HAIL TO THE CHIEFS

The Untold History of Reagan's SDI Decision

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ne of the most dramatic episodes of the nuclear age occurred in June 1967 during the Glassboro summit between President Lyndon Johnson and Soviet Premier Aleksey Kosygin. Johnson's goal was to convince the Soviets that the deployment of their Galosh anti-ballistic missile (ABM) system, which was then under way, would do nothing to improve Soviet security and would merely intensify the nuclear arms race. Johnson was having some difficulty getting this point across to his Soviet counterpart, so he turned to Secretary of Defense Robert McNamara and said: "Bob, for God's sake, you tell Kosygin what's wrong with their plan." McNamara then laid out the logic of assured destruction for the Soviet premier: "If you proceed with the anti-ballistic missile deployment, our response will not, should not be, to deploy a similar system....[O]ur response will be to expand our offensive weapons." McNamara then told Kosygin that the only way out of this trap was to negotiate restrictions on defensive systems. At this point, Kosygin became red in the face, pounded the table, and declared: "Defense is moral, offense is immoral!"

Nevertheless, McNamara's logic prevailed, and the first round of SALT agreements two years later stifled ABM developments while leaving offensive technology essentially unconstrained. This institutionalized the strategic doctrine that is loosely referred to today as mutual assured destruction, or MAD. In consonance with this doctrine, at the beginning of 1976 the United States closed the one operational ABM facility it was allowed, the Safeguard missile defense facility near Grand Forks, North Dakota. At the same time, Congress ordered the Department of Defense to reorient its ABM program from one designed to produce a successor system to Safeguard, to a limited research program to insure against a surprise Soviet breakout from the ABM Treaty.

Seven years later, President Ronald Reagan went before the American public with a nationally televised speech in which he announced his decision to order the Department of Defense to expand its research and development efforts to see if ABM technology had advanced to where the deployment of an effective strategic defense might be possible at some point in the future. To a number of his critics, Reagan's decision seemed to be a hasty, ill-advised reversal of past national policy. However, a closer examination indicates that Reagan's decision came in response to a strategic crisis (the increasing vulnerability of U.S. ICBMs to a Soviet first strike) and was taken on the advice of the nation's top military advisors, the Joint Chiefs of Staff and the National Security Council. Furthermore, the decision aimed to capitalize on a number of important advances in ABM technology that had been produced by a lengthy research and development effort.

Forty Years of ABM Research

In 1983, America's involvement with ballistic missile defenses stretched back almost 40 years to efforts of the Allies to find a defense against German V-2 missiles, which first struck England in September 1944. Concern over ballistic missiles intensified within the U.S. defense establishment when German plans to strike New York City with ICBMs were uncovered after the war. Within a year of the war's end, the Army Air Forces (soon to become the Air Force) commissioned two technical studies to examine the feasibility of an anti-missile system that could destroy incoming missiles at altitudes up to 500,000 feet and at ranges of up to 500 miles. Even before the Air Force had started its studies, the Army had initiated the Nike anti-aircraft program. In the mid-1950s, the Army began to place more emphasis on the ABM mission in response to early intelligence reports of a developing Soviet ICBM capability.

As the Army began to pay more attention to the ABM mission, the first major milestone in the U.S. Anti-Ballistic Missile program was achieved. As late as the mid-1950s, a number of scientists doubted that it was possible to intercept ballistic missiles because of their extremely high velocity, which meant that intercepting a missile would be like hitting a bullet with a bullet. However, in a 1955 study sponsored by the Army and Air Force, Bell Laboratories completed 50,000 computer simulations of missile intercepts, which indicated that it was theoreti-

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On February 11, 1983, the Joint Chiefs of Staff unanimously recommended a shift to a long-term strategy based on strategic defense.

cally possible to hit a missile with another missile.

In 1958, the Army and Air Force ABM programs were merged and the Army given responsibility for ABM developments. At this time, the principal candidate for an ABM system was the Army's Nike-Zeus—a three-stage, nuclear-tipped missile. In 1962, Zeus demonstrated sufficient accuracy to destroy an ICBM reentry vehicle (RV). Nevertheless, problems with the Zeus system, among them its inability to distinguish warheads from booster debris, led to the addition of a second missile to the system. The Sprint missile was to complement Zeus by intercepting warheads at low altitudes, after atmospheric friction had stripped away booster debris. Together, these two missiles constituted a layered defense, with Zeus attacking warheads at altitudes of 70 to 100 miles and Sprint attacking at altitudes of 20 to 30 miles. Another important change was the development of phased-array radar. The new radar had a much greater capacity for handling targets because its search beam was electronically pointed and could be moved much more rapidly than the beam of a conventional radar, which aims its search beam by moving its entire antenna dish.

The Nth Country Threat

By this time, the secretary of defense was Robert McNamara, who opposed the deployment of an ABM system because he believed the Soviets could easily overcome it by adding decoys and warheads. As a result, he felt that an ABM system would not increase security, but would merely intensify the nuclear arms race. Nevertheless, he was forced to change his policy when the Soviets began deploying the Galosh system around Moscow, thereby creating political pressure for the United States to field its own ABM system. At first, McNamara hoped to head off a U.S. deployment by persuading the Soviets to abandon their Galosh system. When he and Johnson could not dissuade Kosygin at the Glassboro summit in June 1967 and the Republicans indicated they would make ABM an issue in the 1968 election, McNamara

yielded to the pressure for an ABM deployment.

On September 18, 1967, at the end of a speech describing all the reasons against deploying an ABM system, McNamara announced the United States would field a thin ABM system to defend against the so-called Nth country threat, an unsophisticated ICBM attack from a country such as China, which was developing ballistic missiles at the time. McNamara hoped that the capabilities of Sentinel, as this system was to be called, would be limited enough not to trigger an expansion of Soviet offensive forces, thereby heating up the arms race.

Soon after taking office in 1969, President Richard Nixon reoriented Sentinel from population defense against the Nth country threat to defense of ICBMs. This reorientation eliminated the major political problems caused by the necessity of locating Sentinel sites with their nuclear warheads near population centers.

Also, continuing the deployment of an ABM system would give the Nixon administration a position of some strength from which to bargain with the Soviets in arms talks that would soon begin. The ABM system, now re-designated Safeguard, called for the deployment of defensive missiles at up to 12 locations with construction to begin immediately at only two sites: Malmstrom, Montana, and Grand Forks, North Dakota.

The use of Safeguard as a bargaining chip was the principal U.S. strategy in the 30 months of SALT talks that culminated in May 1972 with the signing of the ABM Treaty. The treaty allowed each side to deploy up to two ABM sites, each having 100 interceptor missiles. One site was to defend the national command authorities at each nation's capital city; the other was to defend an ICBM field. A 1974 protocol further restricted deployments to only one site.

These agreements effectively sounded the death knell of Safeguard. Under constant attack by liberal congressmen who considered the program too costly and technically flawed and saw Safeguard as a symbol for a military establishment that had gotten out of control in Vietnam, Safeguard limped along until 1976 when the only completed site was closed within a month of being declared operational.

Advances in Computing Power

When Congress ordered Safeguard closed, it also directed the Army to reorient its ABM efforts. Until that time, the Site Defense program, the core of America's missile defense research and development effort, had aimed to develop a successor system to Safeguard. Now the Army's ABM program was to become essentially a research-only program to keep the United States abreast of the latest developments as a hedge against a possible technological breakthrough by the Soviets. After 1976, Army research efforts focused on eliminating the technical limitations that had plagued Safeguard; and by 1983, significant advances had been made in a number of critical areas.

One especially fruitful research area was the field of computer science, where speed and computing power increased considerably. The original Safeguard computer could complete only 10 million instructions per second (MIPS). For its Site Defense program the Army had planned to use a commercial Control Data Corporation 7700 computer with an operating capability of 20 MIPS. Soon after this, parallel processing was used to increase the speed of computers to 800 MIPS. At the same time, the Army was developing small, powerful computers that could be used in the guidance systems of kinetic kill vehicles that destroy their targets by physically colliding with them. These computers were to operate at a rate of 100 MIPS, weigh about 80 pounds, be about a foot long, and have a diameter of 14 inches. The Army also made progress in the development of infrared sensors that could be used to detect and track reentry vehicles beyond the range of ground-based radar systems.

These and other advances in technology laid the groundwork for a fundamental shift in the concept for intercepting ICBMs. Prior to these advances, ABM interceptors such as Zeus were so inaccurate that they had to rely upon nuclear warheads to insure destruction of reentry vehicles. Furthermore, limitations in sensors and guidance systems dictated that these nuclear-tipped missiles be guided from the ground. The requirements for nuclear warheads and ground-based control greatly limited the Safeguard system. But small and powerful computers and improved seekers made it possible to develop a new generation of ABM interceptors that were self-contained and so accurate that they could destroy incoming RVs by actually crashing into them, as was confirmed by the fourth Homing Overlay Experiment completed on June 10, 1984.

Strategic Crisis

The SALT agreements of 1972 set the stage for a strategic crisis at the end of the decade. While the ABM Treaty led to the conversion of the U.S. ABM program into a largely research-only program, the interim accord on offensive systems produced no comparable restraints on offensive weapons and technologies. Indeed, one of the major shortcomings of SALT I from the American

perspective was its failure to place adequate restrictions on the Soviet heavy-ICBM force. As a result, these missiles gave Soviet strategic forces a tremendous advantage in throw weight. Furthermore, the SALT I accord left MIRV (multiple independently targeted reentry vehicle) technology unconstrained. The significance of this situation was fully recognized by Senator Henry "Scoop" Jackson, Democrat of Washington, who warned during ratification procedures in the Senate that the Soviets could gain a first-strike capability within five years by MIRVing their huge SS-9 missiles.

In the second half of the 1970s, Jackson's fears began to be realized. The Soviets MIRVed their new SS-18s, which had a throw weight that was 30 percent higher than the 12,000 to 15,000 pounds of the SS-9s they replaced. By the time the SALT II agreement was ready for approval, the SS-18 had been tested with 10 warheads and had shown an accuracy of .1 nautical mile. This meant that by the early 1980s the Soviets could hold the American ICBM fleet at risk. Furthermore, the limits negotiated on Soviet offensive forces under SALT II did nothing to reduce the threat posed by the Soviet heavy ICBMs, for the Soviets refused to accept a U.S. proposal that would have reduced their SS-18 fleet by 50 percent. Each side was to be allowed 2,250 strategic launchers, 1,200 of which could be MIRVed. Thus, even if the SALT II process had not collapsed in the wake of the Soviet invasion of Afghanistan, U.S. ICBMs would still have been threatened by 308 Soviet SS-18s.

The failure of SALT II to restrain the heavy ICBMs of the Soviet Union, the collapse of the SALT process, and steady improvements in the Soviet ICBM force created a strategic crisis. Some answer had to be found to the vulnerability of the U.S. Minuteman force.

Ridicule for Dense Pack

Two solutions to the crisis were seriously considered in the late 1970s: 1) defending Minuteman missiles with an updated ABM system, and 2) fielding a new missile, the MX, in some form of basing mode that would make it invulnerable to a first strike. While the idea of defending ICBMs was never out of the collective consciousness of the American strategic community, the first possibility was generally ruled out because of the restrictions imposed by the ABM Treaty of 1972 and the protocol of 1974.

More attention was given to the second option. The U.S. had been trying to field a new ICBM since the late 1960s, when the so-called Strat-X study described possible basing modes for a successor to the Minuteman. By the time Reagan had become president, developments had proceeded to the point where the Carter administration had decided to field the MX in a multiple protective-shelter basing mode in the southwestern United States. Because this decision was extremely unpopular in the Southwest, Reagan cancelled it soon after he took office in 1981. Yet, two years later his administration had still not found an acceptable basing mode of it own, and its efforts now were being complicated by the nuclear freeze movement, which was reaching the peak of its popularity. This search for an appropriate basing mode reached a critical point in December 1982, when

Reagan's dense-pack basing mode proposal met with widespread ridicule.

The rejection of dense pack meant that the American government was deadlocked in its efforts to respond to growing Soviet strategic capabilities. As 1982 was ending, Republican Senator William Cohen summarized the political and strategic situation in these words:

...conservative Republican presidents (moderates or liberals need not apply) may be able to open doors to China and secure support for arms control treaties yet be unable to sustain a significant or even stable growth in military spending.

By contrast, liberal or moderate Democratic presidents may be able to secure support for strategic and conventional modernization (few questioned the need for the MX, Stealth aircraft, Trident submarine, or a Rapid Deployment Force under Jimmy Carter) but will be less able to obtain ratification of arms control treaties.

Yet, if the U.S. did not respond in some way to the growing threat to its ICBMs, it risked sending a signal to the Soviets that America would acquiesce to an apparent Soviet drive for strategic dominance.

A President Favorably Disposed

The president who faced this strategic crisis at the end of 1982 found the doctrine of offensive nuclear deterrence distasteful. Daniel O. Graham, a retired three-star Army general who had served as a campaign advisor to Reagan in 1976 and 1980, recalled that Reagan was already displeased with MAD during his unsuccessful run for the Republican nomination in 1976. According to Graham, Reagan had compared MAD to a situation in which two men trained loaded and cocked pistols on each other's head. If either man sneezed they would kill each other.

Reagan was concerned that despite America's mastery of high technology, the nation was unable to defend itself against Soviet nuclear weapons. This had become painfully obvious to him during a July 1979 visit to the Cheyenne Mountain underground command center in Colorado, where he witnessed a demonstration of the tracking and display capabilities of the center. Few who watch the demonstration are unmoved as the simulated tracks of reentry vehicles appear at the top of the display screen and progress rapidly toward theoretical targets in the United States. Reagan asked General James E. Hill, the NORAD commander, if there wasn't something the U.S. could do to stop the progress of these warheads. No, replied General Hill. Furthermore, the general continued, even the Cheyenne Mountain underground was not likely to survive an attack, for it had been built to withstand the effects only of 5-megaton warheads; Soviet SS-18s could deliver warheads of 25 megatons, which could "blow away" the command center. Reagan was sobered by the implications of what he saw and heard. All the way back to California on the plane that evening, he and aide Martin Anderson talked about the terrible vulnerability of the United States.

Reagan carried into the White House his discomfort

with nuclear deterrence based on mutual assured destruction. After taking office, he expressed concern about the "nakedness" of deterrence without defense to presidential science advisor George Keyworth. Yet when he called upon the bureaucracy for some kind of response to his concerns, none was offered. The president's closest advisors were more responsive.

Between 1979 and early 1983, President Reagan received recommendations and information on America's strategic situation from a variety of sources. To a large measure, these men shared Reagan's dissatisfaction with MAD. Furthermore, they believed that the United States and the Soviet Union were in a head-to-head strategic competition that the U.S. was losing and would continue to lose until the ground of the competition was shifted to the high technology realm that was America's

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strong suit. The initiation of a strategic defense program, especially one focused on space-based defenses, would move the competition into the high technology arena. Finally, from the perspective of grand strategy, an expanded space-based defense effort made sense, because the economic exploitation of space was man's next great frontier. The thrust of this advice was that the pursuit of offensive nuclear weapons was no longer adequate to insure deterrence; it was time to launch a major new strategic defense program.

A Wallop from Wyoming

One of the men who presented these views to the president was Malcolm Wallop. When he came from Wyoming to the Senate in 1977, Wallop was amazed to find the people charged with the defense of the nation calmly accepting America's vulnerability to a devastating nuclear attack. As a member of the Senate Committee on Intelligence, he had learned firsthand what could be done with modern optics and pointing and tracking technology. Since these technologies are important in the development of laser weapons, it is not surprising that Wallop was impressed when he learned of a proposal to defend the United States against a Soviet ICBM attack with a system of space-based, laser-armed battle stations. The author of this plan was a senior aerospace engineer named Maxwell Hunter, whose ideas had been made public in an October 1978 article in Aviation Week. Wallop met Hunter through the senator's close aide Angelo Codevilla, a strong supporter of strategic defense.

In addition to advising Wallop, Hunter set up the so-called Gang of Four briefing that described key ABM technologies and how they would fit together in a coherent ABM system. Under the sponsorship of Wallop, the "gang" gave the briefing to a number of senators in the fall of 1979. Included in this group were William Cohen (R-Maine), Jake Garn (R-Utah), Ernest Hollings (D-South Carolina), Henry Jackson (D-Washington), Roger Jepsen (R-Iowa), Daniel Moynihan (D-New York), Harrison Schmitt (R-New Mexico), John Tower (R-Texas), and John Warner (R-Virginia).

By the summer of 1979, Malcolm Wallop was confident that defensive technologies had matured to the point where an ABM system could be deployed more cheaply than could the countermeasures required to overcome it. He expressed these views in an article that appeared in the Fall 1979 edition of *Strategic Review*. Before the article was published, he sent a copy of the manuscript to Ronald Reagan, who was campaigning for the presidency. According to one of Wallop's aides, Reagan responded with supportive remarks. Shortly thereafter, in August 1979, just after Reagan had been to Cheyenne Mountain, Wallop met Reagan during a camping trip in the Sierra Madre Mountains and discussed missile defense with him.

High Frontier

Six months later, during a campaign trip in New Hampshire, Reagan received another recommendation in favor of strategic defense, this time from his campaign advisor Daniel Graham, who would later expand his ideas on space developments and strategic defense into what became known as the High Frontier concept. Graham saw space as the next economic frontier, and believed that the nation that first took advantage of the economic opportunities offered by space would become the dominant world power. In Graham's view, the Soviets understood this and were driving to achieve dominance in this sphere. Just as warships had been necessary to protect commerce on the high seas during the age of European expansion, military space systems had to be available to protect the high-value assets that would be involved in the full economic development of space. A spin-off from these space forces would be the ability to defend against ballistic missiles.

In addition to direct approaches to members of the Reagan government, Graham formed a partnership with an influential Republican supporter named Karl Bendetsen in an effort to persuade the president to make missile defense a top national priority. Bendetsen recruited a private panel to advise Graham as he and his staff developed the *High Frontier* study, which Graham later independently published under the aegis of The Heritage Foundation. To insure access to the White House, Bendetsen made sure that his panel included a number of personal friends and confidants of the president: Joseph Coors, William Wilson, Jacqueline Hume, and Edward Teller. The principal White House contact for Bendetsen and his panel was Edwin Meese, then counselor to the president. Additionally, George Keyworth, President Reagan's science advisor, served as an unofficial observer with the High Frontier panel.

After several meetings in the fall of 1981, during which panel members reviewed the strategic situation of the United States vis-à-vis the Soviet Union and explored the technical aspects of missile defense, this group presented a briefing and a position paper to President Reagan on January 8, 1982. Following a warning of apparent Soviet efforts to achieve space dominance, the panel, speaking through Bendetsen, advised the president to select a commission of experts to identify technologies that could be used to develop strategic defenses, and then to establish an organization on the model of the Manhattan Project (which developed the atom bomb) to rush development of an effective missile defense system. In the opinion of panel members, it was especially important to establish a comparable office to keep the Washington bureaucracy from strangling the new strategic initiative in its cradle.

GAO Endorses Lasers

The High Frontier panel was not alone in finding that ABM-related technology had matured to where it was reasonable to reconsider deployment of a strategic defense system. In response to the interest of Congress, the Defense Department, and the news media in spacebased lasers, the General Accounting Office completed a study on the potential of lasers in a missile defense mode. The results of this study were published on February 26, 1982. One conclusion in the study stated:

The emergence of SBL [space-based laser] weapon technology, if successfully developed for military applications, could affect strategic policy and help bring about a long-term transition from offense-based nuclear deterrence toward defensive dominance. Over the long haul, such a transition could help increase U.S. national security greatly by providing a physical survival against nuclear threats rather than a psychological deterrence as now exists. Realistically, early generations of SBL weapons will not provide the important military capabilities needed to achieve defensive dominance, but would represent important steps toward developing such a system.

Within a year of the appearance of this GAO report, two major centers of support for a new strategic defense program developed within the administration itself. These were the National Security Council, where Robert C. McFarlane, Assistant National Security Advisor, was the principal figure, and the Joint Chiefs of Staff, where Admiral James D. Watkins, Chief of Naval Operations, was the central actor.

The Bishops' Checkmate

McFarlane had been Special Assistant for National Security to President Ford when the United States was planning to have the MX missile operational by 1983 as a response to the expected vulnerability of land-based ICBMs. It was now 1982, the Minuteman was becoming vulnerable, and still the U.S. could not make a decision on the MX basing mode. In McFarlane's words, "The United States faced a military crisis; our deterrent force was badly out of balance with the Soviet force, and we needed to compensate for that militarily." Moreover, the nuclear freeze movement seemed to be gaining momentum and the Catholic bishops were starting to work on their pastoral letter, *The Challenge of Peace*. The sentiments these developments seemed to reflect threatened to cut off the modernization of strategic forces pursued by Reagan's administration.

A shift from offense- to defense-based deterrence seemed to offer a solution to these problems. For one thing, it would give the Reagan administration the moral high ground and thus undercut the freeze movement. Moreover, McFarlane believed, a new ABM program would give America an edge by moving the strategic competition into the realm of high technology.

For these reasons, McFarlane advised the president in the fall of 1982 that he was working on a concept that might solve the administration's strategic problems. Mc-Farlane worked closely with a small group within the NSC staff, including Admiral John Poindexter.

Watkins' "Valley of Death"

While McFarlane and the NSC staff were developing a concept for strategic defense, Admiral Watkins was heavily involved in the JCS search for an appropriate recommendation on the MX basing mode. In the sixmonth period between the summer of 1982 and early 1983, the chiefs met over 40 times to consider the issues raised by the MX basing problem. As a result of his participation in these activities, Watkins concluded that the search for an invulnerable ICBM basing mode was taking the United States into what he called a "strategic valley of death," because he believed the U.S. could not match the Soviet Union in the development of ICBMs. Any attempt to solve the crisis of ICBM vulnerability by deploying the MX missile was tantamount to competing with the Soviets where they were strongest. Like Mc-Farlane, Watkins believed America should look for answers to this vulnerability crisis in her technical superiority.

The difficulty the United States was having in finding a solution to the vulnerability of its ICBMs was complicated in some quarters by the moral implications of deterrence based on nuclear retaliation. Although Watkins had no personal qualms about the morality of nuclear deterrence, as a devout Catholic he was concerned about the effects on naval personnel of the pastoral letter on nuclear deterrence the American bishops were then preparing. Indeed, in the late summer of 1982, Watkins was disturbed to learn from the chief of Navy chaplains that Catholic officers and enlisted men were beginning to leave the Navy in response to the work of the bishops. Not only did Watkins speak out in support of the morality of nuclear deterrence, but he also began to think that it would be wise for the nation to seek a defensive alternative to MAD.

On January 10, 1983, the Joint Chiefs of Staff were advised by William Clark, Reagan's national security advisor, that their next meeting with the president would



A shift from offense- to defense-based deterrence undercut the freeze movement, and thus had political as well as strategic implications.

take place on February 11. At that time, each chief would be expected to present his position on the MX and its associated basing modes.

Teller "Pops-up"

The chiefs were now under pressure to draw some conclusions from their six-month-long review of strategic issues. This set the stage in Watkins' mind for some revolutionary thinking. In a few weeks he would have to present his recommendations on the U.S. strategic force structure to the president. His participation in the JCS review of strategic issues had convinced him that the search for a secure basing mode for the MX was bankrupt and at the same time had exposed him to information on the Defense Department's anti-ballistic missile and anti-satellite programs. Furthermore, he suspected that the American commitment to offensive nuclear deterrence was on the wane. Yet he had no concrete suggestions for revising the force structure, nor could he suggest a replacement for the prevailing concept of nuclear deterrence. Then, on January 20, Watkins had lunch with a group of high-level advisors that included Edward Teller. During the luncheon, Teller talked about the possibilities for missile defense that were offered by new technical developments. Specifically, he discussed using the Excalibur X-ray laser in a "pop-up" mode, in which it would be launched into space from a submarine to defend against a Soviet ICBM attack.

Teller's remarks made a deep impression on the admiral because of his reputation and because of Watkins' faith in American technology. Moreover, what Teller said more or less confirmed what Watkins had been hearing in JCS briefings on strategic technologies and in discussions with his own R&D advisors.

Watkins pressed Teller for more information on ABM technology. Could a power source for a terrestrial laser be made small enough to fit in this room? Yes, responded Teller, although it would perhaps be a bit longer. Then lasers could be installed aboard ballistic missile submarines, Watkins realized, and stationed under the Arctic ice off the coast of the Eurasian landmass. In case



The National Security Council was an important center of support for strategic defense, with Robert C. McFarlane, then Assistant National Security Advisor, its principal proponent.

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of an attack, the submarines could "pop-up" and attack Soviet ICBMs, using space-based mirrors to direct the laser beams onto the missiles. Watkins then asked if the national laboratories could produce the technologies that would make ballistic missile defense feasible within 20 years. Unquestionably, responded Teller. Watkins then asked specifically if the U.S. could accomplish detection, boost-phase intercept, and battle management capabilities within that 20-year period. The answer was yes.

Weinberger's Opposition

Now Watkins knew what he would recommend to the president in February. He directed his staff "to develop, on a 'close-hold' basis, a very brief presentation that would offer a vision of strategic defense as a way out of the MX debate." There followed a series of meetings in the "sea cabin" (the Pentagon office of the Chief of Naval Operations) in which Captain Linton Brooks and Admiral W. J. Holland (head of OP-65, the Navy staff's Theater and Strategic Nuclear Warfare Division) presented various "drafts" of the five-minute briefing for Watkins' approval. During the week of January 24, after many rewrites, Brooks and Holland finally found the proper balance and wording. The briefing's main points were that the United States should quit looking for a complex basing mode for the MX missile, deploy a small number of MXs in Minuteman silos, and start developing a strategic defense that would provide the basis for a shift "to a long-term strategy based on strategic defense." Such a change in strategy "is both militarily and morally sound.

With a week now remaining before the chiefs were scheduled to meet with the president, Watkins advised General John Vessey, chairman of the JCS, that he had a position paper he thought should be presented to the president. Vessey arranged for a February 5 meeting of the chiefs at which Watkins presented his views. After hearing Watkins' briefing, the chiefs agreed that this should be the position the JCS presented to the president and that General Vessey would present the briefing.

When the chiefs approached Secretary Caspar Weinberger with their position, they found that he was opposed to the idea of strategic defense. However, as was his practice in matters such as this, he believed that the president should hear the views of the chiefs, and he agreed that General Vessey would present the JCS position to the president on February 11. While these events were occurring, Watkins informally apprised McFarlane and Poindexter of his actions, advising McFarlane that he favored some role for missile defense in America's strategic policies. McFarlane encouraged Watkins to develop a consensus among the chiefs on this issue, for he believed a unanimous recommendation from the chiefs would be required if the president were to make the desired decision.

"Don't Lose Those Words"

On February 11, 1983, Washington was in the grips of one of its worst snow storms. Road conditions were so bad that the chiefs had to use four-wheel-drive vehicles to make it to the White House for their meeting with the president. The hour-and-a-half meeting started with Secretary Weinberger presenting his recommendations on the MX basing mode. He then advised the president that the chiefs had a different view, which he believed the president should hear.

General Vessey then delivered a broad 30-minute briefing that was based on the views presented by Admiral Watkins and included some of the phrases Watkins had used in briefing the Joint Chiefs. After this, each chief was given an opportunity to speak, and Watkins strongly supported the position Vessey had presented. Because McFarlane had a good idea what the chiefs would recommend, he was prepared to exploit this opportunity to push the president toward a decision to develop a ballistic missile defense capability. When Watkins finished, McFarlane interjected:

Mr. President, this is very, very important. For 37 years we have relied on offensive deterrence based on the threat of nuclear counterattack with surviving forces because there has been no alternative. But now for the first time in history what we are hearing here is that there might be another way which would enable you to defeat an attack by defending against it and over time relying less on nuclear weapons.

The president indicated that he understood the significance of the JCS position. To be sure that the position was unanimous, he asked each chief in turn if he agreed. Each confirmed that he believed it was time to explore the possibilities offered by ballistic missile defense (BMD). The president then informed the chiefs that he was very interested in what they had recommended and asked them to work diligently to develop a missile defense proposal and report the results of their work as soon as possible. Moreover, with his sensitivity to politically effective rhetoric, he took special note of one particular expression used by General Vessey, an expression Vessey himself had picked up from the briefing Watkins had presented earlier to the chiefs: "Wouldn't it be better to protect the American people rather than avenge them?" Reagan liked this phrase very much and remarked: "Don't lose those words."

As the meeting was breaking up at about 1:30 P.M., McFarlane sought to insure that the chiefs understood that they had "really struck a responsive chord" with the president. He told each of them that he expected them to develop a thorough report advising the president of an appropriate approach to take in developing a missile defense capability.

The chiefs and McFarlane thought they would have about six months to refine their thinking on the matter of strategic defense. Specifically, at the earliest, Mc-Farlane believed the president would not expect a report until sometime in April, after the Scowcroft commission completed its review of the strategic issues surrounding the U.S. search for a solution to the vulnerability of its Minuteman missiles. However, a month after his meeting with the chiefs, Reagan began to prod McFarlane and National Security Advisor William Clark to speed up their work.

In the middle of March, the president again indicated his desire to have the strategic defense proposal completed quickly. Congress was about to begin its work on authorizations for the Defense Department, and Reagan was worried about the state of his defense program. He wanted to give a major speech on defense issues in which he could "break something new." Specifically, he wanted to provide the nation with something reassuring that might stem the progress of the freeze movement. Mc-Farlane passed this message to the chiefs and at the same time put speech writers to work on the main body of a speech dealing with general defense matters. The writers were instructed to leave space in the speech for a fiveminute insert on the president's strategic defense program that McFarlane would personally write and coordinate with top administration officials such as Secretary of State George Shultz and Secretary of Defense Caspar Weinberger.

"Impotent and Obsolete"

On the evening of March 23, 1983, President Reagan gave his nationally televised defense speech in which he announced the beginning of a major research and development program to see if a missile defense could be deployed at some time in the future. The president couched his speech in the most general terms, avoiding any specific references to such things as protecting populations and defending missile silos. Reagan believed that defensive technologies had advanced to where the U.S. could hope to prevent nuclear aggression by developing a defensive system that would "save lives" rather than "avenge them." He realized that this would be a "formidable technical task"; it could "take years, even decades, of effort on many fronts" to produce a new ABM system. Nevertheless, it was clearly time to begin the effort, so the president called upon the American "scientific community who gave us nuclear weapons to turn their great talents to the cause of mankind and world peace; to give us the means of rendering these nuclear weapons impotent and obsolete." The effort Reagan envisioned was to be consistent with U.S. obligations under the ABM Treaty and would involve close consultation with American allies. It was to begin immediately with the establishment of "a comprehensive and intensive effort to define a long-term research and development program" in support of the "ultimate goal of eliminating the threat posed by strategic nuclear missiles."

Seen against its background of a strategic crisis and almost 40 years of developments in ABM technology, Reagan's 1983 decision to expand and intensify the U.S. anti-ballistic missile program seems prudent. Moreover, technical progress has continued apace since 1983, so that today the Strategic Defense Initiative Organization (SDIO) is a mature research and development program in which the key issues no longer concern the basic technical feasibility of ballistic missile defenses.

As currently envisioned, the central subsystem of the first strategic defense system the U.S. might deploy in the future would be Brilliant Pebbles, a constellation of small homing rockets, each having the capability to find and attack its own target. The lineage of Brilliant Pebbles can be traced back through a decade and a half of missile defense work completed by the Army. Furthermore, the future continues to be bright for the directed-energy technology that did so much to excite renewed interest in missile defenses as the '70s ended. While this technology has not matured as rapidly as kinetic-energy kill systems, important roles are still envisioned for directedenergy weapons in later phases of any strategic defense system the United States might field.

Today, in spite of budget limitations, the SDI program remains on schedule in pursuit of its principal goal: within the next three years to provide the information the president needs to make an informed decision about the deployment of a missile defense system. Current evidence indicates that if the nation so chooses, before the century is out, the United States can begin to field an effective missile defense system built around Brilliant Pebbles for about \$55 billion.

Such a system would have the capability to blunt any major nuclear attack against the United States and would therefore deprive hostile planners of any hope of bring-

President Reagan took special note of an expression heard in his meeting with the Chiefs: "Wouldn't it be better to protect the American people rather than avenge them?"

ing off an effective first strike against U.S. ICBMs. Furthermore, the capabilities of this first system would be enhanced by the addition of new defensive systems developed through SDIO's advanced technologies program. Such an enhanced defensive system, in conjunction with arms control agreements, could move the world substantially closer to the situation envisioned by President Reagan in which nuclear weapons are "impotent and obsolete."

CASTRO'S LAST STAND

Can Cuba Be Freed Without a Bloodbath?

LUIS E. AGUILAR

L ime is working against Fidel Castro. His 31-year dictatorship is besieged by mounting external and internal problems. The collapse of Communism in Eastern Europe, the ailing Soviet regime, and the democratization of Latin America have left the dictator politically and ideologically isolated, with dwindling economic resources.

A new generation of Cubans, indifferent to the myths of Che Guevara and Castro, is demanding its place in the sun. Housing, clothing, and food are becoming scarce. A bloated army has nowhere to march. And the aging "Maximo Líder" promises only more sacrifices and an isolationist stand against the whole world.

Signs of weakness are omnipresent: the militarization of the Committees for the Defense of the Revolution (Stalinist-inspired neighborhood watch groups), the arrest of all dissenters, and recent friction with the Catholic Church.

The last schism is significant. The church, never strong in Cuba, has been unable to overcome the revolution's Communist restrictions on worship. In spite of that apparent weakness, Castro is beginning to see the church as a threat to his regime. In April 1990, he suddenly abandoned plans for rapprochement with the church, branding it as imperialist and an "enemy of the revolution." Permission for a papal visit this Christmas became mired in "confusion," forcing the Pope to postpone his trip indefinitely.

Castro's criticism and the diplomatic reversal were prompted by an unexpected demonstration of mass devotion for the Virgin of the Caridad del Cobre, patroness of Cuba, that swelled a procession from her Santiago shrine to Havana. The vast hymn-singing crowds shocked Castro and blew the lid off 30 years of strictly supervised socialist education. Castro considered intolerable a papal visit that could attract even larger crowds, and he appears increasingly afraid of popular manifestations—any gathering not organized by the government—whether they be religious or political in nature.

Euphoria over Castro's woes is spreading among Cuban exiles, spurred by widespread international media predictions of the dictator's coming fall. In Miami, Castro's perceived lease on power has been reduced to months, as hopes rapidly mount that Cuba will soon go the way of Eastern Europe. However, the exile community may need to become reacquainted with the realities of Castro's hold over modern-day Cuba.

The People's Hitler

No European Communist leader—no reigning leader in the world in fact—has Castro's record and characteristics. He reached power with heroic status and without foreign help, and gained enormous worldwide influence with his revolutionary fervor and declarations of autonomy. At the height of his prestige he had troops in Angola, Yemen, Ethiopia, and Vietnam. The Soviet Union and the United States treated him as a power to be reckoned with.

These historic achievements dazzled the Cuban people from the start and must still be taken into account. Castro is old and gray, his victories faded memories, his failures all too visible—yet his regard by the Cuban people is difficult to assess. No one claims he is hated by the majority. Some make fun of him; the young consider him a crazy old man. Collective despair is growing, but there lingers awe at what Castro was able to achieve and a vague Hitlerian faith that he can overcome any crisis.

The Hitler comparison is not farfetched. Castro also rose to power after a failed military coup, then claimed, like Hitler, that "history will absolve me." He practices the same repetitive oratory to mesmerize the masses, keeps a similarly disorganized work schedule, and demands unconditional loyalty on the premise that he represents the destiny of his people. Like Hitler, Castro has a streak of nihilism. It first surfaced during the missile crisis and has become a leitmotif in his recent speeches, wherein he repeatedly asserts that "the island will sink into the ocean," or become "ashes and stones" if the enemy tries to conquer it; and that "all Cubans, old and

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