

SDI: Establishing Safety, Establishing Dominance

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On March 23, 1983, President Ronald Reagan introduced a bold new project to the American people: the Strategic Defense Initiative. The initiative, known as SDI for short, called for a defensive system in which space-based lasers would shoot down any nuclear missiles fired at the U.S. At the time of its announcement, many people were shocked by the project, primarily for two reasons. First, it was clearly an extremely technologically ambitious project. Second, it seemed to be a major departure from the United States' previous nuclear policy, the offensive Mutually Assured Destruction (MAD).

Twenty-seven years later, historians still disagree about what prompted SDI. In his book, *Strategic Defense Initiative*, Robert M. Lawrence wrote that SDI's causes were so deep-rooted in America's past dissatisfaction with MAD that SDI was really not much of a change; it was merely what many analysts' thinking had been leading up to for many years.¹ Edward Reiss, in *The Strategic Defense Initiative*, offers quite a contrasting view. According to Reiss, Reagan's introduction of SDI "signaled his intention to overturn the entire basis of official U.S. nuclear strategy," and did not appear to have much basis in previous U.S. strategy.²

Why did the Reagan administration introduce SDI? Granted, one reason for this was the ever-expanding technology that was opening up in America, making a space-based defense system seem like it might be a plausible goal for the first time in history. Indeed, SDI certainly would not have been launched in the 1960s. Nevertheless, it did not directly grow out of any changes in American technology; the main reasons for SDI were more connected to America's military relations with the Soviet Union than they were to what was going on within America it-

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self. One of these causes was an attempt by Reagan to ensure American safety during a time in which the U.S.S.R. seemed to be expanding its nuclear arsenal. This was the official explanation Reagan gave for SDI, and I think it is a crucial part of the story, but not the only part. The other main goal Reagan was trying to achieve with SDI was to create a second arms race with the Soviet Union, a race over anti-ballistic missile systems; the idea was that due to America's scientific advantages, the U.S.S.R. would not be able to keep up with America's race for an operational defense system, severely weakening its military standing in relation to the U.S.

The Political Necessity of Technological Justification

In his presentation of SDI to the American public, Reagan certainly emphasized the important role technology was playing in shaping his decision to initiate a new phase of strategic defense. When one considers how much more technically ambitious SDI was than any ballistic missile defense system the United States had previously explored, attempting to shoot down missiles from space for the first time, this comes as no surprise. Nevertheless, despite the leaps and bounds in science and engineering that Reagan claimed made SDI possible, SDI did not grow out of these technological changes. Instead, to make SDI palatable to the general U.S. population, it was necessary for Reagan to produce a means of justifying his initiative by stressing the recent improvements in U.S. technology.

From the moment Reagan introduced SDI to America in a televised speech on March 23, 1983, he made sure to highlight the growth in American technology that had led to his decision to undertake this project. To create a system in which the United States would not have to rely on the doctrine of MAD, Reagan appealed to his audience, "Let us turn to the very strengths in technology that spawned our great industrial base and that have given us the quality of life we enjoy today."³ This statement is a clear example of Reagan trying to earn popular support for SDI by creating a feeling that America could accomplish almost anything through its great technical prowess. Later in his speech, Reagan did qualify this some by saying that SDI would most

likely take many years of research, possibly decades, before it could be fully operational.⁴ However, this could also be seen as a political move, making SDI harder to criticize by admitting that it was quite an ambitious, long-term project. Furthermore, even in this qualification, Reagan continued to drive home the point that SDI was growing directly out of America's advancing technology.

But looking deeper, it appears that no technological improvements, either real or invented for political support, were the motivation for SDI. In a letter to a Mr. Patrick Mulvey, Reagan wrote that he did not actually know what SDI would, from a technical standpoint, consist of.⁵ Instead, he just asked his team of scientists to figure out the feasibility of a space-based defense program.⁶ While the president would of course not be directly involved in the actual scientific planning of such a military project, this letter clearly implies that the impetus for SDI came not from any scientific gains, but that Reagan tried to find scientists to back him up after he had already become convinced of the necessity of SDI. This is different from, for example, the Manhattan Project, which was initiated after physicist Leo Szillard wrote a letter (also signed by Albert Einstein) to President Roosevelt advocating the research of nuclear fission for the purpose of creating an atomic bomb. Furthermore, Reagan appears to not have consulted very carefully with all of his technical advisers before announcing his proposal to the public. This is evidenced by the fact that both the director of the Defense Advanced Research Projects Agency and the director of defensive systems learned of Reagan's speech introducing SDI at the same time as the rest of the nation: on television.⁷

Based on the public reaction to this speech, it seems that the way in which Reagan emphasized the science behind SDI was truly necessary for the project politically. To some extent, Reagan succeeded in creating a positive reaction to his initiative by stressing the great technological bounds that led to SDI. A *Time* article, titled "The Old Lion Still Roars," printed not even two weeks after Reagan introduced SDI, describes Edward Teller, one of Reagan's chief scientific advisers for the project, in a very positive light.⁸ Even the title conveys an enormous air of optimism. However, the fact that SDI was soon dubbed "Star Wars"

because of its seemingly impossible, science fiction-like ambition, and that this nickname has stuck quite strongly even to the present day, shows that a huge number of people grew to think that SDI was technologically ridiculous. A *San Jose Mercury News* article, “‘Star Wars’ Feasibility Debated,” further shows the sort of technological criticism SDI received, specifically from the computer science community.⁹ Such criticisms, which lasted throughout SDI’s existence, prove that it was indeed politically necessary for Reagan to attempt to convince the public of SDI’s achievability with claims of great scientific advancements, as he continued to do throughout his presidency, despite the fact that in reality, SDI did not grow out of any gains in technology.

The Light Side—Protecting the American People

The official motivation Reagan gave for SDI was to create a means of protecting the lives of American citizens should the Soviet Union decide to initiate a nuclear attack. In a pamphlet released by the White House in 1985, Reagan stated, “Our only purpose is to search for ways to reduce the danger of nuclear war.”¹⁰ This statement is only half true; while it appears there were at least some other incentives for SDI, it does seem that one of the main goals was in fact to be able to effectively defend against a nuclear attack, instead of merely relying on the threat of massive retaliation to prevent such an attack. Ultimately, this new defensive strategy has roots in Reagan’s own ideals that he brought with him to office in 1980. Proximally, these ideals could be fully realized as SDI because of a nuclear build-up that the Soviet Union had been undertaking at the time.

Reagan entered office already very interested in creating a defensive alternative to MAD. In fact, already in 1979, before he was elected, Reagan had decided that the United States was in need of a means of defense against a missile attack, but he decided not to run on this, as it was too politically risky.¹¹ Throughout his presidency, Reagan remained an extremely avid proponent of SDI. This is evidenced by the fact that in arms negotiations with the Soviet Union, although he was willing to compromise over other issues, such as nuclear arms reductions, he was never willing to let up on his plans for SDI at all.¹² SDI always was an integral part of his vision for a peaceful world.

Central to Reagan's desire for a new system of defense was an extreme distrust in MAD. MAD's fundamental logic was a basic tenet of game theory strategy known as deterrence: if both the U.S. and the U.S.S.R. have enough nuclear weapons to destroy the other side, and they each could detect if the other were to launch a nuclear attack on them, neither side would launch a nuclear attack, as the risk of retaliation would be too high, and too devastating. Mainly because it had seemed to work well so far, all previous administrations, and even many of Reagan's own advisers, viewed MAD as necessary for the prevention of nuclear war.¹³ However, Reagan viewed the logic of MAD as inherently dangerous. In his speech announcing SDI to the public, Reagan said that even if the Soviet Union is willing to keep their nuclear weapons stockpile at no higher than the U.S.'s, "it will still be necessary to rely on the specter of retaliation—on mutual threat, and that is a sad commentary on the human condition."¹⁴ Even in a stable, balanced situation, with neither side having any advantage, Reagan was not at all satisfied with MAD.

On top of this, when Reagan took office, MAD did not seem to be a stable system to Reagan and many others of his administration. In fact, even before he took office, some analysts had been concerned over the effectiveness of MAD, reporting that the Soviet Union had been increasing its nuclear capabilities. A 1976 *New York Times* article shows that the United States did have some intelligence suggesting that the U.S.S.R. was building up its nuclear arsenal, and even that the Soviets had never quite been content with MAD. Furthermore, the article stated that NATO analysts believed the Soviet Union was possibly creating civil defense programs so that a retaliatory attack would cause only a limited number of deaths, a number that the Soviet Union might find tolerable for conducting a first strike.¹⁵ When Reagan took office, he agreed that the Soviet Union was working towards gaining a nuclear advantage over the United States. Moreover, he felt that the second SALT (Strategic Arms Limitation Talks) treaty had worked to help the U.S.S.R. enjoy levels of nuclear weapons far greater than those of the United States.¹⁶ One response that Reagan gave to this was an attempt in the first years of his presidency to greatly build up the U.S.'s nuclear weapons as well.¹⁷ However, even with this buildup, Reagan felt that SDI was necessary to protect the United States from the advantage U.S. intelligence believed the Soviet Union held in its nuclear

potential. The public, too, felt that the U.S.S.R. posed a serious threat towards America. In a December, 1981 poll, 76 percent of Americans were reported to have said that they believed a nuclear war was likely to break out within just a few years.¹⁸ This fear throughout the nation suggests that Reagan may have been influenced by public opinion in his decision to push for SDI. However, Reagan's explanation that the purpose of SDI was to defend against a nuclear attack does not seem to be just politically motivated. In the years leading up to SDI, the Soviet Union was indeed expanding its nuclear arsenal at a rate significantly greater than the U.S. had been expanding its own. (See Appendix A.) This suggests that Reagan and his analysts were not merely trying to create an irrational sense of fear over the nation to gain support for SDI, but that they had reason to believe there was a legitimate cause for concern over nuclear war.

The Dark Side—A Second Arms Race

Still, an attempt to create a defensive system so that the American people would be safe from a nuclear missile attack was only one of the main motivations for SDI. The other important rationale was to instigate a second arms race with the Soviet Union: a race to see which nation could supply itself with the best defensive weapons, and a race that the Reagan administration thought America could win. Of course, to pass SDI off to the public as a completely innocent, entirely defensive decision, the Reagan administration never at all admitted this as one of the incentives, but it influenced the administration's thinking on the matter nonetheless.

Lieutenant General Daniel O. Graham, one of Reagan's chief military advisers, was an extremely important figure in advocating for SDI, often credited with creating most of the initial drive within Reagan's administration for a space-based defense system. Like Reagan, Graham recognized that the Soviets appeared to have an advantage over the United States in terms of the bulk of their nuclear arsenal.¹⁹ However, unlike Reagan, Graham did not believe that the United States would be able to catch up to the Soviets in the number of traditional nuclear weapons they possessed.²⁰ In his belief that it would be unwise for the U.S. to proceed by simply spending more and more on conventional

nuclear missiles, Graham was also likely influenced by the recession plaguing the United States in the early 1980s, the worst since the Great Depression. As an alternative, he advocated changing the nuclear arms race to strategic defense. In his mind, because the United States was generally superior to the Soviet Union in more sophisticated technology, the U.S. would have a very strong advantage in the race over space-based defense systems.²¹ Of course, the fact that one of Reagan's chief advisers on SDI laid out this theory two years before SDI was announced does not in itself prove that an effort to initiate a defensive arms race really was one of the causes of SDI, but it does suggest that this rationale for SDI was very likely to have been one of the driving forces behind it.

In looking at SDI in the context of the Anti-Ballistic Missile Treaty of 1972, it seems that the desire to cause a second arms race did indeed play a big part in the administration's decision to introduce SDI. The ABM treaty was ratified by the United States and the Soviet Union in order to limit the development and deployment of missiles used to counter nuclear warheads. Furthermore, the treaty specifically bans the development of space-based missile defenses.²² In his memoirs, President Nixon, who signed the treaty alongside Leonid Brezhnev, stated that the primary purpose of the ABM treaty was to stop "what inevitably would have become a defensive arms race, with untold billions of dollars being spent on each side for more and more ABM coverage."²³ If SDI broke the ABM treaty, then, this would further suggest that one of the purposes of SDI was to create a defensive arms race. Not surprisingly, when SDI was announced, the Reagan administration insisted that it was within the confines of the treaty, as SDI was merely a research project.²⁴ Despite these claims, though, SDI still seems to be a drastic change from the military strategy that the ABM treaty set for the U.S. in 1972, and that it had adhered to until SDI.

One piece of evidence that SDI signified a change from previous military strategy on missile defense systems is the huge amount of money that went into SDI when compared to previous spending on anti-ballistic missile weapons. After the ABM treaty was signed, the amount of money spent on ballistic missile defenses gradually dropped to its

lowest levels since 1959, down to about 500 million dollars per year. However, after Reagan announced SDI, the amount of money being spent on such devices quickly shot up to its highest levels ever, peaking at around 4 billion dollars per year in 1988. (See Appendix B.) This change in spending alone strongly suggests that with SDI, America was breaking off from the ABM treaty. What's more, in his diaries, in March 1987, Reagan wrote that at the start of the next year, SDI would move into a stage of "broader interpretation" of the ABM treaty.²⁵ This further shows that the Reagan administration was in fact consciously moving away from the ABM treaty, in turn implying that the United States seemed to be initiating a defensive arms race. One group of people who certainly held this opinion were the Soviets. In 1985, *Pravda* printed an article titled "Playing With Fire" that argued that SDI was extremely dangerous, even counter-productive, to the prospects of reducing the levels of nuclear weapons between the two nations, and it was just helping to propel the arms race further.²⁶ Because of this general fear of SDI throughout the Soviet Union, Soviet leaders were always very opposed to SDI and tried to bring an end to it in various arms negotiation talks, but SDI still managed to survive the remainder of the Cold War.

Conclusion

One of the reasons it is so hard to understand what the initial intentions were for SDI is that before it could ever be fully realized, the Soviet Union suddenly collapsed in 1991. With the Soviet Union went much of the fear of a nuclear attack that had permeated American politics for over 40 years. However, SDI research continued. Of course, the motives for more strategic defense weapons were quite different after the fall of the U.S.S.R.; the United States was clearly not trying to start an arms race with any other country, and there was no immediate threat of a nuclear attack by any measures. Instead, the reasons for continuing research seemed to be aimed more toward a long-term goal, so that if the United States were ever to find itself in danger of a nuclear attack again, it might be ready with a space-based defense. Furthermore, research likely continued because of the level of momentum SDI had reached by that point, and the large amounts of money that had

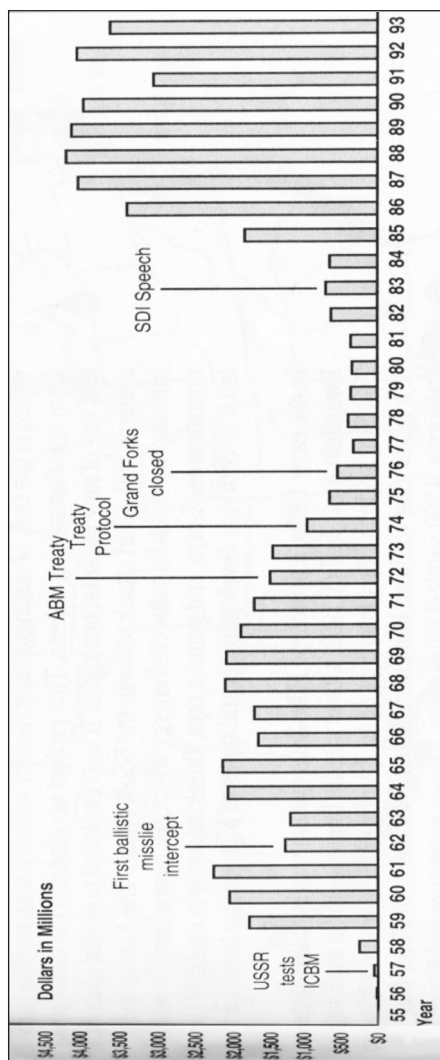
already been spent on it. Very recently, on February 12 of this year, the Missile Defense Agency, which currently heads strategic defense technology, announced that for the first time, in a test, it had succeeded in shooting down a ballistic missile with a space-based laser, a major breakthrough for the program. Because of this, it is conceivable that although the Cold War is long gone, Reagan's dream of SDI may yet become a reality in the not-so-distant future. So as strategic defense continues to benefit from large sums of government spending, and as it might possibly play a very real role in the future of American military policy, it is of vital importance that we, as a nation, do not lose sight of the initial origins of the program: the dream to create an America safe from nuclear attack, but also the great thirst for military superiority over the Soviet Union. ●

Appendix A

Year	Launchers		Warheads		Megatonnage	
	USA	USSR	USA	USSR	USA	USSR
1964	2,416	375	6,800	500	7,500	1,000
1966	2,396	435	5,000	550	5,600	1,200
1968	2,360	1,045	4,500	850	5,100	2,300
1970	2,230	1,680	3,900	1,800	4,300	3,100
1972	2,230	2,090	5,800	2,100	4,100	4,000
1974	2,180	2,380	8,400	2,400	3,800	4,200
1976	2,100	2,390	9,400	3,200	3,700	4,500
1978	2,058	2,350	9,800	5,200	3,800	5,400
1980	2,042	2,490	10,000	6,000	4,000	5,700
1982	2,032	2,490	11,000	8,000	4,100	7,100

Source: Gerard Segal, "Strategic nuclear missiles, warheads and throw-weights of United States and USSR, 1964-82" (2002)

Appendix B



Source: *Ballistic Missile Defense: Evolution and Current Issues: Report to the Chairman, Committee on Governmental Affairs, U.S. Senate (1993)*

Department of Defense Spending on Ballistic Missile Defense Programs, 1955-1993

Note: Y-axis ranges from 0 to 4,500 in millions of dollars

Notes

1. Robert M. Lawrence, *Strategic Defense Initiative* (Boulder: Westview Press, 1987), 7.
2. Edward Reiss, *The Strategic Defense Initiative* (Cambridge: Cambridge University Press, 1992), 37.
3. Ronald Reagan, "Peace and National Security: A New Defense" (Washington, D.C., March 23, 1983).
4. Ibid.
5. Ronald Reagan to Patrick Mulvey, June 20, 1983, in Kiron K. Skinner et al., ed., *Reagan: A Life in Letters* (New York: Free Press, 2003), 425.
6. Ibid.
7. Edward Reiss, *The Strategic Defense Initiative*, 38.
8. "The Old Lion Still Roars," *Time*, April 4, 1983.
9. Naomi Schalit, "'Star Wars' Feasibility Debated," *San Jose Mercury News*, December 20, 1985.
10. Ronald Reagan, *The President's Strategic Defense Initiative* (Washington, D.C., 1985), in Steven Anzovin, ed., *The Star Wars Debate* (New York: H. W. Wilson, 1986), 13.
11. Donald R. Baucom, *The Origins of SDI, 1944-1983* (Lawrence, Kansas: University Press of Kansas, 1992), 139.
12. Ronald Reagan, diary, February 10, 1987, in Douglas Brinkley, ed., *The Reagan Diaries*, (New York: HarperCollins, 2007), 474.

13. Ronald E. Powaski, *Return to Armageddon* (New York: Oxford University Press, 2000), 30.
14. Ronald Reagan, "Peace and National Security: A New Defense."
15. Drew Middleton, "Soviet Civil Defense A Concern For NATO," *New York Times*, October 11, 1976.
16. Ronald E. Powaski, *Armageddon*, 15.
17. Ibid.
18. Ibid., 18.
19. Donald R. Baucom, *Origins*, 142.
20. Ibid., 144.
21. Ibid.
22. U.S. Department of State, "Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems," May 26, 1972.
23. Richard Nixon, *The Memoirs of Richard Nixon*, Vol. 2 (New York: Warner Books, 1979), 99.
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26. G. Arbatov, "Playing With Fire," *Pravda*, July 24, 1985, in Steven Anzovin, ed., *The Star Wars Debate* (New York: H. W. Wilson, 1986), 199.

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