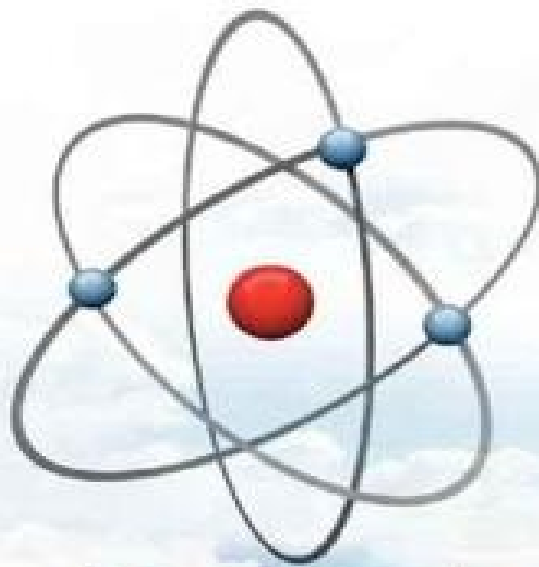


DISCOVERY INSTITUTE PRESS

SLEEPWALKING WITH THE BOMB



**BY JOHN C. WOHLSTETTER
FOREWORD BY RICHARD PERLE**

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SEATTLE

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Description

Sleepwalking with the Bomb shows how we can forestall nuclear catastrophe. It offers familiar faces, cases and places to illustrate how the civilized world can face the most pressing nuclear dangers. Drawing from both history and current events, John Wohlstetter assembles in one place an integrated, coherent and concise picture that explains how best to avoid the “apocalyptic trinity”—suicide, genocide and surrender—in confronting emerging nuclear threats.

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Praise for *Sleepwalking with the Bomb*

JOHN WOHLSTETTER HAS GIVEN US A TOUR DE FORCE OF OUR TROUBLED nuclear condition, its roots and prospects. It's all here: an insightful history of the nuclear aspect of the Cold War and its crises, fictional as well as real; the chilling prospects of nuclear-armed rogue states and terrorists; the dangerous links between civilian nuclear power for the grid and nuclear weapons; the fuzzy and counterproductive dreams of the zero nukes movement.

For many years *Sleepwalking With the Bomb* will be the standard against which all other work on nuclear issues will be measured.

R. JAMES WOOLSEY, FORMER DIRECTOR OF CENTRAL INTELLIGENCE, CHAIRS THE FOUNDATION FOR DEFENSE OF DEMOCRACIES.

In these perilous times of nuclear Jihad and amputational pacifism we acutely need John Wohlstetter's Reverean ride through the night, ringing out strategic alarms and insights in the grand tradition of Herman Kahn and Albert Wohlstetter. *Sleepwalking With the Bomb* is as lucid, sophisticated, and wide awake as America's current leadership is muddled, naive, and somnambulant.

GEORGE GILDER, AUTHOR OF *THE ISRAEL TEST* (ENCOUNTER BOOKS, 2012) AND *WEALTH & POVERTY* (REGNERY, 2012).

To family, friends, and others who educated me in coping with life's challenges, including the challenge of thinking about how best to avoid man-made catastrophes—of which nuclear conflict is most fearsome and destructive of all.

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Richard Perle

WHEN RICHARD NIXON RETURNED FROM MOSCOW IN 1972 HE brought with him the apparent triumph of a comprehensive agreement with Leonid Brezhnev that would end a nuclear weapons “arms race” and usher in a new era of constructive cooperation between the superpowers. Neither he, nor his grand strategist Henry Kissinger, understood that the ABM Treaty and separate offensive arms limitation agreements they negotiated would lead to a massive Soviet build-up that left the United States (and its allies) in a situation far worse than the one they hoped to improve.

Far from reducing the Soviets’ already vast nuclear arsenal, the agreements of 1972 actually increased both the number and lethality of Moscow’s nuclear forces. And they led directly to a challenge to the United States and its allies that was as grave as any in the Cold War.

The 1972 interim agreement fixed the number of launchers for nuclear armed intercontinental ballistic missiles, but it allowed for the enlargement of those launchers and the replacement of older single warhead missiles by new missiles with multiple warheads. The Soviets promptly began to exploit both provisions of the agreement, first by replacing a class of missiles carrying a single warhead with a new class carrying three warheads. But not content with using an arms control “freeze” to triple the number of their warheads, they then proceeded to develop an entirely new missile, which was excluded from any limit because it lacked intercontinental range. The Soviets assigned this new missile (known as the SS-20) to the European targets that had been previously assigned missiles limited by the agreement. This freed up hundreds of missiles that could now be aimed at the United States. By the time Ronald Reagan took office in 1981, the SS-20 and NATO’s plan to respond had created a crisis in the NATO alliance, as our allies debated whether to approve a plan to balance the new SS-20s with American missiles of comparable range. For much of Reagan’s first term the crisis dominated America’s relations with Russia and its NATO allies.

The unintended consequences of the 1972 arms agreement is but one example of a lesson that the Obama administration has yet to learn: arms control is seldom a solution but is often a problem. Today, the ill-founded belief that arms control treaties with Russia are vital to American interests militates against sensible policies regarding missile defense and nuclear weapons proliferation. By their nature, international treaties treat all signatories alike. Yet the great challenge of halting the proliferation of nuclear weapons will not be met until we accept that not all states or regimes are the same: nuclear weapons in the hands of Britain or France or the United States are not the same as nuclear weapons belonging to North Korea or Iran.

It was a misplaced global/legal sentiment that helped get us into today’s situation where nuclear technology has been freely distributed around the world, waiting only for “peaceful” nuclear programs to be transformed into programs for nuclear weapons. The chances are that a future nuclear conflict will involve weapons acquired by one or more states that benefited from outside technical assistance based on, and justified by, the Atoms for Peace program and its progeny, the Nuclear Proliferation Treaty (NPT).

John Wohlstetter knows all this and a great deal more. With great clarity and effortless instruction he has astutely analyzed and explained the history and current issues surrounding nuclear weapons. Anyone wishing to understand the past, present and future of nuclear weapons should read this fine book before saying or writing a word on the subject. I can't think of a single journalist or government official, especially those with strong opinions on nuclear matters, who would not benefit from reading *Sleepwalking With The Bomb*. (The more they think they know, the greater the benefit.) But the thing most devoutly to be wished is that someone, somewhere in the Obama administration (and those that follow it) will read this important book.

—RICHARD PERLE, WASHINGTON, D.C.

THE IDEA FOR THIS BOOK CAME FROM WATCHING ADMINISTRATIONS make avoidable mistakes during the period after the end of the Cold War and the implosion of the former Soviet Union. There were things done right as well, but nuclear policy is supremely unforgiving, leaving little margin for error and little time to correct mistakes. Applying lessons from the failure to stop North Korea's nuclear quest, for example, would have led to better decisions and perhaps avoided the peril we confront today with Iran. This book draws lessons that I hope will give future leaders of the civilized world a better chance to make sound decisions.

A book of this nature necessarily involves some technical explanations and use of terms not universally familiar. I have done my best to make this material as clear as possible for nonspecialists; some clarifications and definitions are offered in the text itself, and some are in footnotes or in the book's appendices.

The period covered in this book encompasses the last 46 years of the former Soviet Union (also known by the Anglicized initials USSR, or as Soviet Russia), and the first 20 years of its current remnant, Russia (known as the Russian Federated Soviet Socialist Republic, or RFSFR, when part of the USSR). "Soviet Union" and "Russia" were used colloquially during the Cold War period and are interchangeable, and in the text the names are often alternated or combined, depending on context. The text also follows colloquial usage in referring to the United Kingdom as Britain or Great Britain, or England.

Foreign names are spelled per usage familiar to the public; if I cite a text, I generally follow the spelling in the version cited. For Chinese names, I follow the modern, phonetic Pinyin system (thus "Jiang Zemin"); but I use the older Wade-Giles Roman transliteration for Taiwanese names (thus "Chiang Kai-Shek").

I mined sources primarily for factual support for matters in the text, with analysis mine unless otherwise attributed. Where named people who have written memoirs are cited, their memoirs, listed in the bibliography, are used as primary source material for what they said, wrote, or thought. Special attribution in the text is given to certain works unusual for their coverage of one or more parts of the puzzle, or for offering an especially valuable narrative. The text includes a bibliography of some of the more important works in the field, all of which were consulted in writing this book. Complete documentation of quotations and factual data is available online at www.SleepwalkingBomb.com.

As with any book, the author owes much to many. Bruce Chapman, founder and guide of Discovery Institute, created a home for me to think and write—at his insistence, in that order. His counsel on how best to proceed was invaluable, as was his editorial advice. Discovery's Steve Burie provided me with serial events at which to float my analyses and conclusions before a public audience.

George Gilder contributed the insights of his capacious, creative intellect, plus much encouragement and sage advice for the entire project. Others who read drafts and offered guidance and encouragement include Rosann Kaplin, Nicholas Fuhrman, Jack Oslund, and Tim Wilson. Tim brought his expert knowledge of weaponry to clear up key points. Edward Weidenfeld offered the sage

advice drawn from his lifetime immersion in national security policy, politics, and history.

Special mention must be made of the late David Ginsburg, whose storied Washington career spanned 72 years, and who crossed paths with countless major national security figures around the world and in 13 American administrations. Thirty-one years of periodic lunches and serious conversation on issues of the day were an education for me and inspired me to try writing books.

Special thanks also to Richard Perle, who contributed the foreword. Meeting Herb London proved a landmark in my life. He invited me to become a trustee of the Hudson Institute, and has been a constant source of encouragement. Fellow trustees Linden Blue, Jack David, and Scooter Libby, Hudson CEO and president, and Ken Weinstein, and Hudson scholars Douglas Feith, and Christopher Ford provided essential perspectives on nuclear issues, in various contexts. Linden brought in Robert Schleicher, who offered expert advice on nuclear technology basics. Michael Ledeen offered abundant historical perspective. Peter Huessy and Sven Kramer shared their wide knowledge of arms-control and strategic weapons issues. Claudia Rosett and Gordon Chang offered deeply informed perspectives on North Korea and China. Laurie Mylroie, as always, educated me on Mideast matters.

If it flies, Stu Johnson and Paul Hart know all about it. Ike Nehama aided my look at missile defense. Alan Salisbury and Marc Gunnels gave me needed military perspective on key issues. Michael Brewer applied his insightful analysis to a wide range of subjects. George Brokaw pointed me to a source I had overlooked. Jeff Gibbs lent his historical scholarship and long experience to various topics; he also pointed me to Thomas Hone, whose essay on the Washington Naval Treaty was very illuminating. Yuri Mamchur tested my Russia arguments, to my benefit. Henry Sokolski, Nonproliferation Policy Center provided a gold mine of proliferation data and analysis, plus public forums with discussion of the highest quality. Bob Zarate collaborated with Henry on editing the writings of Albert and Roberta Wohlstetter, an invaluable source. Joan Hall, my first cousin, added her insights on Albert, Roberta and issues of the day.

A September 2011 visit to Israel, under the auspices of the Hudson Institute and hosted by the Friends of the Israeli Defense Forces, provided a close-up look at the strategic situation of one of America's firmest, most trustworthy allies, a world leader in critical military and commercial technologies.

Online publishers The American Spectator, Human Events, and Daily Caller published my national security articles, enabling me to air some of my arguments during the book's long gestation. Hudson DC's Grace Terzian shepherded my twin publications on Herman Kahn for Hudson Institute. Hudson NY's former online editor, Nina Rosenwald, published my comparison between the Washington naval treaties and the SALT treaties.

I give heartfelt thanks to the talk radio hosts who provided me with hundreds of radio opportunities on stations of local, citywide, statewide, and national reach. They gave me a platform to present my national security thoughts to a broad swath of Americans—including those who called in to engage me directly.

I owe a special debt to two permanent members of the strategic community, my late uncle and aunt Albert and Roberta Wohlstetter. Their work, which spanned the half century following World War II, has been an inspiration to me.

Albert Wohlstetter focused on issues of strategy, force structure, and nuclear proliferation and associated incentives, aiming to avoid nuclear conflict without the free world surrendering. Roberta Wohlstetter addressed nuclear proliferation as well. But she is best known for her seminal work on intelligence and strategic surprise. In *Pearl Harbor: Warning and Decision* (1962) Roberta examined the intelligence failure that led to Japan's successful destruction of the fleet at Pearl Harbor. Her work showed that evidence of an attack was never clear enough, nor highlighted sufficiently, to enable decision makers to anticipate what transpired. The perceived improbability of Japan striking such an audacious blow, impermeable bureaucratic walls between agencies, organizational sloth, and the ardent—understandable—human desire to decline to believe the worst among possibilities, combined to lead to disaster. Roberta won the Bancroft Prize in history for her book. To this day, many in the intelligence community refer to the problem of anticipating strategic surprise as a “Roberta problem.” The *9/11 Commission Report* dealt with similar issues after what we consider the twenty-first century's first Pearl Harbor. New disclosures upon the seventieth anniversary of the attack confirm the acuity of the analysis Roberta presented 50 years ago. It was the work of Albert and Roberta that got my attention in junior high school days, and made my study of these issues a lifetime quest.

I finally thank two editors who worked on the book. Louisa Gilder edited early versions of the manuscript, and brought to bear both her knowledge as the accomplished author of a history of physics and the perspective of a younger generation—both with highly positive results. Anne Himmelfarb applied her elegant editing skills to later drafts. She also copy-edited the final manuscript, a service she ably performed for my first book.

I am, needless to say, solely responsible for all errors of analysis, context, and fact, and any other faults in my book.

THE AIM OF THIS BOOK IS TO EQUIP READERS WITH A BROAD UNDERSTANDING of fundamental nuclear weapons issues and to draw lessons from history that can help us avoid nuclear catastrophe. Two generations ago “the Bomb” was uppermost in the national consciousness. For those of us who grew up in the “duck and cover” 1950s, the national shock of Sputnik’s October 1957 launch is an indelible memory. The race for the moon had suspenseful moments worthy of Hollywood. As for Tinseltown, supplied us with radioactive monster movies in the 1950s, Cold War dramas or satire in the 1960s, and peace pictures in the 1970s.

The real-life parade of nuclear crises peaked with the October 1962 Cuban Missile Crisis, which put the entire country on edge for a fearful fortnight. Assassinations, riots, and wars followed. But through it all the concrete prospect of nuclear holocaust cast a baleful shadow over the body politic.

Then came the fall of the Berlin Wall in 1989, and two years later the end of the Soviet Union “evil empire,” as Ronald Reagan famously tagged it. With the “peace dividend” of the 1990s and “Goldilocks Economy” Americans enjoyed a storied “holiday from history.” Democracy and free markets were increasingly ascendant in many parts of the globe, astonishing to those who remembered how rare they once were.

Cold War–oriented curricula began to disappear from college offerings. Students looked elsewhere for fields of study—finance, law, and ecology. National security threats as a concept came to include climate change and economic growth. Nuclear nightmares receded.

The terrorist atrocities of September 11, 2001 brought home militant Islam’s crusade against the West. Once again the Bomb threatened. This time the most feared threat was not warheads atop ballistic missiles hurtling through space at several miles per second, but Islamist terrorists chauffeuring a crude atomic device inside a truck or slipping a device inside a shipping container.

Lost to a new generation that did not live through the Cold War’s “delicate balance of terror” was the real sense that nuclear catastrophe was more than a theoretical prospect. Al-Qaeda has been pushed back, with its efforts abroad increasingly feeble. Its founder perished ignominiously in his hideout, cowering before the avenging angels of SEAL Team 6.

So while national security specialists continue to worry about growing nuclear threats, our citizenry is preoccupied with global economic crises. Though generally aware of present threats, many lack the grounding offered by the more than half century of tutelage that preceded 9/11. To them the prospect of an actual nuclear detonation must seem remote. It is a comforting, but perilous, assumption. On history’s lessons can supply what living memory cannot.

Nuclear strategy was once an avocation for what often was termed—rarely as a compliment—“priesthood” of strategists, scholars, defense and foreign policy intellectuals, government officials, and a small coterie of interested onlookers from the outside. Much relevant knowledge was, by necessity, highly classified (some still is, most notably the precise formula for making an efficient and hence readily deliverable, hydrogen bomb). Most discussions of what might or might not happen—even what could and could not happen—centered upon speculation. The great nuclear strategists

a half century ago exercised their keen imaginations, with only sparse data to answer central questions, among them how governments and individual leaders could acquire and use nuclear technology, and how nuclear war could best be avoided.

There was little historical guidance. America's Founding Fathers, by contrast, drew lessons extracted by painstaking study of historical examples dating back to ancient Greece, traced through imperial Rome, medieval England, and more. Over 2,000 years of history were encompassed in such narratives.

Now, after two-thirds of a century, global nuclear history offers multiple clear examples that teach lessons on how to minimize the risk of nuclear catastrophe in the present and future. Yesterday's history gives us concrete evidence of what has worked and what has failed. Now there are enough examples to illustrate—for the public and policy makers alike—how to most effectively address the nuclear issues we face. This book applies lessons of nuclear-age history to chart a less utopian, more prudent path.

Support for nuclear disarmament—so-called nuclear zero—flies in the face of history's lessons. Proponents of nuclear zero hold that the possibility of nuclear annihilation creates among all nations a common interest in mutual survival. They also hold that a world without nuclear weapons can be achieved by means of diplomacy. According to their view, the use of a single nuclear weapon will inevitably lead to an all-out nuclear war—that is, to mutual assured destruction; disarmament is therefore necessary to save the human race.

Public policy prescription has always been, in the main, guesswork, but there are better and worse guesses. Guesses that rely on the belief that all countries and all leaders share our core civilization values are likely to be wrong. The strategists, with their numbers and calculations, can err with catastrophic consequences—but equally so can those who slight sound strategic principles or disdain numbers and calculations, because they pursue disarmament as an end in itself in spite of what history has to teach.

The first two chapters of the book offer some background. [Chapter 1](#) explains why policies driving America's arsenal towards nuclear zero would, far from making America, its allies, or the world safer, bring everyone closer to nuclear catastrophe. This is especially crucial to realize as the United States elects a president in 2012; the winner likely will face decisions of greater moment than any since at least the 1962 Cuban Missile Crisis.

[Chapter 2](#) reviews nuclear-age history, highlighting key events from the three eras of nuclear arms evolution: 1945 to 1967, which saw an all-out arms race; 1968 to 1992, which was dominated by superpower efforts to restrain arms competition; and 1993 to the present, which has featured growing nuclear proliferation by hostile states.

Each of the next eleven chapters offers a narrative of key faces, places, and cases with an eye towards the vital lessons nuclear-age history now offers—lessons that are being ignored at grave peril to world political, economic, and social stability.

[Chapter 3](#) looks at the former Soviet Union and today's Russia to examine the relationship—strategic parlance the question of “linkage”—between the nuclear arms policies and foreign policies of nuclear nations. It offers the FIRST LESSON: ARMS CONTROL CANNOT BE VIEWED IN ISOLATION, BUT

Chapter 4 examines the problem of trying to negotiate arms agreements with adversaries. The experience of the United States over several decades teaches the **SECOND LESSON: ARMS AGREEMENTS MUST BE BASED UPON GENUINE, NOT PRESUMED, COMMONALITY OF STRATEGIC INTEREST.**

Chapter 5 examines the risk of a future global nuclear confrontation with Iran in light of new information about the 1962 Cuban Missile Crisis. That event, properly understood, teaches the **THIRD LESSON: REVOLUTIONARY POWERS CANNOT BE CONTAINED; THEY MUST BE DEFEATED.**

Chapter 6 looks at North Korea to consider the risk of a rogue nuclear state blackmailing its adversaries with the threat of a sudden resort to nuclear weapons. It offers the **FOURTH LESSON: NUCLEAR WEAPONS GIVE NATIONS A "DYING STING" CAPABILITY THAT VIRTUALLY PRECLUDES PREEMPTIVE ACTION AND CONFERS NEAR-TOTAL SURVIVAL INSURANCE.**

Chapter 7 looks at China and Chinese history to consider the risk of a regional power confrontation escalating to nuclear war. The Chinese experience teaches the **FIFTH LESSON: THE NUCLEAR BALANCE MATTERS IF ANY PARTY TO A CONFLICT THINKS IT MATTERS, AND THUS ALTERS ITS BEHAVIOR.**

An "interlude" between chapters 7 and 8 examines how thin is the line between development of commercial nuclear power and the development of weapons. The discussion there serves as an important background to subsequent chapters.

Chapter 8 looks at India and Pakistan to examine the risk of regional nuclear war. It also examines the risk posed by theft of nuclear weapons or an Islamist takeover of the country. These countries' experiences teach the **SIXTH LESSON: CIVILIAN NUCLEAR POWER INHERENTLY CONFERS MILITARY NUCLEAR CAPABILITY.**

Chapter 9 examines the problem of obtaining accurate intelligence on a country's nuclear power program, looking specifically at Western experiences with Iraq and Iran. It offers the **SEVENTH LESSON: INTELLIGENCE CANNOT RELIABLY PREDICT WHEN CLOSED SOCIETIES GO NUCLEAR.**

Chapter 10 examines why nations go nuclear and considers Russia, Britain, France, and Israel in turn. It offers the **EIGHTH LESSON: ALLY PROLIFERATION CAN BE PREVENTED ONLY BY SUPERPOWER CONSTANCY.**

Chapter 11 looks at the implications of popular pressure to disarm, such as arose after the bombings of Hiroshima and Nagasaki, as well as pressure to ban atmospheric tests. It offers the **NINTH LESSON: POPULAR PRESSURE FOR UNILATERAL DISARMAMENT CAN PREVAIL UNLESS WESTERN GOVERNMENTS EXPLAIN ITS HIDDEN, GRAVE DANGERS.**

Chapter 12 also looks at disarmament, though from a different angle: it explores why nations disarm (the examples are South Africa, Libya, Argentina, Brazil, and three former Russian republics) or are disarmed by force (Iraq and Syria). These examples teach the **TENTH LESSON: DISARMING HOSTILE POWERS CANNOT BE DONE BY NEGOTIATIONS ALONE.**

Chapter 13 examines the special catastrophic threat posed by surprise "electromagnetic pulse" attacks, now within reach of smaller, emerging nuclear powers such as nuclear-club-aspirant Iran. It offers the **ELEVENTH LESSON: NEVER ALLOW SINGLE OR LOW-NUMBER POINTS OF CATASTROPHIC VULNERABILITY.**

[Chapter 14](#), the last chapter, ties everything together: concepts, cases, and coping with future dangers. It suggests that, if learned, the vital lessons afforded by nuclear history can reduce the risk of nuclear catastrophe, and it offers a final, summative TWELFTH LESSON: NUCLEAR POLICY MUST BE FUNDAMENTALLY DEFENSIVE: ITS GOAL SHOULD BE TO AVOID THE APOCALYPTIC TRINITY OF SUICIDE, GENOCIDE, AND SURRENDER.

Four appendices offer important context. [Appendix 1](#) discusses how the imaginations of novelists and filmmakers swayed the public via scenarios starkly at odds with nuclear-age realities. [Appendix 2](#) discusses the tightening of control over nuclear weapons since 1945. [Appendix 3](#) discusses intelligence failures regarding strategic arms deployment. [Appendix 4](#) discusses nuances of the complex relationships between missile defensive and offensive weaponry.

This book assembles in one place an integrated picture of what lessons history and strategic thinking offer us to confront today's nuclear threats. They are lessons we are well advised to absorb and to apply to evolving events and threats today and in the future.

THE RUSH TO NUCLEAR ZERO: COURTING CATASTROPHE

So today, I state clearly and with conviction America's commitment to seek the peace and security of a world without nuclear weapons. I'm not naive. This goal will not be reached quickly—perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change. We have to insist, "Yes, we can."

PRESIDENT BARACK OBAMA, HRADCANY SQUARE,
PRAGUE, CZECH REPUBLIC, APRIL 5, 2009

SINCE NEWS OF THE TWIN ATOMIC BOMBINGS THAT ENDED THE SECOND World War first hit front pages around the world, the cause of abolishing nuclear weapons has resonated with millions. A visit to the Los Alamos "Trinity" test site, where the first atomic bomb exploded, offers mute testament to the vast scale of man-made destruction unleashed two-thirds of a century ago: the three-foot-high remnant of the 100-foot tower that cradled the massive, ungainly device; the ground littered with tiny shards of "trinitite," also called "Alamogordo glass." The explosion instantly fused the sand around the tower base into a green-gray glass that sparkles in the sun—and that emits radioactive alpha and beta particles. One site visit will give visitors about half the radiation dosage they would get from a transcontinental plane flight. A brown rock obelisk, about twice the average height of an adult, marks the spot where the world was changed forever.

Beginning with President Harry S. Truman, every American president has expressed a desire to see the world rid once and for all of nuclear weapons. All have stated that it is a goal unlikely to be achieved anytime soon. But on February 15, 2012—less than three years after President Obama joined his predecessors in cautioning that nuclear abolition is a faraway goal—"perhaps not in my lifetime"—anonymous senior administration officials leaked a "trial balloon." The Obama administration was considering three levels of arms cuts beyond those already slated in the 2010 New START Accord, down to far lower nuclear force levels than 2009's total stockpile of 5,133 warheads. The three target level ranges leaked were 1,000–1,100, 700–800, and 300–400.

It is evident that President Obama desires to push America's nuclear arsenal as low as possible, to levels near those he had originally said might be decades away. He gave the reasons in his April 2009, Prague address:

The existence of thousands of nuclear weapons is the most dangerous legacy of the Cold War. No nuclear war was fought between the United States and the Soviet Union, but generations lived with the knowledge that their world could be erased in a single flash of light....

[T]he threat of global nuclear war has gone down, but the risk of a nuclear attack has gone up. More nations have acquired these weapons. Testing has continued. Black market trade in nuclear secrets and nuclear materials abound. The technology to build a bomb has spread. Terrorists are determined to buy, build or steal one. Our efforts to contain these dangers are centered on

global non-proliferation regime, but as more people and nations break the rules, we could reach the point where the center cannot hold....

Some argue that the spread of these weapons cannot be stopped.... Such fatalism is a dead-end adversary, for if we believe that the spread of nuclear weapons is inevitable, then in some way we are admitting to ourselves that the use of nuclear weapons is inevitable.

... [W]e must stand together for the right of people everywhere to live free from fear in the 21st century. And ... as the only nuclear power to have used a nuclear weapon, the United States has a moral responsibility to act. We cannot succeed in this endeavor alone, but we can lead it, we can start it.

Obama views himself as a transformational president. And in national security what could be more transformational than ending the world's post-1945 nuclear nightmare? The New START Treaty, ratified in December 2010, and the 2010 Nuclear Security Summit are cited as examples of success in the direction of nuclear zero. But New START was a unilateral U.S. strategic arms-reduction agreement, as the Russians were already below treaty limits. Under the treaties to which they are signatories, the Russians can actually build newer, more modern missiles and add to their arsenal; they are in fact doing so, testing several models. New START's verification provisions are far more limited than those in the treaty it replaced (the Bush Moscow Treaty of 2002). As for the Nuclear Security Summit, its participants paid more attention to Israel for its arsenal than they did to North Korea for having exited the Nonproliferation Treaty and joined the nuclear club.

Abolitionism cannot surmount several immense obstacles. *First, hostile states will not only decline to follow our good example; they will be induced to increase their arsenals, which become more valuable as our arsenal shrinks*—100 nukes in Pakistan matter much more in a world in which the U.S. has the same number than in a world in which the U.S. has a few thousand. This behavior runs counter to the psychology of civilized people who see nuclear weapons as being for deterrence only, but a nuclear Iran eager to destroy the Great Satan (U.S.) and Little Satan (Israel) will think differently.

Consider what the Soviets did in the 11 months between the November 1985 Geneva Summit and the October 1986 Reykjavik Summit. In that short span they capped off their 25-year strategic buildup by adding over 5,000 warheads, topping out at some 45,000 warheads—this despite the U.S. having frozen the total number of its warheads in 1967 at 31,255, and reducing them constantly since Gorbachev did soon come around, as Russia's economy imploded. But it is unrealistic to expect Iranian fanatical mullahs to do the same. Pakistan's increasingly Islamist leadership plans to double its arsenal as rapidly as possible.

A second obstacle to abolitionism is that *verifying clandestine stockpiles of warheads and missiles is simply impossible at present and likely will remain so for a long time*. We failed to find a dozen jet planes Saddam hid in the sands of Iraq, until after his overthrow. Concealing missiles and nuclear warheads deep underground would be, by comparison, child's play.

China has been developing—and possibly concealing—new nuclear weapons. It revealed

December 2011 that it has built 3,000 miles of deep underground tunnels—called “the Underground Great Wall”—that may conceal an arsenal far larger than the 200 to 400 weapons China is commonly thought to possess. China has never divulged anything compatible to the extensive nuclear data that we have collected from the Russians over the past 20 years, and thus we can only guess at the size of its arsenal. A former U.S. national security official, Professor Phillip Karber, had students working for three years to compile all available data on the subject. Karber offered no specific China arsenal estimate. The data, official film footage on China’s bomb and missile programs, show huge missiles shuttling inside the tunnels. Prominent skeptics argue that current estimates are correct, citing CIA estimates of arsenal size and estimates of fissile material produced in China. But CIA nuclear intelligence estimates are often wrong. Given that Chinese leaders know they may someday face the United States in a western Pacific showdown, it defies strategic logic to assume that the massive across-the-board Chinese military buildup would exempt the most powerful class of weapons.

Third, *abolitionists have no basis for their confidence in the UN’s ability to stop a determined nuclear aspirant.* The worst nations will simply ignore entreaties and evade inspections. What can work—the only remedy—is positive regime change. The Soviet Union evaded arms treaty obligations for years and concealed the full size of its massive strategic buildup. Only with the accession of Mikhail Gorbachev late in the Cold War did things change for the better. Until similar change comes to Pakistan, North Korea, and Iran, abolition is chimerical.

To be sure, President Obama talked in Prague about the need to punish violators:

Rules must be binding. Violations must be punished.... The world must stand together to prevent the spread of these weapons.... North Korea must know that the path to security and respect will never come through threats and illegal weapons. All nations must come together to build a stronger, global regime.... [W]e must stand shoulder to shoulder to pressure the North Koreans to change course.

He went on to note the threats posed by Iran and by terrorists in possession of a nuclear weapon.

But President Obama had spurned a rare opportunity for positive regime change in June 2009, when the Iranian opposition formed in fury at the stolen election that returned Islamist Mahmoud Ahmadinejad to the Iranian presidency. Instead of siding with the demonstrators and uniting a coalition to put maximum pressure on the mullahs, Obama stood aside and contented himself with feeble verbal sallies. Moreover, he pursued arms talks with a leadership that had never honored an agreement made and that was clearly determined to pursue its nuclear ambitions, in part by slow-rolling diplomatic negotiations whenever possible. He also allowed Russia and China to water down several rounds of Iran sanctions. Though since late 2011 sanctions against Iranian oil and financial interests began to bite, they have not stopped Iran’s nuclear program.

As this book went to press the furies were assembling in the Mid-east. It appears increasingly likely that Iran’s relentless progress towards nuclear weapon capability cannot be arrested by sanctions alone, and thus that Israel, perceiving a nuclear Iran as an existential threat, will take preventive military action. Israel’s determination to act has been reinforced by the Obama administration’s strong public opposition to launching a strike and by a notably unsympathetic international community. A nuclear-armed Iran, declared “unacceptable” by two American presidents, does suggest how ineffective, indeed dangerous, nuclear nonproliferation efforts tend to be.

Finally, there is a fourth obstacle to abolitionism: *it creates the dangerous situation in which the public's gut sentiment favoring abolition can trump practical obstacles to verification and enforcement, and thus could push Western nations to disarm first.* Were a nuke to detonate anywhere on the planet, momentum for unilateral disarmament could snowball. Many advocates fan such emotional flames. But embarking on a course of unilateral disarmament before devising the requisite diplomatic and military arrangements needed to effectively police a nuclear-zero world—a condition nowhere near to being achieved—would begin the slide down the slippery political slope. There is no definitive correct number of nuclear weapons that the United States needs at any given time; that would be true even if every other nation's number were perfectly known. Thus there is no definitive stopping point for disarmament, and advocates can keep pressing Western democracies to cut their arsenals—pressures not felt by the world's most dangerous nuclear-armed regimes.

The president has shown an alarming willingness to trade a modest missile defense program—or one that would hedge against clandestine nuclear breakout in event of countries violating nuclear-zero pledges—for the instantly revocable promises of an adversary. Ronald Reagan conditioned zeroing out nuclear missiles on keeping missile defense development, in order to erect a shield as a hedge against such cheating. But President Obama is manifestly eager to bargain away missile defense leverage—shown by the notorious “open mic” verbal exchange with a top Russian leader at the 2012 Nuclear Security Summit in Seoul.¹ Leaving America defenseless even against small nuclear-armed missile attacks invites nuclear blackmail during a crisis.

The president did announce in Prague two laudable initiatives: to curb black market smuggling of nuclear material and to secure all loose nuclear material within four years (by the end of 2013). But his optimism about negotiations follows a utopian model of resolving differences between nations premised upon a presumed commonality of interest in mutual survival:

When nations and peoples allow themselves to be defined by their differences, the gulf between them widens. When we fail to pursue peace, then it stays forever beyond our grasp. We know the path when we choose fear over hope. To denounce or shrug off a call for cooperation is an easy but also a cowardly thing to do. That's how wars begin. That's where human progress ends.

Put simply, the president mistakenly believes that all nations share a common interest in mutual survival. He thus rejects the idea of irreconcilable conflict. But such conflicts manifestly exist. In fact, *what irreconcilably opposed governments share is a parallel desire to survive; neither has an interest in a mortal enemy's surviving. Rather, each desires—and must aim for—the enemy's destruction.*

The United States has no common interest in survival with al-Qaeda. The United States desires to survive; so does al-Qaeda. But parallel desires are not common interests. The United States has no interest in Hamas, Hezbollah, or the Muslim Brotherhood surviving. It has no interest in the Ayatollah Khomeini's militant Islamist republic surviving. It has no interest in the North Korean regime surviving. Nor would it have an interest in militant Islamists gaining control over Pakistan's government, and thus its nuclear arsenal. Conversely, nothing would more greatly benefit militant Islamists of any stripe than the destruction of the United States. The United States, along with its allies, is the main obstacle to the global triumph of militant Islam.

In the run-up to World War II, the Western democracies had mutual interests in one another's

survival, but hardly any security interest in the survival of Hitler's Nazi regime or of the military regime in Japan. ~~The United States formed an alliance of convenience with Soviet Russia, but U.S. interests ceased coinciding with Russia's at war's end, and only when in 1991 the former Soviet Union collapsed could the United States win the Cold War.~~ While the United States and the Soviets both sought to survive, the Soviet project would have benefited most of all from the U.S.'s demise.

Just as America had no common interest with past enemies in mutual survival, it would be a deadly mistake to think that it shares such an interest today, given growing nuclear threats from hostile states, some of whose leaders embrace a fanatical religious ideology that welcomes Armageddon. Such powers may not act on ideological imperatives, but we cannot assume they will decline to do so.

Regrettably, many of Barack Obama's policies make a war more likely. Rushing towards abolition of nuclear weapons will, on the fair historical evidence, not induce dangerous nuclear states to follow the U.S. lead. Instead, our adversaries will see greater benefit in increasing their own arsenals. America's is pared to a few hundred.

We make comfortable assumptions about how our adversaries will act at our potentially grave peril.

¹ The text of the exchange appears in [chapter 4](#).

THE NUCLEAR AGE: FROM “TRINITY” TO TEHRAN

Then it may well be that we shall by a process of sublime irony have reached a stage in the story where safety will be the sturdy child of terror, and survival the twin brother of annihilation.

PRIME MINISTER WINSTON CHURCHILL, HOUSE OF COMMONS, MARCH 1, 1955

ON SEPTEMBER 24, 1924, READERS OF THE BRITISH LITERARY MAGAZINE *Nash's Pall Mall* opened its pages to a chilling article by Winston Churchill. In “Shall We All Commit Suicide?” Churchill—a statesman then out of political office—warned what was incubating in the embers of the recent world war. Beyond the horrors of the war he had observed on the Western Front, he wrote of the immense escalation the summer of 1919 would have seen had there been no armistice. With incredible prescience, Churchill intuited the direction towards which modern war technology was heading:

Might not a bomb no bigger than an orange be found to possess a secret power to destroy a whole block of buildings—nay, to concentrate the force of a thousand tons of cordite and blast a township at a stroke? Could not explosives even of the existing type be guided automatically by flying machines by wireless or other rays, without a human pilot, in ceaseless procession upon a hostile city, arsenal, camp or dockyard?

... Such, then, is the peril with which mankind menaces itself. Means of destruction incalculable in their effects, wholesale and frightful in their character, and unrelated to any form of human merit: the march of Science unfolding ever more appalling possibilities; and the fires of hatred burning deep in the hearts of some of the greatest peoples of the world, fanned by continuous provocation and unceasing fear and fed by the deepest sense of national wrong or national danger!

Modern nuclear history began with discoveries by late nineteenth-century and early twentieth-century physicists looking into certain strange elements and mapping out the internal structure of the atom. By the time the first physicist grasped the potential of unlocking the energy contained there, the world was already on the path to a second global conflict. But the statesman who saw the future came first.

Churchill's foreboding 1924 prophecy encompassed the three components of the greatest threat humankind has faced since 1945: nuclear weapons, ballistic missiles, and fanatics in possession of them both. His remarks came when guided missiles were a pipe dream, rocketry consisted of sending tin projectiles aloft for a few seconds or minutes to reach at most a few miles' altitude, and scientists had yet to even discover the neutron particle, which made splitting the nucleus of an atom feasible. The element plutonium was still unknown, let alone the process of thermonuclear fusion that would ultimately allow the miniaturization of high-yield weapons. Though visionaries like the sci-fi writer Jules Verne and H. G. Wells had imaginatively seen ahead before Churchill spoke, among statesmen

of his time Churchill's prediction was uniquely farsighted.

The First Bomb: Earliest Research through the Trinity Test

ON A drizzly London day in September 1933, only months after his Hitler-induced exile from Germany, Leo Szilard had the crucial eureka moment. The great Hungarian grasped before any of his fellow physicists that a nuclear chain reaction would release enormous energy, sufficient to destroy a city. The next step came just before Christmas 1938, when German chemists Otto Hahn and Fritz Strassman stumbled upon an unexpected effect. The physicist member of their group, Lise Meitner, had just fled to Sweden. From there, she and her nephew, fellow refugee Otto Robert Frisch, interpreted what had happened—the central nucleus of a uranium atom was apparently unstable. The absorption of an extra neutron was enough to split it, resulting in two smaller atoms and an immense release of energy—a process Frisch dubbed “nuclear fission.”

Tipped off by Meitner, Szilard saw that here could be the beginning of the chain reaction he had foreseen. He persuaded Albert Einstein to write his famous 1939 letter to President Franklin Roosevelt. “[T]he element uranium may be turned into a new and important source of energy in the immediate future,” Einstein wrote FDR, calling for “watchfulness, and, if necessary, quick action on the part of the Administration.” He explained:

It may become possible to set up a nuclear chain reaction in a large mass of uranium, by which vast amounts of power and large quantities of new radium-like elements would be generated.... A single bomb of this type, carried by boat and exploded in a port, might very well destroy the whole port together with some of the surrounding territory.

Szilard chose Einstein to deliver the message, to lend it the weight of his unmatched prestige. He had calculated well. On October 19 FDR convened an advisory panel to look into the matter, and by 1942 the Manhattan Project (so named to conceal its true purpose) was under way. Yet according to James B. Conant, a top FDR science adviser, FDR had “only fleeting interest in the atom,” and “the program never got very far past the threshold of his consciousness.”

The discoveries made by Manhattan Project scientists first led to two types of atomic bombs (A-bombs), based upon uranium and plutonium, each a thousand times more powerful than bombs with conventional explosives. These atomic bombs, in turn, laid the foundation for the later development of the hydrogen bomb (H-bomb), a thousand times more powerful than the A-bombs dropped on Japan.

Forty-two months after the founding of the Manhattan Project, the atom bomb was a reality. A flood of European scientists, refugees from Hitler, made this astonishing success possible. To Los Alamos flocked geniuses: two more Hungarians, the mathematics prodigy John von Neumann and the “father of the hydrogen bomb” Edward Teller; the great Danish founder of the atomic theory, Niels Bohr; the young Polish mathematician, Stanislaw Ulam; the brilliant German Hans Bethe, who explained how fusion energy powers the stars; and the Italian Enrico Fermi, considered by his peers the most deeply knowledgeable of them all. They joined Americans like J. Robert Oppenheimer, whose technical brilliance was complemented by his organizational ability and knack for picking the right people for each complex task; young physicist Glenn Seaborg, who created the devilish artificial element plutonium in 1941; and a contingent from Britain that included James Chadwick, discoverer of the

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