
Introduction

ON SEPTEMBER 11, before much of the world was even aware of what had happened in New York, Washington, and Pennsylvania, the Bush administration had raised the country's nuclear alert codes from defcon 6 to defcon 2—the highest state of alert before the launch code is operable. (It is not known how long this situation was maintained.).

Russia, the country with the second largest nuclear arsenal in the world, almost certainly responded in kind. As a result, thousands of nuclear weapons stood poised on hair-trigger alert, ready to be launched by the president of either country with a decision time of just three minutes. The intercontinental nuclear-armed ballistic missiles controlled by these codes have a thirty-minute transit time from Russia to America or vice versa. They cannot be recalled. And they pose an ever-present threat of global nuclear holocaust.

In the months since the terrorist attacks, Secretary of Defense Donald Rumsfeld and others in the administration have also used September 11 to justify everything from pursuit of a missile-defense shield (even though such a shield would be utterly useless against suicidal men armed with boxcutters and plane tickets) and abandonment of long-standing weapon-control treaties, to massive increases in defense spending. While most Americans desire an increased sense of security in a newly destabilized world, many do not realize that the new "security" measures and the "conventional" war the United States has waged against Afghanistan are intimately connected to the enormous nuclear threat posed by the current American posture. Aggressive militarization under the rubric of defense against terrorism threatens to provoke a chain reaction among nuclear nations, big and small, that, once set in motion, may prove impossible to control. No military confrontation anywhere in the world is free from this ominous and ever-present danger.

The U.S.'s own behavior in Afghanistan has veered frighteningly close to deployment of nuclear weapons, which could easily have engendered a nuclear response. In addition to deploying the most horrific conventional weapons known to man (even though there were very few targets of military significance), the defense department recommended the use of tactical nuclear weapons, while some members of Congress strongly advised the use of small nuclear "bunker busters." Bush advisors, including Stephen Hadley, Deputy National Security Advisor Stephen Cambone, and William Schneider, also advocated the use of nuclear weapons. The founder of the neutron bomb, Samuel Cohen, even postulated that his weapon might be appropriate for Afghanistan. (The neutron bomb has a relatively small blast effect compared with its radiation, hence it tends to kill large numbers of people with horrendous radiation illness while leaving buildings intact.) Although the U.S. has previously been clear that it would attack only nuclear-armed countries with nuclear weapons, Secretary of Defense Rumsfeld consistently refused to rule out the use of nuclear weapons in Afghanistan, which is not nuclear-armed.

Some of the conventional weapons America used to support the Northern Alliance during their advances on the Taliban were so powerful that they are described by the Pentagon as "near nuclear" weapons. They are as follows:

15,000-POUND FUEL AIR EXPLOSIVES (FAEs): In military jargon these are referred to as "Daisy Cutters." The Foreign Military Studies Office at Fort Leavenworth says "A fuel air explosive can have the effect of a tactical nuclear weapon without the radiation." There are many different varieties of FAEs, but they typically consist of a container of fuel and two
separate explosive charges. Dropped by parachute from a huge MC-15O Combat Talon plane, they detonate just above the ground, creating a wide area of destruction. The first explosion bursts the container at a predetermined height, dispersing the fuel, which mixes with atmospheric oxygen. The second charge then detonates this fuel-air cloud, creating a massive blast that kills people and destroys unreinforced buildings. Near the ignition point people are obliterated, crushed to death with overpressures of 427 pounds per square inch, and incinerated at temperatures of 2500 to 5000 degrees centigrade. Another wave of low pressure—a vacuum effect—then ensues. People in the second zone of destruction are severely burned and suffer massive internal organ injuries before they die. In the third zone, eyes are extruded from their orbits, lungs and ear drums rupture, and severe concussion ensues. The fuel itself—ethylene oxide and propylene oxide—is highly toxic. Up to 200 civilians died 20 miles away from the cave complex in Afghanistan where Osama bin Laden was thought to be hiding at Tora Bora when U.S. planes attacked. They suffered blast trauma—ruptured lungs, blindness, arms and hands blown off, almost certainly from FAEs.

CLUSTER BOMBS: These have been used extensively in Afghanistan by the U.S. Terrifying and deadly, each bomb is composed of 202 bomblets, which are packed with razor-sharp shrapnel dispersed at super-high speed over an area of 22 football fields, ripping into human bodies. These weapons are prohibited by the Geneva Protocol. Civilians were inevitably killed throughout Afghanistan by these illegal and dreadful weapons. On one documented occasion, the U.S. bombed a mosque in Jalabad during prayer and while neighbors were digging out 17 victims, additional bombs killed more than 120 people.

Historically, between 5 and 30 percent of these bomblets fail to explode initially, lying around the countryside as mines that explode with violent force if touched, tearing their victims to pieces. Tragically, the bomblets are colored yellow and shaped like a can of soft drink, and therefore attractive to children. The food parcels containing peanut butter, Pop Tarts, rice, and potatoes dropped throughout Afghanistan by the U.S. are also yellow and the same size and shape as the munitions. (Some of these food drops themselves went astray, destroying houses and killing more people.) Human Rights Watch estimates that over 5000 unexploded cluster bomblets may be littered across Afghanistan, adding to the hundreds of thousands of mines left after the Russian—American war of 1979 to 1989. Afghanistan is currently the most heavily mined country in the world.

GUN SHIPS: These lumbering C-130 planes built by Lockheed Martin have been converted to airborne gunships, capable of firing a fearsome array of weapons, inflicting the most devastating damage, and leveling an area of several football fields, with up to 2000 rounds per minute. They are armed with 25mm Gatling guns, which fire 1800 rounds per minute; 40mm Bofors cannons, which fire 120 rounds per minute; and 105mm Howitzer cannons, which fire 8 to 10 rounds per minute. Secretary of Defense Rumsfeld said Afghanistan is not a "target rich" area, and many analysts felt that these attacks far exceeded their expectations. On October 22nd, in the village of Chowkar-Karez, scores of civilians were mown down by these gun-ships. CNN quoted an "unnamed" Pentagon official as saying "The people are dead because we wanted them dead." Almost certainly, many civilians therefore were wounded and killed.

BUNKER BUSTERS: Dropped from B-1 or B-2 planes, these 5000-pound behemoths are made from the gun barrels of retired naval ships and are so heavy that they burrow 20 to 100 feet into the ground before their high explosive materials detonate. Most are laser guided, but some use Global Positioning satellites for guidance.

CARPET BOMBING: This means dropping tons of bombs from 6-52 planes at a 40,000-foot altitude: high enough to protect pilots but too high to protect civilians. This is indiscriminate
bombed, and the pilots have no idea on whom their bombs are landing. In 1969 carpet bombing used in Cambodia by Kissinger and Nixon during the Vietnam War induced the total destruction of the ancient irrigation system and water supply and most of the rice-growing areas of the country and, as a secondary effect, caused the absolute disintegration of Cambodia's culture. The bombing runs were called "breakfast," "lunch," and "supper."  

UNMANNED DRONES. These are pilotless planes armed with Hellfire missiles, guided by the Global Positioning System, allowing the military to reduce the time between "identification and destruction of a target." Clearly these planes pose no threats to pilots but terrible threats to civilians on the ground, who may live next to or within a certain "military target," which could be a factory, an electricity generator, or a railway station.

The U.S. has not announced whether or not it used depleted uranium weapons in Afghanistan (as it has done elsewhere in recent wars), but it is quite possible that it did. We will not know for sure until independent sources can enter the war zones and test for this radioactive element.

During the first four weeks of the war, half a million tons of bombs were dropped on Afghanistan, 20 kilos for every man, woman, and child. During eight and a half weeks of U.S. bombing, a documented 3,763 civilians were killed. 

WHAT ARE THE INTERNATIONAL RAMIFICATIONS OF THIS BEHAVIOR LIKELY TO BE?

Pakistan has been deeply involved in Afghanistan since the 1979—1989 U.S.—Russian war, when America channeled weapons, training, and funding through the Pakistani military and intelligence services to the mujahadeen, the Taliban, and Osama bin Laden to fight the Russians. After September 11, America changed sides, pressuring Pakistan to ally with the U.S. against their previous friends and allies, the Taliban, bin Laden, and al-Qaeda, because the U.S. needed Pakistani airports to fight their war—a move that was anathema to thousands of Pakistani supporters of bin Laden and the Taliban. These supporters include many members of the Pakistani military, who could well rebel and gain control of the army and its 20 to 50 nuclear weapons, passing these on to the Taliban and al-Qaeda or their global networks.

The use of Pakistani nuclear weapons could trigger a chain reaction. Nuclear-armed India, an ancient enemy, could respond in kind. China, India's hated foe, could react if India used her nuclear weapons, triggering a nuclear holocaust on the subcontinent. If any of either Russia or America's 2,250 strategic weapons on hair-trigger alert were launched either accidentally or purposefully in response, nuclear winter would ensue, meaning the end of most life on earth.

OTHER NUCLEAR THREATS

Terrorist Nuclear Weapons

Up to 100 small suitcase Russian nuclear weapons have been lost over some years. Al-Qaeda network may now possess several of these, which could well be smuggled into America on a small boat or overland, from Canada or Mexico, in a truck. Nuclear Oklahoma Cities are not beyond question. Immediate deaths would number in the tens of thousands, while tens of thousands of cancers would incubate quietly among the survivors over decades. Britain, Europe, and Australia, among other places, will not remain immune.
Dirty Nuclear Devices

Hundreds of tons of highly carcinogenic plutonium and enriched uranium stand unguarded in Russia. From 1993 to 2000, the UN International Atomic Energy Agency—which monitors nuclear security—documented 153 confirmed cases of theft of nuclear materials. Some of this material could be obtained by terrorists to make primitive nuclear weapons, or "dirty" bombs. There would be no nuclear explosion, but conventional explosives would be used to scatter plutonium or uranium across a wide area, contaminating all in the pathway with these carcinogenic elements. Other radioactive elements from reprocessed nuclear fuel, such as cesium-137, strontium-90, and cobalt-60, could also be deployed.

Terrorists could, with some difficulty, manufacture their own nuclear devices from stolen plutonium or uranium. The design for a primitive weapon can be found on the internet. The possibilities for nuclear terrorism seem endless.

Nuclear Meltdowns

Terrorists do not actually need nuclear weapons. They have been conveniently supplied with 103 nuclear power plants scattered throughout the United States (438 of these deadly facilities exist throughout the world). A planned meltdown at one of these facilities would make the World Trade Center attacks seem like child's play. The massive concrete containers protecting the reactors are not strong enough to withstand the impact of a jumbo jet.

Alternatively, an infiltrator working as an operator could engineer a meltdown by taking over the control room, as the hijackers on September 11 took over the planes. They could also disrupt the water supply (one million gallons a minute is needed to cool a reactor core) or the external electricity supply. Either event would induce a melt-down within hours. The spent-fuel cooling pools adjacent to the reactor contain 20 to 30 times more long-lived radiation than the actual reactor core. (A 1000 megawatt nuclear reactor contains as much long-lived radiation as that released by the explosion of 1000 Hiroshima-sized bombs).

Here is the medical description of the meltdown of a 1000-megawatt nuclear power plant near New York City (there are two reactors at Indian Point, 35 miles north of Manhattan):

With ten million people at risk, 3300 people would die from severe radiation damage within several days; 10,000 to 100,000 would develop lethal acute radiation sickness within 2 to 6 weeks of exposure; 45,000 would become short of breath from lung damage caused by inhalation of intensely radioactive gases; 240,000 would become hypothyroid, with accompanying symptoms of weight gain, lassitude, slow mental functions, loss of appetite, constipation, and absent menstruation; 350,000 males would be rendered temporarily sterile, while the remaining sperm would be genetically mutated; 40,000 to 100,000 women would stop menstruating, many permanently. Up to 100,000 babies would be born as cretins, mentally retarded, as radioactive iodine destroys their thyroid glands (imperative for neurological development), and there would be 3000 deaths in utero. Five to sixty years later, 270,000 people would develop cancers of various organs, and there would be an estimated 28,800 cases of thyroid malignancy.

Apart from the nuclear power plants, there are many military-related nuclear facilities in the United States with massive quantities of nuclear waste, all vulnerable to terrorist attacks.

Since September 11, the FAA banned all aircraft flying within 12 miles of any nuclear facility. The Nuclear Regulatory Commission (NRC) advised all reactors to go on the highest state of alert, and for the first time, the NRC is investing 800,000 dollars to stockpile massive quantities of potassium iodide tablets to be made available to the public in case of a meltdown. Specific states will need to request the tablets, and this medicine must be taken within hours of a meltdown to block the uptake of radio-iodine by the thyroid gland. (This measure may not be
adequate, however, because over one hundred different deadly radioactive elements are also released during a meltdown, and these concentrate in other bodily organs.31)

POLITICAL IMPLICATIONS

The scope of U.S. retaliation for September 11 may be as important a factor in international response as the nature of the weapons the U.S. employs. In Washington, the Bush administration is experiencing its own internecine warfare around this topic. On the one hand, Secretary of State Colin Powell and the state department put together a harmonious if tenuous international coalition with Europe, Russia, China, and the Arab nations to "battle" terrorism in Afghanistan only. But the defense department has been taken over by unreconstructed, Reagan-era Cold War warriors, intent on moving the war from Afghanistan to other states.32

This policy is extremely dangerous. Vice President Cheney has listed fifty states or countries that could be targeted by the U.S. for military, financial, or diplomatic action, including North Korea, Somalia, Yemen, Iran, the Sudan, Libya, Syria, Lebanon, Indonesia, the Philippines, Saudi Arabia, and countries in South America. Victoria Clarke, a Pentagon spokeswoman, warned, "The war on terrorism neither begins nor ends with Afghanistan. The president will decide the next target."33

Iraq tops the list. Ever since the U.S.—Iraqi war in 1991, when America "failed to eliminate Hussein," a right-wing putsch has been eager to finish the job. The excuse: Iraq will not allow weapons inspectors to enter the country, barring them since December 1998 from checking for nuclear, biological, or chemical weapons activities. (However, Iraq's foreign minister, Naji Sabri, said in late November 2001, "We will consider a return of monitoring [of weapons] after the lifting of sanctions."34 ) Deputy Secretary of Defense Paul Wolfowitz is spearheading the Iraqi attack movement along with his close colleague Richard Perle, who was Reagan's undersecretary of defense.

Perle chairs an unofficial bipartisan group called the Defense Policy icy Board, which is vigorously promoting the overthrow of Hussein, even though there is no evidence linking him to the September 11 attacks.33,36 (The Defense Policy Board meets in a room adjacent to the secretary of defense's office, and includes such luminaries as Henry Kissinger, former secretary of state; Harold Brown, former secretary of defense; Newt Gingrich, former house majority leader; and R. James Woolsey, former director of the CIA. The group has assumed a quasi-official status with the imprimatur of Secretary Rumsfeld.) This attitude seems to be prevailing within the administration, and Powell appears to be losing his authority, although the international community is outraged by these proposals.

An attack on Iraq would infuriate Arab populations, the U.S.-led alliance against al-Qaeda37 would dissolve, and the world would descend into a terrorist-ruled chaos. A veteran of the CIA's Directorate of Operations said "The agency as an institution would never offer up a view of these people [Perle, et al.], but if you ask individuals, they think these guys are more than a little nuts." Another longtime case officer at the CIA said, "Attack these places and there will be consequences that we simply will not be able to deal with. But Perle and Wolfowitz are absolutists, and they're stupid."38

Meanwhile, other destabilizing plans are afoot in the Bush administration:

• The administration will aggressively pursue testing of its missile defense system, a.k.a. Star Wars, even though Russia and China are adamantly opposed. After the cordial Bush-Putin meeting at Crawford Ranch in Texas in November 2001, National Security Advisor Condoleezza Rice said, "The timeline has not really changed. The president continues to believe that he has got to move forward with the testing program in a robust way, so that we can really begin to evaluate the potential for missile defenses." What she means is that the U.S. will withdraw from
the seminal Anti Ballistic Missile Treaty (ABM) with six months notice.\textsuperscript{39} Such a move will destabilize global arms control and the associated treaties, and induce a massive new nuclear arms race.

- The Bush administration boycotted the Comprehensive Test-Ban Treaty Conference (CTBT) at the United Nations in November 2001 and had the audacity to remove its nameplate from its seat in the conference room. A week before, at a General Assembly meeting, the U.S. was the only country to vote against placing the CTBT on the General Assembly's agenda for 2002. Washington has signed, but the Senate has not ratified the treaty, which would ban all above- and below-ground nuclear testing. As a group of nongovernment organizations said, "Failure to act may lead to a cascade of proliferation events that will enable future terrorists to use nuclear weapons." \textsuperscript{40}

- There is a strong move by Bush's people to resume nuclear testing at the Nevada Test site because, as Secretary of Defense Rumsfeld said, "we may need to develop new nuclear weapons." This could stimulate Russia, China, India, and Pakistan, among others, to resume nuclear testing, leading to a new nuclear arms race.\textsuperscript{41}

- In July 2001, the U.S. prevented the UN conference on curbing small-arms exports from convening by insisting that it was a threat to the Second Amendment.

- In November 2001, Congress cut 69 million dollars from a program designed to safeguard Russian nuclear materials in order to prevent terrorists stealing plutonium and enriched uranium to build their own nuclear bombs. Bush wanted to reduce the program still further by 29 million dollars.\textsuperscript{43}

- Simultaneously, Congress increased the funding for U.S. nuclear weapons by 300 million dollars and granted 8.3 billion dollars for missile defense.\textsuperscript{44} As Joseph Cirincione of the Carnegie Endowment for International Peace said, "Tragically some are using the terrible tragedy [September 11] to justify their existing programs, slapping an 'anti-terrorist' label on missile defense and military budget increases."\textsuperscript{45}

- The terrorist attack has provided a great fillip for the military-industrial complex. The military budget is expected to reach 375 billion dollars in 2001, a 66 billion dollar increase from 2001, and Deputy Secretary of Defense Paul Wolfowitz said that these appropriations will "just be a down-payment" toward the major long-term increases the Pentagon will need to fight its new kind of war\textsuperscript{46} which Vice President Cheney says "may not end in our lifetimes."\textsuperscript{47}

- The war in Afghanistan is costing i billion dollars a month,\textsuperscript{48} while two thirds of the world's children are malnourished and starving.

Loren Thompson, defense analyst from the Lexington Institute said "The whole mind set of military spending changed on September 11. The most fundamental thing about defense spending is that threats drive defense spending. It's now going to be easier to fund almost anything." Indeed, Lockheed Martin stocks rose from $39.39 on September 11 to $48.11 by November 12, 2001. The Pentagon is to receive 20 billion dollars of the 40 billion dollars allocated by congress for antiterrorist activities, an amount to be added to 343.2 billion dollars for fiscal 2001, already the largest military budget since Reagan's at the height of the cold war—greater than 50% of all discretionary funding for domestic needs. Among the firms already benefitting from this extraordinarily extravagant and unnecessary largess are Lockheed Martin, Grumman, Raytheon, and Boeing. Most of this money will not be used for the war in Afghanistan, but for new fighter planes like the F/A-18E/F, the F-22, and the Joint Strike fighter, for a new Virginia class submarine designed to trail now-extinct Soviet subs around the globe,
and for 12 more Trident 05 submarine ballistic missiles. In this context it is interesting to note that the Afghans had very few planes to speak of, and that these were destroyed by massive U.S. bombing within the first few days of the war. Paul Nisbet, another defense analyst said, "With the [Bush] administration, we will see a rebuilding of the military to bring it back to where it was eight years ago. We will see a considerable appreciation in defense stocks as we saw in the Reagan years." 49, 50

**RECENT INTERNATIONAL WEAPONS DEVELOPMENTS**

People may feel reassured that President Bush, meeting in Texas in November 2001 with President Putin, offered to reduce America's stockpile of strategic weapons from some 7000 down to 2220—1700 over the next ten years. But this offer was made without the guarantee of any formal written treaty and can therefore be abandoned or reversed at any time. Without verification, it will be impossible to confirm that cuts are actually carried out, while the ten-year duration gives much latitude for reversal and change.

In fact, although the cuts look good on paper, they mean nothing. The U.S. will still have plenty of weapons to maintain its first-strike winnable nuclear war policy, and none of the weapons will be dismantled, but will be stored, awaiting possible future use. The reductions do not include the removal of multiple warheads on missiles required by the START II Treaty (the Russians have a monstrous ten-warheaded SS-18 missile, code named "Satan"). And the U.S. Trident submarine fleet, with their invulnerable first-strike arsenal, will be exempt, as will weapons on long-distance bombers being overhauled, and all tactical nuclear weapons.51

In truth, if Russia comes to the party, such bilateral reductions will make it easier for the U.S. to win a nuclear war against Russia, because there will be fewer targets, and the missile-defense system now under construction will mop up any Russian missiles that escape the initial surprise attack. U.S. antisatellite weapons under construction will also be necessary to destroy the "eyes and ears" of the Russian early-warning system. This is a terrifying but realistic scenario, a logical extension of the Pentagon's current policy to "fight and win" a nuclear war.

So Bush's unilateral reductions proposal is a ploy to divert the world's attention away from his Star Wars project, which Simon Tisdall of the London Guardian called "a reckless act of weapons proliferation," which will provoke an international arms race, entangle third parties such as Britain and Australia, and, as this book makes clear, lead directly to the militarization of space if it does not cause nuclear winter first.

Tisdall warns that "the highly contentious military and geostrate-gic foundations of the 21st century are being laid—and hardly anybody is watching."52

That is why I wrote this book.
Chapter One

The Tragedy of Wasted Opportunities

_The hidden hand of the market will never work without a hidden fist. McDonald's cannot flourish without McDonnell Douglas, the designer of the F-16. And the hidden fist that keeps the world safe for Silicon Valley's technologies is called the United States Army, Air Force, Navy, and Marine Corps._


Imagine this: The cold war is over. A wise and visionary young American president, elected in 1992, decides that now is the time to rid the world of nuclear weapons. Six months into his first term he flies to Moscow to meet with a pliable Russian president, who agrees to sign a treaty to eliminate Russian and American nuclear weapons within five years. The governments of France, China, England, and Israel follow suit. India and Pakistan choose not to pursue the development of nuclear armaments, a path they were about to take. The United Nations is vested by the international community with the authority and funding to prevent lateral proliferation of nuclear weapons. Hundreds of tons of deadly plutonium are removed over the next five years from the world's total of 52,972 nuclear weapons.¹ The overwhelming relief that the world will soon be free from the threat of instant annihilation catalyzes effective international planning and cooperation to solve the problem of where and how to store the plutonium.

American tax dollars are diverted from massive Pentagon and corporate military budgets into projects designed to take care of the nation's people. A government-funded system of universal health care is instituted, and free, state-of-the-art education from kindergarten through college gradually becomes available throughout the nation. Congress passes a law mandating that all cars be built to operate at 80 miles per gallon and appropriates funding for public-transportation initiatives in every state. Legislation is enacted requiring that most buildings be retrofitted to collect solar energy, and that every new building be powered, heated, and cooled by solar energy. Generous safety nets are put in place, providing for the old, the poor, the sick, and the indigent, and the Social Security system remains immune to the work of "market forces." Every American child will be fully immunized, and no child will live below the poverty line. Almost five decades since the dawn of the atomic age, the United States of America is on the way to becoming truly secure, no longer dependent on a nuclear barricade for its safety. The nation becomes an inspirational example to all other countries as we enter the twenty-first century.

Now blink and reenter reality.

A newly elected young president—touched paradoxically with both hubris and timidity—who had never acquired an in-depth knowledge of matters military or nuclear was handicapped by a severe leadership impediment: He had evaded the Vietnam draft. In his own mind he never overcame this apparent character deficit, and the military that he allegedly commanded made sure that he never forgot it. To exacerbate this situation, several acute personal problems of a deeply embarrassing—not to mention compromising—nature occupied this president, to the point where he contemplated possible resignation and faced actual impeachment.

Partly to compensate for these "deficiencies," Clinton used U.S. military force overseas—in Bosnia, Iraq, and Kosovo, among other places—more frequently than any other U.S. president of the last twenty years. Further, his was the only administration since Eisenhower's that did not negotiate a single significant nuclear arms control treaty.²

Bill Clinton's basic disinterest, distraction, draft handicap, and lack of vision allowed the military—Pentagon, nuclear scientists, and military corporations—to move into this presidential
They wooed, seduced, and bought Congress and the administrative staff, and the
opportunity for nuclear disarmament was tragically lost. Ironically, as we enter the twenty-first
century, after eight years of a Democratic administration, the world is in a position even more
dangerous than it was at the height of Reagan's buildup of nuclear weapons and Star Wars
dreams. It is against this unfortunate backdrop that the events of September 11, 2001, took
place, adding ominously to the possibility of international nuclear war or nuclear accidents, as
the U.S. nuclear arsenal was placed on the highest state of alert and international tensions rose.
U.S. nuclear policy and weaponry has never been more aggressive:

- The U.S. currently has 2000 intercontinental land-based hydrogen bombs, 3456 nuclear
  weapons on submarines roaming the seas 15 minutes from their targets, and 1750 nuclear
  weapons on intercontinental planes ready for delivery. Of these 7206 weapons, roughly 2500
  remain on hair-trigger alert, ready to be launched at the press of a button.\(^4\) Russia has a similar
  number of strategic weapons, with approximately 2000 on hair-trigger alert.\(^5\) In total there is
  now enough explosive power in the combined nuclear arsenals of the world to "overkill" every
  person on earth 32 times.\(^7\)

- The U.S. currently has in place plans to fight and win a nuclear war, and is prepared to use
  nuclear weapons first if necessary. Winning a nuclear war with Russia, for example, requires the
  use of anti-satellite weapons to destroy Russian early warning systems, a secret preemptive
  first strike attack to destroy Russian missiles before they can be launched from their silos, and
  preemptive destruction of Russian nuclear subs in port and at sea, all of which capabilities are
  currently in place. (Any Russian missiles escaping the initial attack would have to be destroyed
  en route to the U.S. in space, using a newly developed U.S. ballistic missile defense system.)

- The Pentagon's official targeting plan, the single integrated operational plan (SIOP), has
  been upgraded since 1989: Instead of a total of 2500 targets there are now 3000. These include
  2260 Russian sites, 1100 of which are ostensibly "nuclear facilities," 160 of which are
  "leadership" targets—government offices and military command centers (in a country almost
  devoid of leadership)—and 500 of which are disintegrating factories that produced almost no
  arms last year.\(^8\)

- China is now included in SIOP for the first time in twenty years, despite the fact that the
  U.S. Senate moved to normalize relations with China by granting it permanent normal trading
  relations status (PNTR) in September 2000. (This country of 1.3 billion people, potentially a
  huge market for the U.S., has only twenty nuclear missiles capable of reaching America.)

- Non-nuclear nations such as Iran, Iraq, and North Korea are also targeted with nuclear
  weapons for the first time.\(^9\) (Before the nineties, the U.S. had targeted only other countries with
  nuclear weapons.)

- The U.S. department of energy's nuclear laboratories—Los Alamos and Sandia in New
  Mexico, and Lawrence Livermore in California—are embarked on a second "Manhattan
  Project"—a massive scientific undertaking costing 5 to 6 billion dollars annually for the next ten
to fifteen years, to design, test, and develop new nuclear weapons under the guise of ensuring
  the safety and reliability of the U.S.'s current stockpile of nuclear weapons.\(^10\) This is twice the
  cost of the original Manhattan Project, which developed the first three atom bombs in the early
  forties, and significantly more than the annual average of 3.8 billion dollars spent on nuclear
  weapons during the cold war."

- The Bush administration is pledged to fast-track plans for a new national missile defense
  system. This runs the risk of destabilizing the many arms-control treaties already negotiated
  between Russia and America.

Who are the enemies that America is so frantically and expensively arming against at the
dawn of the twenty-first century? Until September 11, 2001, America had no enemies with the
potential to wreak real harm on its land or people. It has friendly countries to the north and
south, and vast oceans to the east and west. Under the current configuration, no foreign nation
would ever think of invading the U.S. But it is now apparent that America has terrorist enemies—amorphous, difficult to track and locate, and almost impossible to extinguish by firepower or enormous arsenals of weapons.

The Pentagon and State Department justify the extraordinary U.S. military expenditure—now 310 billion dollars annually—with potential threats from North Korea, Iraq, Iran, China, Russia, and possibly Libya. But of these, only the 5000 strategic nuclear weapons in Russia—half of which could hit U.S. cities thirty minutes after launching—pose a major threat to American security. More relevantly, as recent events have made all too clear, the largest nuclear stockpile in the world can accomplish little in the face of terrorists armed with box cutters, except, possibly, offering the potential for terrifying escalation of any ensuing conflict between nations. America currently spends 22 times as much on its military forces as all the other so-called rogue states or "states of concern"—Iraq, Iran, Syria, North Korea, Cuba, and Libya—put together, when nullification of any threat they might pose could be achieved for a fraction of that amount.\(^\text{12, 13}\)

Other possible explanations for America’s immense military expenditure include:

- It fattens the coffers of weapons makers.
- It is a direct result of the rivalry between the air force, the army, the navy, and the marines, each of whom want their own weapons systems.
- It elevates the prestige of top lawmakers within Congress and the White House who are the recipients of huge donations from weapons manufacturers as they legislate for more weapons.
- A huge conventional and nuclear arsenal allows America to do what it will around the world with impunity—it is the iron hand in the velvet glove of U.S. corporate globalization.

All of this is why Clinton’s failure to seize the opportunity to eliminate or pare down the number of nuclear weapons in the world through rapid and realistic negotiation with Russia—at a time when this was possible—is so deeply tragic. Ironically, it may well be the very fact of the September 11 attack, and the U.S.’s resulting need to adopt a more conciliatory stance toward Russia, that leads George W. Bush to enact the stockpile reductions that eluded Clinton in calmer times.

The nuclear weapons establishment has four arms—the nuclear scientists, the military corporations, Congress plus the White House, and the Pentagon. Subsequent chapters look at each of these in turn. But first, let’s set the stage by imagining what nuclear war might really be like.
Chapter Two

The Reality of Nuclear War

What will likely be the final conclusion to incessant nuclear-war planning? The destruction of the planet. And such an event could be triggered tonight or tomorrow by human or computer error, or even by a terrorist attack.

What would nuclear war be like?

MEDICAL CONSEQUENCES OF NUCLEAR WAR

If launched from Russia, nuclear weapons would explode over American cities thirty minutes after takeoff. (China's twenty missiles are liquid-fueled, not solid-fueled. They take many hours to fuel and could not be used in a surprise attack, but they would produce similar damage if launched. Other nuclear-armed nations, such as India and Pakistan, do not have the missile technology to attack the U.S.) It is assumed that most cities with a population over 100,000 people are targeted by Russia. During these thirty minutes, the U.S. early-warning infrared satellite detectors signal the attack to the strategic air command in Colorado. They in turn notify the president, who has approximately three minutes to decide whether or not to launch a counterattack. In the counterforce scenario the U.S. government currently embraces, he does launch, the missiles pass mid-space, and the whole operation is over within one hour.

Landing at 20 times the speed of sound, nuclear weapons explode over cities, with heat equal to that inside the center of the sun. There is practically no warning, except the emergency broadcast system on radio or TV, which gives the public only minutes to reach the nearest fallout shelter, assuming there is one. There is no time to collect children or immediate family members.

The bomb, or bombs—because most major cities will be hit with more than one explosion—will gouge out craters 200 feet deep and 1000 feet in diameter if they explode at ground level. Most, however, are programmed to produce an air burst, which increases the diameter of destruction, but creates a shallower crater. Half a mile from the epicenter all buildings will be destroyed, and at 1.7 miles only reinforced concrete buildings will remain.

At 2.7 miles bare skeletons of buildings still stand, single-family residences have disappeared, 50 percent are dead and 40 percent severely injured. Bricks and mortar are converted to missiles traveling at hundreds of miles an hour. Bodies have been sucked out of buildings and converted to missiles themselves, flying through the air at 100 miles per hour. Severe overpressures (pressure many times greater than normal atmospheric pressure) have popcorned windows, producing millions of shards of flying glass, causing decapitations and shocking lacerations. Overpressures have also entered the nose, mouth, and ears, inducing rupture of lungs and rupture of the tympanic membranes or eardrums.

Most people will suffer severe burns. In Hiroshima, which was devastated by a very small bomb—13 kilotons compared to the current 1000 kilotons—a child actually disappeared, vaporized, leaving his shadow on the concrete pavement behind him. A mother was running, holding her baby, and both she and the baby were converted to a charcoal statue. The heat will be so intense that dry objects—furniture, clothes, and dry wood—will spontaneously ignite. Humans will become walking, flaming torches.

Forty or fifty miles from the explosion people will instantly be blinded from retinal burns if they glance at the flash. Huge firestorms will engulf thousands of square miles, fanned by winds from the explosion that transiently exceed 1000 miles per hour. People in fallout shelters will be asphyxiated as fire sucks oxygen from the shelters. (This happened in Hamburg after the Allied bombing in WWII when temperatures within the shelters, caused by conventional bombs, reached 1472 degrees Fahrenheit.)
Fallout

Most of the city and its people will be converted to radioactive dust shot up in the mushroom cloud. The area of lethal fallout from this cloud will depend upon the prevailing wind and weather conditions; it could cover thousands of square miles. Doses of 5000 rads (a rad is a measure of radiation dose) or more experienced by people close to the explosion—if they are still alive—will produce acute encephalopathic syndrome. The cells of the brain will become so damaged that they would swell. Because the brain is enclosed in a fixed bony space, there is no room for swelling, so the pressure inside the skull rises, inducing symptoms of excitability, acute nausea, vomiting, diarrhea, severe headache, and seizures, followed by coma and death within twenty-four hours.

A lower dose of 1000 rads causes death from gastrointestinal symptoms. The lining cells of the gut die, as do the cells in the bone marrow that fight infection and that cause blood clotting. Mouth ulcers, loss of appetite, severe colicky abdominal pain, nausea, vomiting, and bloody diarrhea occur within seven to fourteen days. Death follows severe fluid loss, infection, hemorrhage, and starvation.

At 450 rads, 50 percent of the population dies. Hair drops out, vomiting and bloody diarrhea occurs, accompanied by bleeding under the skin and from the gums. Death occurs from internal hemorrhage, generalized septicemia, and infection. Severe trauma and injuries exacerbate the fallout symptoms, so patients die more readily from lower doses of radiation. Infants, children, and old people are more sensitive to radiation than healthy adults. Within bombed areas, fatalities will occur from a combination of trauma, burns, radiation sickness, and starvation. There will be virtually no medical care, even for the relief of pain, because most physicians work within targeted areas.

Nuclear Power Plants

The United States owns 103 nuclear power plants, plus many other dangerous radioactive facilities related to past activities of the cold war. A 1000-kiloton bomb (1 megaton) landing on a standard 1000-megawatt reactor and its cooling pools, which contain intensely radioactive spent nuclear fuel, would permanently contaminate an area the size of western Germany. The International Atomic Energy Agency now considers these facilities to be attractive terrorist targets, post—September 11, 2001.

Disease

Millions of decaying bodies—human and animal alike—will rot, infected with viruses and bacteria that will mutate in the radioactive environment to become more lethal. Trillions of insects, naturally resistant to radiation—flies, fleas, cockroaches, and lice—will transmit disease from the dead to the living, to people whose immune mechanisms have been severely compromised by the high levels of background radiation. Rodents will multiply by the millions among the corpses and shattered sewerage systems. Epidemics of diseases now controlled by immunization and good hygiene will reappear: such as measles, polio, typhoid, cholera, whooping cough, diphtheria, smallpox, plague, tuberculosis, meningitis, malaria, and hepatitis.

Anyone who makes it to a fallout shelter and is not asphyxiated in it, will need to stay there for at least six months until the radiation decays sufficiently so outside survival is possible. It has been postulated that perhaps older people should be sent outside to scavenge for food because they will not live long enough to develop malignancies from the fallout (cancer and leukemia have long incubation periods ranging from five to sixty years). But any food that manages to grow will be toxic because plants concentrate radioactive elements.
Nuclear Winter

Finally, we must examine the systemic global effects of a nuclear war. Firestorms will consume oil wells, chemical facilities, cities, and forests, covering the earth with a blanket of thick, black, radioactive smoke, reducing sunlight to 17 percent of normal. One year or more will be required for light and temperature to return to normal—perhaps supranormal values, as sunlight would return to more than its usual intensity, enhanced in the ultraviolet spectrum by depletion of the stratospheric ozone layer. Subfreezing temperatures could destroy the biological support system for civilization, resulting in massive starvation, thirst, and hypothermia.5

To quote a 1985 SCOPE document published by the White House Office of Science and Technology Policy, "the total loss of human agricultural and societal support systems would result in the loss of almost all humans on Earth, essentially equally among combatant and noncombatant countries alike . . . this vulnerability is an aspect not currently a part of the understanding of nuclear war; not only are the major combatant countries in danger, but virtually the entire human population is being held hostage to the large-scale use of nuclear weapons. . . ."

The proposed START III treaty between Russia and America, even if it were implemented, would still allow 3000 to 5000 hydrogen bombs to be maintained on alert.6 The threshold for nuclear winter? One thousand 100-kiloton bombs blowing up 100 cities7—a distinct possibility given current capabilities and targeting plans.

ACCIDENTAL NUCLEAR WAR

On January 25, 1995, military technicians at radar stations in northern Russia detected signals from an American missile that had just been launched off the coast of Norway carrying a U.S. scientific probe. Although the Russians had been previously notified of this launch, the alert had been forgotten or ignored. Aware that U.S. submarines could launch a missile containing eight deadly hydrogen bombs fifteen minutes from Moscow, Russian officials assumed that America had initiated a nuclear war. For the first time in history, the Russian computer containing nuclear launch codes was opened.

President Boris Yeltsin, sitting at that computer being advised on how to launch a nuclear war by his military officers, had only a three-minute interval to make a decision. At the last moment, the U.S. missile veered off course. He realized that Russia was not under attack.8

If Russia had launched its missiles, the U.S. early-warning satellites would immediately have detected them, and radioed back to Cheyenne Mountain. This would have led to the notification of the president, who also would have had three minutes to make his launch decision, and America's missiles would then have been fired from their silos. We were thus within minutes of global annihilation that day.

Today, Russia's early-warning and nuclear command systems are deteriorating. Russia's early-warning system fails to operate up to seven hours a day because only one-third of its radars are functional, and two of the nine global geographical areas covered by its missile-warning satellites are not under surveillance for missile detection? To make matters worse, the equipment controlling nuclear weapons malfunctions frequently, and critical electronic devices and computers sometimes switch to combat mode for no apparent reason. According to the CIA, seven times during the fall of 1996 operations at some Russian nuclear weapons facilities were severely disrupted when robbers tried to "mine" critical communications cables for their copper!10 This vulnerable Russian system could easily be stressed by an internal or international political crisis, when the danger of accidental or indeed intentional nuclear war would become very real.
And the U.S. itself is not invulnerable to error. In August 1999, for example, when the National Imagery and Mapping Agency was installing a new computer system to deal with potential Y2K problems, this operation triggered a computer malfunction which rendered the agency "blind" for days; it took more than eight months for the defect to be fully repaired. As the New York Times reported, part of America's nuclear early-warning system was rendered incompetent for almost a year." (At that time I was sitting at a meeting in the west wing of the White House discussing potentially dangerous Y2K nuclear weapons glitches. Several Pentagon officials blithely reassured me that everything would function normally during the roll-over. But in fact, their intelligence system had already been disabled.)

Such a situation has the potential for catastrophe. If America cannot observe what the Russians are doing with their nuclear weapons—or vice versa—especially during a serious international crisis they are likely to err on the side of "caution," which could mean that something as benign as the launch of a weather satellite could actually trigger annihilation of the planet. This situation became even more significant after the September 11 attack.
Chapter Three

It's a Mad, Mad, World: Nuclear Scientists and the Pentagon Play With Deadly Gadgets

We were fascinated by abstract violence on a huge scale. I became addicted to nuclear weapons work. It gave me a sense of great power. I remember dreams about a weapons design that I'd been working on—when it failed it was a nightmare. When it succeeded it was a high—that sense of: I'm good at this. It's my bomb. Except we never called them bombs. We called them gadgets.

—Ted Taylor, former bomb designer

Nuclear scientists have been called priests or monks by a media and public in awe of their inventions.¹ Most journalists and policy-makers therefore assume that the scientific activities within the weapons labs are sacrosanct and beyond question.² Because of the almost-mystical power these individuals are granted, they have dominated the national security scene since the Manhattan Project began in 1942. Virtually unimpeded and uncontrolled, over a period of fifty years they designed sixty-five different types of nuclear weapons, exploded 1030 bombs at the testing site in Nevada, and directed the manufacture of over 70,000 bombs.³ (As noted above, 1000 bombs exploding over 100 cities could induce “nuclear winter” and the end of most life on the earth.)⁴

These scientists have always operated in absolute secrecy, which gave them the anonymity they needed to pursue their work. They used a language that was incomprehensible to all but the most educated, and, like physicians, they hid behind an arcane scientific complexity, never emerging to inform the world what they were doing.

They still operate the three major nuclear weapons labs—Los Alamos and Sandia in New Mexico, and Lawrence Livermore in California. All are currently run by the department of energy (DOE) and overseen by the University of California. (While most Americans know that the DOE supervises U.S. energy policy, few are aware that the same department also oversees all nuclear weapons research.)

At the end of the cold war, nuclear scientists saw their future slipping away from them. The euphemistically named the Stockpile Stewardship and Management Program (SS & M), was a way to ensure their continued employment. Ostensibly created to ensure that old weapons will still explode if necessary, the labs are actually designing, testing, and building a variety of new nuclear weapons, many in violation of existing treaties and bans. (See Chapter Five for a full discussion of the SS & M charade.)

At a political level the scientists have been able to associate their work with nationalism and the preservation and protection of the United States. Yet it is doubtful that any of the individuals involved—from the politicians mandated to guide and direct these scientists on our behalf to the scientists themselves, the military personnel, or the businessmen who profit from the nuclear weapons enterprise—understand the philosophical, moral, spiritual, or biological problems engendered by capturing gigantic extraterrestrial forces manifested only in the sun and the stars.

Let us begin with the nuclear scientists: thousands of physicists, chemists, and engineers—the cream of the crop, recruited from U.S. colleges over a period of sixty years—brilliant, rational, careful, strictly scientific, engaged in exploring the very elements of creation, and all committed to the design, construction, and testing of nuclear weapons.

Surprisingly, while many are to the right of the political spectrum, others are liberal in their views. They do not believe that designing bombs is an act of patriotism as the right-wingers do,
but are drawn to the culture of low-key "rational-speak" (their term for strictly rational discussion, bereft of emotional overtones) and find joy in scientific problem-solving.\textsuperscript{5}

The Lawrence Livermore Lab has a policy that if an employee expresses any concern about the ultimate result of the use of nuclear weapons (i.e., the possible destruction of the world), they are advised—and sometimes required—to see a counselor. In a scenario right out of \textit{1984} (and a classic sign of a cult mentality), anyone giving voice to the stark truth must be counseled to accept the lie of the labs.\textsuperscript{6}

Cults also typically withhold information from potential recruits to conceal the true nature of the group or the work with which it is involved.\textsuperscript{7} Thus, when Dr. Andreas Toupadakis, a chemist, became an employee of the Lawrence Livermore nuclear weapons lab in 1988, he was led to believe that he would be working on environmental cleanup and nuclear disarmament. In fact, as he gradually realized, he was participating in an ongoing nuclear arms race, and he became agitated and deeply concerned. Toupadakis was advised to see a counselor shortly before he left Livermore Lab in January 2000.\textsuperscript{8}

Since the 1940s, the scientific bomb cult has allowed individual scientists to design and test their very own bombs. If the testing proved successful, it was a rite-of-passage for the newcomer. More experienced members have attested to gaining a sense of power over the forces of nature while renewing their stature.\textsuperscript{9} Bomb designers often slept alone in a room above the Nevada Test Site with the control mechanisms that would trigger the explosion the next day,\textsuperscript{10} like a racing-car driver flirting with death—in this case, not just individual death, but the death of millions, the death of life.

At a more fundamental level, these scientists felt that their technical mastery over the bomb implied that they would then be able to control the impending annihilation that their work signified. But in psychological terms the mastery they had acquired actually implied that they had intense fear of the bomb and of death.\textsuperscript{11} Interestingly, the language of the scientists reflects the imagery of birth and new life, denoting more profound psychological dynamics. The first nuclear bomb ever tested in 1945, code-named Trinity (after the Father, Son, and Holy Ghost), was called "Oppenheimer's baby" in honor of the scientific director of the Manhattan Project. The telegram Edward Teller sent to Los Alamos after the first successful A-bomb test in 1945 read "it's a boy."\textsuperscript{12} The bomb gets "married" to the diagnostic canister, and as it explodes it "couples" with the ground, making "daughter fission products" that pass through "generations."\textsuperscript{13} One of the scientists described the test as "like having a baby" and compared the tenseness he experienced during the test to "whether to push or not."\textsuperscript{14} Another bomb designer compared his post-test feelings to a state of "postnatal depression."\textsuperscript{15}

The anthropologist Hugh Gusterson, in his book \textit{Nuclear Rites}, surmises that to the scientists, nuclear weapons tests "symbolize not despair, destruction, and death but hope, renewal, and life" and therefore nuclear weapons must be part of the natural order. Perhaps at a subliminal level these scientists—almost exclusively men—are seeking an archetypal understanding of the experience of conception and delivery, otherwise unavailable to them. The ultimate destruction of the creation is, in their minds, analogous to creation itself. Oppenheimer quoted the \textit{Bhagavad Gita} upon witnessing Trinity, the first nuclear explosion: "I am become death, the shatterer of worlds."

On the other hand, unlike the nurturing instincts of a new mother, much of their language reflects their profound dehumanization of people. To them, people are "human resources" and "components" within a system. They describe human communication as "interfacing" and miscommunications as "disconnects." The pain of human injuries is referred to as "damage," and when a human being is killed she is "disassembled."\textsuperscript{16} The Pentagon echoes this language, calling targeting of cities "countervalue targeting." People are dubbed "soft targets" (missile silos are hard targets). The 15 million civilians who would initially be killed in a counterforce attack on Russian hard targets are "collateral damage."\textsuperscript{17}
As Gusterson writes, "Techno-strategic discourse is characterized by its lack of emotion, its
game-theoretical models of human motivation, its fondness for abstraction and for passive
sentence constructions, its focus on hardware rather than people. And its fundamental
unquestioned and unquestionable assumption that weapons development must continue." As
they remove pain and fear from their vocabulary, presumably the scientists are protecting their
psyches from the human consequences of their work. At the same time, however, they wax
lyrical about their weapons, describing nuclear equipment as beautiful, and their relationships to
technology as Zen. Weapons are arms, bombs are warheads, a nuclear attack is a decapitating
strike, the strategic nuclear forces have three legs, early-warning satellites are eyes and ears,
missiles are covered with skins, and aging weapons grow "whiskers" that can interfere with their
"health." Superimposed upon the humanization of nuclear weapons and the mechanization of human
bodies is the culture of careful expert rationalism, very similar to the rational language used by
physicians to distance themselves from the almost unbearable human pain and suffering they
deal with on a daily basis. One obvious difference, however, is that, while physicians deal with
pain already existing in their patients, these scientists create the source of their pain. The
psychological pain these scientists must then confront is self-imposed.

MILITARY MADNESS AND THE PENTAGON CULT

You start talking about targeting or strategic command and control and, baby, that's
the family jewels.

——General Jack Merritt, former director of the Joint Chiefs of Staff

According to retired admiral Eugene Carroll, interservice rivalry is the real engine of the
nuclear arms race—the three services under the direction of the Pentagon, each competing for
the nuclear dollar. It's about power building, each wanting and demanding more planes, bombs,
and ships. This competition among the services—a dynamic centered at the mental and psychological
age of my grandchildren, aged eight, seven, and five years, who argue continuously and
competitively about toys, all wanting their own and never having enough—may have been
socially and politically acceptable during World Wars I and II, in a pre-nuclear era. In a world
bristling with nuclear weapons, such rivalry is calamitous. Any military skirmish in an
interdependent world involving the navy, the army, or the air force, could escalate and trigger a
thermonuclear holocaust. Indeed, all nuclear war games "played" by the Pentagon end up
obliterating both the victors and the vanquished. In this context it is interesting to examine the
powerful political role that the Pentagon has played since the cold war ended.

The new international scenario, in which the Pentagon was left without a major national
enemy at the end of the cold war in 1989, came as a shock to the entrenched military
establishment, which was faced with a kind of post-traumatic stress syndrome. Indeed, many
individuals overtly mourned the loss of their once-predictable former enemy.

To the contrary, in the face of newfound opportunity President George Bush displayed
commendable leadership, defying Pentagonian pressure and moving decisively and unilaterally
to eliminate all ground-based tactical missile bombs, all tactical nuclear weapons from naval
vessels, and all hydrogen bombs from long-range bombers. He also cancelled certain land-
based missile programs. He de-escalated both as a gesture of goodwill and as a strategic
defense maneuver; as he explained to one of his aides at the time: "I want tactical nuclear
weapons out of Europe. Gorbachev needs U.S. cover to get their nukes out of the republics
before they collapse." At the same time, then-Secretary of Defense Dick Cheney and
Chairman of the Joint Chiefs of Staff Colin Powell instigated a full-scale review of the single
integrated operational plan (SIOP)—the U.S. nuclear targeting strategy that was the guiding light of the Pentagon, but that had now been rendered obsolete.²⁵

Both men were appalled by the subsequent report. Not only was SIOP arcane and hopelessly out of date, it also lacked clear logic and objectives. According to one account, "Cheney concluded that SIOP was not a nuclear war plan ... it seemed like a jumble of processed data. . . . Every time the Pentagon had bought a new nuclear weapons system to match the Soviets' . . . Omaha [the Strategic Command Headquarters in Omaha, Nebraska] had simply found targets for the added warheads and rearranged the SIOP math formulas. This had gone on for years, as captains and majors who wrote the SIOP plan rotated in and out.²⁶ This dynamic was so out of control that by 1986, SIOP had targeted 16,000 "nuclear facilities" in the Soviet Union.²⁷ (as a point of comparison, there are only 240 major cities in the entire northern hemisphere). Following the Cheney-Powell review, thousands of targets in the former Soviet republics were removed from the SIOP plans, and all focused targets were now located in Russia,²⁸ which was fast becoming an ally. The targets still included command and control centers, conventional forces, all war-supporting industries including such things as shoe factories, most other factories, oil and gas facilities, power plants, railroad stations, schools, and universities, in addition to actual nuclear forces—so there was overkill, but less overkill.²⁹

Bush continued to take command of nuclear weapons policies, never allowing the military bureaucracy to prevail in decision-making. He counted on his main advisors, who were astute inside players, to carry out his objectives, and they received powerful presidential support in the face of Pentagon opposition.³⁰

Prior to the Bush administration, no president, presidential aide, or official from the office of the secretary of defense had been involved in directing or even trying to understand the logic of the SIOP planners in the Pentagon. Indeed, one military official from the Joint Strategic Planning Service charged that officials in prior administrations "were criminally negligent" for their lack of oversight for SIOP, all the details of nuclear targeting strategy having been left to junior officers in the Pentagon.³¹

In An Elusive Consensus, Janne Nolan describes the years before the first Bush administration as follows:

Briefings to senior officials about the SIOP typically were perfunctory and often unintelligible. The thousands of pages of SIOP data and computer codes contained in the plans would be translated into an hour-long briefing and presented in several dozen view graphs. "Generally no one at the briefings wanted to ask questions because they didn't want to embarrass themselves," according to one account, in reference to both military and political authorities. "We would cut deals as junior officers [of the different services] in allocating weapons . . . sometimes this resulted in remarkable changes in the guidance, which should have been reviewed at the highest levels."³² Once, while being briefed on the SIOP, then—Secretary of Defense Cheney began squirming uncomfortably in his chair as he watched Moscow—which had been targeted with 200 separate hydrogen bombs, entailing an enormous excess of megatonnage—turn slowly into a solid red mass covered over and again with ludicrous targets.³³

The Pentagon thinks about nuclear strategy in a strange and pathological way. (One could readily diagnose the attitudes of the Pentagon as clinically sick and suggest that all people who subscribe to these theories need urgent counseling and therapy.) "Aggression" by an enemy will be "deterred" with a threat to vaporize millions of people as Joanne Nolan comments in her book. The rationale is as follows: Officers responsible for nuclear weapons must have the ability to hold "at risk" anything that an adversary would "value most." But because those doing the targeting cannot know what is most valued, almost everything is held "at risk." As one military official was heard to say, "If he values his grandma, we have to target grandmas."³⁴
While the Bush administration bequeathed an activist legacy of potent arms control and unilateral disarmament programs to the next president, this tradition was not perpetuated by President Clinton. Clinton vacillated and was ever reluctant to engage himself directly in nuclear issues. And Clinton simply never took command of the Pentagon. As one of Bush's aides said, "Clinton debates objectives with his subordinates. Bush debated tactics but never objectives." 55

Clinton's first secretary of defense, Les Aspin, the former chairman of the House Armed Services Committee, was highly experienced in the area of nuclear weapons strategies. Aspin had doubts about the relevance of nuclear deterrence in the post—cold war era, noting, "A world without nuclear weapons would actually be better. . . . Nuclear weapons are still the big equalizer, but the United States is not the equalizer but the equalizee." 35

To this end, Aspin initiated a nuclear posture review, based upon the concepts of "mutual assured safety" and "cooperative denuclearization." The review was to encompass and incorporate policies, doctrines, force structure, operations, safety, security, and arms control and was to include a critique by an outside panel of experts. Aspin specifically planned the review to emphasize the fundamentally political character of nuclear policy. However, there was strong opposition from Pentagon officials who decided that outside participation would not be necessary or desirable. As one commented, "We certainly weren't about to invite any weirdos from ACDA [the Arms Control and Disarmament Agency]." 37

Aspin resigned in 1994 shortly before he died, and responsibility for the review passed on to Deputy Secretary of Defense John Deutch, a relatively inexperienced man who had recently been appointed from the private military sector. (He was later appointed head of the CIA.) Operational responsibility for the review was shared by Ashton Carter, assistant secretary of defense for national security and counterproliferation, and Lieutenant General Barry McCaffrey 38 (who later became Clinton's drug czar).

Aspin's instruction to the nuclear posture review had been to extricate the entrenched nuclear establishment—including the Pentagon—from its obsolete cold war preoccupations and to foster more appropriate understandings of the post—cold war reality. The military establishment, Aspin believed, needed to accept and understand the enormous dangers of the U.S. nuclear strategy. But in the absence of senior oversight and disciplined leadership once Aspin resigned, the review process failed. President Clinton declined to become involved, Secretary of State Warren Christopher was disengaged, and National Security Advisor Anthony Lake was uninterested. So the job was left essentially to Deutch and Carter. 39

Carter, who was well intentioned, sincerely believed that a process of logical analysis could alter orthodox military thinking about nuclear weapons strategy. To this end, he established six working groups, staffed by midranking and junior military officers plus career bureaucrats. Most had little background in nuclear strategy, and all met in closed-door meetings within the Pentagon. Their attitude was derisive to any "outsider analysis" and new ideas were given polite but frosty receptions. 40

The Pentagon personnel overwhelmingly opposed any changes to their triad of nuclear forces, and to the concept of de-alerting their strategic nuclear weapons. The air force also strenuously resisted eliminating their land-based ICBM weapons. The others charged that any change in their strategy of employing a variety of launch options threatened America's ability to respond to nuclear attacks effectively. Some military officials also sensed an assault on their nuclear procedures and their lines of authority. As one midlevel officer asserted: "We know how to produce nuclear war plans. We have the methodology, we can analyze damage expectancies." 41

The vice chair of the Joint Chiefs of Staff, Admiral William Owens, who oversaw the committees was a potent critic of nuclear weapons, but unfortunately he did not challenge his colleagues when they vigorously opposed the mandate of the review. (Even had consensus been reached by the Pentagon however, the White House never at any stage attempted to
engage or educate the Congress about these extraordinarily important issues.) Eventually, after ten months of review process, the working groups sabotaged Aspin's original concept, opposing even minor changes or innovations. Instead they produced analyses and a series of view graphs totally supporting the structure, doctrine, and force levels implicit in the current nuclear doctrine.42

Carter became so frustrated that he bypassed the working groups and appointed two outsiders to rescue the process—Steve Fetter, a physicist and professor from the University of Maryland, and Lieutenant Commander Leo Mackay, who wrote his Harvard doctoral dissertation on nuclear strategy. He organized high-level clearances in order to give them full access to the necessary documents. This "counter-review" was specifically structured to analyze the possible removal of land-based ICBMs vulnerable to a first strike, de-alerting of strategic weapons, removal of the remaining U.S. nuclear weapons in Europe (there are still zoo), and alteration of nuclear targeting doctrines. Post—cold war, it was obvious, to Carter at least, that America could operate with a much smaller strategic nuclear arsenal, if indeed it needed one at all.43

Deutch expressed sympathy with these proposals, but when the Joint Chiefs of Staff got wind of the briefing charts, a revolt was triggered in the Pentagon. Although Carter had been appointed to oversee the nuclear posture review by the office of the secretary of defense, in the end he was abandoned to do solitary battle against the power and might of the Pentagon. A meeting called by regional commanders "to call Ash on the carpet" progressed to a brutal showdown. Carter had no authority to present options to the secretary of defense they said, unless the options had been approved by the "working groups."44

Though Carter defended himself, saying that it was not appropriate for colonels and lower-level Pentagon personnel to craft U.S. national policies, the policy that was finally given approval by a disengaged president was a complete triumph for the Pentagon. It called for a "lead and hedge" strategy in which the U.S. would publicly pursue nuclear arms control while at the same time hedging "against ... a return to an authoritarian military regime in Russia hostile to the United States." In the end, this new policy allowed America to retain its nuclear weapons should the cold war reemerge, to double the number of strategic intercontinental weapons allowed under the START II treaty—from 3000 to 6000—and there were to be no limits on nondeployed warheads (nuclear weapons in storage) or tactical nuclear weapons (tactical nuclear weapons are not delivered by intercontinental missiles or intercontinental planes, but are launched from short-range missiles, cruise missiles, or short-range planes). Finally the policy reinforced the triad of land-, air-, and sea-based weapons. Ashton Carter has since disclaimed that there was really any genuine attempt to alter the U.S. force structure or the overall nuclear policy.45

The Pentagon had prevailed. There was no change in nuclear policy, and the status quo of nuclear comfort returned.

When the review was released, one Russian commentator observed, regarding the lack of leadership displayed in the face of the Pentagon's post-review tantrum: "Clinton's foreign policy is determined by immediate reactions to internal, and to a lesser degree, external factors."46
Chapter Four

Corporate Madness and the Death Merchants

I see in the near future a crisis approaching that unnerves me and causes me to tremble for the sake of my country. . . . Corporations have been enthroned and an era of corruption in high places will follow, and the money power of the country will endeavor to prolong its reign by working upon the prejudices of the people until all wealth is aggregated in a few hands and the Republic is destroyed.

—Abraham Lincoln, November 21, 1864

Who runs the Congress all these years later? The transnational corporations whose executives wine and dine, woo, bribe, and corrupt the officeholders of the White House and Congress—from the president and vice president to almost all the elected congressional officials. These all-powerful corporations manipulate and control most of the federal legislation, foreign and domestic, that passes through Congress. They do it through a variety of mechanisms: think tanks, corporate mergers, lobbying, and political donations.

Think Tanks

In the seventies leading international corporations jointly organized and endowed a series of think tanks—their own "battle management organizations"—whose primary purpose was to sway popular and political opinion in directions useful to the think tanks' corporate sponsors. These think tanks are staffed by erudite researchers who produce editorials, TV news pieces, papers, media releases, and legislative material, which are well-conceived, well-researched, well-written, easy to understand, and very acceptable to the media and Congress. Production of this material is orchestrated in a timely fashion to guide specific pieces of legislation. Mostly Washington based, these think tanks also have a pervasive presence in the media, their spokespeople being regular political commentators on the Sunday-morning talk shows and in print.

Tree Tops Propaganda

If the mass will be free of the chains of iron, it must obey the chains of silver. . . . If it will not love, honor and obey, it must not expect to escape seduction.

—Harold Lasswell, leading American scholar of propaganda, 1939

This broad-reaching, sophisticated, high-level manipulation of the so-called free, democratic media and legislature is known as "tree tops" propaganda, and it has been extraordinarily successful for the sponsoring corporations and the points of view they espouse. Such an approach effectively controls government agendas in many countries—certainly including the United States—and is more effective by far than grassroots organizing, for all but the very few issues around which millions of concerned citizens can be mobilized. The right-wing think tanks almost alone created the new conservative movement of the 1970s. But these think tanks are neither free nor democratic. They are nonelected, private bodies controlled by wealthy and powerful corporations. In effect they are advertising agencies acting for the corporations that founded and fund them. They represent the corporate philosophy of "economic rationalism," which favors the corporate takeover of all public enterprises, from health care and education to water and electricity, and an agenda that includes decreasing or abolishing government regulation of big business, decreasing corporate taxes and taxes for the rich, destroying the unions, and increasing corporate profits. The IMF, the World Bank, GATT, NAFTA, APEC, FTAA, and WTO have all taken their cues from these think tanks. (In January
1998, a chief World Bank economist, Joseph Stiglitz, attracted worldwide attention during a lecture he gave in Helsinki when he criticized this so-called "Washington consensus." Stiglitz pointed out that Washington-inspired austerity, privatization, and deregulation—which has become the standard policy prescription for much of the world—was misguided and often disastrous. He said that market ideologues were using economic crises in various countries as excuses to discredit government intervention and to promote more market liberalization. He argued, contrary to the economic rationalist line, that moderate inflation is fairly harmless, budget deficits are not necessarily evil, privatization is not a panacea, and deregulation of domestic and international financial markets can do serious harm. Not surprisingly, he was fired from the World Bank at the end of 1999.

One of the most influential think tanks is the Heritage Foundation. Funded by transnational corporations and wealthy individuals including Amway, Hyundai, Exxon, Phillip Morris, United Parcel Service Foundation, Joseph Coors, Timothy Mellon and the Sarah Scaife Foundation, the Heritage Foundation's income for 1999 was 43.6 million dollars. The Heritage Foundation established a comprehensive list of agenda items for the Reagan presidency, which they titled "Mandate for Leadership—Policy Management in a Conservative Administration." Items included arming America to fight and win a nuclear war, and to develop "superiority over the Soviet Union." Most of these agenda items became policy. (They followed up by issuing another Mandate for Leadership in Reagan's second term.)

Think Tanks and the Military-Industrial Complex

The think tanks exert a huge amount of influence on behalf of the military-industrial complex. The Heritage Foundation is still very much involved in promoting the nuclear arms race in all arenas, and actively lobbying for Star Wars. Other powerful right-wing think tanks that involve themselves in American "nuclear security" include the American Enterprise Institute and the CATO Institute. Yet another think tank, the Center for Security Policy (CSP), serves as the nerve center of the Star Wars lobby. It was organized by Frank Gaffney, a Pentagon official under Reagan and a high priest of missile defense. (Gaffney also heads the Coalition to Protect Americans Now, a group that organizes TV ads to promote missile defense and all-out Star Wars. One ad depicts visions of babies in their cradles and children playing baseball, interspersed with missiles falling from the sky, and a caption reading, Where will you be when the missiles are launched?)

CSP is funded by military contractors including Lockheed Martin, Boeing, TRW, General Dynamics, Rockwell International, and Northrop Grumman. CSP's board includes six Lockheed Martin executives; members of the Heritage Foundation; President Reagan's science advisor George Keyworth; two staunch Republican supporters of missile defense, Senator John Kyl of Arizona and Representative Kurt Weldon of Pennsylvania; and the notorious—and now elderly—Edward Teller, the inventor of the hydrogen bomb. (Teller calls Star Wars the "third generation" of nuclear weapons, the atomic bomb being the first and the hydrogen bomb the second. For thirty-two years he has urged the nuclear weapons labs to conduct more research on "defensive weapons.") The CSP packs a powerful corporate punch, publishing over 200 press releases a year, euphemistically called national security decision briefs. (In 1998, the Center for Security Policy gave its Keeper of the Flame award to Donald Rumsfeld, former defense secretary under Ford and now secretary of defense in the present Bush administration; other notable recipients of the award have included Ronald Reagan and Newt Gingrich.)

But even as early as 1983, when Reagan—under Edward Teller's guidance—gave his speech advocating Star Wars, most credible scientists knew that the scientific hypothesis upon which the theory was based—that a comprehensive and effective missile shield could be built—was simply unworkable. Seventy billion dollars and a string of uninterrupted technical failures later, the Center for Security Policy, the Heritage Foundation, Lockheed Martin, TRW,
Raytheon, and Boeing remain committed to the Star Wars concept and the country is still trying to build a missile shield.

**How the Think Tanks Resuscitated Star Wars**

When the Soviet Union collapsed in 1991 it became necessary for the corporations, their think tanks, the State Department, and the Pentagon to invent new excuses to justify this unworkable, enormously expensive military-scientific adventure.

First, a new arch-enemy had to be found, and North Korea (a country unable to feed its own people) was the propaganda machine’s number-one choice. Originally labeled (along with Iraq) a "rogue state" by the State Department, and now called a "state of concern," "North Korea does not have a single missile that could hit the U.S., nor any nuclear weapons. John Pike, then with the Federation of American Scientists, commenting on the North Korean missile test site, said, "This facility was not intended to support and in many respects is incapable of supporting the extensive test program that would be needed to develop a reliable missile program." The site has no transportation links, no paved roads, no storage facility for propellant, and no staff housing.13

Nevertheless, the ongoing demoniacal representation of North Korea is important to the Pentagon because it has been and is used to justify the only U.S. military deployment on mainland Asia (the U.S. maintains 57,000 troops in South Korea). Adherence to this policy is essential because it gives the U.S. a reason to maintain a military presence and a belligerent policy in an Asian country while it is currently positioning itself to cast China as the next major enemy on the horizon. Though recently Afghanistan has, on an acute basis, replaced China as a major Pentagon focus.

Consequently the Pentagon, State Department, and military industry have worked with the leading think tanks to make the public case for the need to defend the U.S. from this "rogue state." So important has the North Korean "threat" been to U.S. military policy that William Cohen’s first question to policy officials when he became Secretary of Defense in 1994 was "How can we change the assumption that U.S. troops will be withdrawn after peace comes to the Korean Peninsula?"14

Unfortunately this "enemy" is not behaving according to plan. For one thing, North Korean President Kim Chong-il and South Korean President Kim Dae Jung signed a peace treaty on June 15, 2000, agreeing that they needed reconciliation and the establishment of peace. (A military officer who closely follows the situation noted that "The U.S., in my opinion, is obsessed with the status quo," and said the Pentagon was underestimating the potential for a peace breakthrough and resisting changes in its forces in South Korea that could ease tensions further.)15 North Korea even informed Russian President Putin that it would abandon its fledgling missile program in exchange for Western aid in building scientific satellites.

But the State Department remains less than convinced. As one department spokesman insisted, "The threat of war is still there. In terms of the [North Korean] military capability, they still have over one million troops ready to go."16 And in the spring of 1999, despite the "problems" brought on by Korean peacemaking, the Star Wars partisans claimed success. Their prodigious lobbying efforts, corporate political donations, and propaganda exercises persuaded the House and Senate to pass legislation stating that the official policy of the United States government is to deploy a national missile defense as soon as is "technically feasible."17 A Pentagon intelligence report quoted in the *New York Times* in September 2000 concluded that "North Korea remains a dangerous military threat." And when Kim Dae Jung, a Nobel Peace Prize laureate, visited George W. Bush soon after Bush’s inauguration, he was essentially snubbed by the president and his staff.18
CORPORATE MERGERS AND NUCLEAR POLICY

The most powerful military corporation on earth, Lockheed Martin, was created in 1993 by a series of corporate mergers. During the eighties and early nineties there were ten to fifteen major U.S. weapons firms. However, in 1995, Secretary of Defense Les Aspin concluded that the Pentagon could no longer sustain the enormous weapons procurement budgets of the lavish Reagan years, and, in an early-1993 meeting, Undersecretary of Defense William Perry bluntly informed industry executives of the new Pentagon policy of encouraging corporate mergers.

That seminal meeting was triumphantly dubbed "the last supper" by Norman Augustine, at that time CEO of Martin Marietta and subsequently the guiding hand behind the mergers. Martin Marietta merged with Lockheed, to become Lockheed Martin, a 55-billion-dollar behemoth, and the number-one contractor for the Pentagon, NASA, and the Department of Energy. Boeing absorbed McDonnell Douglas, and Raytheon bought the military units of Hughes Aircraft and Texas Instruments to become numbers two and three, respectively. Other smaller firms survived, including TRW, Northrop Grumman, and United Defense, but their earnings were significantly lower than those of the big three's. (Ironically, the Pentagon has not closed a single major weapons production line since the mergers were instituted. With a smaller number of corporations now bidding competitively for military contracts, prices have gone up, not down, and, in the end, no actual savings have been passed on to taxpayers.)

Two government officials, William Perry and his Pentagon colleague John Deutch, both of whom were past paid consultants to Martin Marietta, shepherded the mergers through the government bureaucracy. Officially it was against the law for Perry and Deutch to act on behalf of their former employer, but they obtained "conflict of interest waivers" from Defense Secretary Aspin. Perry and Deutch even went so far as to change the Pentagon's contracting rules, thus allowing merging companies to be compensated for costs involved in moving factories, for legal fees, and for executive bonuses (a policy memorably dubbed "payoffs for layoffs" by Congressman Berme Sanders from Vermont). This type of corporate-orchestrated merger and payoff operation is a classic example of the "revolving-door syndrome": Corporate employment leads to a Pentagon position, where one is then able to featherbed the nest of one's corporate colleagues. Then, when the government term of office expires, some return to private industry equipped with invaluable Pentagon connections.

Lockheed Martin realized a taxpayer-financed windfall from the merger amounting to 1.2 billion dollars. The company also became the single largest advocate of aggressive nuclear development in the country, in a quest to protect its billions of dollars worth of government arms contracts (18 billion dollars in 1997). Less than two months after the September 11 attacks, the Pentagon awarded Lockheed Martin a mammoth contract of 200 billion dollars over the next several decades to build 3000 F-35 joint strike fighter planes.

Birth of a Death Merchant

As Lockheed Martin came to power, so did Norman Augustine, CEO of the newly merged company and perhaps the key player on the corporate side of the military-industrial equation. Augustine personally received 8.2 million dollars in government payouts stemming from the merger. As one Pentagon source noted, "If you're concerned about corporate welfare, the one you should look out for is St. Norman Augustine." (Former Tennessee governor Lamar Alexander also got 250,000 dollars for the "hardship" he endured when asked to leave the board of the newly merged company!) Who is the man who has come to play such a key role in the defense industry? Originally a forest ranger, Augustine majored in geological engineering. As a first-year graduate student, however, he was "utterly shocked" when the Soviet Union launched Sputnik—
"I couldn't imagine how we could be number two," he said—and within months he took a job at the Douglas Aircraft Corporation. He has stayed in the weapons industry ever since. He sees weapon production as a patriotic duty, and he refers to the military corporations as "the fourth armed service," noting that increased spending on weapons is a national imperative, not merely a means to increase corporate profits.

While he led the nation's largest corporate military contractor, Augustine was also influential in other areas. As chairman of the Defense Science Board (DSB), a Pentagon panel, he helped to decide for or against multibillion-dollar weapons projects. He was president of the Association of the United States Army, a politically influential group of retired army personnel, and he served as chairman of the Defense Policy Advisory Committee on Trade, a committee that gives confidential guidance on arms exports to the secretary of defense. (Beyond his military credentials, Augustine was also the chairman of the American Red Cross and president of the Boy Scouts of America.)

A hard-driving man conversant with all the major policy and technical issues affecting Lockheed Martin, Augustine was a high-stakes lobbyist and became an unofficial—and intimidating—policy maker, successfully advocating initiatives that yielded billions of dollars in government funding for his corporation. Former government officials declined the opportunity to testify on Pentagon procurement recommendations because "Norman Augustine really wants this." During the summer of 1994, he had become such a presence on the Hill that one staff member referred to him sarcastically as "the secretary of defense." (Augustine continued in his dynamically influential role as CEO of Lockheed Martin until 1998, when he was replaced by Vance Coffman. But Augustine remains on the board, an effective lobbyist for his company, and he continues to participate in military-related activities. He sat on a congressionally mandated bipartisan committee to investigate increasing terrorist threats to the United States. He also participated in a committee in 2001 to assess the efficacy of the ill-fated Osprey helicopter.)

What Norman Wants . . .

One of the ways military corporations curry favor with lawmakers is by employing people in multiple political districts. The legislators express gratitude for increased employment in their districts by enacting legislation that forces the Pentagon to spend money on weapons that it doesn't necessarily want or need.

Lockheed Martin, headquartered in Bethesda, Maryland, has major military research and production centers in eight other states: Moorestown, New Jersey; Marietta, Georgia; Oak Ridge, Tennessee; Colorado Springs, Colorado; Fort Worth, Texas; Albuquerque, New Mexico; Vandenberg Air Force Base and Sunnyvale, California; and at the Nuclear Test Site in Nevada. But actually the corporation maintains facilities in fifty states. As John Pike, formerly of the Federation of American Scientists, said, Lockheed Martin carries a "big political footprint.

Since 1994, when the Republicans gained control of both houses of Congress, billions of dollars beyond Pentagon requests have been added each year to the military budget. For instance, in the years 1996—98, 20 billion dollars extra was added, three-quarters of which was earmarked for weapons that benefited only their corporate producers. Dozens of unnecessary weapons systems were crammed into the Pentagon budget during the Gingrich era in an add-on game called "the waste that keeps on wasting." An egregious example is the huge C-150 military transport plane, manufactured by Lockheed Martin just outside Newt Gingrich's congressional district in Georgia. Since 1978, the air force has requested only five of these planes, yet Congress built 256—a ratio of fifty for each plane requested! Republican Senator John McCain of Arizona was heard to say that there were so many surplus C-13OS that "we could use them to house the homeless." Indeed, the air force was forced to retire more than a dozen C-150s because they had no use for them. (And Congress doesn't even budget for the actual operation of the planes—said to be 1 billion dollars..."
over the next six years.) These C-130s are deployed as trophies with national guard units in the states of key congressional members—for example, more than a dozen C-130s sit at Kessler Air Force Base in Trent Lott's home state of Mississippi.

**MERGED MONEY TALKS**

Political donations represent even more overt efforts by the huge new military corporations to affect policy. In 1997, for example, the military corporations spent more than 2.4 million dollars contributing to political campaigns and parties. From 1991 to 1997 they surpassed even the tobacco companies in political donations by a margin of 32.3 to 26.9 million dollars. Lockheed Martin led the pack. One Lockheed operator, Bernard Schwartz, a former company board member who owned Loral Industries before it merged with Lockheed in 1996, gave 601,000 dollars to the 1996 Democratic war chest and more than 1.1 million dollars to committees of the Democratic party in 2000. And in just two years—1997 and 1998—America's six biggest weapons makers spent 51 million dollars actively lobbying for their killing weapons. Lockheed Martin alone spent 10.2 million dollars lobbying in 1997 and 1998. (Of course most lobbying activities are tax deductible.)

Lockheed Martin has even installed company people in key positions in Democratic and Republican presidential campaigns. For example, Lockheed's vice president Bruce Jackson served as vice-chair for the Dole fundraising campaign in 1996; he subsequently occupied the same position for Governor George W. Bush in 2000. Lockheed Martin shared the limelight at the 2000 Republican convention with other notable U.S. corporations, including the United States Tobacco Company, AT&T, Freddie Mac, and Southern Co. Each of these firms contributed 60,000 dollars to Senate Majority Leader Trent Lott for a fifties-style sock hop titled the "Lott Hop." Lockheed then cemented this political connection by pledging 1 million dollars to the "Trent Lott Leadership Institute." Lott, it turns out, had helped to bail out Lockheed's multimillion-dollar F-22 fighter plane project in the late nineties, when it experienced huge cost overruns and was not performing according to specifications. He also helped to fund the construction of many superfluous C-130 planes, and he vigorously supported the theater high altitude area defense project (THAAD), for which Lockheed received 4 billion dollars. (THAAD has failed six of eight tests.)

Lott's generosity did not stop there. In September 2000, he steered a bill through the Senate to provide 4 to 6 billion dollars in tax subsidies to the tobacco, arms, and pharmaceutical industries over the next decade. As William Hartung, a senior fellow at the World Policy Institute, writes, "The provision of the bill that would give double tax breaks to weapons exporters like Boeing, Raytheon, and Lockheed Martin is particularly outrageous. These companies already benefit from over seven billion dollars per year in government grants, loans, and promotional activities designed to promote U.S. weapons exports. ... If there was ever an example of an industry that emphatically does not need more government subsidies, the U.S. weapons industry is it." Other corporate-influenced people at the Republican convention included House Majority Whip Tom DeLay, who received the Boeing-Lockheed award with no apparent embarrassment. When DeLay was later questioned about ubiquitous corporate donations, he said, "We're raising money left and right, we'll leave this convention with a significant amount of resources." Then he added "It's cynical for the media to make it like it's bad: it's better to raise money than to have the government pay for elections." While 97 percent of Americans do not contribute to any political party, Lockheed Martin, TRW, Raytheon, and Boeing collectively gave 6 million dollars in campaign contributions during the election year of 2000. (These weapons firms have consistently contributed more to Republicans than Democrats by a 2:1 margin since the Republicans took control of Congress in 1994.)
And the connections don't stop there. George W. Bush attempted to award a contract to Lockheed Martin to run the Texas welfare system! Bush relented in the face of strong public opposition. Lynne Cheney, the wife of the vice president, for years served on Lockheed's board, for which she received 120,000 dollars annually in compensation.

Dick Cheney himself served as secretary of defense under George Bush and was a fellow at the American Enterprise Institute from 1993 to 1995. He scored a 100 percent rating from the American Conservative Union and zero percent from Americans for Democratic Action during the eighties. Appointed chief executive of Halliburton corporation in 1995, he doubled the size of the company both through a series of mergers and through business deals with the Pentagon. Under Cheney's reign, Halliburton became one of the nation's largest weapons contractors, ranking twenty-second in prime Pentagon contracts by January 2001. Cheney organized a 1.1-billion-dollar Pentagon contract for Halliburton to support military operations in the Balkans, and 2.3 billion dollars in government loans, an increase from 1.2 billion dollars received over the previous five years. The company donated a total of 1.2 million dollars to both political parties and congress over five years, and in 1999 it spent 600,000 dollars on lobbying—up from 280,000 dollars in 1996. When Cheney retired to run for vice president, he left with a "package" of 20 million dollars in stock options and an overall worth of 50 million dollars.

His Democratic opponent in the vice presidential race, Joseph Lieberman, is not without corporate taint either. Both Gore and Lieberman were avid solicitors of campaign funds from Lockheed Martin and Raytheon. Lieberman was one of the first Senate Democrats to join Senate Majority Leader Trent Lott and Senator Thad Cochran to support Star Wars. He lobbied extensively for the troubled Lockheed Martin F-22 plane (at 200 million dollars per plane it is the most expensive ever built); the engines are constructed by a branch of United Technologies in his home state of Connecticut. He received over 96,000 dollars in political donations from military corporations in 2000.

Lieberman also supported loan-guarantee programs for countries buying American weapons, and he voted against the arms sale code of conduct—legislation that prevents weapons from being sold to countries with a poor human-rights record or countries that may be working on developing nuclear weapons. He voted consistently against initiatives to reduce the U.S. military budget, and supported programs to prevent transfer of money from military to domestic programs. For the past five years he has served as chairman of the pro-military Democratic Leadership Council with a corporation-friendly, pro-military, fiscally conservative agenda. Although Lieberman was vocal about religion and personal behavior during the campaign, as William Hartung commented, the Democratic ticket demonstrated "a failure of public ethics, not private morality."

TO THE VICTOR GO THE SPOILS

To give some feel for how Lockheed Martin has benefited through lobbying, revolving-door policies, political donations, etc., here is a short list of some of the company's nuclear weapons related contracts:

Lockheed Martin currently produces the Trident 11 submarine-launched ballistic missile, armed with eight 100- kiloton or 475- kilo-ton hydrogen bombs. (As a reference, the Hiroshima bomb was equivalent to 15 kilotons of TNT.) Each Trident submarine is equipped with 24 of these missiles. (Eighteen Trident subs, together containing killing power three times the threshold for nuclear winter, glide silently beneath the oceans of the world, invisible to all: a subliminal global holocaust machine.)

But this is not all.

Lockheed Martin has government contracts, all together worth billions of dollars, for:

- The payload launch vehicle for the interceptor system
• The space-based infrared system (SBIRS) "high" component
• The theater high altitude area defense (THAAD)
• The airborne laser (ABL), in partnership with Boeing and TRW
• The navy theater-wide system
• The medium extended air defense system (MEADS), in partnership with Alenia of Italy and Daimler Chrysler of Germany

On the side, Lockheed Martin is also developing the capability to conduct simulated nuclear tests at the Nevada Test Site with the Bechtel Corporation and receives 2 billion dollars a year to run the department of energy's Sandia National Laboratory in New Mexico.52

TWO CASE STUDIES

I once naively believed that the administration in power and Congress determined U.S. foreign policy. I was wrong. Here are but two examples of recent foreign policy deals orchestrated by the weapons industry.

NATO Expansion

During the cold war years, the North Atlantic Treaty Organization (NATO), was the military bulwark in Western Europe against invasion by the Soviet Union. Western European countries enjoyed "protection" under the American nuclear umbrella: If the Soviets invaded, America would use nuclear weapons to fend off the attack. If necessary, the U.S. would be prepared to absorb a nuclear attack on its own territory to defend its NATO allies. (The U.S. has always controlled the NATO alliance.)

When the Berlin Wall fell, the Bush administration promised Gorbachev that NATO would not expand into Eastern Europe if Russia did not oppose the admission of a unified Germany into the alliance. But when Clinton was elected, he decided to enlarge NATO, in violation of President Bush's agreement. By welcoming the Czech Republic, Hungary, and Poland into NATO, and arming these former Eastern Bloc countries—two of which directly adjoined the Russian border—America reestablished a hostile situation with Russia. The reason given was that free-market democratic reforms would be consolidated, and an expansion of the market into former Eastern Bloc countries would benefit trade and the U.S. economy. But the truth was different. U.S. military corporations knew that NATO expansion presented a huge marketing opportunity—any new NATO country would be forced to upgrade its weapons systems to NATO standards.

Lockheed Martin was well represented among the lobbyists. Bruce Jackson, a vice president, volunteered to become president of the U.S. Committee to Expand NATO, a lobbying and public education organization operating out of the offices of the American Enterprise Institute. This committee ran a series of ads in the congressional magazine Roll Call, stating that "Americans agree" on NATO expansion. (The "Americans" they chose were "Stormin" Norman Schwarzkopf and three former secretaries of state, including Henry Kissinger.) The Committee to Expand NATO delivered speeches, gave congressional briefings, published articles, produced white papers, and sponsored ad campaigns within the U.S., all promoting the "widest possible expansion of NATO."

In 1997, Norman Augustine toured prospective NATO countries and enthusiastically supported the entry of Romania into the club—a country that shares a long contiguous border with Russia and to which his company had already sold 82 million dollars in radar equipment. Lockheed Martin, Textron, and McDonnell Douglas funded organizations such as American Friends of the Czech Republic, and foundations promoting Romania's entry into NATO. They also bankrolled a public referendum in 1997 in Hungary on NATO expansion and vigorously
worked with the top leadership in Poland, the Czech Republic, Romania, and Hungary to convince them that the best way to gain U.S. support for entry into NATO was to buy American weapons.

Despite official rhetoric to the contrary, the expansion of NATO was entirely about weapons sales, the bill for which will run in the range of 500 billion dollars over twelve to fifteen years—2500 dollars for every American household, since America ends up bankrolling much of this military expenditure. Sales to foreign governments are particularly lucrative for weapons manufacturers, since by the time the weapons are ready for export, all research, development, and initial production problems have been covered by the U.S. taxpayer. But forcing the impoverished nations of the former Soviet bloc to buy sophisticated weapons as they experienced freedom was an act of cynicism and exploitation. Furthermore, it is unethical for any foreign corporation or government to interfere with the domestic politics of other countries. (Remember the furor created when China was said to have contributed to Clinton’s reelection campaign in 1996?)

In 1998 the Senate voted 81 to 19 to expand NATO, adding Poland, Hungary, and the Czech Republic (Romania did not make it on this round). Russia was understandably furious, regarding the U.S. as hostile and dishonest, and backed away from talks to reduce nuclear weapons. In April 1999 a lavish event was thrown in Washington, D.C. to celebrate NATO’s fiftieth anniversary. International politicians and weapons makers mingled at the party that was funded by Boeing, Lockheed Martin, and United Technologies, each of whom donated 250,000 dollars.

And there was an added cause for celebration: the war in Yugoslavia was at its zenith. Although it would cost U.S. taxpayers about 1 billion dollars per month, it was good for corporate business. Replacement of lost Raytheon-made Tomahawk cruise missiles used in battle (each lost cruise missile costs 1 million dollars to replace) and Lockheed Martin F-16 and F-22 fighter planes would provide billions in new contracts for the weapons makers.53

When Bush visited Europe in June 2001, he continued actively to promote NATO expansion.

**Lifting the Arms Ban on Latin America and Other Foreign Military Sales**

For twenty years the United States had a policy banning arms sales to Latin America because it was populated by brutal dictators. However, when the Reagan years ended and the domestic weapons spending bonanza faded, foreign markets were seen as a way to increase corporate profits. Lockheed Martin, Boeing, and others decided to eliminate restrictions based on human rights or the possible nuclear weapon proliferation record of a particular country in order to avail themselves of new weapons "markets." They also decided to organize new government subsidies so that U.S. taxpayer dollars would supply cash to foreign countries to buy weapons.

Clinton’s defense secretary, William Perry (formerly Norman Augustine’s paid consultant), joined Lockheed Martin to become an advocate within the administration to lift the Latin American weapons ban despite strenuous resistance by the state department. To this end, the air force performed demonstration flights of the F-16 fighter plane at the 1996 air show in Santiago, Chile, and Brazilian generals were invited into the cockpits of F-16 planes to do test flights. Aerospace lobbyists then organized thirty-eight senators and seventy-eight house members to send letters to Secretary of State Warren Christopher (a former director of Lockheed) supporting the abolition of the ban. (This was lucrative work because these legislators subsequently received a total of 1 million dollars in political action committee contributions from the relevant military companies.) A Lockheed Martin brochure was published on their web site and distributed at arms conferences and on the Hill, touting the Latin arms market as a 3- to 15-billion-dollar opportunity over the next ten years.
At the same time, former Costa Rican president and Nobel Peace Prize winner Oscar Arias Sanchez was vigorously promoting a moratorium on sales of advanced weapons to countries in Latin America to promote conflict prevention and force reductions. Yet President Clinton's allegiance was to the weapons industry. (On the contrary, Jimmy Carter displayed moral fortitude in the face of corporate displeasure—one notorious Carter state department cable, which became known as the "leprosy letter," warned its diplomats to shun arms exporters.) In May 1993, Secretary of State Christopher instructed U.S. embassies to assist arms companies in promoting international trade. To consolidate this policy, two years later, in February 1995, President Clinton issued Presidential Directive 41, stating that arms sales were essential for preserving industrial jobs. The directive ordered the diplomatic corps to boost arms sales.

The State Department appointed a semi-official body—the Defense Trade Advisory Group (DTAG) to advise on arms exports. In a direct conflict of interest, its forty members included representatives from Boeing, United Technologies, Hughes, Allied Signal, Litton Industries, Raytheon, General Dynamics, Loral Space Systems, the Electronic Industries Association, and the Aerospace Industries Association. In 1995 the federal government also created the 15-billion-dollar Defense Export Loan Guarantee (DELG) program, together with other financially supportive government programs.

These new weapons export policies are complementary to Article XXI in the General Agreement on Tariffs and Trade (GATT), which directs countries to take any action they consider necessary to protect their essential security interests—actions "relating to the traffic in arms, ammunition and implements of war and such traffic in other goods and materials as is carried on directly for the purpose of supplying a military establishment." The GATT accord was written in 1993 by transnational lawyers, some of whom represented the military-industrial complex.

Lockheed Martin and others benefit hugely from foreign military sales. American firms typically arm both sides in regional conflicts, a practice that is fundamentally good for business. Ancient enemies are armed: Turkey and Greece for their conflict in Cyprus, India and Pakistan, Peru and Ecuador, Taiwan and China, and Israel and every other country in the Middle East—the world's largest arms market. Ironically, if a country previously armed by America—such as Iraq—becomes an "enemy," U.S. troops will be killed by American weapons.

In 1999, America garnered 39 percent of new weapons contracts, deals that netted 11.8 billion dollars—outdoing the sales of Russia, France, Britain, and China combined. Secretary of Defense William Cohen's worldwide travels resembled marketing tours for weapons. He encouraged Chile and Argentina, longtime enemies, to upgrade their arsenals; he pushed weapons in the Persian Gulf states, in Eastern Europe, in Western European countries, in Japan, and in Australia. No country is exempt from the outreach of the United States.

Here is a sampling of weapons sold abroad by Lockheed Martin from 1994 to 2000:

- Advanced gunnery-training systems to Egypt
- Army tactical missiles (ATACMs) and launch assemblies to Greece and South Korea
- C-130 Hercules transport planes and/or associated spare parts to Bangladesh, Brazil, South Korea, Kuwait, Saudi Arabia, and Taiwan (Turkey and Zimbabwe also took some spare parts of C-130 airplanes)
- C-130 transport planes to Bolivia, Botswana, Bulgaria, Ethiopia, Greece, the Philippines, Romania, South Africa, Tunisia, and Zimbabwe, and H-5o transport planes to Malaysia
- F-16 fighter jets to South Korea and Taiwan (Turkey and Egypt received upgrades to their F-16s)
- F-16 A/B Fighting Falcons to Bahrain and Jordan; F-16 C/D Falcons and upgrades to Bahrain, Egypt, and Singapore; F-104s to Zimbabwe
- Hellfire II air-to-ground antitank missiles to Egypt, Israel, Kuwait, and Taiwan
• LANTIRN (low-altitude navigation and targeting infrared for night) navigation pods to Egypt, Singapore, and Turkey
• MK-41 vertical-launch system to South Korea
• Multiple-Launch Rocket Systems (MIRs) to Israel, South Korea, and Turkey
• Multiple-Launch Rocket Systems-Extended Range (MLRS-ER) to South Korea
• P-3B Orion patrol aircraft to Argentina and Greece
• Sharpshooter infantry fighting vehicles to Egypt
• T-33 to Zimbabwe and Turkey
• Walleye missile tube vidicons to Israel\textsuperscript{61}
Chapter Six

Star Wars: The Story of National Missile Defense Systems

If the U.S. proceeds to destroy the ABM treaty... We can and will withdraw not only from the START II treaty. . . but from the whole system of treaty relations having to do with the limitation and control of strategic and conventional arms.

—Russian President Vladimir Putin, 2001

Any amendment, or abolishing of the treaty, will lead to disastrous consequences. This will bring a halt to nuclear disarmament now between the Russians and Americans, and in the future will halt multilateral disarmament as well.

—Chinese Arms Control Ambassador Sha Zukang, 2001

AT ROUGHLY THE SAME TIME that nuclear scientists conceived the idea of a "stockpile management program" to prolong their careers after the end of the cold war—and as a cover for development of new nuclear weapons—Bill Clinton and George W. Bush, in response to pressure from weapons manufacturers, worked on a parallel effort to craft a missile defense system. Shaped, as always, by the politics of the day, the plan evolved from Lyndon Johnson's Sentinel to George W. Bush's national missile defense program (NMD), via Ronald Reagan's memorably named Star Wars plan. Each successive incarnation has added new approaches to creating a comprehensive missile shield for the U.S., and it is important to understand both the evolution of missile defense and the various components of the latest plan being put forth by George W. Bush—including his proposal to put nuclear reactors and possibly nuclear weapons in space as well as on earth and in the immediate atmosphere—in order to evaluate the viability and implications of our current policy. This chapter looks at the history of missile defense and its current components. Chapter Seven looks at plans to militarize space.

FROM SENTINEL TO NATIONAL MISSILE DEFENSE

Every military weapon ever built has instigated another weapon to counter it. Ever since scientists designed missiles capable of delivering nuclear weapons through space, the next imperative became an antimissile system. To this end, in 1967 President Lyndon Johnson proposed a system called Sentinel. President Richard Nixon called his hypothetical version Safeguard, and Ronald Reagan's version became known as Star Wars. Eventually, all these plans were abandoned because none of them worked. Building thousands of hydrogen bombs proved far easier than building a system to foil them.1 Nevertheless, Reagan's charisma and powers of persuasion swayed public opinion in favor of Star Wars—a "shield" to be constructed over the continental U.S. to protect against incoming Soviet ballistic missiles. His Star Wars speech in 1983 gave the imprimatur to a plan recognized by every reputable scientist to be unworkable. Reagan's speech also gave the whole concept of missile defense an indelibly memorable name and many people—myself included—now use the term "Star Wars" for all comprehensive missile defense plans, despite each successive administration's renaming efforts.

Seventy billion dollars later, after enormous amounts of work and research in many of the universities, colleges, and corporations around the nation, none of the evolving technologies has been shown to be effective against incoming ballistic missiles. Following his election in 1992, Clinton directed his defense secretary, Les Aspin, to end the Star Wars program, or the strategic defense initiative (SDI) as it was then called. In May 1993 Aspin created as an alternative a new organization called the ballistic missile defense organization (BMDO). Moving
away from the concept of space-based weapons, the new plan was to acquire and develop ground-based systems designed to defend American forces overseas from battlefield missiles. Eighty percent of the BMDO budget was appropriated to "theater" or short-range missile defense; 20 percent for research into national or long-range missile defense. But since the same technology is used to design both short- and long-range systems, the Republican Right was actually quite pleased with Aspin's plan, and Frank Gaffney, former assistant to Reagan's undersecretary of defense, said that Aspin was really just "rearranging the deck chairs."

As early as 1991, the navy, army, and air force had quietly begun to develop their own theater missile defenses. The navy and army worked on two similar systems—a lower-tier defense designed to intercept short-range missiles in the lower atmosphere, and an upper-tier defense designed to intercept missiles in the upper atmosphere. The air force, meanwhile, had been developing several theater missile defense (TMD) programs, including a boost-phase laser system intercept that would be deployed in a piloted plane. Aspin's BMDO specifically endorsed three of these systems—the army's Patriot (PAC-s) lower-tier system, the navy's Aegis program to be based aboard Aegis ships, and the army's theater high altitude area defense (THAAD). (It is a generally accepted notion that theater or short-range missile defense does not violate the Antibalistic Missile—ABM—treaty. However, THAAD operates at altitudes of 40 kilometers, almost outside the atmosphere, so in effect it does violate the ABM.)

But the shock of the political loss of the House and Senate to the Republicans in 1994 had a dramatic effect upon Clinton's opposition to Star Wars. Among the dictates of Speaker Newt Gingrich's "Contract with America" was a provision calling for a "highly effective defense" of the continental United States at the earliest practical date. In order to placate the now-powerful Republican Congress, Clinton specifically embraced the Star Wars issue, retitling it once again, this time as the seemingly more benign national missile defense (NMD).

The American Right remained adamantly wedded to the Star Wars idea, despite the fact that a 1995 U.S. national intelligence estimate powers, will develop or otherwise acquire a ballistic missile in the next fifteen years that could threaten the contiguous 48 states and Canada. Upset by this report, the Republican-controlled Congress appointed Donald Rumsfeld, secretary of defense in the Ford administration (and now secretary of defense for George W. Bush) to head an "independent" commission to counter the assertions. According to Bob Aldridge's background paper on national missile defense titled "Son of Star Wars," the commission was directed to consider the worst-case possibilities, but to exclude the most likely scenarios in its deliberations.

They were told to assess real or potential threats from ballistic missiles carrying nuclear, biological, or chemical weapons, but were not to decide their probability or feasibility. Nor were they to consider that there could be other easier ways to deliver these weapons. In other words, the commission was directed to find specific threats for Congressional promotion of its NMD ambitions. General Henry Shelton, chairman of the Joint Chiefs of Staff, gave some perspective on the Rumsfeld report in a letter he wrote to Senator James Inhofe on August 24, 1998: "The [Rumsfeld] commission points out that through unconventional, high-risk development programs and foreign assistance, terrorist nations could acquire an ICBM capability in a short time, and that the intelligence community may not detect it. We view this as an unlikely development."

Unfortunately, Shelton's letter arrived just as North Korea launched a Taepo-Dong missile containing a satellite over the Japanese mainland in August 1998, an event that gave new momentum to national missile defense. This missile was based upon primitive scaled-up Scud missile technology, built by a country that has a gross domestic product smaller than Delaware's. (The prestigious journal Jane's Defense Weekly said of the North Korean long-range missile site that it looks "more like an abandoned oil derrick than the nerve center for
annihilating the 'running dogs of capitalism.' Inherently incapable of reaching the U.S. mainland, the primitive Korean medium-range missile crashed into the sea off the coast of Japan. Nevertheless, it provided the American Right an enormous boost of moral ammunition. It also prompted Japan, which had previously been reluctant to become involved with the U.S. on plans for missile defense, to sign a cooperative agreement in August 1999 to develop a theater missile defense.

The Rumsfeld report was now followed by another assessment from the National Intelligence Council, published on September 9, 1999. This new report warned that proliferation of medium-range ballistic missiles, driven primarily by missile sales from North Korea, presented an "immediate, serious and growing threat . . ." (This was not even an allegation that North Korea presented a threat, but that it was selling missile components to other countries that might be threats.) Among other allegations, the report said that Iran, with the help of Russia, could test a missile before 2010 that could deliver a several-hundred-kiloton warhead against the U.S." And that over the next fifteen years the U.S. "most likely will face ICBM threats from Russia, China, and North Korea, probably from Iran, and possibly from Iraq."

While these reports were designed to sound comprehensive and authoritative, in their zeal to justify a multibillion-dollar defense program they failed to acknowledge the fact that any country or person in the world could smuggle a nuclear, chemical, or biological weapon into the United States aboard a ship, in a suitcase, or in a small private plane. A truck could be driven in from Mexico or Canada loaded with weapons. A cruise missile flying beneath radar, undetectable by any NMD system, could also be used as a suitable delivery mechanism. Or, as we witnessed on September 11, 2001, American aircraft loaded with civilians and thousands of gallons of jet fuel could be used as ballistic missiles, the primary weapons—simple, inexpensive box cutters. As the Mercury News argued on September 10, 1999, attack through these means was much more likely than attack through space.

Joseph Cirincione, the director of the Carnegie Endowment for International Peace, incisively stated that the new report "reflects a lowering of previously established intelligence standards for judging threats." The report arbitrarily shifted the missile threat to incorporate all fifty states instead of forty-eight (as allowed under the antiballistic missile treaty, which excluded Hawaii and Alaska), and it advanced by at least five years the possible date of a "rogue state" long-range-missile deployment. The report itself acknowledged that "some analysts believe the prominence given to missiles countries 'could' develop gives more credence than is warranted to developments that may prove implausible." The panel also pointed out that an actual kill vehicle had not been tested on an actual booster (as opposed to prototype warheads and surrogate boosters) and there was major concern that the kill vehicle would not be able to withstand the actual shock loads, because the actual booster is much faster and the loads are "more than an order of magnitude greater than those of the surrogate booster now being used." The panel recommended that Clinton delay his decision to build the national missile defense.

Clinton, however, was under impeachment proceedings in January 1999, and in an exceedingly vulnerable political position. By the end of the month, Defense Secretary William Cohen, acting for Clinton but also agreeing in principle himself, increased the missile defense
budget by 6.6 billion dollars over four years and announced a timetable that included a
deployment decision before Clinton left office.16 While the Clinton administration had initially
endorsed a modest missile defense system in response to a theoretical small ICBM attack from
a "rogue" state, the defense budget increase announced by Cohen allowed the Star Wars lobby
to get their proverbial foot in the door, and an animated debate on the efficacy, technical validity,
and viability of the proposed NMD ensued. As scientists from both sides of the fence attacked
each other, three tests for the missile system failed, North and South Korea made peace
overtures to each other, and the rationale for NMD disappeared.

Clinton had originally enumerated four criteria for making the decision about deploying
national missile defense: the threat, the cost, the technology, and overall American security. The
threat was now gone, the cost was incomparable, the technology did not seem to work, and
many felt that American security would be endangered rather than enhanced by deployment of
NMD, a view confirmed by a classified intelligence report issued at the time on "Foreign
Responses to U.S. National Missile Defense Deployment." The report warned that NMD would
prompt China to expand its nuclear weapons arsenal tenfold and cause Russia to place multiple
hydrogen bombs on missiles that currently carry only one bomb. The report also stated that if
China were prompted to deploy 200 warheads by 2015 (as noted, they currently have only
twenty hydrogen bombs capable of hitting America) this would prompt India and Pakistan to
respond with their own nuclear buildup.17

In response to the report (and with obvious relief), Clinton passed the Star Wars problem on
to the next president and thus avoided being labeled the president who destroyed the ABM
treaty. (Even as he failed definitively to decide the future of NMD, in typical Clinton fashion he
directed his secretary of defense to pursue a "robust program of technological development." So,
unofficially, the program proceeded unabated.)

In contrast, George W. Bush now enthusiastically endorses a full-scale, no-holds-barred,
multilevel NMD system.18 The Heritage Foundation has been busy setting the stage and leading
the charge, including circulating the following petition during the presidential election year 2000,
some months before Bush was declared president:

Citizen's Petition to Protect America Now

Whereas China and Russia have threatened the U.S. with nuclear attack, and rogue
nations such as Iraq, North Korea and Iran have acquired or are acquiring missiles
equipped with weapons of mass destruction;
   Whereas the United States currently cannot stop even one missile after it is
   launched; Whereas the Administration has declared that it must have the permission of
   the Russian government before deciding to deploy any missile defense for the United
   States;
   Whereas the limited, land-based missile defense system the Administration says it
   may decide later this year to deploy will not be able to protect our families until 2005 at
   the earliest;
   Whereas the United States Navy could be ordered to immediately begin the process
   of deploying a sea-based defense that would provide some missile protection several
   years before 2005;
   Whereas senior Pentagon officials have judged that a comprehensive missile
defense with a combination of land-, sea-, air-, and space-based components would offer
the American people the most effective protection against missile attack; and
   Whereas the Administration is currently engaged in treaty negotiations with Russia
that would prohibit the United States from deploying sea-, air- or space-based defenses;
   Therefore I, [fill in name] of [fill in state], call upon my elected representatives and
candidates for public office to pledge to my family and all of the families of the United
States to support immediately beginning the process of deploying a sea-based missile
defense as the first layer of protection for America's families; and further to pledge to
reject the notion that any other nation may exercise a veto of the U.S. military's ability to offer the American people the most effective protection available.

Jack Spenser and Michael Scardaville, Heritage Fellows, fashioned an op-ed piece for the *Miami Herald* on October 17, 2000, justifying such a commitment to NMD. They reminded readers that Iran tested a Shahab missile with an 800-mile range on September 21, 2000, and announced that Iran is "dangerously close to developing nuclear weapons." They also noted that on September 23, Syria acquired a new model of Scud missile from North Korea, allowing it to attack Israel from bases deep within its own territory. Libya, they said, began receiving North Korean Nodong missiles on September 24, giving Libya the ability to attack Israel and southern Europe. They wrote that Pakistan and India were also planning new missile tests for intermediate-range ballistic missiles, and they ended by stressing that the threat to "our troops and friends abroad is growing," that the U.S. needs an antiballistic missile system, and that reliance upon the ABM treaty is folly.19

In response, Steve LaMontagne, a research analyst at the Council for a Livable World, wrote that Spenser and Scardaville omitted the fact that the missile developments of Libya, Iran, and Syria occurred within a week of and in response to Israel's successful test of its new Arrow 2 anti-tactical ballistic missile system, and that none of the above-mentioned missiles could reach the U.S. His article pointed out that if—as the Heritage Foundation claimed—antiballistic missile systems deter proliferation, "why do Iran, Syria, and Libya seem un-fazed—and even provoked—by Israel's missile defenses?" And "why is Russia determined to preserve its retaliatory strike capability against possible U.S. defenses? . . . The lesson from the Middle East and Russia is that missile defenses encourage proliferation."20

Nevertheless, any ongoing debate about the need for or feasibility of national missile defense takes place even as the corporations and the Pentagon quietly go about designing, contracting, and constructing most of the elements. There is no public discussion, no informed debate within or by the media, and the American public is being asked to foot the multibillion-dollar bill and take the catastrophic risks such developments entail. William Cohen, Clinton's secretary of defense, had enthusiastically endorsed NMD when he increased the missile defense budget in January 1999, referring to North Korea by saying, "We affirm that there is a threat and the threat is growing." Congress added to the pressure two months later by endorsing legislation introduced by Republican Senator Thad Cochran mandating national missile-defense deployment "as soon as is technically possible," 21 and stating, "It is the policy of the United States to deploy a national missile defense."

Star Wars had been revived.

On October 2, 2001—21 days after September 11—the Senate unanimously passed a massive 345 billion dollar Defense Appropriations bill, which included George W. Bush's demands for flexibility on missile defense (which itself cost 8.3 billion dollars).22

**COMPONENTS OF MISSILE DEFENSE**

The categorization of Star Wars or missile defense systems is complex and intertwined, and the nomenclature is continually changing. During the nineties' revival of Reagan's Star Wars concept, less belligerent terminology was devised to make the whole concept seem more acceptable. *Missile defense* was the chosen lexicon, and, as noted previously, it had two components: theater missile defense (TMD) and national missile defense (NMD). TMD was to be used to hit in midair, low-flying short-range missiles—sometimes known as "tactical missiles"—like Scuds, which were used by Iraq in the Gulf confrontation. (The flight time of these missiles is minutes only.) NMD was conjured up to describe the interception of intercontinental ballistic missiles, usually nuclear armed. (The flight time of sea-launched ballistic missiles—sometimes known as "intermediate-range missiles"—is fifteen minutes;
the flight time of land-based ballistic missiles—sometimes known as "strategic missiles"—is thirty minutes.)

Star Wars and each of the options that have succeeded it encompass plans to protect against the whole spectrum of weapons, from the most primitive to the most dangerous and sophisticated. Individual politicians, lobbyists, and others endorse more or less extensive versions of missile defense, ostensibly related to the level of threat they perceive (but clearly often driven by more mercenary factors):

**Limited Missile Defense**

Some believe that America need only protect itself against "rogue" states or "states of concern" like North Korea, Iraq, Iran, Libya, etc. These countries possess conventional weapons but none possess missiles capable of hitting the U.S., and none currently possess nuclear weapons. Advocates of this approach favor antimissile missiles, based on land, on sea, and in the air.

**Extensive Missile Defense**

Others argue that China must now be considered the new global threat, although it maintains only twenty primitive nuclear-armed ICBMs that are liquid-fueled and take days to prepare before they can be launched against the U.S. But the Pentagon is projecting that China will shortly be arming itself with ever more nuclear-armed ICBMs, and therefore argues for a more extensive missile defense than that currently planned for rogue states. Russia, on the other hand, retains a nuclear arsenal capable of destroying the U.S. and inducing nuclear winter. It is obvious that no antimissile system could ever protect the U.S. against some 5000 Russian nuclear weapons descending upon it from space. But the missile defense system makes sense in conjunction with the other components of the overall U.S. official policy to "fight and win" a nuclear war against Russia. In a surprise attack the U.S. will initiate a first strike, which means it will go first and win the nuclear war by taking out most of the Russian missiles before they are launched from their silos. Star Wars will then "mop up" the few missiles that have escaped destruction and have actually been launched into space, so there will be no more Russian missiles to hit the U.S. This scenario will create nuclear winter, of course.

**Space-Based Defense**

An even more aggressive contingent within the official U.S. establishment is pushing for a still more extensive, space-based system, both to provide a greater degree of missile defense and to protect America's economic interest in space. Beyond protecting America's current borders from missile attack, this contingent plans to exploit natural resources by "mining" the moon, the asteroids, and the planets for rare minerals. Naturally, if the U.S. invests billions of dollars in space research and development, it must be prepared to "protect" its investment. This logic led to the establishment of a new military entity—the U.S. space command, created by the Joint Chiefs of Staff in 1985 to help "institutionalize the use of space in U.S. deterrence." The U.S. space command explicitly states that the U.S. must "[dominate] the space dimension of military operations to protect U.S. interest and investment," domination that will be attained by the militarization of space with antisatellite weapons, antiballistic missile weapons, laser beam weapons, nuclear missiles, nuclear reactors, and possibly orbiting nuclear weapons. (So concerned is the rest of the world that on November 1, 1999, 138 nations voted at the United Nations for a resolution titled "Prevention of an Arms Race in Outer Space," which recognized "the common interest of all mankind in the exploration and uses of outer space for peaceful purposes" and "reaffirmed the will of all states that the exploration and uses of space..."
shall be for peaceful purposes and shall be carried out for the benefit and in the interests of all countries. . . . Prevention of an arms race in outer space would avert a grave danger for international peace and security." Only the United States and Israel refused to support this resolution.24

THREE WAYS TO DESTROY AN INTERCONTINENTAL BALLISTIC MISSILE

A ballistic missile is like a bullet shot from a gun. It leaves its launch-pad or silo on a predetermined trajectory, cannot be recalled, and will land where it is targeted. Missile defense systems are categorized based on the point in flight at which they intercept enemy missiles:

- **Boost-phase systems** hit "enemy" missiles immediately after they are launched, in their "boost" phase—the five minutes available after launch and before the missile leaves the atmosphere
- **Midcourse systems** hit missiles in space during their "transit" phases, as the bombs, or "passengers," separate from their missiles and coast through space at tremendous speeds
- **Terminal systems** hit missiles as they reenter the earth's atmosphere to land on and "kill" their target

Destruction of a ballistic missile at any stage—boost, transit, or terminal—carries grave medical implications.

**Boost Phase**

The boost phase is possibly the best time to destroy the missile, particularly if it is MIRV'ed (multiple independent reentry vehicles), for it carries numerous hydrogen bombs that are much harder to target once they have separated. If the missile is loaded with numerous sub-munitions of chemical or biological weapons, the only efficient time to destroy them is during the boost phase. During the boost phase, the missile itself is large and slow compared to tiny warheads barreling through space at many times the speed of sound. During its rapid ascent the missile pours forth great jets of fire, which are readily identifiable by infrared-tracking early-warning satellite, thus making them "easy" targets.

There are three disadvantages to boost-phase destruction. First, the missile must be detected within two minutes of launch, leaving no time for human decision or intervention either to detect or to attack the missile. This means that World War III could be computer initiated by error or by design, with software determining our future.

Second is a medical problem of grave import. If ten hydrogen bombs on one missile were destroyed in the atmosphere, approximately 100 pounds of carcinogenic plutonium would rain down upon the population, causing long-term havoc and mayhem. Prevailing winds would scatter the deadly, long-lived carcinogenic pollution hundreds to thousands of miles. The contaminated earth would be polluted forever. Likewise, if the missile were carrying biological or chemical weapons, lethal genetically modified viruses and bacteria, or highly toxic chemicals, would descend upon the underlying population.

The third disadvantage is that the intercepted nuclear weapons could accidentally explode when intercepted.

**Transit Phase**

As a MIRV'ed missile zooms through space, the launch rocket separates from the front end, or "bus," which contains its "passengers"— the ten hydrogen bombs.
This transit phase lasts about 25 minutes. It is very difficult to detect hydrogen bombs hurtling through space at very cold temperatures. But because the metal bombs originate in the earth's atmosphere, they retain their warmth relative to the subfreezing temperatures of space. Heat-sensing mechanisms on an antiballistic missile or "kill" vehicle are designed to detect the temperature differential and allow the missile to seek out its target.

However, it has long been recognized that it is relatively easy to fool an antiballistic missile system. Numerous decoys could accompany the bombs—such as mylar balloons inflated to bomb size and coated with the appropriate radar reflecting material to simulate the bomb, or pieces of aluminum to confuse the radar systems of the kill vehicle. Balloons can be made to be the same shape as the warhead, and if they contain a lightbulb and a battery, they maintain the same temperature as the warhead, thus confusing the interceptor sensors. Or the real bomb can be surrounded by a cooled balloon to make it resemble a decoy. The truth is that the Pentagon has never tested an interceptor system against a large array of decoys. Burton Richter, winner of the 1976 Nobel Prize in physics, compares the task to hitting a gnat with a gun that fires pins, with only one pin in each gun. Not surprisingly, most of the tests performed thus far by the Pentagon using a hit-to-kill missile have failed.

Richter and other eminent scientists suggest that the only way to effectively halt or intercept missiles and bombs in space is to deploy nuclear weapons in space. Decoys would then be irrelevant, because the nuclear explosion would destroy bombs and decoys over a wide area. But even an effective space-based missile defense would create what are known as "exotic" effects, including electromagnetic pulse (EMP). In 1962, for example, the United States exploded a hydrogen bomb 248 miles high in space. In an unexpected turn of events, it was thus discovered that destructive electromagnetic radiation emitted from a nuclear blast in space travels vast distances.

It has since been calculated that a single bomb exploded 200 miles above the continental U.S. could paralyze North America, destroying most electronic systems, including long runs of cable, piping, or conduit; large antennae and their feed cables; guy wires and their support lines; overland power and telephone lines; long runs of electrical wiring; railroad tracks; aluminum aircraft bodies; computers; power supplies; alarm systems; intercoms; life-support control systems; transistorized receivers and transmitters; base radio stations; satellites; and some telephone equipment. Fewer than five explosions could blanket the U.S. with as much as 100,000 volts per square meter.

Ted Taylor, one of the inventors of the miniaturized hydrogen bomb, estimates that there are approximately fifty exotic effects from a nuclear explosion, including many types of EMP, gamma radiation, X rays, and electron effects from bomb debris.

**Terminal Phase**

As the hydrogen bombs reenter the earth's atmosphere, at 20 times the speed of sound, it is very difficult to destroy them. Even if some of them could be successfully hit, they would spread plutonium across the targeted country.

Despite all these drawbacks, missile defense systems seem destined for manufacture unless the American people, realizing that their lives are in great jeopardy, rise up to save themselves, their children, and all future generations.

While I have tried to give a neat overview of missile defense systems, as recently as August 2001 the Pentagon changed the terminology again, which will keep the public — conveniently for the Pentagon — confused. TMD and NMD are now intertwined, the differences between them unclear. This terminology shell game means that those who previously supported TMD only, including many Democratic politicians, may be forced to support the whole system, unless they have the courage to challenge the Pentagon.
I invite you to absorb the following with a skeptical eye, being ever aware of the innate dangers technology brings to the world. You need to understand how the U.S. government is spending your tax dollars, and how this spending spree is contributing to the destabilization of an armed world seething with ancient animosities between nations. Bear in mind that in determining numbers of weapons systems needed, the Pentagon's overall strategy has been to prepare the equipment to fight two conventional wars simultaneously (although before September 11, Defense Secretary Rumsfeld had planned to downscale to a single major war).

In each case, I have described the particular weapon system, given the cost to taxpayers, indicated who will benefit from the contract to build it, and evaluated the weapon's usefulness, track record, feasibility, etc., drawing on reports of the General Accounting Office and others who have analyzed each system in detail. I have also tried to indicate which systems are in violation of existing treaties, but because the Antiballistic Missile (ABM) treaty is not absolutely specific and does not cover theater missile defense, it is unclear whether some of the systems under development constitute violations or not. Some Americans would contend that theater defense does not violate the ABM, for example, but Russia is not so sure. Several of the systems with bilateral functions definitely do violate the ABM treaty, as they cross the line between the theater defense arena and NMD. It is deeply worrying that the U.S. military-industrial complex is already constructing many of these systems regardless of treaty violations.

Many Americans are under the impression that weapons developed under the rubric of "missile defense" do not count as new weapons or are permitted by current arms control treaties. This was the case with a man from the national guard in Alaska, who told me that he is involved in installing the foundations for the first 100 missiles near Fairbanks, the initial part of the exoatmospheric missile defense system initiated by Clinton. The man was very surprised by an anti-Star Wars speech I gave, saying that he had been under the impression that NMD was specifically for defense. The fact is that missiles used in missile defense violate all arms control treaties and will likely initiate a massive new nuclear arms race involving China, Russia, India, Pakistan, and others, despite the express purpose of the ABM and other international agreements.

**Lower-Tier Defense (Endoatmospheric)**

The army and navy are in charge of these particular systems, designed to intercept missiles or bombs at low levels in the atmosphere. Components of the systems include the antimissile missiles themselves, and detection and tracking systems to locate and target enemy missiles for destruction.

**Patriot PAC-3 Army System**

This is a hit-to-kill warhead on a missile guided by aerodynamic fins. The current version is an upgraded model of the Patriot PAC-2 defense used against Iraqi Scud missiles during the Gulf War. The Pentagon, despite the dazzling TV propaganda at the time, has been forced to admit that not one of the Patriot missiles intercepted a single Scud, a fact that does not bode well for the future development and upgrading of the Patriot. Although the missiles certainly seemed to be hitting the Scuds, these images that played and replayed clearly did not represent what was actually happening in "real time" during the Gulf conflict.

The new, upgraded version of the Patriot missile, PAC-3, will be 17 feet long and weigh 640 pounds with a 22-mile or 55-kilometer range. The warheads will be equipped with sensors to locate and home in on the target, with small rocket thrusters to maneuver the bomb onto a
collision course. Destruction of the enemy missile will be accomplished by energy of the impact. Sixteen of these interceptor missiles are to be loaded onto a Patriot launcher.

**COST:** Original estimates for the upgraded Patriot came in at 5 million dollars for each interceptor, based on building 2200 PAC-5S to meet the two-war criteria. This figure is now reduced to 1200 PAC-5S at 2 million dollars each. The total estimated cost of the PAC-5 system is 7.4 billion dollars. But according to the Government Accounting Office, this figure may be an underestimate because contractor costs could exceed current estimates, and twelve to fifteen additional flight tests may be conducted as well, meaning twelve to fifteen replacements.

**BENEFICIARIES:** Principle contractors are Lockheed Martin Missiles and Fire Control for the interceptors, and Raytheon Company for the launchers and the fire control vehicle with its small phase-array radar and the engagement control vehicle with computers and displays. There are five subcontractors.

**EVALUATION:** There is no guarantee that these weapons will work if the performance of their predecessors is any indication. Note that the destruction of one missile will cost 2 million dollars just for one antimissile, and this amount does not include the infrastructure, plus the R and D necessary for its construction.

**Navy Area Defense**

The missiles in this system — called Block-4A — have a range of 62 to 124 miles, longer than that of the army's PAC-3, and are to be placed within vertical launch tubes on Aegis destroyer ships. These are an updated version of the Standard-2 anti-air missile, which is already deployed. They will be equipped with a hit-to-kill warhead for endo-atmospheric intercepts, an infrared seeker to supplement their radar seeker, and a radio-frequency adjunct sensor.

Development and operational testing are already complete; the system is in low-rate initial production.

**COST:** The total cost to American taxpayers is estimated at 8.98 billion dollars.

**BENEFICIARIES:** Raytheon is the main contractor with five subcontractors.

**EVALUATION:** The General Accounting Office warns: "The Navy plans to contract for the low-rate initial production of 185 Block-4A missiles, at an estimated cost of $568.2 million, prior to the completion of any realistic operational testing. . . . We are concerned that the Navy will make a premature commitment to production of unproven missiles."

However, the navy is convinced that their system is superior to the army's Patriot system because the army requires more than 126 C-5A airplane flights to Korea, for example, to rapidly deploy a single Patriot battalion (194 missiles) just to "protect" U.S. troops. The navy would need only three to four Aegis ships to "protect" most U.S. troops in Korea and Japan. (Nevertheless, the navy intends to build 1500 missiles to put on fifty-seven Aegis destroyers and twenty-two Aegis cruisers by the year 2011.)
Medium Extended Air Defense System (MEADS)

MEADS is designed to be a rapidly deployable, highly mobile theater missile defense system to be used in the battlefield to protect soldiers. Traversing rough terrain and maneuvering with troops, it will provide a protection of 360 degrees. There will be sixteen missiles per launcher and 100 launchers in a battery.

COST: Under pressure by the U.S. government, Germany and Italy have been persuaded to co-finance this particular antimissile system—the U.S. will fund 55 percent, Germany 28 percent, and Italy 17 percent. In 1996 MEADS was estimated to cost a total of 40 billion dollars, but new estimates are now predicted to be many times this amount.

BENEFICIARIES: Prime contractors are Lockheed Martin Missiles and Fire Control; Alenia Marconi Systems in Rome, Italy; and Daimler Chrysler Aerospace AG in Munich, Germany.

EVALUATION: The 1996 estimate for developing and producing 100 complete MEADS systems—sixty for the U.S. and forty for Europe, was estimated at 40 billion dollars over fifteen years, based on the PAC-3 missile costing 2 million dollars each. The subsequent increase to 3 million dollars per missile caused an uproar in the MEADS program.

Airborne Warning and Control System (AWACS)

The air force already has a fleet of thirty-four AWACS—a strange Boeing 707 aircraft with a saucer-shaped radar dish on the top of the plane—as do Britain and Saudi Arabia. NATO operates eighteen AWACS. South Korea, Turkey, and Italy are interested in buying. The AWACS planes are to be upgraded by Boeing to track missiles and provide target information specifically for Star Wars operations.

COST: Upgrades will cost 60 million dollars, and the infrared tracking system for each plane is to cost 8 to 15 million dollars.

BENEFICIARY: Boeing Defense and Space Group.

EVALUATION: This radar will be very useful for missile tracking and it has been modified to track elusive cruise missiles.

Joint Surveillance and Target Attack Radar System (J-STARS)

The J-STARS surveillance plane is designed to detect, track, classify, and support the attack on moving and stationary targets from a distance of 120 miles. A joint army and air force project, it will either pinpoint mobile missile batteries, destroying them before their missiles are launched, or it will provide early detection of missiles after launching.

COST: 11 billion dollars.

BENEFICIARY: Northrop Grumman Corp.

EVALUATION: These new planes were tested during the Bosnian war in 1995—96, and they were found to be unsuitable for their task. Despite this problem an undersecretary of defense approved full-scale production. The GAO blasted this move as being premature and raising the program’s level of risk.
**Upper-Tier Defense (exoatmospheric)**

In this area, once again, the army and navy are competing with each other. Upper-tier defense systems are designed to attack incoming missiles and bombs at high levels in the earth's atmosphere or just above the atmosphere in space.

**Theater High Altitude Area Defense (THAAD)**

THAAD is a ground-based launcher of upper-tier interceptors—i.e., missiles launched from the ground to intercept other missiles high in the atmosphere. Defending an area of 120 miles at heights of more than 90 miles, it is more extensive than the lower-tier systems.

Its missiles will have a range of 650 miles and will deploy a hit-to-kill interceptor destroying its target with collision energy, not explosive forces. However, THAAD cannot sit alone in the field because it is vulnerable to attack from cruise missiles or weapons launched from planes. So it must be protected with a Patriot or some other lower-tier defense system—protecting a missile with a missile so it can destroy a missile.

Each THAAD launcher is designed to hold ten interceptors. A total of nine to thirteen launchers compose a battery. A tactical operations center and an X-band TMD-GBR (theater missile defense ground-based radar) are needed.

**COST:** The current estimate for the acquisition of THAAD and its twenty years of operational life is 23 billion dollars.

**BENEFICIARIES:** Lockheed Martin Missiles and Space is the prime contractor. They are constructing a plant forty miles west of Huntsville, Alabama, specifically for THAAD work. On June 28, 2000, Lockheed Martin signed a 4-billion-dollar eight-year contract with the army for full-scale engineering, manufacturing, and development for configuration i—the first stage of THAAD. This will include twenty-seven flight tests. The company hopes that sales to other countries could be in the range of several billion dollars, exceeding national Pentagon purchases. THAAD has twelve subcontractors, including Raytheon, Boeing, United Technologies, Northrop Grumman, Honeywell, and Westinghouse.

**EVALUATION:** The first two trial flights of the THAAD interceptors at White Sands Missile Range in New Mexico in April and July 1995, tested only the ability of THAAD to fly, maneuver, and separate from the warhead. One test worked, the other test failed. A third test in October was reported as successful. Subsequent flight tests for the missiles' infrared sensors had dismal results, six attempts and six failures spanning four years. During the parade of failures, the army kept justifying more tests in order to compete with the navy for the upper-tier interceptor that will eventually prevail.

The General Accounting Office is critical of THAAD. "A suitable target for testing the THAAD system against longer-range missiles does not exist, and funds have not been requested for target development and production. Without a longer-range test target to represent the more formidable higher-velocity missiles that THAAD could face, the system's operational effectiveness will remain in doubt, and DOD will not have reasonable assurance that it could rely on THAAD in an actual conflict."

When THAAD finally intercepted a target missile in 1999, the army optimistically decided that the program was so successful that final flight tests would be unnecessary. Phillip E. Coyle III, the director of operational test and evaluation for the Pentagon, was scathing in his criticism. He said the THAAD missiles used at the White Sands range were prototypes and not the correct configuration that will be used. He called the tests "highly scripted" and nowhere near the situation that would be encountered with actual hostile missiles.
Retired Air Force Lieutenant General Larry Welch called the extraordinary push to deploy THAAD and other hit-to-kill vehicles as a "rush to failure." An aid to a senior Democratic senator said, "The taxpayers have paid for something we still don't have." Bob Aldridge, (writer of "Son of Star Wars") who compiled much of this material, described the system as a corporate golden goose.

**Naval Theater Wide (NTW) Missile Defense**

An upper-tier system to be deployed on Aegis ships, NTW will use a Standard-3 missile to carry a twenty-pound hit-to-kill lightweight exoatmospheric projectile (LEAP) as a warhead. With a range of 570 to 620 miles, it is designed to intercept missiles above the atmosphere, and as such is classified as exoatmospheric. NTW will require space-based and/or airborne early-warning sensors to detect and to help it hit the ballistic missiles. It is to be developed in two segments, Block-1 and Block-2.

Block-1 will have eighty interceptors carried on four ships. To be deployed by 2010, it will protect against rudimentary missiles like the North Korean Nodong-1 with ranges of 1000 kilometers. Block-2 is to be used against missiles with ranges of up to 3000 kilometers—missiles from China, and Russian ballistic missiles—and as such constitutes a clear violation of the ABM treaty.

Block-3 or Standard-3 is a four-stage missile. The first two stages launch the interceptor into space, the third stage boosts the interceptor farther, and the fourth stage is the LEAP kill vehicle which, using infrared sensors, is designed to detect and hit the target. The third stage of the rocket will take readings from NAVSTAR global positioning system (GPS) satellites for course correction.

**COST:** 1.9 billion dollars is earmarked to be spent on the naval theater wide missile defense system between 2000 and 2005.

**BENEFICIARIES:** Principle contractors are Lockheed Martin, Raytheon, and Boeing. The navy has established its own specific missile defense office to implement NTW. The Aegis-guided missile cruiser USS Lake Erie, home ported at Pearl Harbor, is to be dedicated to navy missile defense tests over the next two years.

Obviously the navy will need more Aegis ships (and crew) to compensate for those being used for NMD. New ships would cost i billion dollars to build and 20 million dollars a year to operate.\(^{30}\)

**EVALUATION:** A report from the Council for a Livable World said that sea-based and boost-phase alternatives to NMD could cost between 30 and 36 billion dollars, would be detrimental to other naval operations, and would not be deployed until 2014. This estimate precludes hidden costs to the navy and does not include costs of space-based tracking sensors. The addition of seven more ships to cope with simultaneous geographical threats could raise the cost to 43 billion dollars, the report says.\(^{31}\) The report also points out that it would be impossible to incorporate boost-phase interceptors with very high acceleration and high burnout velocity on Aegis ships in the present vertical-launch system modules, so new ones would have to be built. Despite the navy's enthusiasm, the General Accounting Office warned that the NTW has significant technical and schedule problems. It also questions the navy's ability to design a kill vehicle capable of discriminating between an actual bomb and decoys in the time allocated to testing.

On an even more frightening note, it is important to understand that if the missiles were to be used for boost-phase interception, the ships that carry them would need to be located near the enemy country making them an easy target. Furthermore, the theater commander would
have virtually no time to assess the threat of enemy missile launches, so the launch of antimissile missiles would be initiated by a computer, a process aptly described as the tyranny of reaction time.

Operational testing will not occur until 2010. Despite this time frame, more than 50 percent of the interceptors are to be deployed by 2008.

**High Energy Laser Weapons**

A whole other category of laser-based weapons, appropriately called "killer lasers," is also planned as part of overall missile defense. These weapons directly violate the ABM treaty because they are to be used against intercontinental ballistic missiles. Under development since Reagan's Star Wars program began, they are now divided into three types.

*Air Force Airborne Laser (ABL)*

Carried aboard a Boeing 747 plane, this laser is designed to destroy an intercontinental missile in its boost phase. The 747S will be equipped with passive infrared sensors and megawatt-class chemical oxygen-iodine lasers (COILs), which will focus intense laser energy on "hostile" missiles at altitudes between 39,000 to 70,000 feet. The intensity of the focused laser beam will burst the motor casing of the missile. Each plane will carry chemicals for twenty to forty shots, and each shot will cost 1000 dollars. It is planned that two planes will circle constantly at 40,000 feet, ever-ready for an attack.

COST: 11 billion dollars.

BENEFICIARIES: Lockheed Martin, Boeing, and TRW.

EVALUATION: Serious technical obstacles face chemical laser weapons, including diffusion of the beam through the atmosphere, accurate target tracking during air turbulence, and miniaturization and packing of the equipment so that it will fit into a plane. David Collier, chief scientist for the army space and strategic defense command, said, "Laser geeks tend to overestimate their effectiveness. . . . There's a major disagreement on the effectiveness of almost any laser system." Finally, depending upon whether the missile is carrying hydrogen bombs or chemical or biological weapons, the country that launches the missiles and/or its neighbors will be contaminated either by plutonium, highly toxic chemicals, or genetically modified lethal bacteria or viruses.

*Space-Based Laser (SBL)*

A Reagan concept, conceived in 1977, the SBL has been resurrected to become the Pentagon's first space-based weapon for use in both the ballistic missile defense and theater missile defense programs, both overt violations of ABM. Jointly funded by the ballistic missile defense organization and the air force, and operated by the air force, SBL will employ twenty to twenty-five satellites, each equipped with a cylindrical hydrogen-fluoride chemical laser capable of destroying 100 missiles from a range of 2672 miles. The first SBL launch is scheduled for 2012.

COST: The total cost is estimated to be in the billions of dollars.

BENEFICIARIES: Lockheed Martin, Boeing, and TRW were awarded an initial contract of 125 million dollars in February 1999 to begin a space-based laser integrated flight experiment.
EVALUATION: A technology demonstration phase scheduled in autumn 2001 will culminate in a systems definition review. Each review and modification tends to increase the cost of the system.

*Tactical High Energy Laser (THEL)*

THEL is a ground-based laser incorporating command, control, communications, and intelligence systems, as well as a fire-control and target-acquisition radar, and a laser pointer/tracker. The laser can fire sixty shots without reloading, each shot costing 5000 dollars. THEL is to be used to defend Israel's northern border against the small Katyusha rockets fired by Hezbollah guerrillas from Lebanon. (Katyusha rockets are much cheaper, and the THEL system can readily be overwhelmed by more rockets). THEL is jointly funded by Israel and the U.S. and managed by the U.S. army, but it is not designed for American use.

COST: 201.8 million dollars has been spent on the program since 1996, with Israel's contribution at 67.5 million dollars.

BENEFICIARY: TRW Space and Electronics.

EVALUATION: Yiftah Shapir, from the Jaffee Center for Strategic Studies in Tel Aviv, said on May 26, 2000, that THEL is not cost-effective or practical. Each truck-mounted system can launch only forty of these 120-mm diameter rockets without reloading, but a Katyusha battery has six trucks that can ripple-fire 240 rockets. Major General Gaby Ashkenazi, commander of the Israel Defense Force's northern command, said, "It's like trying to protect the entire northern part of Israel from rain with a single umbrella."

**Battle Management/Command, Control, and Communications (BM/C3)**

This intricate computerized system will be the nerve center of all missile defense. It will receive information from myriad sensors and sources the U.S. has deployed on land, on sea, and in space around the world. The information will be instantaneously processed by a battle-management computer, designed to produce a detailed picture of the missile attack. Because missiles move so fast, there will be no time for human input; the computer will therefore be programmed to initiate its own antimissile attack (obviously the computer can never be tested under the realistic conditions of an attack).

The elements that must be in place for BM/C3 to function include rockets, radars, satellites, transmitters, and command centers as follows:

*Ground-Based Interceptor (GBI)*

The GBI is the NMD system which is ground-launched. It consists of a "booster stack" missile with an exoatmospheric kill vehicle (EKV) deployed atop this three-stage rocket. The GBI will travel at speeds of 25,000 miles per hour, firing the EKV into space to shatter the enemy missile by impact.

**BOOSTER STACK**

In July 1998, the department of defense selected a booster stack design deploying commercial off-the-shelf motor stages.

COST: Each booster stack is estimated to cost 5 million dollars.
BENEFICIARIES: Boeing is the main contractor; Alliant Tech Systems and United Technologies are subcontractors.

EVALUATION: The first test of a booster stack will not take place until August or September 2001 at the earliest. This means Clinton was pressured to make a decision to proceed with NMD before the rockets had been constructed, let alone tested.

EXOATMOSPHERIC KILL VEHICLE (EKV)

The following description of the EKV was provided by Raytheon, the prime contractor. The EKV "has its own [long wavelength infrared] seeker, [liquid bipropellant] propulsion, communications, guidance, and computers to support intercept targeting decisions and maneuvers." Cold gas thrusters are used to control the altitude (position) of the 55-inch long, 150-pound EKV and aim its seeker as it approaches the target at 4500 miles per hour.

The EKV will have six to eight minutes to home in on the target and destroy it with a combined impact velocity of 12,000 to 20,000 miles per hour, taking place at an altitude of 140 miles.

COST: A total of twenty-four integrated test flights are planned (six have already occurred). Each test costs about 100 million dollars, so the testing alone will cost about 2.6 billion dollars before actual deployment occurs.

BENEFICIARIES: Raytheon, and subcontractor Axsys Technologies.

EVALUATION: It was announced by the Clinton administration that two out of three flight tests of a prototype GBI-EKV must be successful before presidential approval would be given to develop NMD. The first qualifying test took place on October 2, 1999. The test was rigged to score a hit, as were some of its earlier predecessors. The hostile missile launched from Vandenberg Air Force Base in California carried a large balloon that traveled alongside the target bomb. Because there is no friction in space, the balloon traveled as fast as the bomb, but it was designed so that its infrared signal was constant and did not flicker like a normal signal from a tumbling bomb. Although the Pentagon claimed that the balloon was a decoy, it actually served as a marker buoy to lure the EKV close enough to site the target, because the EKV had failed to orient itself correctly with the stars and had drifted off course.32

Eventually it "saw" the balloon from the corner of its visual field, and, after homing in on the balloon, it was able to see the bomb's flickering signal and make a "kill." This strange sequence was described by Undersecretary of Defense Dr. Jacques Gansler:

> In this early test what we were trying to do was to pull it off and so used something that was even larger and much more obvious, and we figured that might pull the interceptor off to the target, and in fact, it did, in the flight. It found this decoy first because it was larger, did have more radiation, and it found it first, and it said, "Oh, there's the target," and started to go for it. ... And its software said "That's the wrong target," and then it shifted to the target that had the characteristics it was supposed to have had . . .33

As reported by the Washington Post, both the interceptor and the target missile used the NAVSTAR global positioning system (GPS) to maneuver onto a collision course. Obviously a "hostile" missile would not be so obliging as to broadcast its position and trajectory, to signal its position and to send up a marker balloon for its bomb.

The next test was conducted on January 19, 2000. The EKV failed to intercept the target bomb because of a leak of liquid nitrogen utilized to cryogenically cool its infrared sensors. As in
the previous test, a large balloon was also deployed, and the NAVSTAR GPS accurately positioned the missile and interceptor. Space-based sensors and the battle management/command, control, and communications system were also deployed and the field of view for the EKV was increased by 210 percent. Still it failed.

The last test before Clinton was to make his decision took place on July 8, 2000. It failed for three reasons: the balloon did not inflate, the interceptor missile veered off course, and the EKV did not separate from the surrogate booster rocket.

Apart from these problems, the tests in no way resemble the conditions that would exist in battle. Russian, North Korean, or Chinese missiles would fly from west to east, but the NMB test "offensive" missiles are launched from California, to be intercepted by "kill vehicles" launched from an atoll in the mid-Pacific. As of this writing, fourteen more test flights are scheduled, with all the artificial Band-Aids that the previous tests deployed. As one senior official was heard to say during a briefing, "I am trying to avoid defining, 'What means success?'" However, Secretary of Defense Cohen, after the last failed test, said, with what journalist Mary McGrory of the Washington Post called "striking sophistry" that "the test itself was a disappointment but it was one of those failures that was least expected. . . . That happens from time to time—that you have a failure of something that's fairly routine." 34

Ted Postol, a professor at MIT who was a scientific advisor to the chief of naval operations in the eighties and helped develop the Trident-2 missile, said that the Pentagon had rigged missile tests to ensure success. After a 1997 test of the antimissile revealed that it couldn't effectively distinguish decoys from warheads, the Pentagon stopped using decoys that would seriously challenge the defensive weapon. 35 Nina Schwartz, a senior physicist who worked at TRW in 1995 and 1996, charged that the TRW corporation had falsified work in an effort to portray a "kill vehicle" as more capable than it actually was. She said that TRW certified to the government that interceptors using its computer programs would succeed more than 95 percent of the time in the identification of enemy warheads, but in fact they could do so only 5 to 15 percent of the time. Dr. Schwartz said that at some level the Pentagon and its contractors were in collusion. "It's not a defense of the United States, it's a conspiracy to allow them to milk the government. They are creating for themselves a job for life." 36 Schwartz said that TRW fired her when she protested about alleged efforts to fudge test data to hide flaws in the system's ability to distinguish warheads from decoys.

Postol alleges that the Pentagon colluded with TRW to collate fraudulent test documents. (The FBI is investigating these charges of fraud.) 37 Postol also accused the Pentagon of significantly reducing the difficulty of the next sixteen tests planned. 38 Postol and David Wright conducted a study of the efficacy of NMD and found that the defense would not work because it can be overwhelmed with simpler, cheaper technology—decoys. 39 Three major scientific groups supported Postol in his stand. The American Physical Society with 42,000 physicists, the Federation of American Scientists and the Union of Concerned Scientists, and fifty Nobel laureates called the planned system "premature, wasteful, and dangerous."

Theater Missile Defense Ground-Based Radar (TMD-GBR)

This particular radar is a small, ground-based portable sensor that can be transported by plane. It can search, track, and discriminate for specific missiles. Designed to receive and instantaneously process data from all relevant sensors (satellites, other radars) it can form a detailed picture of the attack. A commander will then theoretically be equipped with the necessary data to direct the TMD weapons to intercept a hostile missile attack—if he has the time.

COST: An estimated 5.4 billion dollars.
BENEFICIARY: Raytheon is the primary contractor.

EVALUATION: No evaluation available.

_Ballistic Missile Early Warning System (BMEWS)_

This is one of two early-warning radar systems that feed into the ground-based radar system. The radar at Fylingdale in Yorkshire, England, has three faces and therefore operates over a 360-degree circle. (Other installations at Clear, Alaska, and Thule, Greenland, consist of two-faced phased-array radars that monitor 240 degrees of azimuth; each face monitors 120 degrees of azimuth—the arc of the heavens from horizon to zenith.)

COST: Not available.

BENEFICIARY: BMEWS radars are made by Raytheon.

EVALUATION: The Pentagon wishes to upgrade these facilities to become X-band radars, but neither Denmark nor Britain is willing to approve any new installations that do not comply with the ABM treaty. The U.S. is assessing alternative plans, including placing X-band radars on commercial ships in international waters.

_Perimeter Acquisition of Vehicle Entry Phased-Array Warning System (PAVE PAWS)_

**ANOTHER RADAR REQUIRED FOR BM/C3**

There are two of these two-faced phased-array radars in the United States, one at the Cape Cod Air Force Station in Massachusetts and one at Beale Air Force Base in California.

COST: Not available.

BENEFICIARY: Manufactured by Raytheon.

EVALUATION: PAVE PAWS has been in place for many years as an integral part of the early-warning system, but it is to be upgraded to a more sophisticated system for NMD.

_Space-Based Infrared System (SBIRS)_

Radar systems must be supported and complemented by infrared tracking satellites that detect heat and flames emanating from the tail ends of missiles. The current system of infrared satellites is called the defense support program (DSP) and consists of three satellites deployed in geosynchronous orbit—they move at the same speed as the earth's rotation, and continuously overlook one area of the earth, namely the Indian, Pacific, and Atlantic Oceans. There may be more DSP satellites, but the exact number is classified. Three upgraded replacement satellites of the DSP system are about to be launched, the last scheduled for 2003. Apart from DSP, the Pentagon is about to deploy another set of satellites specifically for Star Wars:

_High Orbit Space-Based Infrared System (SBIRS-High)_

Approved by the Pentagon since 1994, this system will consist of four satellites in geosynchronous orbit around the equator, plus another two satellites in highly elliptical polar orbits, providing effective coverage of the northern regions of the globe.
SBIRS-High will monitor the hot exhaust plumes of missile launches, and is due to replace the DSP system in 2004. This system will be better able to determine the exact launch and impact points of a missile, and its trajectory.

COST: 2 billion dollars for six geosynchronous-orbit satellites and infrared sensors that will ride piggyback on other satellites.

BENEFICIARIES: The main contractor is Lockheed Martin; there are six subcontractors.

EVALUATION: The comptroller's office has instructed the air force to delay the launches of the satellites 2 through 4 by one year so that money can go to other programs.

Low Orbit Space-Based Infrared System (SBIRS-Low)

Low orbit satellites will complement the high orbit satellites by tracking hostile missiles and hydrogen bombs through space (the midcourse phase) after their booster motors have died, thus providing better targeting and engagements for the kill-vehicles. SBIRS-Low will consist of between eighteen and thirty-two small satellites in low orbit—about 250 miles high. They will have the ability to look through clouds and darkness; some will use electronic cameras. Data is to be relayed from one low orbit satellite to another by laser beam, reaching the relevant command center with the speed of light. The information will be rapidly relayed to the ground-based radars. In turn, they will send the trajectory information about the missiles to the kill interceptors.

COST: The air force plans to spend a total of 11.8 billion dollars on SBIRS-Low.

BENEFICIARIES: Eleven contractors are already working on this project. The prime contractor is to be Spectrum Astro, with Northrop Grumman Corp. as its main partner.

EVALUATION: In February 2001 the GAO warned, "the air force's current SBIRS-Low acquisition schedule is at high risk of not delivering the system on time or at a cost with expected performance." It identified three problem areas:

1. The current acquisition schedule does not provide for flight-test results or crucial satellite functions and capabilities until five years after production has started.
2. Five of the six critical technologies have been judged immature for the current state of the program.
3. Alternative terrestrial systems to the SBIRS-Low have not been investigated.

Single Integrated Air Picture (SIAP)

SIAP will provide a sophisticated common battlefield picture for aircraft, cruise missile, and ballistic missile defense. It will be designed to integrate huge quantities of information from sensors and intelligence information from the three services, and the results will be instantly available to every commander.

The navy already has such a system, called cooperative engagement capability (CEC), in place. Computers combine all the fleet's radar, sensor, and targeting systems into a single picture displayed on computer screens in ships and aircraft that determine which ship or aircraft should track the targets and which should engage them. By 2007 the navy hopes to have CEC equipment on all cruisers and destroyers with Aegis radars. The army wants CEC for its Patriot PAC-3 batteries, and the air force will also develop their own form of CEC for its AWACS.
COST: Tens of billions of dollars.

BENEFICIARIES: Lockheed Martin and Raytheon.

NMD Infrastructure

Even a relatively simple missile defense system requires a massively complex interconnecting system of ground-based radars, sensors, detectors, satellites, command centers, computers, radio transmitters, and personnel. Let us now examine this infrastructure, remembering that it could be modified for a full-scale first-strike system.

Radar stations already exist in strategic locations around the world, as part of the U.S. early-warning system. These can also be used for the Star Wars systems. Coordinating their data collection with space-based infrared sensors on satellites, they will be able to detect launches of "hostile" missiles and to give an imprecise idea of the missile's location. Once the imprecise location is determined, newly constructed X-band radars, which would violate the ABM treaty, will take over and give the precise location and condition of the missile by tracking the target. The X-band radar will then provide the "kill assessment."

The construction of the first X-band radar is planned for Shemya Island, part of the Aleutian chain of islands in Alaska, the most western point of the United States—in direct line with any attack on the U.S. from North Korea, but also conveniently in direct line with Russia and China. Three other X-band radars are to be constructed in other strategic locations of the globe, including Fylingdale in Yorkshire England, and in Vardo, Norway. There are also rumors that America is planning a total of nine X-band radars in places such as Pine Gap, Australia, and possibly in Japan and South Korea.

A multiweek exercise called integrated ground test (IGT-6) was conducted in February 2001 at the Integrated System Test Capability-2 facility, a new site located at the Army Space and Missile Defense Command's Advanced Research Center in Huntsville, Alabama. This IGT-6 operation involved the test of the next NMD intercept. The previous three have failed.

Officials assessed the operability of the NMD integration efforts by deploying "nodal" computers representing each element of the complex system, using the most advanced software and processors. The exercises were conducted in "real time"—meaning no delay—and, according to Pentagonese language, were designed to validate "the functionality" of element-to-element interface and to mitigate the risk to NMD intercept tests. These ground tests are crucial to the NMD program because they will provide, as the military says, the vast majority of information needed for "milestone" decisions along the way to a fully integrated and operational Star Wars system. IGT-6 was used to test engagement scenarios involving limited attacks from three geographical regions: North Korea, the Middle East, Libya, and from accidental unauthorized launches from Russia and China.

The Ballistic Missile Defense Organization (BMDO) already has operational IGT nodes for the antiballistic missile's battle management/command, control, and communication system, for the ground-based X-band, the upgraded early-warning radar, the in-flight interceptor communications system, the defense support program satellites, the space-based infrared system satellites, and the ground-based interceptor. This infrastructure will all feed into a battle management computer.

OVERALL EVALUATION OF BATTLE MANAGEMENT/COMMAND, CONTROL, AND COMMUNICATIONS (BM/C3)

The crux of the Star Wars system—a battle-management computer designed to plan, coordinate, direct, and control the Star Wars weapons and its sensors—is essentially a computer system with millions or billions of lines of programming. No computer is perfect, even
the simplest desktop computers fail because of software problems. According to software experts, the increase in difficulty of writing software is not linear but exponential. Moving from ten to twenty lines is not twice but 100 times as difficult. The difficulties inherent in a program of millions upon millions of lines of computer code are impossible to imagine. A bug in a desktop computer is a nuisance, but in a missile-defense computer it could mean nuclear winter.41

Under conditions of attack, there will be virtually no human input, except perhaps a split-second decision by a military operator. Certainly there will be no time for civilian or political input. John Pike, a space and military policy analyst, formerly of the Federation of American Scientists, says that by the time the missile-defense system is operational, the computer software that assesses the attack and analyzes response options “will be the culmination of many thousands of work-years of modeling and calculation and simulation and refinement and testing. The software is going to be in an infinitely better position to make a considered judgment about what should be done than the few human beings sitting in the room. There will be too much stuff going on too fast for any human operators to figure it all out. There just won’t be any time for mere human meddling.”42

In other words, the decision to go to war or to annihilation will be removed from the president in the oval office and given instead to a computer manned by a military officer sequestered in an underground command post. Computerized or fully automated war would definitely be necessary in a boost-phase counterattack, favored by George W. Bush, where there would be only a few tens of seconds to detect a launch and another few seconds to fire. Unfortunately, the battle-management computer can never be tested under operating conditions; the first actual test will occur when the U.S. is under attack.

Here is one scenario: North Korea fires a missile containing five chemical warheads. In response, the U.S. launches a dozen interceptor missiles, which appear on China’s primitive early-warning radar screen. Believing it is under attack, China launches its nuclear missiles at the U.S. before they can be destroyed in their silos from a U.S. first strike. America, detecting this unexpected Chinese attack, immediately launches its hair-trigger missiles, initiating a full-scale nuclear war.43

Another scenario, postulated by former missileer Bruce Blair: "What if a country is just going to test a missile? Are we going to knock it out just because it has the range to reach our country? It could be a peaceful launch."

The Innate Chaos of Complex Computer Systems

Other insuperable problems plague the Star Wars systems. The most fundamental is an inherent aspect of rocket science. Called the "brittle" problem by students of complexity theory, it is simply this: Should one tiny part of a hugely complex interconnected system fail, the whole thing fails. Compounding the brittle factor is the "flub" factor. The more complex a system, the more likely it is that something unanticipated will fail.

With thirty minutes or less from the time a missile is launched until it reaches its target, there is no time to fix anything. As Gottfried J. Mayer, adjunct professor of kinesiology at Pennsylvania State University, memorably noted some years ago, "the booster fails to separate from the payload—and New York is history," a particularly chilling speculation in light of the September 11 attacks.

Is NMD Just a Front for First-Strike Winnable Nuclear War?

In 1977 and 1980 Jimmy Carter’s Presidential Directives 18 and 59 clearly described the four components of first-strike capability:

1. Antisatellite (ASAT): Weapons to" knock out the Soviet early-warning system
2. **Decapitation:** Destruction of the Soviet leadership with extremely accurate Pershing 11 missiles before they pressed their button

3. **Counterforce:** Destruction of most Soviet missiles in hardened silos, submarines, mobile launchers, and the strategic bomber fleet by MX and D5 missiles

4. **Strategic Defense Initiative (SDI):** A ballistic missile defense system to mop up any Soviet missiles that survived counterforce and had been launched

No presidents have signed any significant treaties agreeing to back away from a stance that was adopted at the height of the cold war, and I would submit that first-strike winnable nuclear war is the real (secret?) agenda of Star Wars revitalization.

**Does NMD Violate International Treaties?**

Almost all the plans for NMD and most involving TMD will violate the ABM treaty, the cornerstone of all other nuclear arms control treaties. The ABM treaty, for example, directs that America and the former Soviet Union—now specifically Russia—can operate only one regional interceptor defense system each. (The current systems are in North Dakota and Moscow, respectively, making the new Alaska-based system a clear violation.)

The treaty would also be violated by upgrading the present U.S. radar systems, by implementing a defense system covering all fifty states instead of the agreed-upon forty-eight, by installing a new satellite network, or by shifting the interceptor system to a new location—all of which are currently proposed as a part of George W. Bush's national missile-defense plan.

The ABM treaty states that because no country can protect itself against a nuclear attack, each side must therefore live in fear of mutually assured destruction. Logically, under these circumstances, no country would be foolish enough to launch a nuclear war. Thus, the ABM treaty has always been intended as a brake on unrestrained nuclear arms buildup, and has proven effective since its signing in 1972. Its violation by either party would be an unconscionable and extraordinarily destabilizing act in a world bristling with nuclear weapons.

Yet the U.S. openly plans to violate the ABM treaty. In justifying his plans, George W. Bush told an audience in Iowa in 1999, "When I was coming up, it was a dangerous world, and you knew exactly who they were. ... It was us versus them, and it was clear who them was. Today, we are not so sure who they are, but we know they're there." 46

Violation of the ABM would in turn jeopardize other international treaties. Currently, for example, the Russian Duma has ratified a new nuclear arms treaty, START II, calling for the bilateral reduction of strategic nuclear weapons to 3500. Should the ABM be violated, Russia has indicated that it may well cancel plans to reduce its nuclear arsenal and refuse to consider additional reductions under START III. Surprisingly, START II actually allows the U.S. to maintain 3500 deployed strategic weapons, as well as 950 operational tactical nuclear weapons, 2500 "hedge" strategic weapons, and 2500 in the "inactive reserve." 47 Furthermore, the START II treaty does not actively call for the elimination of the hydrogen bombs, only for destruction of the launch platforms, so that in the future the bombs could be hauled out of storage and redeployed.

START III, however, if agreed upon, would reduce Russia's and America's strategic arsenals to fewer than 2500 nuclear bombs each, and would, for the first time, include requirements for the actual destruction of nuclear bombs, with the plutonium and uranium disposed of in such a way that they will never be available for the future construction of nuclear weapons. (It is relatively easy to monitor these procedures technically, given the goodwill that currently exists between the countries concerned, but this may not continue to be the case under the Bush administration.) 48

Furthermore, President Putin, wishing to discourage America's NMD developments and wanting to move rapidly toward nuclear disarmament, recently offered unilaterally to reduce
Russia's nuclear arsenal to between 1500 and 1000 weapons, or even less—at least 1000 to 1500 fewer than the number demanded by START III. This offer comes with the proviso that America not proceed with national missile defense, abide by the ABM treaty, and that the Senate ratify the Comprehensive Test Ban Treaty.

However, at the Crawford ranch meeting in Texas between President George Bush and President Vladimir Putin during the second week of November 2001, Bush proposed a unilateral reduction of U.S. strategic weapons to between 2200 and 1700 to take place over a period of ten years, from the current level of more than 6000. This would obviate the START II treaty ban on Russian land-based missiles with multiple nuclear warheads, and would leave most of the U.S. deterrent on submarines invulnerable to surprise attacks. Putin left the meeting without a response, although he is expected to reciprocate in kind. The Rush move is intended to "soften up" the Russians for the U.S. intended violation of the ABM treaty.49, 50

But the U.S.'s attachment to NMD is so bizarre that the state department actively encouraged Russia to maintain "large, diversified, viable arsenals of strategic offensive weapons capable of delivering an annihilating counterattack," as long as Russia allows the U.S. to violate the ABM treaty and to proceed with national missile defense.51, 52

China, with its twenty intercontinental nuclear weapons, has already confirmed that it might well speed up deployment of a new generation of weapons systems if America goes ahead with NMD. Indeed, China will be encouraged to do so. In a speech in early November 2000, foreign minister spokesman Zhu Bangzuo said:

The United States is a country with the largest and most sophisticated arsenals of both nuclear and conventional weapons in the world and now it is engaging itself to develop NMD and TMD (theater missile defense). Such an act is contrary to the trend of the times because it is not conducive to the international efforts of disarmament and arms control. It will also exert a lasting negative impact on world peace. The Chinese side expresses serious concern, and in particular if the U.S. is to develop TMD and to include Taiwan, this is something that will be by no means accepted by the Chinese side.53

(Ironically, the small NMD system for "rogue" states that Clinton advocated would actually be an adequate "defense" against China's twenty nuclear-armed intercontinental missiles that could reach the U.S.—as opposed to the multilayered missile defense planned by George W. Bush.)

Likewise, European allies are increasingly worried that violation of the ABM will initiate a new nuclear arms race and separate European security from that of the U.S. French President Jacques Chirac said in the New York Times on December 17, 1999, "If you look at world history, ever since men began waging war, you will see that there's a permanent race between sword and shield. The sword always wins. The more improvements that are made to the shield, the more improvements are made to the sword." 54

WHAT THE WORLD THINKS OF NMD

Star Wars is designed to protect only the United States, but obviously should other countries be persuaded to host Star Wars facilities, they are not necessarily protected but become targets of a nuclear attack.

Citizens of certain countries due to participate in Star Wars are not happy about the prospect. England, for instance, has been deeply involved in the U.S. early-warning system for many years, hosting two American bases at Menwith Hill and at Fylingdale. And the level of British participation is increasing. Over the past year, almost 500 British military-scientific representatives visited the U.S. under the auspices of a 1958 mutual defense agreement, a twofold increase in visits from 1995. And the U.S. military establishment visited the British
scientific military facility at AWE Aldermaston no times during the same period. Two Aldermaston staff were seconded to Los Alamos and one to Lawrence Livermore "to assist with the technical development of facilities of mutual interest." Washington plans to upgrade the U.S. base at Menwith Hill in North Yorkshire, giving it a crucial role in America's plans for a space-based infrared missile-launch-detection system. Tony Blair has already granted approval for Fylingdale Moor to be upgraded, but the Parliament has not concurred. The U.S. also plans to construct a fifteen-story—sized radar building at some unknown location in the U.K.

But strong opposition is mounting in England as U.S. plans expand. Aware that Bush is in favor of the full Star Wars system, a committee of twelve members of Parliament concluded after deliberation: "The government should articulate the very strong concerns that have been expressed about NMD within the U.K. We are not convinced that the U.S. plan to deploy NMD represents an appropriate response to the proliferation problems faced by the international community. We recommend that the government encourages the U.S. to seek other ways of reducing the threats it perceives."

And Hugo Young, writing in the Guardian, says NMD is "born of an arrogance that Russia could not be expected to watch in silence, nor China, with its relatively small missile armory, to countenance without increasing its own nuclear force," adding that "for Europe, the project is all downside risk," because Iran and Iraq are closer to Europe than to North America.

Similar opposition exists in Denmark about the upgrading of early-warning radars in Thule, Greenland, a Danish province. Strategically significant early-warning radars that require upgrading to X-band status include the facilities in Thule, Greenland; Grand Forks, North Dakota; and Clear, Alaska. According to Ted Postol, these upgrades are exactly what the U.S. will need for a national missile defense program aimed specifically at Russia and China.

Thus, incredibly, the U.S. seems to have allowed the perceived threat by North Korea, Iran, and Iraq to justify a system actually aimed at China and Russia.

The most obvious clue about these intentions is the current deployment of the world's most sophisticated advanced tracking and imaging intelligence-gathering radar on the northern tip of Norway, forty miles from the Russian border. This new X-band radar, along with the one to be deployed at Eareckson Air Station at Shemya Island, 1500 miles southwest of Anchorage, will be used to collect data on Russia's long-range missiles tests, rendering Norway a prime Russian target.

Called Vardo, code-named HAVE STARE, this U.S.-owned, Norwegian-based radar could well present a formal violation of the ABM treaty. With a potential resolution of about 10 to 15 centimeters, it will provide extremely detailed images of Russian warheads and their missiles. (To date, the most sophisticated radars have resolutions of at best 5 to 10 meters.) The two radars in Norway and Shemya will be capable of monitoring the entire trajectory of Russian missile tests, including their powered flight, the "bus" maneuvers, deployment, and separation of warheads and decoys. Precise data will be collected on every phase of the missile and its bombs from launch to splashdown. The radars will be linked directly to the nerve center of the proposed NMD, buried deep inside Cheyenne Mountain in Colorado. This data will be entered into the NMD database, increasing enormously the discrimination capabilities of the NMD system against Russian intercontinental ballistic missiles.

As Ted Postol says, "If the purpose of a national missile defense system is to protect the United States from North Korean missiles, why is the world's most advanced tracking and imaging radar about to go online at the northern tip of Norway instead of northern Japan?" According to Postol, Russia and China will be constantly concerned "that the U.S. will eventually expand and modify their missile defense with nuclear armed interceptors instead of the pitiful hit-to-kill interceptors now planned for the system." Postol points out that the U.S. should at least be honest about its intentions. Both Russia and China are under no illusions about the U.S. agenda, he argues, but America is lying to the rest of the world—including its own population—using North Korea as a camouflage to disguise its true intentions.
As noted, Shemya Island is to receive the next X-band radar. Part of the Aleutian Islands chain, Shemya is a remote, windswept place. The closest inhabited point is an Eskimo village 100 miles away. Shemya is therefore not the most convenient place for this facility. Because of its isolation, it is also an easy target for destruction, either from a missile or a small artillery piece mounted on a fishing trawler.

The U.S. claims that this particular site has been chosen because it is in line with a missile attack from North Korea. But there is a political reason that Shemya was chosen as a site. Senator Ted Stevens, the powerful ex-head of the Senate appropriations committee, is from Alaska. And because Clinton needed his support, an attempt had to be made to protect Alaska from Russian attack, even though this radar was precluded under the ABM treaty.

The Rumsfeld report stated that "a number of countries with regional ambitions do not welcome the U.S. role as a stabilizing power in their regions and have not accepted it passively. Because of their ambitions they want to place restraints on the U.S. ability to project power or influence into their regions."

But perhaps the U.S. should begin by questioning its right to project its power into other regions of the world: 6.5 billion people inhabit this planet, not just 280 million Americans. Given the reality of past and present U.S. interference in the politics of numerous foreign states, the U.S. missile shield signals to the world that American maintains a significantly hostile intent. A working nuclear shield above the United States would be the equivalent of giving a sniper a bulletproof bodysuit. Would he be more or less likely to shoot others if he himself were immune?
Chapter Nine

The Lockheed Martin Presidency and the Star Wars Administration

We enter the twenty-first century locked in a mortal arms race with ourselves. Though the needs for more advanced weaponry are at best unclear, we proceed on the premise that “if we build it, they will come.”

—M. W. Gruzy

It’s not right to have all those people in one building without a single watchdog. We’re all in trouble . . . when the generals get that much power.

—Harry Truman on the Pentagon

GEORGE W. BUSH ASCENDED to the presidency propelled by a Republican-dominated Supreme Court. His cabinet is composed mostly of corporate executives. Among them are Dick Cheney, former CEO of Halliburton Oil; Andrew Card, chief of staff—General Motors vice president; Paul O’Neill, treasury secretary—chair of Alcoa; Don Evans, secretary of commerce—former CEO of Tom Brown Inc. Oil Company; Donald Rumsfeld, secretary of defense—former CEO of G. W. Searle and General Instrument; Condoleezza Rice, national security advisor—Chevron board of directors.

Forty million dollars, the largest amount ever donated, paid for the festivities at the inauguration, including 100,000 dollars each by 168 corporations and individuals. More than forty-five corporations wrote five-digit checks for events that honored Texans. A news release said this will be "the only inaugural ball where guests can have their picture made with a 2500-pound Brahmin bull or sitting in the cockpit of a fighter jet."


Barrens Online wrote:

The capital is filling up with pin-striped, Chamber of Commerce types, attracted by what promises to be the most pro-business, anti-regulatory administration since Ronald Reagan reigned. Bush has packed CEOs and industrial lobbyists on transition teams that are advising his new Cabinet secretaries and agency heads on pressing policy issues and new hires. The advisory team for nominee Gale Norton’s Department of Interior is jammed with representatives of energy, mining and paper companies.

As Steve Weiss from the Center for Responsive Politics observed, “The general public, which cannot give these large contributions, does not get access to the next president or his advisors. Money buys you access to the president and those who are shaping the policies.”

The world’s most powerful corporation, one that literally controls the fate of the earth, is Lockheed Martin. As we have seen, this company, together with its smaller military corporate colleagues, is involved in the production of almost every single weapon and Star Wars system that we have examined. They are up to their necks in corporate donations to both presidential candidates, and congressional and senate candidates on both sides of politics. (Weapons-industry political action committees favored the Republicans to Democrats by a 2 to 1 margin in contributions. Since 1997, the four top missile contractors spent 4 million dollars in PAC
contributions and 3 million dollars in soft-money contributions. They also spent 18 million dollars in lobbying—which is tax deductible.\(^5\)

Lockheed Martin was the top defense contractor for the year 2000, receiving 15.1 billion dollars of taxpayer funds. Boeing was next with 12 billion dollars, followed by Raytheon at 6.3 billion dollars.\(^6\) As we know, Lockheed Martin employees sit on the boards of right-wing think tanks such as the Heritage Foundation and the Center for Policy Studies. But now that their man is enshrined in the White House, they are in the position to control domestic and international policies directly. These corporations are determined to build a multilayered Star Wars system, and to build every weapon they can conceive, whether America needs it or not.

If Bush proceeds with the full throttle, all systems green-and-go Star Wars, instead of the modest, modified Go-billion-dollar Clinton system, it could cost the nation 240 billion dollars over the years of construction. And while many of the expenditures would technically come under the rubric of "defense," as Bush noted in a speech in September 1999 before the Citadel military college in Charleston, South Carolina, when discussing "the need to bolster our unrivalled power," "I know the best defense can be a strong and swift offense," effectively offering a rubric for development of any weapon whatsoever.\(^7\) We are heading rapidly toward a state of global disaster. A belligerent and ill-informed president sits in the White House (despite his perceived change of status since September 11, 2001), controlled by his corporate staff intent on extracting as much American tax money as they possibly can to build ever more exotic and dangerous weapons. Bush administration appointees are among the most hawkish and extreme in recent memory, and an alarming number of Bush’s staff people have direct ties to Lockheed Martin.

The quartet of Vice President Cheney, Defense Secretary Rumsfeld, Secretary of State Colin Powell, and National Security Advisor Condoleezza Rice are now the most powerful people in the world. Believing as they do that America is the heart of the universe, that U.S. militarism must be used to protect American global business interests, that Russia is not to be trusted, and that China may need provoking into a new cold war arms race, they have embarked America upon a dangerous four-year journey.

Vice President Cheney, "a defacto leader of a somewhat ceremonial president," to quote the Guardian journalist Martin Kettle,\(^8\) now occupies a position of great influence, orchestrating as he does the appointment of cabinet members, and directing the activities of the new president. As noted earlier, the vice president's wife, Lynn Cheney, is a former board member of Lockheed Martin.

Donald Rumsfeld, a former Republican congressman, former NATO ambassador, and former secretary of defense, maintains intimate ties to missile-defense advocates and anti—arms control proponents, and he is closely associated with Frank Gaffney's Center for Security Policy, the de-facto nerve center of the Star Wars lobby, as noted in Chapter Four. Rumsfeld also serves on the board of Empower America, which ran pro—Star Wars radio ads against an incumbent Nevada Democrat during the 1998 congressional elections.

His contrived Rumsfeld report of 1998 warned that America would be threatened by North Korean missiles within the next five years, although CIA estimates had placed that projected time frame at ten to fifteen years (this assuming that peacekeeping efforts to unite the Koreas and bring North Korea into the community of nations have failed),\(^9\) and although, as U.S. intelligence analyst Robert Walpole said in testimony before Congress, the least likely way a foreign nation would deliver a nuclear weapon of mass destruction is a ballistic missile because it has a "return address." (On September 11, 2001, U.S. civilian planes were used as effective ballistic missiles.)
Shortly before his appointment as secretary of defense, Rumsfeld headed another Pentagon commission, that unveiled a report in January 2001 warning that America could face a "space Pearl Harbor." It advocated tighter security for American space systems and called for the appointment of an undersecretary of defense for space, intelligence, and information. It also called for increased military spending, estimating the cost to replace obsolete military satellites in the next decade at 50 billion dollars. Belligerent in tone, it said that the president should "have an option to deploy weapons in space to deter threats to, and, if necessary, defend against attacks on U.S. interests." 

At his Senate confirmation hearings Rumsfeld referred to the Antiballistic Missile treaty, the cornerstone of nuclear arms control, as "ancient history." He also questioned whether the U.S. could maintain its nuclear arsenal without nuclear testing. This testimony was supported by Senator Jesse Helms, head of the Senate foreign relations committee, when he said "The United States is no longer bound by the ABM treaty—that treaty expired when our treaty partner the Soviet Union ceased to exist." Helms went on to say "Personally, I do not think that a new kind of ABM treaty can be negotiated with Russia that would permit the kind of defenses that America needs and must have."

Rumsfeld is a forceful player who generally has his way against the most powerful opponents. As Gerald Ford's secretary of defense, he outmaneuvered Secretary of State Kissinger when Kissinger was in Moscow in a last-minute attempt to coax a SALT II arms-control agreement from the Soviets. Behind Kissinger's back, Rumsfeld convened a meeting of the national security council backed by the Joint Chiefs of Staff. After two hours of discussion, the Pentagon withdrew its support for SALT II. Rumsfeld was traveling and did not even attend the meeting. Ford was furious and SALT II became obsolete for that presidency. Kissinger calls him the most ruthless man he has ever known.

Rumsfeld's former colleagues describe him variously as a highly organized, highly political personality, and a master bureaucrat. His outreach and influence is pervasive. Since 1992, he has been a member of the board of directors of the Tribune Company which, it boasts in its publicity statements, with "television, radio, newspapers and the internet, reaches nearly 80 percent of American households every day."

Colin Powell, the new secretary of state, is an interesting enigma. Basically a company man, he worked his way up through the ranks of the bureaucracy, eventually becoming the first African American to be appointed chairman of the Joint Chiefs of Staff and subsequently the first African American secretary of state. However, he failed to protest the overt discrimination against blacks in Florida's vote-rigging, which gave Bush the presidency.

As an advisor in Vietnam during 1962 and 1963, unlike some others, he did not protest the destruction of villages and the killing of civilians. He had an early role in the investigation of the My Lai massacre, which he effectively covered up until it was exposed by other, more courageous men. He was involved in the Iran-Contra scandal while working with Defense Secretary Casper Weinberger.

Although a cautious person at heart, he was deeply involved in— and indeed responsible for—several military operations that flouted the international rule of law. In 1989, as chairman of the Joint Chiefs of Staff, he oversaw the invasion of Panama when an estimated 300 civilians were killed and buried by the U.S. military in secret graves. Three thousand more were seriously injured. America instigated this operation to capture Manuel Noriega, a man put into office by the CIA but who had ceased to please the American elite.
In his book, *Just Cause*, Powell enunciated his doctrine: "Use all the force necessary and do not apologize for going in big if that's what it takes." Powell believes that American military force should only be used in overwhelming strength to achieve well-defined strategic interests, meaning that peacekeeping operations are not acceptable.

He became a hero of Desert Storm when he warned the Iraqi army that "first we are going to cut it off, and then we are going to kill it." Did he know that uranium weapons were used in that operation? If so, did he understand the medical implications of that operation, so clearly described in the military literature? If he did, he violated the fundamental principles of war. Innocent civilians are now threatened for the rest of time with malignancies and a damaged gene pool.

Powell describes Russia and China as countries that the U.S. would attempt to work with "not as potential enemies or adversaries, but not yet as strategic partners." By buying into this philosophy, he leaves the door open for more radical members of the administration to have their way.

During his confirmation hearings, Powell said that the Bush administration would move full-speed ahead with a nationwide missile defense, arguing that it was essential to build a "complete strategic framework" including defensive as well as offensive weapons. Taking the Rumsfeld line on the ABM treaty, he said "The framework that treaty was designed for was a framework that really isn't relevant now. We are moving forward with the capacity to develop a missile defense system, and the only way we can eventually move forward is to see the ABM treaty modified or eliminated or changed in some rather fundamental way."

When Senators Joseph Biden and Lincoln Chafee said that the allies were skeptical about the NMD project, he brushed aside their concerns. "When people see something new come along they are terrified, but if it is the right thing to do, you do it anyway. ... In the end of the day, it will benefit the world," he said. Powell, however, says that if it was necessary to walk out of the ABM treaty, he would consult with the Russians and the allies. And in 1998 he joined the other Joint Chiefs of Staff by supporting ratification of the CTBT.

Condoleezza Rice is at heart a right-wing ideologue who is dismissive of other countries. While having no direct Lockheed Martin connections, she fits in well with the White House ideology. She said that the trouble with Israel is that it is "so small," and that "Cuba is the road kill of history." Strongly opposing the Comprehensive Test Ban Treaty, she wrote in *Foreign Affairs*:

> Since 1992, the United States has refrained unilaterally from testing nuclear weapons. It is an example to the rest of the world, yet does not tie its own hands "in perpetuity" if testing becomes necessary again. But in pursuit of a "norm" against the acquisition of nuclear weapons, the United States signed a treaty that was not verifiable, did not deal with the threat of the development of nuclear weapons by rogue states, and threatened the reliability of the nuclear stockpile. Legitimate congressional concerns about the substance of the treaty were ignored during negotiations.

Other appointees mirror the corporate presidency:

As noted, Bruce Jackson, vice president of corporate strategy and development of Lockheed Martin, volunteered to be the overall chairman of the Bush foreign policy platform committee at the Republican convention, and it was he who wrote the Republican party's foreign policy platform.
Stephen J. Hadley, a partner in the Washington-based law firm Shea & Gardner, which represents Lockheed Martin, has been appointed deputy director of the National Security Council, working in the White House as Condoleezza Rice's chief deputy. An enthusiastic advocate of Star Wars, he is secretary of the committee to expand NATO and was also a member of the National Security Council staff of President Bush the first. Hadley also belongs to an eight-member foreign policy team formed during the Bush campaign, nicknamed the "Vulcans" after a statue representing the Roman god of fire and metalwork, commemorating the steel-making history in Birmingham, Alabama, Condoleezza Rice's hometown. Composed mostly of hawks, the group includes Rice and Hadley, and also Richard Armitage, Reagan's former assistant secretary of defense; Robert Black-will, a member of Bush the first's National Security Council; Dov Zakheim, Reagan's former undersecretary of defense; Robert Zoellick, former undersecretary of defense for Bush; and Richard Perle, a man nicknamed "the prince of darkness" by his Pentagon colleagues during the Reagan administration when he was undersecretary of defense.25, 26

Another who is directing the Bush presidency toward a new cold war stance is Paul Wolfowitz, who headed the Paul Nitze Center for International Studies. Wolfowitz epitomizes the neoconservative wing of the Republican party cold war warriors. They still hate Russia, but were looking to China to fill the role of a new American threat on a global scale until terrorist activity recently took center stage.

Wolfowitz can take credit for the recent expansion of NATO; he authored a secret memorandum for the Pentagon, which leaked to the New York Times in 1992, warning that Yeltsin's Russia posed a grave potential threat to U.S. interests, and he advocated an all-out U.S.-led NATO war against Russia if it threatened the security of the newly independent Baltic republics. Although Russia did no such thing, Wolfowitz was installed as a neoconservative hero, and Clinton, ever compliant, expanded NATO into Czechoslovakia, Poland, and Hungary, much to Russia's discomfort and rage. (Now that the cold war is over, NATO has no tangible use, yet it continues to exist and is getting bigger. If Russia had been invited to become part of the NATO alliance, the act would have defused any cold war tensions that remained in Europe.) Wolfowitz and his acolytes believe that America must maintain its position as global superpower; no regional powers, such as China or Russia, must be allowed to develop, and American values and self-interests must reign supreme.

Richard Perle, who said on March 15, 1983, the fact that "nuclear winter that would wipe out all life on earth ... is all the more reason to continue President Reagan's weapons buildup," is a friend of Wolfowitz. Perle is a hard-line ally of Israel, believing that there is no difference between the interests of the two countries. In 1996 he was simultaneously adviser to Dole's presidential bid and to Netanyahu's election campaign in Israel. During the Reagan days he often accused Secretary of State George Shultz of being too soft on Cuba, the Chinese, North Koreans, the Soviets, and Arabs.

Robert Zoellick, an ally of Wolfowitz and Perle, was White House deputy chief of staff to Bush the first. He supports NATO enlargement, uncritically supports Israel, and he regards Russia as an inherent adversary, not to be trusted or treated as a friend.27

John Bolton, undersecretary of state for arms control, nonproliferation, and international security is described by Senator Jesse Helms as "one of the best and wisest" nominations that Bush has made for a "senior foreign policy position." "Bolton is the kind of man with whom I
would want to stand at Armageddon, for what the Bible describes as the final battle between
good and evil in this world," Helms said at an American Enterprise Institute event. At Bolton's
Senate confirmation hearing Helms said "John, I want you to take that ABM treaty and dump it
in the same place we dumped our ABM cosigner, the Soviet Union—on the ash heap of history."

Bolton believes that the CTBT is dead, that Taiwan should have official diplomatic
recognition separate from China, that the U.S. should stop paying dues to the United Nations,
and that the U.S. should be indifferent to whether it ever has "normal" diplomatic relations with
North Korea. With Bolton in control, not only will the ABM and CTB treaties be imperiled, but so
will all the other arms control treaties, each of which took years to negotiate.38

Although he is currently enjoying record-breaking approval ratings in America, among the
other 95 percent of the world's population there is a global fear of George W Bush and his
appointees:

To describe Star Wars as criminally insane is to slander reputable psychopaths. It is
inspired by the delusion that America can achieve absolute dominance, that she can fight
without taking casualties, forget about deterrence and detonate nuclear weapons secure
in the knowledge that her defensive missiles will shoot down any warheads launched in
retaliation.

—Nick Cohen, London Observer29

The richer, stronger and more globally accountable America becomes, the more self-
centered its politics grows. The end of the cold war should have brought great
psychological dividends. Generous in global victory, free of paranoia and with wealth
beyond imagining, here at last was its chance to become what it has always believed
itself to be—the brave, the beautiful, the free and so on. ... The high-flown rhetoric of the
conventions is echoed in every high school valedictory speech, in every rotary and
church, pledging allegiance to a constitution that has lost any vision of society beyond the
pursuit of happiness. God's chosen people, uniquely blessed, nurture a self-image almost
as deranged in its profound self-delusion as the old Soviet Union. The most advanced,
knowledgeable, educated, psychoanalyzed, theraped nation on earth knows nothing of
itself, irony-free and blind to the world around it.

—Polly Toynbee, The Guardian30

Mikhail Gorbachev, the Soviet president who, more than any person on earth, helped to
bring the cold war to an end, wrote a letter to President Bush just after the Supreme Court made
him president. He wrote:

I hope, Mr. Bush, as the new American president, that you will give up any illusion
that the twenty-first century can, or even should be the "American Century." Globalization
is a given—but "American globalization" would be a mistake. ... For ten years, U.S.
foreign policy has been formulated as if it were the policy of a victor in war, the cold war.
But at the highest reaches of U.S. policy making no one has grasped the fact that this
could not be the basis for formulating post-cold war policy—from the standpoint of the old
world, the post—cold war period ushered in hopes that are now fading. Over the past
decade, the United States continued to operate along an ideological track identical to the
one followed during the cold war ... the expansion of NATO eastward, the handling of
the Yugoslav crisis, the theory and practice of U.S. rearmament, including the utterly
extravagant national missile defense system, which is based on the bizarre notion of
"rogue states." ... Isn't it amazing that disarmament moved further during the last phase
of the cold war than during the period after its end?31
Russia is frightened of Star Wars. Because of the poor state of its weapons, Russia relies on a launch-on-warning policy. All 111 of Russia's operating satellites are on the brink of collapse, more than 70 percent are past their initial service lives, and 70 percent of them have military functions. The deteriorating condition of the satellites and early-warning radars increases the possibility of false signals, and these conditions are compounded by the erosion of the Russian command and control system, possibly allowing a "rogue" commander to take control. We cannot assume that Russia has its weapons under strict control. The Bush people should realize that it is extremely unwise to threaten a wounded or inadequate nation, for they may respond in an unpredictable fashion.

In November 2000 Putin proposed a massive cut in the level of strategic weapons to 1000 or less, saying "there should be no pause in nuclear disarmament." He said a 1500 level could be reached by 2008, but only on the condition that the U.S. does not proceed with missile defense. Russia cannot afford its annual spending of 5.1 billion dollars on defense (compared with the U.S. expenditure of 310 billion dollars). To this end, Putin also approved a military reform program to cut his three million military personnel by 600,000.

Because both sides recognized the inherent danger in the ongoing launch-on-warning posture, on December 16, 2000, Secretary of State Madeleine Albright and Russian Foreign Minister Igor Ivanov signed an agreement to strengthen cooperation on preventing accidental missile launches on both sides by expanding an early-warning center where both sides can exchange information. However, the agreement—which still stands—will not cover missiles launched in combat, and either government can withhold advance information of certain space flights for national security reasons.

Still, as a direct result of the U.S. election, Russia has changed its posture. Putin warned that the deployment of a national missile defense shield and NATO's continued expansion into Eastern Europe could "irreparably damage" global stability and the architecture of international relations.

Thus, in January 2001, just after Bush was inaugurated, the Kremlin shelved its plans for radical cuts in its military structures. Soon thereafter Russia announced that it would double its defense spending over the next ten years if Washington decided to go ahead with its missile defense shield.

During the same week, however, Putin wrote a letter to President Bush proposing broader Russian-American cooperation, and setting out the major issues on which he believes the two countries can cooperate. "When Russia and the U.S. act jointly or on parallel tracks, decisions meeting the interests of peace and international stability may be reached," he said, and affirmed that Russia wants warm relations with the United States. But Bush signaled that he will pay even less attention to Russian foreign policy concerns than did Clinton, who ignored Russia's protests about the expansion of NATO and the war against Yugoslavia. However, at the November 2001 Crawford Ranch meeting in Texas between Bush and Putin, there was a post-September 11 magnanimity that pervaded the presidents' relationship, with Bush offering to reduce the U.S. strategic nuclear weapons arsenal down to between 1700 and 2200 within the next ten years. Putin did not give an immediate response.

Moscow analysts see Cheney, Rumsfeld, Powell, and Rice as hawks from a bygone era. "These are people who see themselves as victors of the cold war," according to Alexander Golts, a military commentator for the news magazine Itogi. "The Kremlin and the generals are flattered by that, because it reminds them of the days of the USSR when they were a great power. But the new American administration is making a very strong and negative impact on our military." Concerned about the missile shield, China and Russia hastily convened a meeting on January 13, 2001, at which they worked on a treaty to proclaim their friendship, while privately reassuring the U.S. that they still seek closer ties with them. Jonathon Pollack, chairman of the strategic research department at the Naval War College, says the treaty is a significant move in
Sino-Russian ties and as such reflects Reijing's and Moscow's deep concerns about Bush and his people. James Mulvenon, a security expert at the Rand Corporation, echoed these sentiments: "The United States, through incompetence and ham-handed policy making, has effectively driven China and Russia together. . . . NMD is a perfect example. By not having a coordinated policy vis-a-vis the Europeans and the Russians, we let the Chinese play them off against us. There is an enormous resonance in both countries for blaming problems on American hegemony, and we have done nothing to drive a wedge between them."40, 41

The pact will almost certainly add fuel to the Wolfowitz clan stance. It will now be easy to convince the American people that China and Russia threaten the very existence of America with their newfound friendship and their combined nuclear arsenals. This dynamic will then reinforce exactly what the neoconservatives have been saying, and Star Wars will be legitimized.

CHINA AND THE BUSH ADMINISTRATION

What is China's response to Bush and Star Wars, apart from the Sino-Russian treaty, which at this stage is vague in its specific objectives?

China's view of America has taken a radical turn since 1998, when in its second white paper on national defense, it mentioned the United States ten times, each in a positive fashion. In September 2000, its third white paper mentions the U.S. thirteen times—all save two of the references are negative. China's attitude has been soured by events in recent years, including the expansion of NATO, the strengthening of the U.S.-Japan military relationship, a congressional report charging Chinese nationalists with two decades of espionage in the U.S., NMD, and the allied bombing of the Chinese embassy in Yugoslavia, which killed three of their journalists.42 The bombing prompted serious internal debate about whether China should accelerate its military spending. However, the central committee decided to reaffirm their former emphasis on economic development.

American belligerence toward China is becoming uncomfortable. On a visit to Australia in July 2000, former secretary of defense William Cohen, having just left China, urged Australia to increase its military spending to ensure that its forces could support the U.S. if there were to be a war with China over Taiwan. Republican Tom DeLay, House majority whip, recently boasted of how he confronted the Chinese ambassador on Meet the Press. He grabbed the ambassador's hand as if to shake it, but instead squeezed it hard, yanked the ambassador close to him, and warned him not to underestimate the resolve of the American people. The ambassador, humiliated, left immediately.43

China is not a military threat to America. With a population of over 1.2 billion and a rapidly changing political arena moving from authoritarian communism to some form of free-enterprise capitalism, China's leaders have much to occupy their minds while providing food, education, and a decent standard of living for their people. The last thing that China needs is to divert money and attention to a new nuclear or conventional arms race in their region. But that is the dynamic that Bush is about to set up. If Congress approves the full Star Wars scenario, China will be forced to build more ballistic missiles to overcome America's missile defense. In fact, as noted previously, the U.S. intelligence agencies' report, "Foreign Responses to U.S. National Missile Defense Deployment," predicted just this.

But there is more at stake. The U.S. is about to deploy theater missile defense systems in Japan, South Korea, and possibly Taiwan, because TMD is legitimate under the ABM treaty. China will then be forced to build up her intermediate-range nuclear missile forces to "overload" the TMD system. Theoretically, these missiles could hit targets in India, an old enemy of China. The pro-nuclear regime in India will react badly to these developments and will be goaded into an ongoing nuclear arms race with China. Then what will nuclear Pakistan do? It will be pushed into an ongoing nuclear arms race against India, siding with its ally, China.44
However, since the American attack on Afghanistan, there is huge dissent in the streets of Pakistan amongst the Muslim fundamentalists who support the Taliban and Osama Bin Laden. These people also have a significant presence within the Pakistani military. There is a distinct prospect that if there were a civil war in Pakistan, they could gain the upper hand in the military and thereby control the twenty to thirty nuclear weapons that Pakistan has built over the past decade. This poses a terrifying prospect—arch enemies of a nuclear-armed India, themselves armed with nuclear weapons.

There is also Japan, a country with the third largest military in the world, with the world's most advanced technological base, a country with an aggressive past and huge stockpiles of pure plutonium, on the cusp of nuclearization. With a week's notice, Japan could construct nuclear weapons if it so decided. (Japan maintains the third largest military in the world because it can legally spend only 1 percent of its GNP on weapons, but it has a huge GNP.) China is well aware of these possibilities, and Japan is an old enemy of China. The nuclearization of Japan could then trigger a nuclear arms race between South Korea and Japan, two countries with deep enmities.

Taiwan is officially a part of China since Nixon's visit in the early seventies. However, animosity between China and Taiwan remains, and right-wing Republicans are enthusiastically adding fuel to this smoldering fire. In September 2000 the U.S. signed a 1.5 billion dollar arms deal with Taiwan, including the sale of 200 Amraam missiles, not to be made available unless China introduces a similar weapons system, an arrangement that is meant to signify America's pledge not to introduce new offensive military capacities into Asia.45 But on April 1, 2001, an international incident induced a change in the Chinese-American relationship. A Chinese pilot collided with a U.S. spy plane off the coast of China, forcing the U.S. plane to land on Hainan, a Chinese island. The Chinese were furious that America was spying just off their coast and the U.S. was furious because the Chinese held the twenty-four-member crew for eleven days.

Despite the provocation and damage to U.S.-Chinese relations caused by this incident, the flights of the spy planes must continue, according to Secretary Rumsfeld.46 This episode sharply increased tensions just before the Bush administration was to decide whether to send more military equipment to Taiwan. China was particularly concerned that Taiwan not obtain Aegis ships, which are an integral component of a theater missile defense system. Eventually, on April 24, 2001, the Bush administration announced that it would sell twelve P-3 Orion planes to enable Taiwan to patrol at sea and hunt for submarines, four Kidd-class destroyers that carry powerful sonar equipment to hunt for submarines and sub-hunting helicopters, and eight new diesel subs, to be made in Germany and the Netherlands. (However, these countries have announced their reluctance to assist the U.S. arming of Taiwan.) The Chinese find the submarines to be particularly provocative. For the moment, Bush has postponed the decision to equip Taiwan with Aegis ships and Patriot PAC-3 antimissile batteries.

To make matters worse, two days after this decision was announced, President Bush declared that the United States would do "whatever it takes" to help Taiwan defend itself, including the use of military force. This statement was a distinct departure from the long-standing policy of American strategic ambiguity toward Taiwan—expressing a strong interest in that country's security while avoiding an outright promise to go to war in its defense.47 Although Bush tried to backpedal in a subsequent interview, his statement was consistent with the hardline Republican policy on China, whose platform states that "America will help Taiwan defend itself." Deputy Secretary of Defense Paul Wolfowitz and Deputy Secretary of State Richard Armitage have called for the strategic ambiguity to be abandoned completely.48 Other nations were shocked and incensed about this change in strategy. Critical editorials abounded in the European and Australian press.

The Taiwanese themselves admit that they are close to China economically, with businesses on both sides involved in huge economic deals. China has evolved into Taiwan's second-largest market for trade and investment; 40 percent of Taiwan's foreign investment is in
China. Students cross the Taiwanese straights to go to Chinese medical schools and universities. It is the Taiwan military, like the United States military, that is pushing for these weapons and influencing foreign policy.49

As Taiwan becomes more militarized, China may conclude that the U.S. is restoring a mutual defense pact with Taiwan, an agreement that fell by the wayside in 1979 when Washington normalized diplomatic relations with Beijing and adopted a "one-China" policy, recognizing the Chinese government as legitimate for Taiwan. With TMD systems deployed in Japan, South Korea, Taiwan, and possibly Australia, a compliant and peaceful U.S. ally, China will begin to feel encircled by military hostility. (As an aside, TMD systems do not pose as much of a threat to Russia as they do to China. Russia's ICBMs are located deep within their continental interior, so interceptor rockets launched from coastal waters, as currently proposed, will not achieve the velocity necessary to take out Russian missiles in their boost phase.)

China is the Pentagon's premier villain, according to a study conducted by the Naval War College in Newport, Rhode Island, called "Asia 2025." Since the fall of the Soviet Union, the major Pentagon war games increasingly take place in Asia. According to the report, the effort now is for the U.S. to "manage the rise of China as a great power," and the Pentagon is concentrating on expanding the naval, air, and space power in the Pacific region. They see China as "a force for instability and a constant competitor."

The Pentagon is concerned with the emergence of China as the greatest regional threat to U.S. interests, the lack of forward operating bases in Southeast Asia and South Asia if the U.S. is to remain a key player in these regions, the emerging strategic potential of India, and the need-at-all-costs to prevent a China-India alliance. They envision five possible scenarios where China could be a threat, including an "unstable China" scenario, a "strong China," a "new South Asian order," where India could either be an ally or opponent of China, an "Asia realigns" scenario, or "the new Sino-Indian condominium" scenario.

There is a major conflict in the U.S. between engagement and containment of China. Instead of military confrontation, Clinton's policy was to engage China so that U.S. business interests could exploit the China market. He encouraged China's entry into the World Trade Organization so that it would end its protectionist trade policies, allowing U.S. corporations full access to Chinese resources. The Pentagon was unhappy with this approach, which strengthened China both economically and strategically. As Walden Bello says, the Asia 2025 study "speaks volumes about the Pentagon's grim determination to counter any significant threat to U.S. strategic hegemony in Asia.50

Another Pentagon study, "The 2001 Quadrennial Defense Review," also concentrates on China. While it continues to reiterate the U.S. policy of maintaining the ability to fight two conventional wars simultaneously, it states that the threat from Iraq and North Korea are fading (negating the Rumsfeld theory that legitimizes Star Wars). The review emphasizes the so-called China threat, stating that China should be the new focus of the U.S. military force structure, including its troop deployments, weapons procurement, research, and development. This policy ensures ever-increasing funding for the Pentagon's budget.

But China uses its Peoples Liberation Army not for international purposes, but to alleviate domestic problems such as floods and fires, to quell internal disputes, such as Xinjiang and Tibet, and for border disputes. Land forces are currently being reduced by hundreds of thousands. Even if Taiwan declares independence and America attempts to back Taiwan in its move, resulting in armed conflict, China has virtually no amphibious forces able to attack Taiwan.51 It would prefer to spend its resources caring for the needs of its 1.3 billion people, and it has little interest in weapons construction. The risk of killing fellow Chinese and of provoking economic isolation and military failure would most likely result in China's peaceful wooing of Taiwan instead. As Dr. Nicholas Berry, senior analyst at the Center for Defense information, writes, "Americans who see China as the new imperialistic threat need to review the historical record. Unless history is meaningless as a predictor of events, China will not seek an empire.
As long as China's periphery is secure and no country is prepared to attack it, the PLA will carry out its internal and defensive tasks, including putting pressure on Taiwan not to leave the fold.52

In warning the Bush administration not to include Taiwan in any missile defense system, China urged the U.S. to desist from any arms sales to that country. "If the United States is bent on its plan to include Taiwan in its TMD system, it will constitute a wanton interference and threat to Chinese sovereignty and security," it said, meaning that if forced to by U.S. policy, it will arm itself appropriately to fight a militarily aggressive Taiwan. This statement was issued only hours after Colin Powell opined that China should not now be regarded as a "strategic partner" as it had been during the Clinton administration.53

The air force is, at this moment, upgrading its bases in Guam and on Wake Island in the Pacific to handle more B-1 and B-2 bombers. They are repositioning cruise missiles in Guam, and American TMD is being widely promoted throughout the region. The navy is expected to nearly double its presence in the Pacific within the next few years. The U.S. has assigned over 250,000 military personnel, including the Pacific fleet, to the region.54 Leaked internal documents dated January 29, 1998, show that the U.S. naval security group command entered into a host-nation partnership at the joint-defense facility at Pine Gap in Australia, where they are currently monitoring movements and telecommunications traffic of warships and naval vessels from Pakistan, India, Indonesia, China, and North Korea. China, the dominant country in the South China Sea, the Taiwan Strait, and the Sea of Japan, is obviously of most interest to the U.S. and intelligence officials.55

AMERICAN GLOBAL IMPERIALISM

Charmers Johnson, in a new book, Blowback: The Costs and Consequences of the American Empire, argues that instead of demobilizing at the end of the cold war, "the U.S. imprudently committed itself to maintaining a global empire." He believes that it is time to discuss how the cold war helped to conceal an American imperial project, and that-America should by rights remove itself from South Korea and from its military bases in Japan, while unilaterally drastically cutting its nuclear forces and declaring a no-first-use policy.

American historian Paul Kennedy calls U.S. global dominance "imperial overreach" and says that the maps of major U.S. force deployments around the world "look extraordinarily similar to the chain of fleet bases and garrisons possessed by that former great power, Great Britain, at the end of its strategic overreach.56

The British today are in a pickle.

Tony Blair worked well with Clinton, but he will be under particular pressure to cooperate with his new-look American allies, even while knowing that if he allows the Fylingdale radar station on the North York Moors National Park to be expanded for Star Wars, he will have a civil uprising on his hands.

Fylingdale neighbors realize that they will become one of the targets of America's mad plans. As retired geologist Peter Woods said, "If this installation became a target for hostile action, it would be like William the Conqueror all over again, who starved to death half the local population a millennium ago," on the North York Moors.

"Imagine us going to you and asking to put up a radar station in the middle of Yosemite National Park to protect Britain," Woods added. "Do you think the United States would just say, okay?"57

If Blair permits the Fylingdale station upgrade, plus another at Menwith Hill, he will be at odds with his European colleagues, and many within his own party. Since the summer of 2000, two white globes have been installed at Fylingdale, supposedly for tracking satellites.58
Inevitably these stations will be aggressively picketed by the Campaign for Nuclear Disarmament, Greenpeace, and the North Yorkshire branch of the Women's Institute, who are deeply concerned about the despoilation of the countryside. It will be Greenham Common all over again (Thousands of women set up camp at Greenham Common and staged protests during the eighties against the deployment of American cruise missiles on the Common; they prevailed and the missiles were removed).

France is an open opponent of NMD. During Bush's inauguration, French Defense Minister Alain Richard flew to Moscow for talks about the proposed U.S. NMD plan which Bush said would "provide protection for America's allies."59

French analyst Camille Grand said the NMD could stand for "no more disarmament." And French Foreign Minister Hubert Vedrine said that it is "not very serious" to think that states such as North Korea, Iran, Libya, or Iraq could threaten the world's only superpower, calling these threats microscopic or theoretical.60

According to Hugo Young of the Guardian, "A quiet turmoil of alarm has gripped the Foreign Office and the Ministry of Defense for months," in Britain. "They now face a Washington being peopled by voices that make a different analysis: scornful of Russia, arrogant about China, intolerant of European sensitivities, overwhelmingly impressed by the case for defending U.S. territory—and confident that the practical failure of NMD so far, like the untested capabilities of the boost-phase project, are mere blips on the relentless American path toward technological mastery."

If Blair decides to support NMD, Young says, it will create the deepest rupture with continental Europe.61

Greenland, a Danish protectorate, where another radar station at Thule will need upgrading, has said that the unproven concept of NMD will sow the seeds of global instability and pitch the country unwillingly into the center of a new cold war. The Thule station is also presently part of the U.S. early-warning system.62

Almost all European countries are adamantly opposed to any form of Star Wars, and are deeply concerned about the direction in which this new president is taking the world.

Meanwhile, Europe is uncomfortable about the way NATO is structured. During the Kosovo war, the Europeans had little say about how that conflict was conducted—America had sole access to most of the space-based information flow, deciding how and when the seventy-eight day operation would proceed.

Pre-September 11 Europe was fed up with its sycophantic position in relation to the U.S., which regularly ignored the United Nations and which intervened unilaterally in the Sudan, Afghanistan, and Iraq without consulting its closest allies. When it did intervene with other nations, it took a military stand that allowed for no American casualties, which made it more a hindrance than a help. As the Guardian editorial said, "Saving Private Ryan has become the leitmotif of the whole operation."63

September 11 changed many of these dynamics. The whole world was appalled by the attacks upon America and a new international spirit of cooperation brought most nations of the world together to support America in its tragedy and time of need. Furthermore, new alliances were quickly formed to support the war in Afghanistan, and although much of the war was fought from the air causing many thousands of civilian casualties, eventually American troops were brought in at the end for "mopping up" operations.

Consequently, in November 2001, Europe decided to set up its own military and peacekeeping force, pledging 60,000 troops and its own equipment by 2005. The first European
military initiative since the end of the cold war, it will involve additional military spending and will give the Europeans the ability to operate without the United States.

The United States is nervous that this EU (European Union) peacekeeping force may surpass and ultimately become more important than NATO—a move that Washington would strongly oppose. Former secretary of defense William Cohen warned, "There will be no EU caucus in NATO. ... If they try to or are desirous of a separate operational planning capability, separate and distinct from NATO itself, then that is going to weaken ties between the U.S. and NATO and NATO and the EU." The Pentagon is not easily going to forego its European footing. On December 1, 2000, it released the strategy report for Europe and NATO, titled "Strengthening Transatlantic Security," which states that the U.S. will continue its reliance on deterrence as a cornerstone of security while maintaining a commitment to American nuclear forces in Europe. It calls for NATO enlargement, saying that "the U.S. military presence in Europe plays a critical role in protecting our economic interests."

It also states that, "overall the United States has embarked on its largest sustained increase in defense spending in fifteen years" and that they are planning the "execution of joint and multinational military operations in NEC (nuclear, biological, and chemical) environments. . . ." Referring to Russia, the report adds, "The transatlantic community cannot be truly secure if its enormous nuclear-armed neighbor, with its rich human and natural resources, withdraws behind a new curtain of hostility and authoritarian rule or collapses economically." (This provocative statement seems to go counter to President Putin's numerous conciliatory overtures to the United States and his overtures to rapidly reduce bilaterally the strategic arsenals.)

BUSINESS ARE US

The world has gone backward since 1987, when Reagan and Gorbachev sat in an intimate sitting room in a house in Reykjavik, Iceland, and almost agreed to eliminate nuclear weapons between the superpowers, an agreement that failed when Reagan refused to forgo his Star Wars project.

General Henry Shelton, the chairman of the Joint Chiefs of Staff, told Congress in September 2000 that the services would need significant increases in spending in the coming years, suggesting that this could consume a large part of the current budget surplus. He endorsed a study from the congressional budget office that called for an increase in spending on new weapons from 60 billion dollars to 90 billion dollars annually. Bush has already pledged to spend 45 billion dollars more on the military over the next ten years, plus at least another 70 billion dollars on Star Wars.

However, since the September 11, 2001 attack, the Pentagon and military-industrial complex have cynically used these terrible events to capitalize upon the trauma and despair of the American people and the Congress. Within days, Congress appropriated a Go-billion-dollar emergency spending package for reconstruction and combating terrorism. The greatest beneficiaries will be weapons manufacturers such as Raytheon and Lockheed Martin. Interestingly, among the very few companies that showed increased stock prices the week the market reopened on September 17 were Raytheon, up 37 percent, Alliant Tech Systems, up 23.5 percent, and Northrop Grumman, up 21.2 percent.

Star Wars corporations used this opportunity to push their wares on Capitol Hill with homilies such as "just because you have insurance against theft doesn't mean you shouldn't buy fire insurance." The democrats backed off their fight against NMD tests or other actions that would violate the ABM treaty in the wake of September 11. So compliant has the Congress become that Christopher Hellman from the Center for Defense Information suggested that military spending for 2002 could reach 375 billion dollars, a 66-billion-dollar increase over 2001, and some right-wing analysts such as Loren Thompson of the Lexington Institute suggested
Congress may now be willing to push the Pentagon budget to 400 billion dollars per year, or more. The NMD program stands to benefit the most, followed by the scandal-plagued F-22 Osprey aircraft made in Republican Representative Kurt Weldon's district in Pennsylvania, Lockheed Martin's F-22 pushed by the Texas and Georgia delegations, Northrop Grumman's B-2 pushed by Democratic Representative Norm Dicks from Washington and Republican Representative Randy "Duke" Cunningham from California at more than 2 billion dollars per plane. In the wake of the September 11 attacks the Bush administration is to accelerate weapons sales in the Middle East and South Asia, including Lockheed Martin F-16s to Oman and the United Arab Emirates, and other weapons systems to Egypt and Pakistan.68, 69

Under the banner Business Are Us, the Pentagon hosts a paper on their website proclaiming that they are America's largest company, the next being Exxon with a budget of 165 billion dollars. With 5.1 million, the Pentagon is the nation's largest employer. It maintains 600 fixed facilities nationwide, with more than 40,000 properties and 18 million acres of land. It stations employees in 130 countries out of a total 178 of the world.70 Its global presence is ubiquitous.

America is a nation that spends only six cents out of every dollar on educating its children and four cents on health care for every fifty cents it spends on the military-industrial complex.71 Overall, the Pentagon's 310 billion dollars per year dwarfs the 44.5 billion dollars for the education department and 20.3 billion dollars for the National Institutes of Health.

Globally the annual military expenditure stands at 780 billion dollars. The total amount required to provide global health care, eliminate starvation and malnutrition, provide clean water and shelter for all, remove land mines, eliminate nuclear weapons, stop deforestation, prevent global warming, ozone depletion and acid rain, retire the paralyzing debt of developing nations, prevent soil erosion, produce safe, clean energy, stop overpopulation, and eliminate illiteracy is only one third that amount—257.5 billion dollars.72

In his farewell speech in January 1961, President Eisenhower warned, "In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist. We must never let the weight of this combination endanger our liberties or democratic process."

This book illustrates in detail that these prophetic predictions have come to pass. We need to put aside our need for superiority over others, our need to be militarily powerful. America has excellent skills at conflict resolution. These must be deployed.

The Pentagon needs to be virtually dismantled. Amalgamating with the United Nations, its military expertise needs to be used quietly and efficiently for peacekeeping operations around the world. (Currently there are sixty-eight low-intensity wars in the world demanding attention.)73 After the September 11 terrorist attack on the United States there was much discussion about what the response should be. I carefully advocated during my U.S. lecture tour over the next two weeks that the international community should work cooperatively together, including all the intelligence organizations—MI5, MI6, Mossad, the FBI, CIA, NSA—to identify, locate, and capture these international terrorists and bring them to trial before an international court of justice, as were their predecessors, the Nazis.

It is not necessary for America to proclaim itself the most powerful and the greatest nation on earth. It needs to demonstrate these qualities. As Edmund Burke said two centuries ago, "the only way evil flourishes is for good men to do nothing."

It is up to the women and men of the world to act. I would therefore like to address the men and women of America:

You belong to the most powerful nation on earth, an immensely wealthy country, populated by people who want to live their lives with compassion and integrity. You have a great and noble task ahead of you. Each of you can be as powerful as the most powerful person who ever lived. If you or your child were threatened with a lethal disease, you would do everything in your
power to save that life. This is the analogy that you must now apply to the planet and in particular to your country.

America has the power and resources to reverse global warming, to save the ozone layer, to prevent chemical pollution, to stop deforestation, to curb the human overpopulation problem, and to prevent the rape of space. The money that America invests in killing must now be redirected urgently to the preservation of life. America must rise to its full moral and spiritual height to reach its intended destiny— the nation that saved the world.

In a similar vein, the people of Europe must resist the constant call from America to arm and re-arm. So too, the people of Canada, of Australia—and indeed all the people of the world. We cannot continue to behave as primitive animals killing for pleasure, killing for money, killing for religious imperatives, killing for greed and territorial imperative. Conflict resolution and peacekeeping must be our new priorities.

Even after the catastrophe of September 11, 2001, it is still inappropriate to rush off and kill thousands of innocent people for revenge. The only reaction by a civilized nation should be, as mentioned above, to work together with the international community to bring these criminals to justice. Never forget that thousands of nuclear weapons remain continuously on hair-trigger alert. Any disturbance of the international situation could trigger their launch and cast us all into the pall of conflagration and nuclear winter.

You cannot simultaneously prevent and prepare for war. The very prevention of war requires more faith, courage and resolution than are needed to prepare for war.

—Albert Einstein
NOTES

Introduction

1. Situation Reports, STATFOR.com (September 11, 2001)
2. "Pentagon Recommends the use of Nuclear Weapons," Japan Today (September 19, 2001)
11. "Protocol I, Relating to the Protection of Victims of International Armed Conflicts, Article 51"
15. "Unexploded Cluster Bombs Pose Threat to Civilians"
26. Ibid.
Chapter One: The Tragedy of Wasted Opportunities

Chapter Two: The Reality of Nuclear War

1. "1MT Surface Blast: Pressure Damage," The American Experience, WGBH/PBS Online
4. Caldicott
7. Ibid.
9. Ibid.
10. Ibid.

Chapter Three: It's a Mad, Mad World: Nuclear Scientists and the Pentagon Play with Deadly Gadgets

3. Ibid.
8. Ibid.
9. Beers
11. Ibid.
12. Ibid.
13. Ibid.
14. Ibid.
15. Ibid.
16. Ibid.
18. Gusterson
19. Ibid.
20. Ibid.
21. Much of the material for this section was obtained from a study conducted by Janne E. Nolan in the book *An Elusive Consensus: Nuclear Weapons and American Security After the Cold War* (Washington, DC: Brookings Institution Press, 1999)
22. Ibid.
23. Ibid.
24. Ibid.
26. Ibid.
27. Ibid.
28. Ibid.
29. Ibid.
30. Ibid.
31. Ibid.
32. Ibid.
33. Ibid.
34. Ibid.
35. Ibid.
36. Ibid.
37. Ibid.
38. Ibid.
39. Ibid.
40. Ibid.
41. Ibid.
42. Ibid.
43. Ibid.
44. Ibid.
45. Ibid.

Chapter Four: Corporate Madness and the Death Merchants

1. Dr. Helen Caldicott, *If You Love This Planet* (New York: W.W. Norton, 1992)
2. Ibid.
3. Ibid.
5. The Heritage Foundation 1999 Annual Report, 214 Massachusetts Avenue, NE, Washington, DC, 20002
6. Caldicott.
Chapter Six: Star Wars: The Story of National Missile Defense Systems

3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
8. Ibid.
9. Ibid.
11. Ibid.
13. Ibid.
14. Fitzgerald
15. Aldridge
18. President Bush's speech on missile defense, CNN.com (May i, 2001)
21. AFP, "Senate Overwhelmingly Passes U.S. Defense Authorization Bill" (October 2, 2001)
22. AFP, "Senate Overwhelmingly Passes U.S. Defense Authorization Bill" (October 2, 2001)
26. Dr. Helen Caldicott, Missile Envy (New York: Bantam, 1986)
27. Bruce Gagnon, "New Names for Star Wars Systems," globalnet@mindspring.com (August 16, 2001)
28. Much of this section is derived from the excellent work by Bob Aldridge, who became one of my mentors in the early 1980s after I read his book *Counterforce Syndrome*.


32. Aldridge

33. Ibid.


36. Ibid.


38. David Abel, "Tiff Between White House, MIT Professor Gets Personal," *The Boston Globe* (September 8, 2000)


43. Ibid.

44. Crock

45. David Morgan, "Ballistic Missile Defense: A Submission to the Standing Committee on National Defense and Veterans Affairs," House of Commons, Ottawa, Canada (April 5, 2000)

46. Nick Cohen, "Protection Racket. It Matters Not Whether It's Bush or Gore. We'll Still Have Son of Star Wars Foisted on U.S.,” *The Observer* (November 12, 2000)


51. "Warhead Elimination"


53. "China Warns Future U.S. President Over Missile Shield," AFP (November 2, 2000)


57. Christopher Lockwood, "Westminster Backlash Over 'Son of Star Wars,' " *Telegraph* (August 3, 2000)

Chapter Nine: The Lockheed Martin Presidency and the Star Wars Administration

2. Russell Mokhiber and Robert Weissman, "Corporate Conservative, Corporate President," Focus on the Corporation (January 11—18, 2001)
5. William D. Hartung and Michelle Ciarrocca, "Reviving Star Wars," The Baltimore Sun (January 21, 2001)
6. United States Department of Defense press advisory (January 24, 2001)
7. Sean Gonsalves, "Star Wars: The Sequel," The Cape Cod Times (December 26, 2000)
10. Jean-Michel Stoullig, "Rumsfeld Commission Warns against 'Space Pearl Harbor,'" AFP (January 11, 2001)
11. Tabassum Zakaria, "Helms Says U.S. not Bound by ABM Treaty" globalnet@mindspring.com (January 11, 2000)
12. "Rumsfeld in Cold War Time Warp, Says Angry Moscow," Reuters (March 20, 2001)
14. Karl Grossman, globalnet@mindspring.com
15. David Corn, "Questions for Powell," The Nation (January 8, 2001)
21. Schweid
22. Ibid.
23. Kettle
24. Daryl Kimball, "N-Testing Update," dkimball@clw.org (December 19, 2000)
27. Ibid.
31. Mikhail Gorbachev, "Mr. Bush, the World Doesn't Want to Be American," International Herald Tribune (December 30, 2000)
34. "U.S., Russia Sign Missile Agreement," AP (December 16, 2000)
36. AFP, "Putin Warns U.S. Against Missile Defense Buildup, Enlarging NATO" (January 26, 2001)
37. "Russia Threatens to Take Arms Race to Space," London Times (January 25, 2001)
39. Ian Traynor, "Russia Halts Military Cuts as Hawks Take over in U.S.,” The Guardian (January 18, 2001)
43. Bruce Gagnon, globalnet@mindspring.com
44. Achin Vanaik, "How Much of a Reprieve?" The Hindu (September 27, 2000)
45. "Missle Sale to Taiwan Has Unusual Clause," AP (September 30, 2000)
51. Jon Basil Utley, "20 Facts About China (Rarely Reported to Conservatives)," www.againstbombing.com/chinapoints.html
52. Dr. Nicholas Berry, "Is China an Aggressive Power?" The Defense Monitor (2000)
53. AFP, "China Warns U.S. to Keep Taiwan out of Any Missile Defense Plans" (January 18, 2001)
54. Bruce Gagnon, globalnet@mindspring.com
55. "U.S. Secretly Monitors Asian Navies from Australia," AP (January 27, 2001)
57. Ellen Hale, "Radar Picks up 'Star Wars;' Rumor in England, Uneasiness at Key Site," USA Today (January 24, 2001)
61. Hugo Young, "A Special Relationship Under Fire from Missile Defense," The Guardian (December 21)
62. "Bush Upsets Danish Opposition Over Missile Defense Station," AFP (January 24, 2001)
63. "Leader," The Guardian (January 4, 2001)
64. Michael Gordon, "EU to Go It Alone with New Army," The New York Times and The Sydney Morning Herald (November 22, 2001)
66. Steven Lee Myers, "A Call to Put the Budget Surplus to Use for the Military," The New York Times (September 28, 2000)
69. William D. Hartung, "Bush's War on Terrorism: Who Will Pay and Who Will Benefit?" motherjones.com (September 27, 2001)
70. www.defenselink.mil/pubs/dodioi/largest/html
72. "What the World Wants," The World Game Institute, wgi@worldgame.org