



Why Space Is a Sanctuary

A Brief History of Space Thinking

By Mark Stout

Note: [this article](#) originally appeared in the 30 October 2008 edition of Air University's [The Wright Stuff](#).

It's a fundamental duty of leadership to prepare for the future. In 1946, this responsibility, plus competition from the Navy, led Air Force legend Curtis LeMay to ask Project Rand (today, the think-tank known as RAND) to study the feasibility of using outer space for military purposes. Rand revealed space had the potential to provide revolutionary breakthroughs benefitting national security, despite the fact that, at the time, space was inaccessible.

Today, the United States is the world's greatest space-faring nation, and space provides essential capabilities the defense and intelligence communities need to function effectively; without the effects space provides, America's military might would regress to approximately the Vietnam War era. Paradoxically, as our space capabilities have matured, many fundamental thoughts and assumptions regarding space have remained remarkably unchanged.

Why a rudimentary history lesson concluding with the assertion our space thinking has been essentially undisturbed since birth? Because historical thinking about the space-domain, dating from its roots in the Cold War, constrains today's thinking. This constrained thinking keeps policy and decision makers--leaders--from examining changes to the space security arena that have already happened, are now occurring, or are likely to occur. Therefore, the road that led to legacy space thinking needs to be unpacked, and the road ahead must be considered.

Bob Goddard and Wernher von Braun may be the respective fathers of rocketry and the US space program, but the matriarch of the space age was the advent of nuclear weapons. After the Soviet Union moved from World War ally to Cold War adversary, America's lack of insight into their capabilities and intentions created grave national concerns, especially after the USSR's breakout in exploding an atomic bomb.

Over the years, US space systems came on-line and matured, and eventually they fulfilled the vision first imagined, including revealing the locations and capabilities of the USSR's nuclear weapons systems, and providing space-based missile warning were the Soviets to launch their ICBMs. These space systems, and others, were essential eyes and ears and helped us understand the USSR. This understanding allowed for better decision making, increased confidence in the accuracy of those decisions, and greatly reduced the risk of nuclear war. Because space added transparency to the Cold War, many came to view outer space as a fragile

“sanctuary.” Any disturbance to the sanctuary had to be avoided as it could significantly reduce understanding of the adversary and dangerously increase the likelihood of nuclear war.

At the beginning of the space age, US policy first proclaimed--and still does--space was to be only for “peaceful uses” and “the benefit of all humanity.” However, the non sequitur between early space policy and actual space capabilities--spying and missile warning--caused the US government to classify many military and intelligence-use space programs. Hiding these space systems in secrecy removed them from public discussion and contributed to the idea of space as a benign sanctuary. After a time, space was a place of peace, where astronauts could grow gravity-free crystals and demonstrate the superiority of America’s economic and social systems.

Today, thankfully, the chance of global nuclear war has diminished even as the world’s overall security situation has become increasingly complex. Now, more than ever, Americans depend on space--arguably to the point of vulnerability. Certainly for our security: almost exclusively for navigation; very significantly for weather, communications, missile warning, and intelligence, surveillance, and reconnaissance. Additionally, our entire economy uses space as never before.

Current US space policy, released in 2006, addresses the principles of space security. This policy, similar in many ways to previous space policies, is both ambitious and flawed. Its ambitions lie in its aims; its flaws in the fact its aim is well disconnected from capabilities. Now, however, instead of policy doing things it says it doesn’t, the 2006 version claims to accomplish things it cannot. For example, just how will we ‘preserve our rights, capabilities, and freedom of action in space?’ How will we ‘dissuade or deter others from impeding our space rights or developing the capabilities to do so?’ How will we respond to interference or, if necessary, ‘deny an adversary’s use of space capabilities that are hostile to our national interests?’ The challenges associated with the 2006 policy, at minimum, include those of proportionality, collateral damage, and escalation control. Similarly, there is no space strategy in place to turn policy into capabilities, or to aid implementation.

Because of the legacy and unexamined approach that space is a “sanctuary” we have veto over, we have not fully thought through these policy statements, nor do we have the systems and capabilities needed to make the policy a reality. It seems we are nearly perfect in our inability to execute much of our own guidance at a time we have well recognized other nations’ anti-satellite systems, cyber attacks, space jamming, and space lasing capabilities. Still others are striving mightily to develop nuclear weapons and delivery systems.

Sadly, our nation is now ill positioned to respond to current and emerging space security challenges because of Cold War legacy opinions viewing space as an inviolate sanctuary. Make no mistake: we still need to strive mightily to prevent nuclear war, but the fact today’s security challenges are different is self-evident. They must be better addressed.

The test for leadership will be to set aside legacy thinking and create a way ahead that improves our national security, in part by improving our space security. Specifically, this should entail ever-improving missile defense systems, moving us from the Cold War’s assured destruction

towards assured survival. Also, we need well-developed space situational awareness, robust, redundant, and responsive space systems, and other space and ground systems capable of generating temporary and reversible anti-space effects. Do we need kinetic anti-space weapons? There are two considerable disadvantages--debris and cost--but is it prudent to unilaterally turn the option off, especially when there are significant other uses of these same technologies?

Today, policy and decision makers--leaders--need to reexamine their ideas regarding space. The "space sanctuary" idea was arguably a beneficial approach during the Cold War, but today it has exceeded conceptual use-by date. It's often offered if the only tool is a hammer, all problems look like nails. Similarly, if the mind only views space as a sanctuary, what is there to do except...nothing? Doing nothing to improve our space security does not prepare us for the future and is not the stock and trade of leaders.

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