpable?Consider the following hypothetical situation. The North Korean government helped build a nuclear weapons complex for Syria that was destroyed by an Israeli air strike in 2007. What if the Israelis hadnt struck, and atomic bombs were eventually produced, acquired by Hezbollah in the midst of the chaos of Syrias civil war and then employed by Hezbollah operatives. Would North Korea be held accountable and retaliated against? If so, does the North Korean regime know this? In other words, what is the legal standard for culpability in the case of nuclear terrorism?The most dangerous thing that governments can do with respect to nuclear terrorism is to do nothing at all, to not build institutions capable of securing nuclear weaponsrelated materials. Holding governments responsible for policing their own territory was relatively straightforward when nuclear weapons could only be built and deployed by governments. It is far more complicated when it is plausible for nonstate actors to acquire these capabilities. In a Hobbesian world bereft of a Leviathan either in the form of a multinational world government or a superpowernational governments are the first and best line of defense against nuclear terrorism. But unlike during the Cold War, today there isnt a credible security framework that suggests that national authorities and their citizens will be held accountable.The emergence of conditions that make it plausible for terrorists to acquire and employ nuclear weapons without an evidentiary chain that implicates a government is a fundamental change in the international security system that warrants new plans and policies. In charting a way forward, it is worth consulting some pertinent history and considering together topics that often are studied in isolation: (1) nuclear proliferation and efforts to contain the spread of the bomb; (2) conflict escalation among nuclear powers; (3) counterterrorism; (4) the evolution of the international system of states; and (5) the effect of moral considerations on warfare. This book brings these subjects together in an attempt to highlight lessons from the past in order to generate ideas for the future.CHAPTER ONETHE PERSISTENT DANGERTWO DAYS RIGHT OF BOOMWHILE MANY IN THE MEDIA AND THE POLITICAL ESTABLISHMENT have long

debated whether or not the threat of nuclear terrorism was real, this isnt a question on anyones mind in the days after the nuclear explosion in downtown Washington, DC. World leaders are unanimous in their expressions of shock, and defensive of their conduct.We always knew this was a possibility, remarks the president, flanked by prime ministers and presidents from the closest allied nations, but there were no signs of a new threat.While most Americans are silenced by a collective horror, a small number search for someone familiar to blame: If only the government had and The administration hadnt These voices murmur with varying degrees of derision.Yet even with the clarity of hindsight, intelligence officials, academics, and pundits cant point to any single event that marked the moment when nuclear terrorism became an urgent problem. A few thoughtful observers recall the warning of Paul Bracken, who stated that often during periods of rapid change we are caught up in the spiral of events, lost in its energy, blind to the accumulation of slow changes remaking our world.1 The proliferation of nuclear knowledge and materials occurred gradually for over half a century. A radioactive crater now testifies to the fact that a tipping point had been passed but gives no indication of how, when, or where. How did this happen? is the question on the lips of nearly everyone. But no one in a position of authority can identify a single cause.The magnitude of the attack overwhelms all response resources. Public officials announce a twenty-four-hour curfew throughout Washington while emergency officials are dispatched to the blast site. They contend with the unique features of a nuclear detonation: the explosive blast, direct nuclear radiation, and thermal radiation. The blasts shock wave generated surface winds approaching one hundred miles per hour, blowing off building walls and breaking glass with enough force to cause injury throughout a three-mile radius. Few of the buildings in a half mile of the blast remain standing, and those that do are not structurally sound. The citys underground infrastructuretunnels, the subway system, water mains, power, telecommunications and gas conduitsare now blocked and will remain so for weeks. One mile from ground zero, sturdy buildings are standing but have been rendered unstable, as have most family homes. People are desperate to get as far away as possible, but rubble and overturned vehicles clog streets and fires rage across the city.Panic induced by the visible devastation is compounded by fear of unobservable dangers. There is no consensus on the geographic boundaries of radioactive dust and debris. Nuclear radiation and contaminants associated with building materials, such as asbestos and heavy metals, are detectable as far as ten to twenty miles from the blast site. Victims within this range are already experiencing nausea and vomiting. In the days ahead an agricultural embargo will be declared for the Chesapeake Bay, all of Delaware and parts of New Jersey, Maryland and Virginia, but that is far from the minds of the first responders.2 While emergency responders deal with the immediate human consequences of the attacktreating the injured, stabilizing damaged infrastructure and rebuilding water, sewage, and electrical systemsthe experts suddenly see a malign trend that had hitherto been obscured by other concerns: the slow but inexorable spread of the technologies of clandestine nuclear warfare.COULD THIS REALLY HAPPEN?Is the scenario above simply the product of an overactive imagination and a penchant for alarmism?This is a reasonable question to ask. And it is worth answering before embarking on an exploration of potential responses to nuclear terrorism. Those who assert that there is a genuine threat of nuclear terrorism should acknowledge at the outset that there are legitimate reasons for skepticism. In fact, those who have paid closest attention to the issue over the years may be most conditioned to be incredulous. They have heard public officials repeatedly issue dire warnings of impending terrorist attacks, watched and seen that no attack materializes, and then have been presented with little or no evidence to support the initial alert.It is also perfectly understandable that reasonable people question the competence and/or trustworthiness of US national security officials, particularly those responsible for nuclear issues. This is especially so in light of the second American-led invasion of Iraqa war justified to the public largely on the basis of nonexistent nuclear weapons. Moreover, warnings of impending doom didnt originate with then vice president Dick Cheney. I think we have to live with the expectation, remarked a Los Alamos atomic engineer in 1973, that once every four or five years a nuclear explosion will take place and kill a lot of people. This statement is cited in John McPhees The Curve of Binding Energy, which detailed concerns about the proliferation of nuclear weapons to nonstate actors over forty years ago.3 In the context of this history, accusations of Chicken Littlelike behavior arent flippant reactions.While exaggeration may mislead the credulous and offend the perceptive, neither the absence of a precedent for nuclear terrorism nor the intelligence failure regarding Saddam Husseins WMD program change the growing threat. Many of these conditions arent new; they have existed since the dawn of the nuclear age, and the world has been very fortunate that the danger has been effectively managed for so long. Other conditions are truly unprecedented. The world crossed from Graham Allisons Three Nos into three Yeses with a whimper rather than a bang, but we have nevertheless entered an environment of extraordinary risk. Allisons contention that [t]he detonation of a terrorist nuclear device in an American city is inevitable if the U.S. continues on its present course is certainly debatable.4Yet an objective assessment of the current nuclear security situation and its future trajectory leads to an unavoidable conclusion: We are more vulnerable to nuclear terrorism than at any time since the dawn of the nuclear age.THE ENDURING THREAT