

**High Frontier:
The Failure of a Bold New Space Initiative**

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Introduction

This paper explores the primary factors that contributed to the failure of the Reagan-era High Frontier project in achieving their goal of adopting their concept into the United States defense strategy. The High Frontier program was a privately funded conservative think tank begun in the summer of 1981 on orders from the White House to explore the feasibility and utility of a space-borne nuclear defense system for the United States. While historiography is mixed over whether High Frontier contributed in any meaningful way to the later Strategic Defense Initiative (SDI), the program clearly failed to reach a level of commitment even remotely close to that of the SDI. Due to the initial crippling of the concept's internal cohesion through political posturing and competition amongst its panelists, as well as the eventual discord between the complexity of the High Frontier proposal and the simple, straightforward defense plans which the President desired, High Frontier fell far short of their end-goal of adoption into the early Reagan administration's new defense strategy.

The factors which led to the program's demise were largely self-inflicted and fall into two distinct categories: personal and organizational conflict within the project itself and an overall misalignment of the organization with the goals and ideals held by the administration of Ronald Reagan, as well as the President's own cognitive challenges. Current historiography only makes passing mention to High Frontier, with a token reference to the program's failure, usually attributed to clashing ideologies of its panelists. The organization made key missteps in its inclusion of individuals with strongly divergent interests, and these failures decisively contributed to the divergence of High Frontier's conceptualization from President Reagan's vision for a future space-borne defense, ultimately dooming the program.

Cold War Context

Upon Reagan's inauguration in January 1981, the Cold War had entered a new phase of tensions. Foreign policy was dominated by the Iran Hostage Crisis as well as the energy crises of the past decade, but the Soviet Union remained America's primary adversary. Still, in the 1970s, the goal of eliminating altogether the Soviet Union and her allies had faded, replaced by America's recognition, under the policy of détente, of the communists' right to exist. The success of détente rested on the military doctrine of Mutually Assured Destruction, or MAD, a belief in the mutual fear of global nuclear war outweighing the desire to destroy the enemy. Towards the end of its term, the Carter administration had toughened toward Moscow, inflamed by the Soviet invasion of Afghanistan and the subsequent difficulty in nuclear disarmament negotiations. Thus, the Cold War had reignited, thanks to Carter's new approach and Reagan's hardline anti-communist stances.

Regarding the pivotal nuclear arms sphere, the Western and Communist nations had forsaken early Cold War brinkmanship involving arms buildups, aggressive competition, and force projection for direct diplomatic contact, encouraged by détente. The State Department inherited by Reagan in 1981 had, over the past decade, signed landmark nuclear weapons agreements with the USSR that limited new types of hardware, testing, and stockpiles. This reliance on diplomatic agreements like SALT I and II indicated a move away from the nuclear arms race towards a new policy of mutual interest in maintaining nuclear safety. The election of Ronald Reagan in November 1980 threatened to change such peaceful coexistence. His landslide victory served as a lightning rod for conservative programs, giving him an electoral mandate that advanced his agenda of economic competition with the Soviet Union, prioritization of national defense, the dismantling of the dangerous MAD doctrine, and increased military

spending. The election encouraged, among other things, vigorous investment in military programs such as the nascent High Frontier concept.

Few administration priorities ranked higher than addressing U.S. military capabilities. A major portion of Reagan's military agenda provided for a new national defense system, which had been a personal interest of the President for some time. One of then-candidate Reagan's core objectives was to enlarge military budgets to shore up supposed weaknesses within the armed forces under Jimmy Carter. Reagan had a soft spot for new technologies, especially those deployable in a theatre in which the U.S. still held a distinct advantage: outer space. This fascination with advanced technologies would later spawn the Strategic Defense Initiative (SDI) in 1983, a program of futuristic space-based defense that promised to usher the world into a post-nuclear age. Upon entering office, Reagan's personal interest in the subject of space defense may have encouraged advocates of High Frontier to dust off some of their most ambitious proposals. After all, they shared the President's deep resolve for contributing to a larger, more advanced military response to the USSR, including taking the unrepresented step of extending military influence into space. Yet High Frontier ultimately lost the battle for Reagan's support, a loss chalked up to a convoluted message that, when presented to the White House, undermined the influence and effectiveness of the panel's recommendations within the administration.¹

Inspiration and Evolution of High Frontier

Through his tenure in office, the President harkened back to policies that he felt best personified America itself, chief among them being a strong military acumen. The early days of the Cold War were a golden age of American military exceptionalism, with the United States

¹ Steven W. Guerrier and Wayne C. Thompson, *Perspectives on Strategic Defense* (Boulder, CO: Westview Press, 1987), 36.

exerting hegemonic power over its allies and enjoying a significant advantage over the Soviets with regards to nuclear development, testing, and capability. Reagan seized on this period as an analogy for his vision of 1980s America, focusing specifically on the Manhattan Project that built the atomic bomb and, to a lesser extent, the Apollo moon-landing program as projects to emulate. Both projects mobilized immense resources and manpower for a patriotic goal that left the country brimming with national pride. Reagan also stressed the fact that the objective was simple: unifying people towards a common purpose. In his early presidency, he sought a contemporary version of these iconic programs, one in which the United States could once again prove its fortitude by creating a cutting-edge defense system that could set the global standard for years to come. By 1981, the stage had been set for a significant upheaval in military defense strategy. Reagan's personal interest in the subject all but assured that a deliberate effort would be made to plan for a future system of the scale of High Frontier. The High Frontier concept was a byproduct of this sentiment, to implement a long-desired conservative anti-communist agenda.²

The official High Frontier concept was less an innovative system design than a full-scale national defense strategy. Among its cornucopia of proposed initiatives was a design for a space-based global ballistic missile defense (GBMD) system, a term later adopted officially for the SDI space defense program. While the High Frontier concept placed emphasis on ancillary program designs, the GBMD remained as the crown jewel of the concept. The GBMD, which planned to deploy a global constellation of hundreds of orbiting satellites, was accompanied by a cornucopia of futuristic defense programs relating to energy, exploration, and even space tourism. High Frontier wedded itself less to the promise of a single military system as to the ideals of the future development of space as a catch-all solution to national security challenges.

² Douglas E. Streusand and Norman A. Bailey, eds. Francis H. Marlo, *The Grand Strategy that Won the Cold War: Architecture of Triumph* (Lanham, MD: Rowman & Littlefield, 2016), 20.

The program leaders prided themselves on their stated task of exploring options for a new space strategy, to be presented to the President himself. The High Frontier organization, in its brief tenure, strove to examine all options for defensive space systems. Whether these proposals involved civilian infrastructure, industrial exploitation, or the beam-weaponry of a global satellite defense array later made infamous by the SDI, High Frontier incorporated all the above into its designs, anticipating a bright, space-dependent future for the United States.³

The program members cared deeply for their futurist ideology; they prioritized these principles over questioning nonviable concepts. High Frontier was composed of conservative optimists, intent not only on reestablishing a competitive advantage for the U.S. but also on signaling to the world America's prowess and ingenuity. High Frontiersmen believed themselves to be inheriting a long line of historical technological endeavors that had set the United States apart from the rest, including space missions and even the invention of the lightbulb. The project prided itself on tapping into Reagan's belief in American exceptionalism and pride. While the extent of these aims contributed to the internal conflict that would plague the organization, High Frontiersmen were adamant that their mission was greater than simply researching and proposing a selection of space systems. High Frontier felt they were the embodiment of the next phase of advanced warfare, promoting the concept of a new national strategy of readiness and space borne infrastructure that might fundamentally alter the balance of power of the Cold War.⁴

The High Frontier program amalgamated a cluster of space-related objectives into a single goal. Top among these elements was the GBMD, a global array of satellites outfitted with weapons that would destroy incoming ballistic missiles before they could reach the United States

³ Gary L. Guertner and Donald M. Snow, *The Last Frontier: An Analysis of the Strategic Defense Initiative* (Lexington, MA: Lexington Books, 1986), 16-17.

⁴ Erik K. Pratt, *Selling Strategic Defense: Interests, Ideologies, and the Arms Race* (Boulder, CO: Lynn & Rienner, 1990), 96.

or her allies. The proposed system would have at least two distinct generations, with the only variation between the two stages being the type of weaponry used on each satellite. The first-generation GBMD would employ satellites outfitted with dozens of intercept vehicles, which would be launched *en masse* with the goal of colliding with a selected missile. High Frontier sold this first phase as a ‘shotgun-style’ approach, with satellites deploying the guided missiles in a cluster akin to pellets fired from a shotgun. This method of missile defense was intended to be temporary. High Frontier’s ultimate objective was the second-generation of the GBMD, utilizing the fabled beam weapons which would later provide the SDI with its ‘Star Wars’ moniker. This system was promoted as the ultimate pinnacle of strategic defense, due to its ability to strike targets at light speed and to theoretically reload its weapons infinitely via solar charging. With beam technology not yet deployable and still in early phases of testing in 1981, the High Frontier strategy would deploy the first-generation guided interceptor weapons as a stopgap measure until beam weaponry had developed enough to be considered viable. However long this would have taken was a point of contention within the program’s Report itself, yet the High Frontier concept still advocated a two-stage process for the creation and deployment of a global ballistic missile defense system.⁵

As noted above, High Frontier was composed of a multitude of proposed systems, many of which had little relation to the GBMD projects. The most prominent systems of the concept outside the missile defense array included a solar power system (SPS) to provide cheap solar energy to the surface via microwave relays, an increased civil defense readiness that would contribute to national border defense, and a conglomerate of improvements for general space

⁵ Sanford A. Lakoff and Herbert Frank York, *A Shield in Space?: Technology, Politics, and the Strategic Defense Initiative: How the Reagan Administration Set Out to Make Nuclear Weapons "Impotent and Obsolete" and Succumbed to the Fallacy of the Last Move* (Oakland: University of California Press, 1989), 10.

operations, such as an updated Space Shuttle, a permanently manned Space Station, higher volume booster rockets, and the possibility of in-orbit industrial production for construction megaprojects. These secondary goals of the High Frontier project focused their attention away from military achievement, rounding out a general American space strategy that spanned multiple disciplines. For the founding members of High Frontier, namely Daniel Graham, these systems were more than mere window dressings for the all-important GBMD system. Rather, they acted as necessary and complementary pieces to a cohesive national strategy of American development in space. Accordingly, the High Frontier concept only succeeded when all the systems were taken together. Without these collective projects, the High Frontier concept would cease to exist; only the development of all the proposed systems would help realize the ultimate objective of a new national strategy.⁶

Bureaucratic Politics and Power Struggles

Although High Frontier acted as a significant factor in the inspiration for the famous SDI program, the historiographic record for this organization is largely lacking. Passing mentions of the project are common in writings devoted to the SDI, yet High Frontier is primarily referred to in the context of the program's splintering in December 1981. The project officially ran until early January of the next year, however, historiographic references to High Frontier almost exclusively devote their limited time to the fallout between the factions within the panel.

Recollections of High Frontier have such a narrow focus on December 1981 and the subsequent dissolution that there is little analysis of previous events and potential contributing factors to this

⁶ Foreword, 10 Dec. 1981, Box 3, Project High Frontier - Draft 3. Foreword, p. 5, Daniel O. Graham Papers, University of Miami Archival Collections, Coral Gables, Florida.

conflict. Internal conflict in High Frontier contributed in part to the program's failure, and the severe fracture between the project's panelists stifled their concept's appeal to Reagan.

To succeed with such an ambitious slate of initiatives, High Frontier sought to pull together the greatest minds in national conservative politics, specifically those passionate about defense. However homogenous the political leanings of the panel, its members differed not only in their respective backgrounds but also with their various interests. The full High Frontier panel included ten men: three military men, two scientists, and five political insiders.⁷ After the resignation of Fisher and Wedemeyer in September and November 1981 respectively, the remaining eight members continued through the end of the project until January 8, 1982, the date which the panel officially presented its findings to Reagan. However similar their political voting records, the listed personnel were neither cohesive in their vision nor in their allegiances. Of the above list, panelists hailed from all walks of life: the sciences, elected politics, and the military. These origins lent themselves to acute factionalism within the program, a subject discussed in more detail below. In short, those who came from scientific backgrounds, like Bendetsen and Teller, cared most for advanced weaponry. They lobbied within High Frontier for beam technology systems as a key part of the concept. These ideological differences, stemming

⁷ Internal High Frontier memoranda, n.d., Folder 1, Box 681, "High Frontier Panel and Strategic Defense Initiative Advisory Committee 1981-1985," Karl R. Bendetsen Papers, Hoover Institution Library & Archives, Stanford, California. See also: Donald R. Baucom, *The Origins of SDI, 1944-1983* (Lawrence: University Press of Kansas, 1992), 146-9.

The ten listed panelists included: Karl R. Bendetsen, a former U.S. Army Colonel, President of Champion Intl., and close associate of Reagan's; Daniel O. Graham, a former Lt. General and former Director of the Defense Intelligence Agency, who had served as a military advisor on Ronald Reagan's 1980 election campaign; Dr. Edward Teller, a theoretical physicist and 'father of the hydrogen bomb', who had served as Director of Lawrence Livermore National Laboratory and was popular in conservative circles; Jaquelin H. Hume, a conservative businessman prominent in the Republican Party and an outside member of Reagan's 'Kitchen Cabinet'; William A. Wilson, another 'Kitchen Cabinet' member who had been an oil baron and was serving as the U.S. Ambassador to the Holy See; Joseph Coors, a Colorado beer tycoon strong in conservative politics and a member of Reagan's 'Kitchen Cabinet', John M. Fisher, a conservative lobbyist who was President and Founder of the American Security Council Foundation, a pro-military think tank; Edwin J. Feulner, a conservative lobbyist who established the Heritage Foundation think-tank; Albert Wedemeyer, a former U.S. Army General with an interest in defense policy; and Frank R. Barnett, a conservative researcher who founded the National Strategy Information Center think tank.

from a lack of shared industry experience, would contribute to the demise of the panel and the failure of its vision.

In opposition to the scientific-minded members were the tactical pragmatists, namely Lieutenant General Daniel Graham. Hailing from the realm of military intelligence and defense policy, Graham sought a realistic system to be implemented as quickly as possible. In ideology, his pragmatic, time-sensitive approach to missile defense stood directly at odds with that of Bendetsen and Teller, which foretold a future of drama and strife between these men. Finally, the largest and most powerful faction within the High Frontier were the political insiders and advisors. John Fisher and Ed Feulner fell into this this group, each acting as official representatives of their respective think tanks - the American Security Council Foundation (ASCF) and the Heritage Foundation - the two parent organizations which housed and bankrolled the High Frontier program. Meanwhile, Jack Hume, Joseph Coors, and William Wilson acted as informal representatives to the Reagan administration due to their close ties to the President as members of his 'Kitchen Cabinet'. While it would be improper to say that members of this last faction were disinterested in the concept of strategic space defense, their primary concerns as panelists were less the advancement of a particular defense ideology over another and more the wellbeing of the administration and the success of the respective think tanks which oversaw the High Frontier project. For their panel, the program pulled together a conglomerate of conservative figures from multiple disciplines, lending themselves to a broad diversity of thought that would eventually cause a rift in the ideology and objectives of the organization.⁸

⁸ Martin Anderson, *Revolution* (San Diego: Harcourt Brace Janovich, 1988), 92.
See also: Nigel Hey, *The Star Wars Enigma: Behind the Scenes of the Cold War Race for Missile Defense* (Washington: Potomac Books, 2006), 76.

In sum, the background of those involved in the High Frontier concept reflected strongly variant solutions to the same problems, and each had different levels of personal commitment to their plans. Edward Teller, famous for his involvement in the creation of the thermonuclear bomb, acted as the lead futurist of the program. Teller had previously worked on directed energy pilot programs such as ‘O-Group’ at Lawrence Livermore, and believed this to be the next era of defensive technology. Along with members of the ‘laser lobby’, a powerful conservative contingent in Congress focused on beam technology development, Teller envisioned a GBMD involving technologic ingenuity with the end product resting on groundbreaking beam weaponry. In contrast, General Graham sought a more tactical, stop-gap system which employed “off-the-shelf technology”.⁹ Graham’s ideology for space-borne defense was only allegiant to quick-built systems that could immediately establish supremacy in space, even if the systems themselves were flawed and largely temporary.¹⁰

Though neither of these two systems were adopted in full under the later SDI, Graham and Teller both showed tremendous devotion to their respective defense ideals, a sentiment which was not shared as much by the moderate panelists. Bendetsen and the panelists from Reagan’s ‘Kitchen Cabinet’ were far less adherent to a specific system design than they were to the general ideal of an alternative approach to the Mutually Assured Destruction doctrine of defense. The moderates sought to re-examine if the entire premise of High Frontier was actually feasible. Although these concerns were voiced only through internal memos and never raised

⁹ Daniel Wirls, *Buildup: The Politics of Defense in the Reagan Era* (Ithaca, NY: Cornell University Press, 1992), 145.

¹⁰ Patrick E. Tyler, “How Edward Teller Learned to Love the Nuclear-Pumped X-Ray Laser,” *The Washington Post*, April 3, 1983. Teller’s vision for a future defense rested on the notion of advanced technology involving X-ray lasers and other beam tech he had championed while at Lawrence Livermore. This belief was shared by many conservatives in Congress, who believed a groundbreaking system would be the ultimate tool against the Soviet threat. Teller, along with White House Science Advisor George Keyworth and a Congressional contingent headed by Senator Malcolm Wallop, composed what would later be dubbed ‘the laser lobby’. See also: Lakoff and York, *A Shield in Space?*, 11.

with anyone outside the study, Bendetsen, Hume, Wilson, and Coors felt less committed to any one system design and were able to evaluate more objectively High Frontier's feasibility than were Graham or Teller. Bendetsen repeatedly clarified this objective in his many drafts of the final Report to Reagan, reminding readers that High Frontier only presented options, and made "no specific system selections or endorsements..." of any particular ideology.¹¹ Although Bendetsen did list a few potential candidate systems in his Report, his stance and those of Wilson and Hume were to merely relay the findings of High Frontier without pushing a singular choice on Reagan. By this time, however, Teller and Graham had already hitched themselves to their own personal system designs.¹²

With the existence of ideological factions within the High Frontier organization, the potential for discord and conflict seemed inevitable. In the realm of political research and unofficial lobbying which High Frontier found themselves, the process of bureaucratic politics was apparent. In order to advance their agenda, the High Frontier panelists jockeyed for attention and influence against other promising ideas posed by conservative groups. However cutthroat and combative the process of bureaucratic politics was against other initiatives, the true destructive impact of the process arose when bureaucratic politics began to define internal proceedings within the High Frontier project. The factionalism seen across the High Frontier panel inevitably led to contrasting views and varying commitments to the core concept of the organization, leading ultimately to a fracture that doomed the future chances of the program's endorsement and adoption by the administration.

In their justification of futuristic systems like the SPS as well as the project's enormous budget and resultant budget reprogramming measures, the panel assumed political and

¹¹ Memo for President, 2 Dec. 1981, folder 1, box 681, Bendetsen Papers.

¹² Bendetsen memo to Panel, 20 December 1981, folder 1, box 681, Bendetsen Papers.

bureaucratic allies would wholeheartedly support the program, regardless of the challenges. The panel insisted that these allies, ranging from Congressmembers to commanders in the armed forces, would support any and all actions taken by High Frontier, even decisions which benefitted High Frontier to the detriment of their allies. Of specific note were the various branches of the military, which would have to make room for a new *de facto* branch dedicated solely to missile defense and space policy. These groups were expected to act as crucial supporters for the concept, from the early lobbying and adoption phases all the way through to eventual system readiness. Yet High Frontier incorporated reallocations from existing military budgets into the overall cost justification for the large High Frontier price tag. The program's panelists foolishly believed they could bypass the dog-eat-dog doctrine of bureaucratic politics and convince the American military establishment to act against its own best interests to instead support High Frontier's, using the supposition of widespread elation for the High Frontier concept as a crutch.

In making guarantees of vigorous support from both Washington and the Pentagon, the High Frontier panel failed to recognize the lack of enthusiasm for the concept from some of their very own panel members. The core concept of space-borne defense as the centerpiece of a new national agenda had been the exclusive brainchild of Daniel Graham for some time. By recruiting individuals only tangentially related to space development and missile defense, High Frontier placed confidence in their own member's excitement for the program in the belief that they would see the agenda as interchangeable with that of modern conservatism and President Reagan. Instead, the external interests of some members, whether it be a fealty to the Reagan administration over that of High Frontier or, alternatively, a desire for the concept to go in a different direction, led to dissent amongst many of the panelists.

The jockeying within the organization between leading members such as Graham, Teller, and Fisher sprung from conflicts over program scope, ideology and, most of all, the relative political influence of each panelist. The political struggle between these members often turned ugly, with threats of resignation, lawsuits, and even criminal charges stemming from heated written exchanges. The subject at issue was often only a means to express the frustrations at the greater influence of the other or, conversely, to display one's own political clout in relation to a competitor. While there was real disagreement over topics like the inclusion of a particular system into the High Frontier concept, the conflict between many of these panelists stemmed from an inherent inequality of political agency in the new conservative administration. This led to a lack of unity and cohesion in vision, thereby undercutting High Frontier's power to persuade necessary stakeholders.

Aside from ideological differences, the panelists of High Frontier differed with regards to their respective access to the Reagan White House. The High Frontier project was tasked with exploring strategic defense options for the White House, but did not seem to be the most pressing focus of the administration at that time. This idea is reinforced by some of the founding documents of High Frontier from the summer of 1981, which specified that the organization sought to recruit panelists "with sufficient standing to give credibility to the final recommendations", specifically those persons "likely to be known to the President or his top advisors".¹³ High Frontier, a small operation at the time, wanted to bring onboard individuals who could get the project in the door through personal connections with the administration. An unforeseen side effect of this was the respective agency each side possessed in connecting to the White House. Dr. Teller, as a respected scientist and frequent visitor to the White House, could

¹³ Richardson memo on Panelist selection, 4 Aug. 1981, folder 2, box 678, Bendetsen Papers.

essentially come and go as he pleased if he wanted an audience with the President. Graham, however, held no personal standing with Reagan, and found it increasingly difficult to gain the attention of the Chief Executive following the splintering of the project in late 1981. Graham's predicament came through his status as a retired officer, with no access or close relationship with major players in either the service branches or the executive branch. The 'Kitchen Cabinet' moderates were likely recruited into High Frontier largely to improve the executive access of the project as a whole, yet the differing levels of political connections held by factions within the project led to frequent conflict and strain.¹⁴

While most historians attribute High Frontier to the Heritage Foundation, for the first month of their existence, High Frontier was attached to the American Security Council Foundation (ASCF), a major conservative think tank run by John Fisher. Despite a seemingly cohesive start to the relationship, a succession of events quickly led to a rift between the two organizations, caused almost exclusively by the misconduct and unilateral actions of General Graham. By early September, High Frontier had broken off relations with the ASCF, leading to months of confusion, bitter exchanges, and threats of legal action, all perpetuated by the discord sewn by Daniel Graham.¹⁵

The fallout with Fisher exposed some striking miscommunication and personal discord within the High Frontier project. In an August 31 phone conversation with Fisher, Bendetsen claimed not to know about an existing overhead agreement with the ASCF nor about Fisher's

¹⁴ William J. Broad, *Teller's War: The Top-Secret Story behind the Star Wars Deception* (New York: Simon & Schuster, 1993), 113. See also: Baucom, *Origins of SDI*, 148, 160.

¹⁵ The fallout generated by High Frontier's departure from the ASCF uncovered many allegations and disputes involving Daniel Graham and his financial and political dealings while an employee of the ASCF. The conversations on these topics happened primarily between John Fisher and Karl Bendetsen, with Fisher voicing his concerns about Graham's actions to Bendetsen, who had previously been unaware of the former's conduct. These exchanges lasted throughout the months of September and October 1981, and were not entirely resolved until November. Some of the misconduct of which Fisher accused Graham included illegal lobbying, embezzlement, and fraud.

recent offer to negotiate a new cost arrangement with High Frontier, the issue which Graham had used as the catalyst for vacating the ASCF. Suggesting that Bendetsen, as the High Frontier Chairman, knew nothing about the current cost agreement of the project seems absurd, but this may speak to the miscommunication between the leadership of High Frontier. Whether Graham decided to begin packing up High Frontier without even speaking with Bendetsen or, conversely, Bendetsen and Graham never even discussed budgetary issues such as program and overhead costs, the splintering from the ASCF pointed to a detached, uncommunicative relationship between High Frontier Chairman and Director.¹⁶

By October, thanks to the contrasting views of the panelists, tensions within High Frontier began to boil over. With Graham and Teller pedaling their respective visions for High Frontier, conflict between these two mavericks of the program seemed inevitable. On October 28, Graham penned a blunt letter to Bendetsen discussing his concerns with Teller and the future of the project's vision. Graham took issue with Teller's supposed ultimatum to remove the focus on the SPS and interceptor missile GBMD systems from the final Report. Graham, being the tactician of the group, had championed the interceptor missile system as a realistic bridge technology while development of a future beam-tech system continued. Teller's desire to leave the program if these systems were included in the Report prompted Graham to send an angry letter to Bendetsen. Graham even suggested that "If worse came to worse, I would accept the loss of Ed [Teller]'s support rather than yield on the basic thrust of High Frontier".¹⁷ Within the conceptual thought group of the High Frontier panel, the views of Graham and Teller had become impossible to house alongside one another.

¹⁶ Fisher letter to Bendetsen, 13 Nov. 1981, folder 4, box 676, Bendetsen Papers.

¹⁷ Graham letter to Bendetsen, 28 Oct. 1981, folder 6, box 679, Bendetsen Papers.

The loss of a renowned ally of the administration like Edward Teller would have been strongly detrimental to High Frontier, especially since Teller would likely have returned to promoting his own beam technology defense concepts, which ran counter to High Frontier's program objectives. Whether Teller would have possessed enough influence in the West Wing to steer the President entirely away from the High Frontier plan is debatable, yet Teller's presence at every important White House meeting with the project panelists, as well as his frequent appearances with top Reagan officials, suggests a strong involvement in the President's decision-making process. Despite Teller's influence, Graham expressed a firm belief in maintaining the purity of his vision of the High Frontier project to keep the core concept intact. Thus, while Graham's governing outlook for the program was piecemeal progress towards new technology and infrastructure, Teller sought a simpler approach through the development of a single, revolutionary system which could singularly solve the defense problem.

From Teller's perspective, Graham's High Frontier concept appeared to have such grandiose ambitions for an entirely new space initiative that it would over-complicate the race to develop beam technology. Bendetsen shared Teller's concern regarding the complexity of Graham's outlook, writing Secretary of Defense Weinberger in November 1981 that many saw the project as too aspirational and "impossibly costly".¹⁸ Such thinking led to Teller's demand to remove all mention of the SPS and interceptor missiles from the Report. Graham's personal ideals for a new space strategy clashed with Teller's simpler view, and jeopardized High Frontier as a result.¹⁹

¹⁸ Bendetsen memo to Weinberger, 5 Nov. 1981, folder 3, box 682, Bendetsen Papers.

¹⁹ *Congressional Record*, 99th Cong., 1st sess., 16512. In a floor debate in 1985, amidst the growing controversy of the SDI program, Rep. Les AuCoin later provided the clearest description of the conceptual divisions within High Frontier, stating simply: "Dr. Teller disagrees with the fundamental principle of High Frontier..."

Throughout the autumn, the program's internal discord was kept largely private. Complaints about panelists were voiced only through private letters, and not even mentioned during meetings of the complete High Frontier panel. Yet in the November 5 letter to Secretary Weinberger, Bendetsen appeared surprisingly candid in his worries regarding the cohesion of the program. In the letter, Bendetsen mentioned to Weinberger, "when you pull some of the best brains in the country together in such an effort, you get a broad range of opinion on a broad range of subjects".²⁰ This letter to Weinberger came on the heels of a scathing letter from Graham to Bendetsen on October 28 suggesting Teller leave the project, as well as just two days after a full panel meeting on November 3. While the tone of the memo to Weinberger attempted to portray optimism, Bendetsen again referred back to the ongoing discord inside High Frontier, listing the organization's successes in spite of "inherent difficulties".²¹ It was true that Bendetsen and others on the panel maintained somewhat close personal relationships with the Secretary, who was an outspoken supporter of strategic missile defense and later of the SDI program. Still, for Bendetsen to feel the need to repeatedly mention ongoing discord within the project indicated the significance of the ongoing conflicts within the High Frontier panel.

By the time the final High Frontier Report was presented to Reagan in early January 1982, the High Frontier project was no longer a single cohesive idea. In December 1981, Graham had split from the project, citing a conflict of vision for what the scope of the program should be. After Graham unofficially cut ties, Bendetsen's succession of drafts of the final Report took on a new look. While the original, long-form Report included proposed systems such as the SPS constellation and a first-generation interceptor GBMD, later iterations dropped almost every mention of these systems from the Report. In a December 18 final draft shared

²⁰ Bendetsen memo to Weinberger, 5 Nov. 1981, folder 3, box 682, Bendetsen Papers.

²¹ Ibid.

with the panel, Bendetsen had removed key sections of previous drafts, including points on space industry, solar power in space (the SPS system), and even Graham's concerns about cost overruns from beam weapons. While these sections may have just been a planned part of the culling of the 200-page project plan down to an impossibly short two-page Presidential briefing, the elimination of all sections championed by Graham stood in contrast to the decision to keep most every section relating to concepts endorsed by Teller.²²

As many of the more practical aspects of the High Frontier project were dropped from the final Report, the briefing noticeably shifted towards selling Reagan on one system in particular: beam weaponry. The final two-page briefing contained two addenda which delved a bit further into the technical aspects of the proposed space strategy. The addenda included mention of Graham's off-the-shelf GBMD system, a "space-borne ABM defense system" with the ability to intercept incoming missiles. Yet the following section devoted to the proposed beam weaponry system declared that "such a [beam] system could provide for all the requirements of [the] above", referring to the interceptor GBMD.²³ In essence, the mention of Graham's interceptor system in the final Report was used as a foil to the beam weaponry system. The Bendetsen-led Report suggested that the beam tech would be a better alternative, insinuating that an interceptor missile system would be entirely redundant. Additionally, the use of milk toast language to depict Graham's interceptor system paled in comparison to the dramatic characterization of the beam technology system, said to include "directed energy" weapons, "battle stations" and a "brightness of great magnitude".²⁴ Through the imagery-laden characterization of a second-generation GBMD as well as the direct comparison against a first-generation system, the final

²² Draft memo for President, 18 Dec. 1981, folder 1, box 681, Bendetsen Papers. See also Streusand and Bailey, *The Grand Strategy that Won the Cold War*, 182.

²³ Ibid.

²⁴ Ibid.

High Frontier Report indicated its wholesale movement away from Daniel Graham's vision for the concept.

Anticipating Failure: The High Frontier Report

Following the secret January 8 meeting with Reagan, the High Frontier project, for all intents and purposes, was complete and therefore dissolved. Just a few weeks later, however, the entirety of the program were laid bare in front of the world. Initially, no one involved in the project knew who was to blame. Soon though, one name was established as the cause of the program's exposure: Daniel Graham. Frustrated with the fracture from the rest of the panel, which completely stymied Graham's access to the White House, Graham saw fit to publish the entire High Frontier Report in his own book, later stating in an interview that by February 1982, "The document was going to be on the streets".²⁵ The book, entitled *High Frontier: A New National Strategy*, was essentially a dressed-up version of the lengthy panel Report, speckled with illustrations and reorganized into more distinct chapters. Upon hearing of Graham's deliberate leaking of the project plans, Bendetsen and the rest of the panel were livid. In a prepared testimony before the ASCF in March 1982, Bendetsen expressed his disgust, stating that "such an outcome, I would have earnestly desired to avoid".²⁶ Graham's decision to leak the High Frontier plan was a ploy to attract public attention to the project, but by stimulating outrage by everyone involved in the project, it further splintered the relationships amongst project members and exposed the concept to unnecessary public critique and criticism.²⁷

Just three days after High Frontier's unofficial founding, Bendetsen included in his first briefing memo to Meese a summary of his major concerns for the project. Among these was a

²⁵ Broad, *Teller's War*, 115.

²⁶ Bendetsen memo to ASCF, 4 March 1982, folder 4, box 676, Bendetsen Papers.

²⁷ Daniel O. Graham, *High Frontier: A New National Strategy* (Washington: High Frontier, 1982).

worry about the potential for unwanted public attention, which led Bendetsen to suggest all members “be required to use due care to avoid all publicity”.²⁸ This concern was seemingly shared by Graham at the time, as he was included on this July 30 memo and did not express his disagreement. In fact, all incoming panel members selected by Bendetsen and Graham were vetted in part on their ability to keep quiet about the organization. As many on the panel, especially Reagan’s ‘Kitchen Cabinet’ members, cared more for the wellbeing of Reagan’s public image than for the High Frontier study, Bendetsen’s demand for secrecy met no resistance among the panelists. Thus, Graham’s publication of their results was all the more infuriating.²⁹

Projects of a scope as large as High Frontier’s require more than just the cooperation of their panel. They also need capital investment, resources, enthusiasm and, most of all, time. However confident the project felt about the first three requirements, the High Frontier study was severely lacking in this last aspect, allotting only four months for deliberations. This self-described “120-day work program” was unrealistic,³⁰ private correspondence indicated that there were concerns about the project’s completeness, even while reassurances were made that High Frontier’s findings were polished and ready. On November 5, Bendetsen penned a project update to Weinberger, stating that the panel had “been able to arrive at a firm consensus on all major aspects of a proposed High Frontier strategy”,³¹ and was now in the late-stage process of synthesizing these aspects into a final Report. This suggestion alone appeared to be wildly optimistic, considering the project had begun barely 100 days prior. Two weeks after this memo, however, ‘Kitchen Cabinet’ panelists Jack Hume and William Wilson privately painted a

²⁸ Bendetsen briefing to Meese, 30 July 1981, folder 6, box 679, Bendetsen Papers.

²⁹ Richardson memo on Panelist selection, 4 Aug. 1981, folder 2, box 678, Bendetsen Papers. See also: Lakoff and York, *A Shield in Space?*, 14.

³⁰ Richardson memo to Graham, 4 Aug. 1981, folder 2, box 678, Bendetsen Papers.

³¹ Richardson memo on Panelist selection, 4 Aug. 1981, folder 2, box 678, Bendetsen Papers.

different image of the project. On November 17, Wilson suggested the study may not be as complete as Bendetsen had outwardly claimed, "Since I think we are still in agreement that the High Frontier program needs more thinking before it is in form for presentation to the White House, it looks as though the idea of forming a committee to study this situation is the most logical approach...".³² Wilson's suggestion of forming an exploratory committee implied there may be bigger issues than just needing a bit more time to complete the study. Clearly, a stark contrast existed among panelists regarding the state of the High Frontier project.

As a result, High Frontier's future appeared increasingly uncertain. The discord between Graham and Teller has spilled over to Bendetsen and affected the rest of the panel. Bendetsen, largely the optimistic leader of the program, privately expressed his own uncertainty following the resignation of panelist A.C Wedemeyer on November 3. Bendetsen voiced his worries, asking if the latter's resignation was a result of Wedemeyer's "feeling... that the project has not measured up".³³ With less than a month before the anticipated completion of High Frontier's work, internal issues that had plagued the project from the beginning began to compound, best seen through the distress of one of High Frontier's most ardent advocates.³⁴

Provoking the Pentagon

While internal cohesion had collapsed, key aspects of the envisioned program's operational and financial success also depended on the military. With an annual defense budget of over \$250 billion throughout the Reagan presidency, the U.S. military existed as an enormous monetary spigot, one which High Frontier hoped to siphon enough funds from to ensure their financial stability. Along with this source of funding would come closer ties with the

³² Wilson letter to Hume, 17 Nov. 1981, folder 6, box 679, Bendetsen Papers.

³³ Bendetsen letter to Wedemeyer, 9 Nov. 1981, folder 4, box 680, Bendetsen Papers.

³⁴ Wedemeyer resignation letter, 3 Nov. 1981, folder 4, box 680, Bendetsen Papers.

Department of Defense (DoD) and the respective branches of the armed forces, organizations which High Frontier hoped to attract as close allies of the program. Yet there was a glaring issue with this assessment. High Frontier planned on defunding existing defense projects to create their own space-borne program which was planned to exist entirely outside the purview of the other branches of the military. High Frontier, in other words, called for the reallocation of military expenditures from the very organizations they hoped to retain as enthusiastic supporters. High Frontier's shortsighted and naïve belief in a close partnership with the military, given the program's plans for budgetary cannibalism, contributed to the failure of their concept in attracting sufficient support to be considered viable.

High Frontier existed in a political scene dominated by fiscal conservatives, and thus had to fashion themselves as such. Therefore, such a massive spending program, even on a popular Republican issue like national defense, had to be tempered by budgetary cuts in other places (called 'reprogramming'). In their Report, High Frontier rested their concept entirely on this practice, suggesting costs be redistributed not only from the struggling MX Missile program, but also from systems "no longer required if the High Frontier strategic defense capabilities become a reality".³⁵ By pointing to existing defense infrastructure as well as competing DoD projects as sources of potential funding, High Frontier set itself at odds with the notion of coexistence with these other systems. The project committed further to a competitive identity in the ruthless budgeting process by assuming cost reprogramming would act as the major process for allaying budgetary concerns, and not merely as an alternative plan. By pursuing a policy of reprogramming, High Frontier was on a collision course with the leading powers within the military sphere. The idea that the respective military branches would enthusiastically support a

³⁵ Cost considerations: Offsets, 11 Dec. 1981, Draft 3. Ch. 6, p. 11, box 3, Graham Papers.

new space-based *de facto* military branch with which to compete over annual budget allotments was exceedingly optimistic. High Frontier antagonized the enormous political powers of the armed services, pitting their small, private organization against the bureaucratic might of the Pentagon. The panelists were doomed to lose in this cutthroat arena of bureaucratic politics.³⁶

Lost in Translation

The political infighting, miscalculations, and hubris led to doom, as well, with Ronald Reagan. In anticipation of presenting their ideas to the President as well as, eventually, the public, the High Frontiersmen wanted an idea which would gain the approval of the administration while also encouraging widespread enthusiasm for its concepts. Instead, the program clashed with the vision of the Reagan administration that undermined both its appeal in the White House and in the public domain. High Frontier sought objectives of global clean energy, space industrialization, and deployment of defensive beam weaponry, subjects which provided surface-level interest to the President and the American public but did not capture their enthusiasm. What's more, the complexity of the plan confused Reagan. The High Frontier panel sought to ride an upswell of support for the new administration which would propel it to the forefront of Reagan's conservative agenda, but they failed to enlist the support of Reagan largely due to his different aims for what he wanted to accomplish with such a project and his interest in a streamlined decision-making style. In diverging so strongly from the President's simple view of a single deliverable created by a linear program structure, and unable to summarize their Report effectively in a succinct way for Reagan, High Frontiersmen alienated themselves from the White House and found themselves desperately attempting to appeal to an electorate from which they were unable to curry favor.

³⁶ Space-Based Energy System, 10 Dec. 1981, Draft 3. Ch. 3, p. 14, box 3, Graham Papers.

The goal of the Reagan administration in tasking the High Frontier panel with researching the subject of space-borne defense was that of a simple progression from design to development to implementation. Unfortunately for both High Frontier as well as the White House, this vision for a new program was not shared by the High Frontiersmen themselves, resulting in a severe misalignment between the panel and the presidency. High Frontier's vision for their program involved a multitude of objectives. Included in the proposals were systems which would expand space travel, begin a new post-nuclear peace, and solve the global energy crisis. These aims, taken together, constituted an entirely new national policy on a range of issues. In contrast, the President had been looking for a lone project to provide a solution to the issue of mutually assured destruction, which he deemed dangerous, misguided, and a barrier to American hegemony. Although High Frontier's overall concept certainly incorporated this desire into its plan, the enormity of the proposed program dwarfed any that Reagan or his administration had envisioned. Thus, High Frontier set up a discordant relationship with what the Reagan administration had intended for the program.

The High Frontier proposal conflicted with Reagan's interests for a space defense policy primarily thanks to the former's complexity and the inclusion of so many various objectives. What bothered Reagan was less the size of the proposed endeavor and more how it failed to focus on a singular system. After all, the SDI which eventually came into being in March 1983 was a huge undertaking, but it strove for a single technology rather than a complete national agenda. Reagan wanted a focused system with a single objective, similar to those of the Apollo program and Manhattan Project. Instead, the multidimensional scheme laid out in the High Frontier Report had no clear definition of a tangible end-goal. It incorporated so many simultaneous tasks that there would be no discernable, overarching objective. Instead, there

would be a breakdown in the shared view of a new American space defense as a result of the conflicting visions of project scope seen between High Frontier and President Reagan.

By all accounts, Reagan had a personal interest in the topic of technological advancement and defense policy. Yet his personal curiosity for the subject did not directly translate to a deep-rooted knowledge or understanding of the core principles of the proposed systems. This cognitive dissonance led to Reagan's confusion when the totality of the High Frontier program scope and structure was discussed. In conversations with High Frontier panelists, he preferred ideas to be voiced briefly and, ideally, in simple terms. While Reagan showed interest in the overall concepts of space defense and anti-missile systems, his struggles to understand the complex and progressive development of systems under the High Frontier proposal, coupled with the limited ability for High Frontier to delve into their proposal, led to mutual confusion and frustration on the part of the President and the project's panelists.³⁷

Throughout both the project Report and during conversations with potential sponsors, the members of High Frontier were confident in the unrelenting support of the administration to endorse and promote their concept. Yet throughout the autumn of 1981, and into December, when the time came to present their findings to the President, the organization was repeatedly rebuffed by the White House. The inability of High Frontier to hear back consistently from the administration indicated that their concept was not a priority of Reagan's, and that he was comfortable in not hearing the updates from the organization for months at a time. While the busyness and tight schedule of the White House cannot be understated, the personal interest of the chief executive in High Frontier's program for space development seems to have extended only as far as a passing thought. By ignoring repeated attempts at an audience, Reagan indicated

³⁷ Bendetsen memo to Panelists, 20 Dec. 1981, folder 4, box 677, Bendetsen Papers.

to the panelists that their ideas were of a much lower priority to his administration than they had initially believed.³⁸

The personal relations and decision-making saga had gradually begun to unravel. The High Frontier concept proposed to President Reagan in early 1982 was not merely a futuristic defense system to win the Cold War, but included an entire array of new technologies and even new industries, designed to out-innovate the competition. From this justification for their elaborate cornucopia of advanced technical systems, however, High Frontiersmen found themselves at odds with the Republican establishment as to how to address the issue of national space-borne defense. While both High Frontier and the White House relished the idea of creating a permanent supremacy over the Soviet Union through space development, the complexity and objectives involved in each plan resulted in an enormous divergence between the respective visions of Reagan and High Frontier.

Conceptually, a significant portion of the High Frontier project was devoted not to weapons or defense, but to industrialization. Some of the concepts included in the study had partial military utility, such as manned orbital satellite maintenance vehicles, yet others had no tangible contribution to military strength or national defense. The scope of the High Frontier project bled into industry and economy, promising “a new era of economic expansion” entirely detached from strategic pursuits.³⁹ Noble in their desire for accessible, renewable energy through space-borne solar panel constellations or commercial space travel facilitated by civil atmospheric infrastructure, the inclusion of industrial and economic projects alongside defense systems in the High Frontier Report might also suggest more selfish interests. To justify the enormous cost of the proposed defensive systems, the High Frontier panel likely included the

³⁸ Baucom, *Origins of SDI*, 152.

³⁹ Non-Military Dimension, 10 Dec. 1981, Draft 3. Summary, p. 12, box 3, Graham Papers.

above space industry projects as economically productive counterweights to their pricey military proposals. Chapter 5 of the Report discussed this topic, stating “most military activities, in contrast to most civilian activities, consume, rather than create, wealth”.⁴⁰ By acknowledging the fiscal drawbacks of a space-borne GBMD, High Frontier demanded the incorporation of non-military space systems into their plan, so as to maintain the overall concept as a net financial positive. In combining military and non-military system designs within the same proposal, High Frontier sought to balance out the enormous costs of a space-borne missile defense network with unrelated civilian proposals which they hoped would entice private investment in space.

With the necessary inclusion of non-military proposals alongside the staggered generations of military defensive systems, the High Frontier plan became increasingly bloated. The foreword of the study proposal suggested that early in the program’s lifespan, the general concept was extended to encompass “a true national strategy rather than a purely *military* strategy”.⁴¹ This phrase was eventually used to define the project in Daniel Graham’s 1982 book, *High Frontier: A New National Strategy*. Rather than maintain only what they had been tasked to do - researching a new space defense plan - High Frontier evolved into a multi-dimensional policy inclusive of military, industrial, and economic programs. Although the panel itself outwardly supported and encouraged this new project scope, the enormity of the project struck a nerve with some. In his resignation from the High Frontier Panel on September 30, John Fisher expressed his growing concern with the project’s expanding scope. Citing a conflict of interest with the research of his own organization, Fisher listed a primary reason for his resignation being High Frontier’s evolution from a “development of military options in space” to

⁴⁰ Military Support, 11 Dec. 1981, Draft 3. Ch. 5, Annex A, p. 6, box 3, Graham Papers.

⁴¹ Graham foreword statement, 10 Dec. 1981, Draft 3. Foreword, p. 5, box 3, Graham Papers.

the “preparation of a ‘basic national strategy’”.⁴² Despite the laundry list of prior conflict with Graham and High Frontier as a whole, Fisher found it necessary to cite the enlarged scope of High Frontier as a primary motivator for his resignation, revealing his dislike of the program’s expanded agenda.

High Frontier’s strategy intended to deliver on a whole host of futuristic systems, requiring a lengthy and intricate process of concept development and implementation. Surprisingly, even panelists themselves admitted to the complexity of the concept and its individual programs. In a May 1983 memo, Bendetsen expressed this notion to Teller, Coors, Hume, and Wilson, stating, “the new technology mix required to attain this posture imperatively required is supremely complex”.⁴³ This quote, referring to the technology proposed by Reagan some weeks earlier in his famous SDI address, suggested that what High Frontier had proposed in January 1982 was, in reality, an incredibly elaborate endeavor. It is worth noting the former Chairman’s decisive statement of the inherent difficulty in executing such an ambitious slate of proposed space-borne systems.

In describing the core tenets of the ideology behind High Frontier, the first chapter of the High Frontier Report presented a somewhat confusing hypothetical decision between contrasting modes of progress. It began by presenting readers with a choice between two options: “an incremental approach or a bold new initiative”.⁴⁴ The Report then proceeded to pick apart the incremental approach, using it as a proxy for the existing détente and Mutually Assured Destruction (MAD) policies which had existed for the past decade. The Report unsurprisingly arrived upon the conclusion that no strategy would work for the United States except the ‘bold

⁴² Fisher resignation letter, 30 Sept. 1981, folder 4, box 676, Bendetsen Papers.

⁴³ Bendetsen letter to Coors, Hume, Teller, & Wilson, 13 May 1983, folder 5, box 677, Bendetsen Papers.

⁴⁴ The Options, 10 Dec. 1981, Draft 3. Ch. 1, p. 3, box 3, Graham Papers.

new initiative’, a nod to Reagan’s promises in shaking up current military doctrine. While seemingly logical at first glance, the hypothetical deconstruction of the two potential initiatives introduced more uncertainty into the calculus of program planning.

Due in part to the project’s scope, as well as the desired succession of increasingly advanced defense systems, High Frontiersmen themselves ultimately proposed an incremental approach. This was insinuated through the program’s plans to develop a stopgap point-defense system, followed by a first-generation interceptor missile GBMD and a second-generation beam-weapon GBMD. Furthermore, the incremental approach was explicitly described as such. Passages in Chapter 3 of the High Frontier Report were insistent that only a “vigorous national space program...[with] a series of well-defined evolutionary steps” would be successful in delivering on a whole host of new systems.⁴⁵ Therefore, the critique of methodologies for an ‘incremental approach’ by previous administrations seemed counterintuitive for an organization priding itself on its own incremental model for progress. While High Frontier certainly aimed to exemplify the ‘bold new initiative’ ideals put forth by President Reagan, their own organizational structure suggested that they shared more in common with the so-called flawed and ineffectual incremental approaches which they felt had hobbled past administrations.

In discussing historical precedent for High Frontier, the project veered from past notable projects for national defense that Reagan so relished. Although High Frontier would demand a commitment similar to mega-projects like the Apollo space program and the Manhattan Project, High Frontier sought to distance themselves from those famous examples. The main issue the project Report had with these previous examples was their single-goal, terminal vision. Instead, High Frontier “focuses on a multiplicity of objectives”. In brief, the Manhattan Project sought to

⁴⁵ Strategies for Space Industrialization, 10 Dec. 1981, Draft 3. Ch. 3, Annex A, p. 23, box 3, Graham Papers.

develop the atom bomb and, once it was successful in that pursuit, it effectively dissolved. Similarly, once the Apollo mission to the moon was done in 1969, the project quickly lost public interest and folded. Conversely, High Frontier declared multiple project goals, staggered over the course of a decade or more, with no clear terminal objective. The project Report noted that all High Frontier aims would be “unlikely to be achieved by an Apollo-type national effort”.⁴⁶ High Frontier rejected the easy comparisons to the space race of the 1960s or the national mobilization of the Manhattan Project, opting instead to conjure up images of a constantly evolving cocktail of new technologies for space industrialization and defense.

Although the High Frontier concept had been shown to be somewhat confusing to the public thanks to its complexity and scope, the ultimate decision on project fulfillment would be made in the Oval Office. Despite a personal interest in developing new Cold War strategies and grand gestures, signs pointed toward Reagan’s desire for a simpler concept than the multimodal, intricate High Frontier plan. The first indication of difficulty for Reagan’s adoption of the project came in mid-December, as Bendetsen was revising the project final Report. Bendetsen stated in a briefing memo to the other panelists that he was told “authoritatively that The President requires the main body of any memorandum reaching him to be no longer than one and a half pages”.⁴⁷ To summarize the objectives, structure, feasibility, and budget of a project of this scale in any effective manner within one and a half pages seemed impossible to accomplish. In the end, entire sections of the project would need to be removed from the Report to come in under the imposed limit. The fact that the High Frontier concept was ultimately thinned down to a one-and-a-half-page Report suggested that key philosophies about the program were likely eliminated altogether.

⁴⁶ Strategies for Space Industrialization, 10 Dec. 1981, Draft 3. Ch. 3, Annex A, p. 23, box 3, Graham Papers.

⁴⁷ Bendetsen memo to Panelists, 20 Dec. 1981, folder 4, box 677, Bendetsen Papers.

The vision of the eventual SDI program focused on a singular system as the ultimate goal, which was starkly different from the proposed High Frontier plan. While external factors may have played a role in shrinking the eventual scope of the SDI, the personal stance of the President on the matter cannot be understated. In previous meetings with Edward Teller, multiple White House sources stated that the Commander-in-Chief was visibly confused by Teller's complex proposals. Allegedly, a September 1982 meeting with Teller included the physicist laying out a progression of stages to space defense, referring to successive generations of systems akin to those of the GBMD generations proposed by High Frontier. The sources reported that "[Teller] confused the president", and that Reagan could not entirely follow Teller's train of thought.⁴⁸ If there was difficulty in conveying the idea of incremental space-borne defense systems to Reagan, one can assume his growing consternation with the entire High Frontier concept. Therefore, it may be less of a surprise that the final product announced by Reagan in March 1983 resembled only the final stage of the High Frontier GBMD system, which had been heavily emphasized in the project briefing Report. In fact, the SDI resembled almost perfectly the intended beam weaponry second generation defense constellation given in the High Frontier Report, without any of the latter's intermediate or accessory systems. In instances of detailed dives into the High Frontier program structure, the President repeatedly showed difficulty in grasping the concept of successive generations of systems and the overall gist of the High Frontier pitch. Whatever circumstances influenced the decision not to base the SDI around the High Frontier plan, a major contributing factor was Reagan's documented confusion with the complexity of the project itself.⁴⁹

⁴⁸ Hey, *Star Wars Enigma*, 102-3.

⁴⁹ Frances FitzGerald, *Way Out There in the Blue: Reagan, Star Wars, and the End of the Cold War* (New York: Simon & Schuster, 2001), 413.

By late November, the High Frontier panel had completed work and were preparing for the most critical moment of the entire project: briefing the President. The administration was not nearly as eager as High Frontier to set up a meeting, however. Bendetsen confirmed in a memorandum to the panel that he had reached out to Edwin Meese twice, once on November 29 and again on December 2, desiring a meeting with Reagan “as soon as possible”. In his role as the *de facto* messenger between High Frontier and the White House, Meese would not confirm a date to meet, much to Bendetsen’s frustration. This process would continue the next week, and the next, with Bendetsen unable to contact Meese until December 19. While he laid no blame on Meese himself, the fact that Bendetsen was essentially stonewalled for weeks suggested that the High Frontier findings were not very high on the White House agenda. The usually upbeat Bendetsen was dismayed, stating, “it is far from clear to me that The President will see any of us”. The White House had clearly communicated its limited interest in hearing from High Frontier, despite assumptions to the contrary about Reagan’s enthusiasm.⁵⁰

Public Naysayers

High Frontiersmen sought to appease their opponents while simultaneously forecasting the wild popularity of their concept, a feat rendered even more difficult when the Report began to explore the laundry list of those who opposed the program. At the beginning of the Report, the document introduced the caveat that many of the positions and recommendations held by the panel “are certain to remain controversial, even among those who accept the basic premises of

⁵⁰ Bendetsen memo to Panelists, 20 Dec. 1981, folder 4, box 677, Bendetsen Papers. Bendetsen struggled to set up meetings with Meese, either failing to get him on the phone or by Meese never responding to contacts. Bendetsen complained in the December 20 memo that he was “unable to reach Meese during the week of December 6”, and that subsequent attempts to schedule a meeting failed. By December 19, Bendetsen was able to catch Meese briefly, with the latter making a halfhearted comment that he would look over the High Frontier findings eventually, leading to Bendetsen’s frustration and dismay in the December 20 memo.

the High Frontier concept”.⁵¹ A theory which had the potential for controversy within its own base likely stood at odds with an even broader bloc outside its usual supporters. The Report was surprisingly thorough in acknowledging the long list of potential opponents, devoting an entire chapter titled “The Naysayers” to discussing these detractors.

The ‘Naysayers’ section explored the potential counterarguments against the program, ranging from the U.S. as an international aggressor to the unpopularity of placing weapons in space. These arguments were sticking points for the project, as the public perception of nuclear weapons expansion would spell the end for the concept. High Frontier was aware of these concerns to an extent that they felt the need to add full-page notations to the project Report, imploring the panelists to shift their focus to promoting the concept as a defensive system so as to “mitigate popular concerns in the U.S. and abroad that rearmament increases the danger of nuclear devastation”.⁵² The panel took deliberate steps to improve the public favorability of High Frontier, suggesting that the current potential public support for such a project was not yet high enough for the concept to be green-lit.⁵³

The clearest example of dissonance between High Frontier and the general public appeared in a section of the Report addressing the foreign impacts of a future GBMD program. While exploring the potential positive effects of a High Frontier program for NATO allies, the Report stated: “The announcement of commitment to the High Frontier concepts could have a strong countereffect on the current highly disruptive, ‘anti-nuclear’, or ‘peace’ movements in Europe”.⁵⁴ In framing peace and anti-nuclear movements as disruptive to High Frontier’s cause,

⁵¹ Graham foreword statement, 10 Dec. 1981, Draft 3. Foreword, p. 6, box 3, Graham Papers.

⁵² Page 6: Insert, 10 Dec. 1981, Draft 3. Summary, p. 6, box 3, Graham Papers.

⁵³ The entirety of Chapter 7 of the High Frontier Draft Report discusses potential opposition to the program and explores the multiple sources from which the opposition much originate. The chapter suggests there would be stiff international and legal pushback against the program, along with widespread political opposition from Democrats.

⁵⁴ Foreign Impacts, 10 Dec. 1981, Draft 3. Summary, p. 22, box 3, Graham Papers.

the program clearly set itself at odds with these popular organizations, despite one of the regular arguments made by High Frontier of being a strong anti-nuclear concept opposed to the dangerous nuclear-dependent MAD doctrine. In presenting peace movements and non-nuclear organizations as antagonistic, High Frontier created discord within its own message of non-nuclear protection for the goal of fostering peace. This portrayal coupled with High Frontiermen's hypocrisy in actively currying external support while still expecting their concept to be popular, the program provided little to justify claims of enthusiastic public backing.

High Frontier's vision for a diverse, futuristic space strategy sought multiple goals across industry, politics, and defense. The bloated vision of this concept, however, necessitated a complex progression of complementary technologies, a project structure much too elaborate for Reagan's liking. Instead, the eventual SDI program ditched the anticipated complexity of the High Frontier system for a single goal of a beam-tech GBMD. Presented in combination with the organization's antipathy towards anti-nuclear movements, a posture which was difficult to sell to the public, the High Frontier program structured its objectives around a particular space strategy that diverged from that which was envisioned in Congress or by the President. Among all the other pressing concerns placed on the President's desk, it was no surprise just how long the project's final Report was delayed in its delivery. The broad scope of High Frontier, coupled with complex objectives that incorporated additional technologies with little strategic utility, had become extremely difficult to sell to an otherwise-occupied Chief Executive who demanded short and simple concept presentations, much less to a bureaucracy and American public which saw an enormous concept that lacked any clear guiding message.

Conclusion

In advancing an agenda of radical innovation and progress for American capabilities in space, High Frontier promoted some ideas which were surprisingly quite achievable and not entirely far-fetched. Their concept of multi-modal development of systems such as a permanently manned space station, increased satellite communication infrastructure, and even commercial space travel was a realistic notion that has since become a reality in the present. While forty years later, laser weapons like those envisioned by Edward Teller have been created and even deployed to a small extent for military purposes, the High Frontier program's idea for this same level of progress being done over just a decade is not completely unreasonable. If allocated the necessary budget, political commitments, and public enthusiasm sought by the High Frontier Report, it seems possible that the past forty years of passive innovation on the subject of GBMD systems and weaponry could have been achieved by a concerted national effort over the course of a single decade. Impossible as it may be for contemporary historians to explore the hypotheticals of the project's success if High Frontier had been selected and prioritized at the top of the national agenda, the High Frontier program's basic principles of space development and innovation were not so far-fetched in 1981 to singularly disqualify the concept.

Rather than fall short due to entirely technological issues, High Frontiersmen failed in their mission thanks to missteps within the project's own bureaucracy. In recruiting members who stood at odds with one another's ideology or, conversely, had less investment in the High Frontier project than that of their own political circles, the panel existed with internal weaknesses that harmed the clarity of their message. Inherent in the High Frontier concept was the principal of interlocking systems which would work to support and accentuate the efficacy of others, as well as the desire for a deliberately long-term, non-linear project scope. However well-suited

this project structure was for High Frontier's specific objectives, this approach contradicted the simple, straightforward project format which Reagan favored. Whether or not the program would have succeeded had it avoided either of these issues, a breakdown of ideological cohesion and confidence amongst its panelists paired with a complex and disparate project plan worked jointly to weaken the High Frontier message in the eyes of the Reagan administration.

The High Frontier program began as an amalgamation of conservative defense policies and enthusiasm for technologic ingenuity and progress. These interests ultimately worked in High Frontier's favor in promoting a new national strategy based on bold initiatives and multi-functional space development. Despite the advantageous political climate in the United States, the High Frontier concept never impressed the Reagan administration or the general bureaucracy enough to be considered viable. Instead, the program splintered and ultimately dissolved, serving as a historiographic footnote to the later SDI project, a partly realized version of what High Frontier could have become. Although the ideas ingrained in their concept had promise, the reasoning for High Frontier's failure originated in the inability of the program to align their multi-modal perspective on space development with that of the singular, linear goal envisioned by the White House, an effort which was largely hindered by the infighting and divergent thought inside the High Frontier panel, and ultimately felled by presidential incomprehension.

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