

FROM SPACE DOMINANCE TO EQUITABLE RULES AND MUTUAL RESTRAINT

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INTRODUCTION

My remarks today are based on a new monograph on space security policy that John Steinbruner and I wrote in conjunction with the American Academy of Arts and Sciences.¹ This monograph is intended for US “opinion shapers”—independent experts who know little about current US space policy, but who care a lot about how the United States interacts with other countries and who might be influential in shaping security policies of the next US administration. We hope that the monograph will convince Americans that the United States should start talking seriously with the rest of the world about additional legally binding rules for space security—and stop blocking a negotiating mandate for the Conference on Disarmament or pretending that all problems of space security can be solved through increased transparency and voluntary codes of conduct.

We hope the monograph will also be useful for diplomats and security experts in other countries who want to know whether the United States really could achieve comprehensive military space dominance if the next administration continues to pursue that objective—either because their country is a US ally, and thus implicated to a certain degree, or because it might some day be on the receiving end of US efforts to control who can use outer space and for what purposes.

Our goal is to raise awareness and facilitate informed discussion, not to provide definitive answers. In the time available now, I will give a brief overview of our analysis, encourage you to read the whole monograph, and invite you to respond with your reactions and suggestions.

TWO CONCEPTIONS OF SPACE SECURITY

The United States recognized from the outset of the Cold War that the only way it could do what it most wanted to do from outer space—which was to use vulnerable satellites to collect information in order to stabilize deterrence, to support arms control and to encourage the Soviet Union to evolve in a more open and cooperative direction—was to promote international agreement on the protective rules and mutual restraints embodied in the 1967 Outer Space Treaty (OST) and other formal and informal tools of policy coordination. The OST drafters anticipated many of the developments that have occurred in outer space, including the growing number of spacefaring countries and the expanding array of space activities, thus they put together an equitable package of general principles that could stand the test of time.

The end of the Cold War and the increased economic and military importance of outer space in the information age started a debate, which remains unresolved today, between two different ways of thinking about which uses of outer space were most important and how they could best be protected. Most space users—including governments of all spacefaring nations besides the United States, and most civilian, commercial and even military space users in the United States—believed that outer space would increasingly be an environment where cooperation was the norm. They expected that the unintentional problems that one user's activities might create for another user could be managed through codes of conduct and other types of policy coordination to minimize space debris, manage space traffic, and equitably allocate scarce space resources.

A small group of hawkish US defence experts and the part of the US military that wanted outer space to become a full-spectrum combat command, and not just a support service for terrestrial military space operations, used documents such as the US Space Command's *Vision 2020* and the Rumsfeld Commission's space report to advance a completely different conception of outer space. They viewed it as an increasingly competitive environment in which continued US military and economic superiority depended on the United States—and only the United States—being free to use outer space for a wide array of purposes beyond the traditional interpretation of "peaceful" (that is, passive) military support operations allowed under the OST.

The United States has never conducted a balanced assessment to determine which conception of outer space is more correct and whether international cooperation or military competition provides a more realistic and reliable route to space security. Instead, US electoral politics put proponents of space dominance into key policy positions, first with Republican control of Congress in the mid-1990s, then control of the executive branch starting in 2001, even though space policy was never a salient electoral issue.

The bulk of our monograph focuses on two questions: first, how much have proponents of US military space dominance actually been able to accomplish? And second, how realistic is it to expect that, if the United States continues on its current quest for space dominance, it could achieve the US Space Command (SPACECOM) vision—that is, to have an unlimited ability to project force in, from and through outer space; to protect all its own space assets and those of friendly countries; and to prevent anybody else from using outer space for purposes that the United States deemed objectionable without also precluding the full development of outer space for peaceful purposes.

ASSESSMENT OF SPACE DOMINANCE

Even though the United States has been spending vastly more on military space than the rest of the world combined, it is nowhere close to achieving total space dominance. Most of the Bush administration's accomplishments have been in the realm of intentions, not capabilities.

First, it changed the context for US space policy by replacing deterrence as the central principle of US national security policy with a much more ambitious objective that can be called coercive prevention. Coercive prevention is characterized by a declared intention to use force, unilaterally if necessary, to stop potentially hostile states and terrorist groups from acquiring technology that could threaten the United States. The Bush administration also removed legal and policy constraints on US freedom of action in outer space, including withdrawing from the Anti-Ballistic Missile Treaty, narrowly interpreting the OST to prohibit only weapons of mass destruction orbiting in outer space and military activities on celestial bodies, and issuing the 2006 National Space Policy that rules out any new legal restrictions on US military space activities.

The Bush administration carried out a sharp and steady increase in the US military space budget, especially for the acquisition of advanced military space capabilities. Precise numbers are impossible for independent analysts to obtain because the Bush administration has become less transparent about military space spending, but US military space spending seems to have roughly doubled over the past eight years.

This rapid increase in spending does not translate into an equally rapid advancement of US military space capabilities though, because most of the money is being spent on incremental upgrades to existing space-based military support programmes and these projects are all seriously behind schedule and over budget.

As best one can tell from the unclassified record, the total amount of money being spent on things that are traditionally considered space weapons—that is, weapons based in outer space, space-based missile defence and any type of anti-satellite weapons (ASATs)—is very small and is primarily for basic research. This spending bears close watching, though, largely because of the damage that it does to normative constraints on the development of space weapons, but there is time to stop these programmes before they come close to providing a deployed weapons capability.

Problems in the space acquisition process have forced a scaling back of US ambitions, at least in the short term. There is more emphasis now among military space professionals on using existing or near-term technology to achieve incremental improvements in US space capabilities, rather than to transform fundamentally how the United States uses outer space for military purposes. But a somewhat more realistic approach to acquisition among military space professionals has not yet caused those policymakers who have embraced the SPACECOM vision to reconsider whether space dominance is desirable or feasible over the long run.

There are good economic, technical and strategic reasons to believe that even if the next US administration wanted to make the quest for military space dominance an even higher priority than it has been under former Defense Secretary Donald Rumsfeld and other true believers in the Bush administration, the United States still could not get to the point where it could use outer space to solve some of its toughest military challenges on Earth. Nor could it physically protect or rapidly replace any satellite needed for global power projection, or prevent other countries from using outer

space for any purposes that the United States did not approve of without also unduly interfering with legitimate uses of outer space. Nevertheless, the United States is better positioned than anyone else to compete for military advantage in outer space and will continue to be tempted to do so unless the likely long-term consequences are better understood.

If the United States continues to pursue its space dominance policy, it will progressively acquire more advanced capabilities to use outer space for long-range precision power projection—including the so-called “prompt global strike” mission. In the near term, this would involve the increasing use of outer space to find, track and target objects that would then be destroyed by aircraft, cruise missiles or conventionally armed ballistic missiles, but this could eventually also include weapons in outer space. The more the United States heads in this direction though, the more vigorously other countries will look for ways to emulate these uses of outer space, or to offset them through asymmetrical means.

The net result of an incomplete US effort to dominate outer space for national military advantage would be to make outer space a much more difficult and dangerous place to operate. The United States would have removed legal protections for satellites, undermined diplomatic mechanisms to coordinate policy and manage conflicts of interest in outer space, and stimulated other countries to develop more advanced space capabilities without being able to provide reliable military protection for its own satellites, let alone those of its allies or neutral commercial and civilian space users.

NEGOTIATED PROTECTION AS AN ALTERNATIVE APPROACH TO SPACE SECURITY

Given the Bush administration’s antipathy towards legally binding arms control, most observers who recognize the ruinous consequences of a competition for military advantage in outer space propose some type of informal rules of the road or code of conduct as a way to get US agreement on some modest cooperative measures. Such informal coordinating mechanisms would be insufficient given the magnitude, the competitive momentum and mutual suspicions that have developed over the past decade. If you compare the space security debate today with where it was 10 years ago, it would be fair to say that both the idea that the United States could achieve total military space dominance at some acceptable cost and

the idea that outer space would naturally evolve into a harmonious realm of international commercial and civilian space cooperation seem equally unrealistic. Outer space is much more closely connected to terrestrial military competition today than it was 10 years ago, and capabilities to use outer space for both benign and threatening purposes are spreading around the globe in ways that make it much more important that rules regulating space activities be explicit, equitable, legally binding and sufficiently institutionalized to ensure their effective implementation. Therefore, we believe that one of the early moves of the next US president should be to offer to start formal negotiations, both to enhance protections for US satellites and to reassure the rest of the world about US intentions.

By using “equitable” rather than “equal,” we mean that the rules must treat like countries in a like manner instead of having one set of rules for the United States and a different set for all other spacefaring powers. The package of rules must also reflect all countries’ interests, needs and capabilities in some fair way. Negotiations must address not only those behaviours that the United States might like to constrain, such as debris-generating ASATs, but also other military space activities that might be an equal or greater problem in the eyes of countries such as China or Russia. Debris-mitigation guidelines, shared space surveillance information and other types of policy coordination mechanisms that have been discussed so far would be able to make a much larger contribution if they were part of a comprehensive strategy to address the central problems of space security in the information age.

A more refined set of rules for outer space would build on the general principles in the OST to protect legitimate space activities while providing reassurances about how those activities will operate and how their benefits will be shared. This set of rules should start with a categorical prohibition on the destruction of peaceful space assets and on interference with their legitimate uses. The rules should also prevent testing and deployment of dedicated space weapons—not only weapons based in outer space, but also space-based missile defence and any type of ASAT.

Because so many space technologies have both benign and malign uses, there will need to be some basic behavioural rules for dual-use space capabilities. “No threat or use of force against space assets” is a reasonable place to start, but negotiators will need to figure out what secondary rules are needed to

provide adequate reassurance that no one is positioning themselves to gain some type of decisive advantage through a sneak attack.

Some have argued that any behavioural rules should only apply during peacetime, either because they want to keep open the option of attacks on satellites during war or because they believe that such attacks, while undesirable, would be impossible to prevent. A strong case can be made though, that rules protecting communication, imagery and navigation satellites are especially important during a crisis in order to minimize the chances of misperception, miscommunication and destabilizing fears about pre-emptive ASAT attack. Even during wartime, the benefits of denying one's adversary satellite services could easily be outweighed by the risks that a limited conflict would turn into a much larger conflagration, either because the belligerents lack the information and communication systems they need to control escalation, or because neutrals join the fighting when their access to vital satellite services becomes a casualty of war.

Rules against interference and attacks on space-based military support activities will require agreement about the limits of permissible use. It would probably not be practical to try to roll back existing space-based military support activities, but the United States needs to acknowledge that advancement cannot continue indefinitely without becoming unacceptably threatening to other countries, just as the United States would not like to feel perpetually under threat of a prompt global strike if other countries followed the US lead in developing such capabilities.

Finally, if we want a serious discussion about legally binding rules to protect legitimate uses of outer space and prevent dangerous ones, we need to have an equally serious discussion from the outset about verification, compliance management and enforcement, based on the principle that the extent of the implementation mechanisms should match the significance of the rules.

PROSPECTS FOR THE FUTURE

It is too early in the US presidential election season to know who the next president will be, let alone whether he or she will recognize the need for the United States to engage more constructively with the rest of the world on this topic. The Center for International and Security Studies at

Maryland and its affiliate Program on International Policy Attitudes recently conducted a polling project to assess Russian and US public attitudes toward space security and various other arms control items on the Conference on Disarmament agenda, in hopes that this might indicate what the next administration could do, if it were so inclined.²

The bottom line is that even though public awareness of space security is probably not very high, more than 80% of both American and Russian respondents thought that their governments should make preventing an arms race in outer space a priority (although more Russians than Americans see this as a “high priority” right now). Regardless of what type of cooperative option the poll questions proposed—from informal reciprocal restraint, to a legally binding ban on all space weapons, to a prohibition on interference with satellites even during times of war—Americans and Russians overwhelmingly preferred the cooperative option to the more unilateral choice. We found roughly an 80/20 split among Americans and similar proportions, but a larger number of “don’t know” responses, among Russians.

These numbers offer no guarantee that the next Russian and US leaders will actually try to work together on this issue, but if they did, they would have the strong support of their publics behind them.

Notes

- ¹ Nancy Gallagher and John Steinbruner, *Reconsidering the Rules for Space Security*, American Academy of Arts and Sciences, 2008, <www.amacad.org/publications/reconsidering.aspx>.
- ² The reports and related articles are available at <www.cissm.umd.edu/projects/pipa.php>.