

WHERE NO BOMB HAS GONE BEFORE:

US Space Weaponization Planning and Its Implications

By Wade L. Huntley

This chapter first reviews U.S. military planning for space dominance, already well underway in the 1990s, as an aspect of its wider plans for global military dominance. The chapter then considers how the Bush administration, while not initiating such planning, has expanded it and built upon it by embracing the military vision in the context of a broader concept of American grand strategy in the post-Cold War world. The chapter concludes that this strategy is unrealistic; but also that the issues at hand are not solely about realistic responses to foreseeable challenges to US and/or global security, including space security. For Canada, meeting the challenge to prevent the weaponization of space will require not simply making the case on realistic grounds, but also challenging and overcoming the underlying vision of dominance/domination now driving US military policy-making at both policy and institutional levels.

Dominance: USSC and USAF Visions

The United States Air Force (USAF) and United States Space Command (USSC) visions for the "dominance" of military uses of outer space precede the advent of the Bush administration (Space Command itself was formed in 1985). Moreover, these military agen-

cies have been quite public in articulating these visions.

Consider US Space Command's widely-circulated document, *Vision for 2020*. Released by Space Command in 1998, the vision portrays the militarization of space as resulting from natural historical progression. Just as air power developed first to support land and sea military operations and eventually became a domain of warfare in its own right, space power has equivalently developed in recent decades in support of terrestrial operations and is now set to "evolve into a separate and equal medium of warfare."¹ The notion that militarization of space is not inevitable is flatly (if implicitly) rejected. Thus, the report identifies "a critical need to control the space medium to ensure US dominance on future battlefields. Robust capabilities to ensure space superiority must be developed – just as they have been for land, sea, and air... Included in that planning should be the prospects for space defense and even space warfare."² General Lance Lord, commander of US Space Command, has subsequently stated the point more bluntly: "The term 'space superiority' has to roll off our tongues just like air superiority. We would never try to engage an enemy without first establishing air superiority. And it's no different for space."³

That the militarization of space will necessarily entail the weaponization of space is articulated fully. *Vision for 2020* presents four "operational concepts" providing the "conceptual framework to transform the Vision into capabilities." The "Control of Space" includes space protection and negation functions (including "D5" capabilities) – its "robust negation systems" might necessitate space-based weapons. The "Global Engagement" concept is more explicit:

USSPACECOM will have a greatly expanded role as an active warfighter in the years ahead as the combatant command responsible for National Missile Defense (NMD) and space force application. Global Engagement

combines global surveillance with the potential for a *space-based global precision strike capability*... NMD will evolve into a mix of ground and space sensors and weapons. Existing land, sea, and air missions will be enhanced by space systems. Current sea and air strategic attack missions *will be augmented by the deployment of space force application systems*.⁴

The four "operational concepts" of the vision are gathered under the banner purpose: "Dominating the space dimension of military operations to protect US interests and investment."

Space Command's *Vision for 2020* was followed in early 2001 by the more infamous and more inflammatory *Report of the Commission to Assess United States National Security Space Management and Organization*, chaired by soon-to-be US Secretary of Defense Donald Rumsfeld. Warning of an impending "Space Pearl Harbor," the report recommends that the United States develop a space-based "military capability" to defend its space "assets," and prepare to fight in space in order to maintain strategic dominance on Earth. The report regards ground-based missile defense as merely the first step to deploying space-based weaponry, on which subject the commissioners' conclusion is clear:

The Commissioners appreciate the sensitivity that surrounds the notion of weapons in space for offensive or defensive purposes. They also believe, however, that to ignore the issue would be a disservice to the nation. The Commissioners believe the U.S. Government should vigorously pursue the capabilities called for in the National Space Policy *to ensure that the President will have the option to deploy weapons in space* to deter threats to and, if necessary, defend against attacks on U.S. interests.⁵

The full-scale effort to prepare for space warfare anticipated in the report does not entail simply the weaponization of space. The report also recommends, for example, that the President declare space a national security priority and that a Space Advisory Group report directly to the President, and it anticipates that soon a "Space Corps" within the Air Force – and eventually a "military department for space" – will be necessary to implement the vision.⁶ Shortly after taking office as Secretary of Defense, Rumsfeld moved to implement some of these recommendations, placing a four-star Air Force general in charge of space operations and undertaking other Pentagon reorganization intended to facilitate space weapons program development.⁷

Pertinently, the Rumsfeld space commission report repeatedly emphasizes the US goal of preserving the "peaceful uses of space," yet explicitly portrays expectations of the weaponization of space as consistent with US obligations under the UN Charter and the Outer Space Treaty:

To protect the country's interests, the U.S. must promote the peaceful use of space, monitor activities of regulatory bodies, and protect the rights of nations to defend their interests in and from space. The U.S. and most other nations interpret "peaceful" to mean "non-aggressive"; this comports with customary international law allowing for routine military activities in outer space, as it does on the high seas and in international airspace. There is no blanket prohibition in international law on placing or using weapons in space, applying force from space to earth or conducting military operations in and through space.⁸

US military leaders have not been shy in reaffirming the plans for space warfare indicated in these documents. Gen. Joseph Ashy, for-

mer commander-in-chief of the US Space Command, commented directly, "It's politically sensitive, but it's going to happen."⁹ This certitude emerges from the consistent assumption that space is a natural medium of international conflict no different from land, sea and air, and that the eventual extension of warfare into this medium is a natural if not inevitable expectation in human evolution:

[W]e know from history that every medium – air, land and sea – has seen conflict. Reality indicates that space will be no different. Given this virtual certainty, the U.S. must develop the means both to deter and to defend against hostile acts in and from space. This will require superior space capabilities.¹⁰

The contemporaneous private report on US defense needs from the Project for the New American Century (PNAC), whose project participants included soon-to-be Bush administration officials Paul Wolfowitz and Stephen Cambone, offered even more definitive conclusions about the need for weaponization of space. "No system of missile defenses can be fully effective without placing sensors and weapons in space." The current US military, commercial and civil dominance of space is soon and inevitably to be challenged; "the unequivocal supremacy in space enjoyed by the United States today will be increasingly at risk." Thus, "control of space ... must be an essential element of [US] military strategy":

[O]ver the longer term, maintaining control of space will inevitably require the application of force both in space and from space, including but not limited to antimissile defenses and defensive systems capable of protecting U.S. and allied satellites; space control cannot be sustained in any other fashion, with conventional land, sea, or airforce, or by electronic warfare.¹¹

These documents are not emerging from a vacuum. The planning they depict is embedded in a far-reaching effort to anticipate and plan for the kinds of military engagements the US military may face in the coming decades. This effort is epitomized by the *Air Force 2025* Study, a wide-ranging and copious effort "to look 30 years into the future to identify the concepts, capabilities and technologies the United States will require to remain the dominant air and space force in the 21st century." The study, concluded in 1996 and consisting of a collection of works totaling more than 3,300 pages of text, evaluated 25 emerging technologies and 40 separate systems through the lens of six "alternative futures."¹² Several of the priorities and technologies most highly evaluated in this comprehensive study, such as the vitality of information flows, the potential role of high-energy lasers, and the pressing need for space-based strategic strike capabilities, are familiar from the later, summary documents noted above.

Several aspects of this study are worth noting in more detail. One is the recurring conviction that an information/space arms race is already underway, with the inevitable erosion of the current US lead driving future military needs:

[A]s more actors, state and nonstate, become capable of launching and building satellites and using space-based assets for increasing their own global awareness, the US margin of superiority which now exists in this arena will likely diminish... Satellites – ours and others – will increase in quality and quantity, and space-based sensors will become increasingly important. Many of the alternative futures and the individual papers describe uninhabited air vehicles for reconnaissance and strike and space planes (transatmospheric vehicles) with multiple functions. High-energy lasers – whether atmospheric or space-based – are seen as a weapon of choice for the future.¹³

A second key aspect is the conclusion that US security will depend on "integration of information technologies with air and space capabilities." Both "space" and "cyberspace" are emerging as new frontiers of military preparation and battle, qualitatively no different than the emergence of military air power: "The USAF must pursue the exploitation of information and space with the same fervor with which it has mastered atmospheric flight." This holds particularly for space, which is "more than a place. It is a set of opportunities, a new dimension of warfare, a final frontier... By 2025 it is very likely that space will be to the air as air is to cavalry today." Additionally, a further recurring theme was also to view all these as highly interactive spheres: "Airpower has atmospheric, exoatmospheric, and infospheric components."¹⁴

A third prominent aspect of the *Air Force 2025* study is the unquestioned premise that US retention of aerospace dominance is the principal objective. "[T]he half-life of the 'world's last remaining superpower' may be rather short. We will have to work smarter and harder to maintain an advantage in these areas." These last two aspects are combined to form the core conclusion:

The US has an opportunity to achieve integrated dominance to oppose strength with strength to impose strength on weakness. The key to achieving and maintaining lasting superiority that cannot easily be duplicated by others lies in the integration of information, air, and space.

The successful integration of information, air, and space will provide increased capabilities by enhancing the capabilities of each individual area as well as the combination of them. Utilizing them will allow the US to achieve dominance in air and space to protect the nation, its assets, and its citizens around the globe. Integrating these capabilities will provide the capability for achieving and maintaining superiority.¹⁵

Of the various systems the study assessed in the alternative futures of 2025, the final report identified ten "with the highest value for their contribution to achieving air and space dominance in 2025."¹⁶ In terms of potential for weaponization of space, the priority placed on space-based high-energy lasers is particularly noteworthy. Both the chemical- and solar-powered laser systems would be capable of attacking ground, air and space targets, as well as serving active and passive imaging roles at lower power levels. High-energy laser technology is also envisioned as one of three elements of the intriguing "Global Area Strike System":

The Global Area Strike System (GLASS) consists of a high energy laser (HEL) system, a kinetic energy weapon (KEW) system, and a transatmospheric vehicle (TAV). The HEL system consists of ground-based lasers and space-based mirrors which direct energy to the intended target. The KEW system consists of terminally guided projectiles with and without explosive enhancers. The TAV is a flexible platform capable of supporting maintenance and replenishment of the HEL and KEW space assets, and could also be used for rapid deployment of special operations forces.¹⁷

The Global Area Strike System consists of a continental US-based laser system which bounces high energy beams off a constellation of space-based mirrors. Inherently precise, megawatt-class, light speed weapons can potentially act within seconds or minutes to impact on events in space, the atmosphere, or the earth's surface. ... The combined system has near instantaneous response capability, a full range of lethality, and global reach and adequate flexibility. *Although it can strike from space, no actual weapons are based in space.*¹⁸

Obviously, the argument that a high-powered directed-energy system depending on precision mirroring satellites does not constitute weapons "based in space" is contentious. Foreign Affairs Canada's Space Security Index uses a more complete definition of "space-based strike weapons," which includes not only "systems operating from earth orbit with the capability to damage terrestrial targets," but also "terrestrially launched objects passing through space, via the projection of mass or energy."¹⁹ The inherent potential for conflict and ambiguity as to the threshold of "weaponization" versus "militarization" of spaces raises questions concerning the achievability and feasibility of any international agreement that would seek to draw that line in the face of emerging new technologies.

The contention is also deeply ironic given the empirical and moral certitude with which the studies underlying the most preferred space strike weapons systems anticipate the weaponization of space:

In order to protect vital interests in space, ensure freedom of space navigation, and achieve information dominance, *the US will eventually require weapons in space.* The need to counter future space threats and minimize US space vulnerabilities will drive the American people to accept the inevitable-weapons in space.²⁰

Lest one think that planning for such systems is still in the realm of science fiction, as recently as the budget requests for fiscal year 2005 the numerous US government programs funding research on high-energy lasers included at least two programs also funding work on "technologies for lightweight primary mirrors applicable to bifocal relay mirrors," used for receiving and re-targeting laser beams in space, and relay mirrors "to advance global strike" capabilities.²¹ A new presidential directive nearing finalization in 2005 after three years of development will explicitly ratify the concept of sustaining US space "superiority" and put the United States on track for eventual

deployment of weapons in space, as called for in the Air Force's now established "Global Strike" strategy. Weapons systems envisioned in this strategy include lasers aimed with satellite based mirrors, a "Common Aero Vehicle" (CAV) capable of striking anywhere in the world in 45 minutes, and a system launching metal cylinders from orbit (nicknamed "Rods from God") that would strike ground targets with kinetic forces equivalent to small nuclear weapons.²²

All this planning by the Air Force for extending military capabilities into "exoatmospheric" and "infospheric" realms is itself embedded in broader trans-service long-term planning represented by the "Joint Vision" publications. Space Command's *Vision for 2020* was self-consciously conceived as a step toward implementation of the *Joint Vision 2010* plan:

The Joint Vision 2010 operational concepts of *dominant maneuver, precision engagement, full-dimensional protection, and focused logistics* are enabled by information superiority and technological innovation. The end result of these enablers and concepts is *Full Spectrum Dominance*. *Information superiority* relies heavily upon space capabilities to collect, process, and disseminate an uninterrupted flow of information while denying an adversary's ability to fully leverage the same. The emerging synergy of space superiority with land, sea, and air superiority, will lead to Full Spectrum Dominance.²³

Joint Vision 2010 was superseded by *Joint Vision 2020* in 2000. This updated blueprint for the US Defense Department retains the central US military planning objective of "full-spectrum dominance," meaning "the ability of US forces, operating alone or with allies, to defeat any adversary and control any situation across the range of military operations."²⁴

In Space Command's thinking, from this overarching intention flows an ever-increasing imperative to sustain US dominance in space. This imperative was given greater urgency by Saddam Hussein's attempt to jam US GPS satellite signals supporting precision guided munitions at the outset of the US invasion of Iraq in March 2003 – in the words of General Lance Lord, commander of US Space Command, "The war in space began during Operation Iraqi Freedom."²⁵

As noted at the outset of this section, military agencies have not been shy in articulating these visions. Indeed, the *Air Force 2025* study explicitly sought wider input through internet connectivity. The volume of public material, however, is only the tip of the iceberg; indeed, as planning has evolved from the conceptual to the more concrete, it has also become increasingly classified.

All the planning reviewed above preceded the election of the Bush administration. So, are this administration's new strategic initiatives, including space weaponization, merely taking the wraps off Pentagon planning well developed in the preceding decade? Is all the consternation over the administration's own innovations misdirected?

The answer is, in part yes, but in part no: for the Bush administration has added crucial elements of its own.

From Dominance to Domination: The Bush Administration

As described above, anticipating and planning for the weaponization of space – as an integral dimension of a wider-ranging effort to sustain US military dominance – has been underway in the Pentagon and the services since the end of the Cold War. The Bush administration did not initiate this planning, but it has significantly advanced it by elevating the ambitions to the level of national policy, moving forward aggressively with research and development of the identified key technologies, and building a strategic rationale based not merely on dominance, but domination.

This last element is not merely rhetorical. "Dominance," as artic-

ulated in military planning documents in the 1990s, essentially represented the ambition to meet and counter any and all anticipatable threats to key US interests for the foreseeable future. "Domination," as a moniker for the Bush administration's grand strategy, represents an abandonment of even a pretense that military planning and capabilities acquisition responds "realistically" to current or foreseeable threats. The Bush administration evoked this transition in strategic thinking in the 2002 *Nuclear Posture Review* (NPR), which brought to US national policy the fundamental qualitative conceptual shift from a "threat-based" to a "capabilities-based" approach to strategic planning presaged in the *Quadrennial Defense Review* (QDR) a year earlier.²⁶

The NPR and QDR portray this shift as a response to the post-Cold War need to "extend America's asymmetric advantages well into the future" in order to prepare for the new prospect of "unexpected developments." But this open-ended "capabilities-based" approach implicitly acknowledges that there exist no current or foreseeable threats sufficient to justify the military prowess the administration now plans to sustain. The open embrace of such unbounded planning for military development pervades the Bush administration's strategic policy documents. A similar shift soon began dominating Pentagon planning.²⁷

This shift is not merely a means to justify dramatic US rearmament willy-nilly; nor does it represent a simple surrender to military-industrial interests. Rather, "capabilities-based" planning also enables the more proactive, idealistically-driven international agenda that has become central to the administration's world view. The Bush administration's *National Security Strategy* (NSS) articulates these ambitions, reflecting a determination to maintain unequalled US power and influence indefinitely as the basis to promote governmental transitions favorable to US interests throughout the rest of the world.²⁸

This vision harkens to a nineteenth century conception of US international activism underpinned by the security of broad oceans. This idealist thinking rejected European style international diplomacy,

which it saw as cynical and corrupt. Instead, it sought to remake the world, albeit in varying ways: one favoring pure power (e.g. "speak softly and carry a big stick"), another favoring reconstitution of international society on ethical terms (e.g. "the war to end all wars").

The Cold War, presenting an implacable ideological foe which could not be met decisively on the battlefield due to the advent of nuclear weapons, imposed sobriety and prudence – in a word, "realism" – on US decision-makers. For forty-five years, this circumstance repressed both veins of American idealism – and, less noticeably, obscured the stark differences between them.

The end of the Cold War lifted these constraints, and the Bush administration now seeks to take advantage of the emergence of the United States as the world's preeminent military power to restore a nineteenth century vision to constitute a safer world through virtuous exercise of American power:

[W]e do not use our strength to press for unilateral advantage. We seek instead to create a balance of power that favors human freedom... We will defend the peace by fighting terrorists and tyrants. We will preserve the peace by building good relations among the great powers. We will extend the peace by encouraging free and open societies on every continent... The United States welcomes our responsibility to lead in this great mission.²⁹

This vision represents the ascendance of idealists over realists in shaping US grand strategy. However, within the idealist tradition this particular vision also represents a triumph for *unilateral militant idealism* over *multilateral liberal idealism* – the "big stick" idealism of Theodore Roosevelt over the "end wars" idealism of Woodrow Wilson.

Sustaining US military unassailability – or "primacy" – is a prerequisite to carrying forth this neo-imperialist vision. The Bush administration now aims to sustain a level of primacy so overwhelm-

ing other states will give up even competing: "America has, and intends to keep, military strengths beyond challenge, thereby making the destabilizing arms races of other eras pointless, and limiting rivalries to trade and other pursuits of peace."³⁰ The vision itself must also be global: the loss of the nineteenth century idea of the "security of broad oceans" necessitates unilateral militant activism far beyond the implicit limits of the Monroe Doctrine.³¹ Thus the Bush administration has taken the impulse to dominance emanating from US military thinking in the 1990s one giant step further, by fitting it as the engine to power a militarily-active but ideationally-driven US global role.³²

Conclusion

This vision was always part myth. In the globalizing world of the twenty-first century, generating novel asymmetric threats against which military power alone is no protection, this vision is more illusory than ever before. A messianic foreign policy premising "Fortress America" offers false promise instead of real preparation for these new challenges, and impedes practical efforts that might more successfully cope with them.

More fundamentally, this vision ignores the basic lessons of "*realpolitik*." Military buildups that go beyond meeting clear and present dangers are inevitably taken by others as signals of more aggressive intentions. Such aggressive military posturing by the world's most powerful state, justified by strategic policies aiming to reconstitute other nations and reconfigure global international society unilaterally, are inherently threatening to other countries, and cannot help but be perceived as such. Allies will grow uneasy, adversaries will respond in kind to the extent that they are able, and new challengers will emerge – this is basic international realism. Hence, this vision of US "primacy" clearly departs from the "realist" tradition in US foreign policy and the "neorealist" school of US international relations scholarship.³³

The Bush administration's neo-imperial grand strategy to remake the world in the image of US ideals that others don't necessarily embrace relies on a military primacy that must ultimately prove quixotic.³⁴ Following this path, US security policy will be unable to reckon the complex power configurations that characterize the globalizing world, within which the US position is simultaneously preponderant and exposed. Down this road, tragically, also lies eroding international security, and human security, worldwide. Insofar as the weaponization of space represents the "cutting edge" and highest ambitions of military primacy, it also represents the height of this folly.

Canada already opposes the weaponization of space unambiguously, and the Canadian government's decision in February 2005 not to participate fully in US missile defence planning was in part due to the role of some missile defence technologies in facilitating space weaponization. The foregoing assessment of the role of US plans for space weaponization in the Bush administration's emerging neo-imperial grand strategy suggests that Canada's opposition to space weaponization should impel Canada to resist that grand strategy as well.

If, as argued above, the Bush administration's neo-imperial grand strategy also is misbegotten and imperils all nations (the United States included), then Canada's stake in resisting that strategy is all the more direct. A stark example concerns terrorism: if a sustained militant US "war on terrorism" with crusading overtones breeds resentment and animosity among disaffected and violent non-state actors worldwide, then the United States and its allies will be increasingly subject to attacks on their "soft targets" and civilian populations.³⁵ Canada would be serving its direct security interests by urging the United States to adopt anti-terrorism strategies that better address the underlying sources of terrorism that the Bush administration itself has identified.³⁶

The point from this example holds for the Bush administration's unilateral militant idealism more broadly. Canadian resistance to such

a grand strategy would not only serve specific current Canadian interests – including opposition to weaponization of space and protecting the country from terrorist attacks – but also its wider aims to promote cooperative security and improved global governance worldwide – aims Canada has long and often successfully pursued. But Canada should go further and actively engage US governmental and civil society audiences to promote an alternative US grand strategy capable of both responding more realistically to emerging twenty-first century threats and evoking shared ideals and aspirations for a better world. Such a strategy would aspire not only to sustain the sanctuary of space, but also to promote genuine progress toward peace and security here on earth.

Notes:

¹ United States Space Command, *Vision for 2020*, p.4. Available at <http://www.fas.org/spp/military/docops/usspac/visbook.pdf>.

² United States Space Command, *Vision for 2020*, p. 7.

³ General Lance Lord, Speech on December 14, 2004, as quoted in Mike Moore, "Space war-now we're jammin'!" *Bulletin of the Atomic Scientists*, vol. 61, n. 2 (March/April 2005), pp. 6-8.

⁴ United States Space Command, *Vision for 2020*, p. 11. (emphasis added)

⁵ *Report of the Commission to Assess United States National Security Space Management and Organization*, January 11, 2001, Executive Summary, p.12. (emphasis added). The full report is available at <http://www.defenselink.mil/pubs/space20010111.html>.

⁶ *Report of the Commission to Assess United States National Security Space Management and Organization*, January 11, 2001, Executive Summary, p.33.

⁷ James Dao, "Rumsfeld Seeking an Arms Strategy Using Outer Space," *The New York Times*, May 8, 2001.

⁸ *Report of the Commission to Assess United States National Security Space Management and Organization*, January 11, 2001, Executive Summary, p.17.

⁹ *Aviation Week & Space Technology*, 1996; as cited in "Arming the Heavens," Editorial, *San Francisco Chronicle*, March 18, 2001, available at <http://www.mindfully.org/Nucs/Arming-Heavens.htm>.

¹⁰ *Report of the Commission to Assess United States National Security Space Management and Organization*, January 11, 2001, Executive Summary, p.10.

¹¹ "Rebuilding America's Defenses: Strategy, Forces and Resources for a New Century," A Report of The Project for the New American Century, September 2000, pp. 54-6. Available online at the organization's web site:

<http://www.newamericancentury.org/RebuildingAmericasDefenses.pdf>. The report adds, "This eventuality is already recognized by official US national space policy, which states that the 'Department of Defense shall maintain a capability to execute the mission areas of space support, force enhancement, space control and *force application*.'" (Emphasis added in citation.)

¹² "Executive Summary," *Air Force 2025* (Maxwell Air Force Base, Alabama: Air University Press, August 1996; <http://www.au.af.mil/au/2025/index2.htm>), chpts 2, 3 & 6; c.f. "A Quick Look at Air Force 2025," available at <http://www.au.af.mil/au/2025/quicklk2.htm>.

¹³ "Executive Summary," *Air Force 2025*, chpt. 3.

¹⁴ "Executive Summary," *Air Force 2025*, chpts. 3 & 4.

¹⁵ "Executive Summary," *Air Force 2025*, chpt. 4. (Emphasis original)

¹⁶ "Executive Summary," *Air Force 2025*, chpt. 6. The ten systems are:

- Global Information Management System
- Sanctuary Base
- Global Surveillance, Reconnaissance, and Targeting System
- Global Area Strike System
- Uninhabited Combat Air Vehicle
- Space High Energy Laser
- Solar High Energy Laser
- Reconnaissance Unmanned Air Vehicle
- Attack Microbots
- Piloted Single Stage Space Plane

¹⁷ "Executive Summary," *Air Force 2025*, chpt. 6.

¹⁸ "Executive Summary," *Air Force 2025*, chpt. 8. (Emphasis added)

¹⁹ "Space Security 2004," workbook for the Government Consultations with Civil Society, Ottawa, Canada, 8-9 March, 2005, p.164.

²⁰ Robert H. Zielinski, et. al., "Star Tek – Exploiting the Final Frontier: Counterspace Operations in 2025," Research Paper Presented To *Air Force 2025*, August 1996, p.6 (Emphasis added), available at <http://www.au.af.mil/au/2025/volume3/chap09/v3c9->

1.htm. This work then proceeds to a discussion of how, in the advancement of this end, to overcome the obstacles presented by "international space treaties, policy, and the space sanctuary illusion."

²¹ Jeffrey Lewis and Jessy Cowan, "Space Weapon Related Programs in the FY 2005 Budget Request," Center for Defense Information, available on the organization's website: www.cdi.org.

²² Tim Weiner, "Air Force Seeks Bush's Approval for Space Weapons Programs," *New York Times*, May 18, 2005.

²³ United States Space Command, *Vision for 2020*, p.5 (emphasis original). See also "USSPACECOM Long Range Plan Summary," available at <http://www.fas.org/news/usa/1998/04/lrp-fs.htm>.

²⁴ Jim Garamone "Joint Vision 2020 Emphasizes Full-spectrum Dominance," American Forces Press Service, June 2, 2000. Available online at http://www.defenselink.mil/news/Jun2000/n06022000_20006025.html.

²⁵ General Lance Lord, Speech on December 14, 2004, as quoted in Moore, "Space war--now we're jammin'" pp. 6-8. The claim is hyperbolic in that the terrestrially-based jamming attempt had little effect and was easily neutralized. The claim is also hypocritical when contrasted to the assertion, noted earlier, that US projection of terrestrially-generated lethal laser pulses through space would not constitute space weaponization.

²⁶ The NPR was first publicly summarized at a Department of Defense briefing on January 9, 2002. The classified review was subsequently obtained by *The Los Angeles Times* and *The New York Times*. Substantial excerpts of the NPR are at <http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm>. The QDR is available at <http://www.defenselink.mil/pubs/qdr2001.pdf>.

²⁷ Cirincione, Joseph, Testimony before the Senate Foreign Relations Committee, May 16, 2002, available at <http://www.ccip.org>.

²⁸ In the language of the NSS, US power will be deployed to "create a balance of power that favors human freedom" and "extend the peace by encouraging free and open societies on every continent." *The National Security Strategy of the United States of America*, White House, September 2002, p.1. For a discussion of the provenance of this thinking, see Douglas A. Ross and Christopher N.B. Ross, "From 'Neo-Isolationism' to 'Imperial Liberalism': 'Grand Strategy' Options in the American International Security Debate and the Implications for Canada," in this volume.

²⁹ President Bush, "Preface," *The National Security Strategy of the United States of America*, White House, September 2002. Note that "balance of power that favors human freedom" in this

context means unchallenged US military supremacy. The wooly term recurs throughout the 31-page document.

³⁰ President Bush, Speech at West Point, June 1, 2002, available online at <http://www.whitehouse.gov/news/releases/2002/06/20020601-3.html>. Colin Dueck argues that, while "primacist" ambitions were well represented and exercising influence in the Bush administration from its outset, they did not become dominant over "realist" inclinations until after the September 11 terrorist attacks. See Colin Dueck, "Ideas and Alternatives in American Grand Strategy, 2000-2004," *Review of International Studies* 30 (2004), pp.511-535, esp. pp. 526-7.

³¹ Indicatively, President Bush repeatedly portrays his administration's security policies as answering September 11's wake-up call to the nation – and him personally – that "oceans" no longer protect US security; see, for example, "President's Remarks at Ask President Bush Event," Lakefront Park, Hudson, Wisconsin, August 18, 2004 (<http://www.whitehouse.gov/news/releases/2004/08/20040818-11.html>). This rhetoric is factually absurd – thousands of nuclear tipped missile have been able to reach US territory from the other side of the planet for decades – and so explicable only as an effort to associate the vision with its historical context.

³² For an elaboration of this argument, see Wade L. Huntley, "Threats All The Way Down: US Nuclear Initiatives in a Unipolar World," *Review of International Studies* (forthcoming, January 2006).

³³ See, for example, Stephen M. Walt, "Keeping the World 'Off Balance': Self Restraint and US Foreign Policy," and Kenneth N. Waltz, "Structural realism after the Cold War," both in G. John Ikenberry, ed., *America Unrivaled: The Future Balance Of Power* (Cornell University Press, 2002).

³⁴ For a contrary assessment, see William C. Wohlforth, "The Stability of a Unipolar World," *International Security*, vol. 24, n. 1 (Summer 1999), pp. 1-41. Wohlforth's self-consciously realist analysis concludes that so long as US primacy is "clear and comprehensive," other states will see counterbalancing as "a costly and probably doomed to venture ... until they observe fundamental changes in the capability of the United States to fulfill its role." But this analysis does not delve into previous "realist" theory on "balancing" versus "bandwagoning," nor does it reckon with twenty-first century opportunities to effectively balance with selective asymmetric capabilities.

³⁵ In one scenario, allies like Canada might be targeted for an attack before the United States. See Ross and Ross, "From 'Neo-Isolationism' to 'Imperial Liberalism'," in this volume.

³⁶ To its credit, the Bush administration's anti-terrorism strategy recognizes the multi-faceted sources of terrorism, and the need to address the key transnational socio-economic roots terrorist ambitions. The strategy identifies a pyramidal "Structure of Terror," whose base is con-

stituted by "underlying conditions such as poverty, corruption, religious conflict and ethnic strife." The next layer is an international environment of "freer, more open borders;" only thirdly is the role of states themselves, which may, "through ignorance, inability, or intent," provide the physical and/or virtual havens from which terrorists can work. *National Strategy for Combating Terrorism*, White House, February 2003, p.6. Unfortunately, these fundamental aspects of the problem have gotten lost in the administration's increasingly conventional and military approach to the now literally defined "war on terrorism."