

## Atomic Audit: The Costs and Consequences of US Nuclear Weapons Since 1940

Stephen Schwartz, editor, *Brooking Press*, 1998

## Killing Detente: The Right Attacks the CIA

Anne Cahn, *Penn State Press*, 1998, 232 pages, \$35, \$18 (paper).

Science aims to link cause and effect for natural phenomena. Linking cause and effect for historical events is often more difficult since historical events cannot be tested by rerunning history with varied parameters. Despite the difficulty, it is worthwhile to review the causes behind the magnitude of the U.S. nuclear buildup. Two critical questions should guide this analysis: How much of the \$5.8 trillion (1996 dollars) that the U.S. spent to build 70,000 nuclear warheads, deployed on 75,000 missiles and 8600 bombers, was too much? And, was the effectiveness of the Soviet military exaggerated with false predictions? These two books go a long way towards quantifying the costs, and explaining the large size, of the buildup.

Atomic Audit, edited by Stephen Schwartz, thoroughly compiles the U.S. costs--\$5.8 trillion between 1940 and 1996--for its atomic arsenal, from the fuel cycle to the weapons to the delivery systems and to decommissioning. As a companion book, Killing Detente supplies some of the causes which prompted this spending level. Anne Cahn describes the history behind the 1970s Team B estimates of the Soviet nuclear triad. These estimates provided some of the rationale for the \$5.8 trillion in spending, and the demise of U.S.-Soviet detente. At the time of the 1993 Senate hearings on the Evaluation of the U.S. Strategic Nuclear Triad, former Secretary of Defense Casper Weinberger (1981-87), said, "Yes, we used a worst-case analysis. You should always use a worst-case analysis in this business. You can't afford to be wrong. In the end, we won the Cold War, and if we won by too much, if it was overkill, so be it." Make no mistake about it, it was better to have too much nuclear hardware and not go to the Armageddon, as compared to the converse. However, since there is no limit to spending under this argument, and more nuclear hardware can be destabilizing, it is useful to separate truth from fantasy if we are to learn from the past.

Atomic Audit provides an excellent, comprehensive description of each of the nuclear-capable systems: 14 types of deployed heavy bombers, 47 deployed and 25 canceled missiles, 91 types of nuclear warheads. It describes and quantifies the technical and economic facts for the Manhattan Project (\$25 billion), command/control, SIOP targets, defensive systems, dismantlement, nuclear waste, plutonium disposition, production and testing victims, secrecy, congressional oversight, and much more. It describes programs that were developed but not really deployed such as the nuclear-powered aircraft (\$7 billion), the 1970's Safeguard ABM system (\$25 B), SDI (\$40 B), nuclear-propelled missiles (\$3 B), Project Orion (nuclear-explosion propelled rocket to stars, \$50 million), and Plowshares (peaceful nuclear explosions, \$0.7 B). Certainly the SIOP strategic target list, which peaked at 12,000 in 1990, dictated the size of the U.S. triad. The Brookings group concludes the obvious: (1) Nuclear weapons were much more expensive than the projected 3% of all military spending. The \$5.8 T total nuclear spending was 31% of all military spending (\$18.7 T) and it was 44% of all non-nuclear military spending (\$13.2 T). (2) Congress, the Defense Science Board, and most presidents made errors of omission and commission. (3) The SIOP target list of 10,000 targets was more than excessive, increasing the size of U.S. nuclear forces.

In Killing Detente, Anne Cahn gives us the detailed background of the 1970s "Team B" estimates. At the end of President Ford's term, the future members of the Committee on the Present Danger lobbied hard to create a process which would, in essence, write National Intelligence Estimates (NIEs) from outside the government. This happened at a time when the CIA was weakened from attacks coming from both the left and the right. The left was angry about CIA covert action in Vietnam, such as Project Phoenix which was responsible for the deaths of 20,000 civilians. The right was angry about projections of an unwinnable war in Vietnam, projections that "no amount of bombing would deter North Vietnam from its objective." Because of the very close primary elections in 1976, Ford stopped using the word "detente" and allowed a team of outsiders to create a rival NIE. CIA Director George Bush signed off on the birth of Team B with "Let her fly, OK, GB."

Cahn describes how Professor Richard Pipes of the Harvard History Department became the leader of Team B, an unbalanced panel which greatly feared the Soviets. In the only three months, Team B developed three NIE alternatives on Soviet strategic objectives (a catch-all that covered every possibility), ICBM accuracy, and low-altitude air defense. These Team B reports laid the foundation for the nuclear buildup of the 1980s. When Pipes testified before a House committee, he stated that if "it [the intelligence community's NIE's] were presented in a seminar paper to me at Harvard, I would have rejected or failed [it]." Now that 20 years have passed since the Team B trilogy was written, it seems only fair to judge Professor Pipes' work along side the NIE's. As one who has consulted many NIE's over a decade while at the Senate Foreign Relations Committee, the State Department and ACDA, I have seen benchmarks by which to grade Pipes' work and I give him an "F" for failure. So that you can judge for yourself, I have included parts of Team B's declassified (Top Secret) reports at the end of this review, with my comments in brackets.

In conclusion, the Soviet Union caused honest fear in the U.S., but we could have used better scholarship than offered by Team B. Perhaps we have learned this lesson. In 1995 the Congress was concerned that the NIE on the emerging ballistic missile threat from smaller countries had understated the threat. In contrast to Team B, the congressionally mandated commission that examined the NIE was well balanced. By having a well-balanced commission, the Rumsfeld Panel stayed clear of the extremists who could have captured the process. The Rumsfeld Panel analyzed those cases that were possible, but did not specify which ones were likely.

I strongly recommend both books as excellent studies on the Cold War nuclear arms race. Hopefully, we can learn from the errors of our predecessors.

Statements by Team B:

On Soviet Low Altitude Air Defense: "It specifically does not address Soviet capability against the B-1, cruise missiles or advanced penetration aids." [This forced a comparison between future Soviet air defenses attacking 1976 U.S. airplanes without cruise missiles, or without B1 and B2 bombers.]

"Put more starkly, it is not inconsistent with current evidence that the Soviets believe they have and may actually possess the inherent ability to prevent most, if not all, penetrating U.S. bombers (of the kind presently in the force, in raid sizes of a few hundred) from reaching targets the Soviets value." [It is hard to believe "most if not all."]

"In future years, high-energy laser weapons may play a role in the air defense of the Soviet Union.... Accordingly, they could possibly begin deploying ground-based laser antiaircraft weapons in the 1985-1990 time period, if they so desire." [The U.S. continues to fund laser anti-aircraft weapons, but without being able to successfully deploy it.]

On Soviet ICBM Accuracy: "Considering the magnitude of this effort and the fact that much of the Western research in this area is available to them, we find it hard to believe... that Soviet G&G errors will be significantly greater than those of the United States. For this reason, we will assume these errors to be equal to those of the Minuteman III in 1975, 70 m downrange and 35 m crossrange." [It is the strong consensus view that Soviet accuracy has always been poorer, by more than a factor of two, than U.S. accuracy. Since a factor of 2 in accuracy corresponds to a factor of 8 in yield, this is a very large effect. To say that the Soviet missiles will have an accuracy of 70 m downrange and 35 m crossrange is far beyond the pale.]

On Soviet Strategic Objectives: "After some apparent division of opinion intermittently in the 1960's, the Soviet leadership seems to have concluded that nuclear war could be fought and won." [Since our SLBMs have always been invulnerable and since some bombers and ICBMs would survive, it is not logical to think that a Soviet leader could think the Soviet Union could actually destroy all of the U.S. nuclear forces and prevent the U.S. from destroying Russian cities. Since the Cuban missile crisis, Soviet leadership indicated no

desire to risk a nuclear confrontation.]

"We have good evidence that it [the Backfire bomber] will be produced in substantial numbers, with perhaps 500 aircraft off the line by early 1984. [The Soviets had 235 Backfire bombers in 1984, which need considerable in-air refueling.]

"Given this extensive commitment of resources and the incomplete appreciation in the U.S. of the full implications of many of the [ASW] technologies involved, the absence of a deployed system by this time is difficult to understand. The implication could be that the Soviets have, in fact, deployed some operational non-acoustic systems and will deploy more in the next few years." [The logic is that if powerful Soviet ASW has not been observed, it will be there in the next few years.]

"... we cannot with any assurance whatever forecast the probability or extent of success of Soviet ASW efforts. However, we are certain that these probabilities are not zero, as the current NIE implies." [The strong consensus view is that at-sea U.S. SLBMs were never threatened by Soviet ASW, and that hypothetical new ASW technologies have all failed." (See reference 1, GAO report on the triad.)]

"... it is clear that the Soviets have mounted ABM efforts in both areas of a magnitude that is difficult to overestimate." [New Soviet ABM systems did not make much technical progress, nor were they deployed. Thus, "difficult to overestimate" is fear mongering.]

"While it may be possible (though often erroneously, in our view) to disparage the effectiveness of each component of Strategic Defense taken separately, the combined and cumulative efforts may possess considerable strategic significance." [Twenty years later SDI is not capable of destroying ICBMs.]

Reference: 1. Evaluation of the U.S. Strategic Nuclear Triad, Senate Hearing 103-457, June 10, 1993.

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