[\*\*\*SPACE WEAPONIZATION GOOD\*\*\* 4](#_Toc299036980)

[Uniqueness --- China Weaponization Now 5](#_Toc299036981)

[Uniqueness --- Space Weaponization Now 12](#_Toc299036982)

[Uniqueness --- China Rivaling US Now 14](#_Toc299036983)

[SMIL Good --- Accidental Launch 16](#_Toc299036984)

[SMIL Good --- China 17](#_Toc299036985)

[SMIL Good --- Deterrence 24](#_Toc299036986)

[SMIL Good --- Hegemony Module 25](#_Toc299036987)

[SMIL Good --- Economy 30](#_Toc299036988)

[Hegemony Link Extensions 31](#_Toc299036989)

[SMIL Good --- Soft Power 32](#_Toc299036990)

[SMIL Good --- Space Arms Races 33](#_Toc299036991)

[SMIL Good --- Space Dominance 36](#_Toc299036992)

[SMIL Good --- Stability 41](#_Toc299036993)

[SMIL Good --- Terrorism 43](#_Toc299036994)

[SMIL Good --- Warfighting 44](#_Toc299036995)

[A2 Aggression 49](#_Toc299036996)

[A2 Commerce 50](#_Toc299036997)

[A2 Conventional Arms Races 51](#_Toc299036998)

[A2 Conventional Warfare 52](#_Toc299036999)

[A2 Destabilizing 54](#_Toc299037000)

[A2 Expensive 55](#_Toc299037001)

[A2 International Backlash 56](#_Toc299037002)

[A2 Miscalculation 57](#_Toc299037003)

[A2 No Technology 58](#_Toc299037004)

[A2 Space Debris 60](#_Toc299037005)

[\*\*SPACE WEAPONIZATION BAD\*\* 61](#_Toc299037006)

[Uniqueness --- No Weaponization Now 62](#_Toc299037007)

[Uniqueness --- Not Inevitable 64](#_Toc299037008)

[Uniqueness --- Space Leadership High Now 68](#_Toc299037009)

[Uniqueness --- No Space Threats Now 69](#_Toc299037010)

[A2 Iran Threat 72](#_Toc299037011)

[A2 North Korea Threat 73](#_Toc299037012)

[SMIL Bad – Laundry List 74](#_Toc299037013)

[SMIL Bad – Accidental Launch 1NC 75](#_Toc299037014)

[Accidental Launch 2NC --- Link Extension 76](#_Toc299037015)

[Accidental Launch 2NC --- Nuclear War 78](#_Toc299037016)

[Accidental Launch 2NC – Russia Miscalc 79](#_Toc299037017)

[SMIL Bad --- China War 1NC 80](#_Toc299037018)

[China War 2NC --- Arms Race 81](#_Toc299037019)

[SMIL Bad --- Colonization 83](#_Toc299037020)

[SMIL Bad – Deterrence 84](#_Toc299037021)

[SMIL Bad --- Economy 1NC 85](#_Toc299037022)

[Economy 2NC --- Link Extensions 87](#_Toc299037023)

[Economy 2NC --- War 88](#_Toc299037024)

[SMIL Bad --- Hegemony 1NC 90](#_Toc299037025)

[Hegemony 2NC --- Link Extension 91](#_Toc299037026)

[Hegemony 2NC --- Trades Off With Military 93](#_Toc299037027)

[SMIL Bad --- Indo-Pak War 1NC 94](#_Toc299037028)

[Indo-Pak War 2NC --- Turns Case 95](#_Toc299037029)

[Indo-Pak War 2NC --- Extinction 96](#_Toc299037030)

[SMIL Bad --- Preemptive Strike 97](#_Toc299037031)

[SMIL Bad --- Proliferation 1NC 98](#_Toc299037032)

[Proliferation 2NC --- Link Extension 99](#_Toc299037033)

[SMIL Bad – Relations 100](#_Toc299037034)

[MIL Bad --- Space Arms Race 1NC 101](#_Toc299037035)

[SMIL Bad --- Russia War 102](#_Toc299037036)

[Space Arms Race 2NC --- Link Extension 103](#_Toc299037037)

[Space Arms Race 2NC --- US Spillover 104](#_Toc299037038)

[SMIL Bad --- Russia Weaponization 1NC 107](#_Toc299037039)

[SMIL Bad --- Satellite Attack 1NC 108](#_Toc299037040)

[SMIL Bad --- Satellite Industry 1NC 109](#_Toc299037041)

[Satellites 2NC --- Link Extension 111](#_Toc299037042)

[Satellites 2NC –-- Key to Economy 112](#_Toc299037043)

[Satellites 2NC --- Key to Military 113](#_Toc299037044)

[SMIL Bad --- Space Debris 1NC 114](#_Toc299037045)

[Space Debris 2NC --- ASATs 115](#_Toc299037046)

[Space Debris 2NC --- GPS Key to Economy 116](#_Toc299037047)

[Space Debris 2NC --- Hurts GPS 118](#_Toc299037048)

[Space Debris 2NC --- Hurts Satellites 119](#_Toc299037049)

[Space Debris 2NC --- Link Extension 120](#_Toc299037050)

[Space Debris 2NC --- Turns Case 121](#_Toc299037051)

[SMIL Bad – Space Industry 1NC 122](#_Toc299037052)

[Space Industry 2NC --- Link Extension 124](#_Toc299037053)

[Space Industry 2NC --- Key to Economy 126](#_Toc299037054)

[SMIL Bad --- Terrorism 127](#_Toc299037055)

[Link --- H-3 128](#_Toc299037056)

[Link --- Missile Defense 129](#_Toc299037057)

[Link --- Privatization 131](#_Toc299037058)

[Link --- Satellites 133](#_Toc299037059)

[Link --- SSA 135](#_Toc299037060)

[Link --- SSP 136](#_Toc299037061)

[Alternatives to Space Weapons 138](#_Toc299037062)

[SMIL Bad --- No Solvency 140](#_Toc299037063)

[SMIL Bad --- Space Weapons Vulnerable 151](#_Toc299037064)

[International Community Hates Weapons 156](#_Toc299037065)

[Impact Calc --- Probability 157](#_Toc299037066)

[Commercialization Checks Weaponization 158](#_Toc299037067)

[A2 Space Weapons Illegal 159](#_Toc299037068)

[US conventional military checks space race 160](#_Toc299037069)

[\*\*\*UNIQUENESS COUNTERPLAN\*\*\* 161](#_Toc299037070)

[UQ CP 1NC 162](#_Toc299037071)

[AT: current treaties solve space weaponization 165](#_Toc299037072)

[Extensions china co op solvency 167](#_Toc299037073)

[Extentions for china co op solvency specific for SBMD 170](#_Toc299037074)

[Ban on Space Weapons Good 171](#_Toc299037075)

[AT: Cheating 172](#_Toc299037076)

[AT: countries wouldn’t support the bans/ treaties would fail 176](#_Toc299037077)

[CP solves conventional heg 180](#_Toc299037078)

[AT: Space weaponization deters arms race and conflict/ CP solves better 182](#_Toc299037079)

[CP solvency- would protect satellites 183](#_Toc299037080)

[CP solvency miscalc/ Arms race 184](#_Toc299037081)

[CP key to prevent environment impacts form space weaponization 186](#_Toc299037082)

[CP solves China Russia relations and arms race 187](#_Toc299037083)

[CP solvency general prevention of space weponization 189](#_Toc299037084)

[Space law good 193](#_Toc299037085)

[AT: Tellis 194](#_Toc299037086)

[More CoC 197](#_Toc299037087)

# \*\*\*SPACE WEAPONIZATION GOOD\*\*\*

## Uniqueness --- China Weaponization Now

### China perceptions- china believes we are militarizing now

Hui 05 (Zhang Hui is a research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government. His research includes nuclear arms control verification techniques, the control of fissile material, nuclear terrorism, nuclear safeguards, nonproliferation and space. An extended version of this paper was produced for the, Space Weaponization And Space Security: A Chinese Perspective, www.wsichina.org/attach/CS2\_3.pdf)

American Academy of Arts and Sciences project, Reconsidering the Rules of Space  
China has seen much evidence to suggest the movement by the administration of U.S. President George W. Bush toward space weaponization is real. A number of U.S. military planning documents issued in recent years reveal the intention to control space by military means. In practice, the United States is pursuing a number of research programs to enable the development of space weapons, which could be used not only to attack ballistic missiles in flight but also to attack satellites and targets anywhere on Earth. Chinese officials have expressed a growing concern that U.S. plans would stimulate a costly and destabilizing arms race in space and on Earth, with disastrous effects on international security and the peaceful use of outer space. This would not benefit any country's security interests. Beijing believes the most effective way to secure space assets would be to agree on an international ban on weapons in space.  
In what follows, I first examine briefly why China says NO to U.S. space weaponization. I then explore in detail preventative measures that can be taken.

### china space weponization now-

O'Hanlon 11(senior fellow in Foreign Policy Studies at the [Brookings Institution](http://www.sourcewatch.org/index.php?title=Brookings_Institution), where he specializes in U.S. defense strategy and budgeting, [homeland security](http://www.sourcewatch.org/index.php?title=Homeland_security), Northeast Asian security, and humanitarian intervention. He is also adjunct professor at the public policy school of Columbia University, a visiting lecturer at Princeton University, and a member of the [International Institute for Strategic Studies](http://www.sourcewatch.org/index.php?title=International_Institute_for_Strategic_Studies) and the [Council on Foreign Relations](http://www.sourcewatch.org/index.php?title=Council_on_Foreign_Relations)."[[1]](http://www.sourcewatch.org/index.php?title=Michael_E._O%27Hanlon#cite_note-MEHan-0), Balancing U.S. Security Interests in Space)

And of course, not all countries that publicly oppose putting weapons in space are true to their rhetoric in practice. The People's Republic of China (PRC) is the most notable example, with its early 2007 ASAT test destroying an old PRC weather satellite, increasing low Earth orbit space debris by 10 percent and shattering an effective moratorium on the testing of ASAT systems that was more than two decades old. In fairness to Beijing, it could be argued that it had a right to "catch up" with the United States— not only with the ASAT technology the Pentagon had developed in the 1970s and 1980s, but also with latent modern ASAT capabilities in the form of American ballistic missile defense systems. That said, it was China and only China that ended the effective international moratorium on actual testing of antisatellite systems, and it was the PRC that chose to take actions at blatant odds with its own official negotiating position in international talks over space weaponry. The point of this assessment is not to vilify China's behavior; in fact, in many ways, such a demonstration of capability is consistent with how a rising power historically would be expected to handle such a situation. Its behavior fits squarely within the trajectory that realists at least would predict. That is true even if it may have reflected poor coordination and communications within the PRC government (since the blow to China's international image may not be offset by the acquisition of useful new capabilities).7 But whatever one's views on that point, China's ASAT test would seem to reaffirm that the United States must fashion its military space policy based more on a hardheaded assessment of capabilities and potential capabilities than on ideological positions, be they of the pro–arms control or pro–space weaponization variety.

### China modernizing now

Zhang 11 – Baohui Zhang is Associate Professor of Political Science and Director of the Center for Asia Pacific Studies at Lingnan University, Hong Kong, March/April 2011, "The Security Dilemma in the U.S.-China Military Space Relationship: The Prospects for Arms Control,” Asian Survey, Volume 51, No. 2, pp. 314-316

Chinese strategists certainly perceive the U.S. quest for space dominance as damaging to China’s national security; whoever controls space will have the edge in winning the next war. Indeed, Chinese military and civilian strategists argue that the U.S. search for “absolute security” jeopardizes other countries’ security. It is widely reported in Chinese military literature that the U.S. has already developed and is in fact implementing a master plan for military dominance in space. The challenge for China is to prevent the U.S. from jumping too far ahead. As observed by a major study organized by the General Staff of the PLA, “In recent decades the U.S. has been consistently pursuing dominance in space in order to become its overlord.” 18 also points out that the U.S. is the first country to develop a full set of doctrines for space militarization and dominance:

In April 1998, the U.S. Space Command published its long-term strategic development plan, Vision for 2020, which specifically proposed the concept of space dominance and revealed the goals of allowing the American military to use space weapons to attack the enemy’s land, sea, air, and space targets. World opinion believes this represented the formal debut of U.S. space war theory and indicated an important first step by the U.S. military toward space war. 19

Li Daguang, one of the most influential PLA experts on space war, also alleges that the U.S. has initiated “a new space war” to maintain its status as “the overlord of space.” He claims that the ultimate goal of the U.S. space program is to “build a powerful military empire in outer space that attempts to include any space between earth and moon under American jurisdiction.” Under this empire, “without U.S. permission, any country, including even its allies, will not be able to use outer space for military or other purposes.” 20

One particular concern for the Chinese military is that the U.S. may no longer be content with merely militarizing space, which involves extensive use of satellites for military operations. Instead, weaponization of space is on the agenda. The PLA now believes that the U.S. is on the verge of important breakthroughs in the development of weapons for space war. As one study claims: “Currently, the U.S. military already possesses or will soon possess ASAT technologies with real combat capabilities, such as aircraft-launched ASAT missiles, land-based laser ASAT weapons, and space-based energy ASAT weapons.” 21 Moreover, the PLA suggests that the U.S. is trying to acquire space-based weapons to attack targets on earth:

The U.S. military is developing orbital bombers, which fly on low altitude orbits, and when given combat orders, will re-enter the atmosphere and attack ground targets. This kind of weapon has high accuracy and stealth capability, and is able to launch sudden strikes. These capabilities make it impossible for enemies to defend against. Orbital bombers thus can strike at any target anywhere on the planet. It is the major means for the U.S. military to perform global combat in the 21st century. 2

### China militarizing—reacting to US dominance

Zhang 11 – Baohui Zhang is Associate Professor of Political Science and Director of the Center for Asia Pacific Studies at Lingnan University, Hong Kong, March/April 2011, "The Security Dilemma in the U.S.-China Military Space Relationship: The Prospects for Arms Control,” Asian Survey, Volume 51, No. 2, pp. 314-316

Chinese strategists certainly perceive the U.S. quest for space dominance as damaging to China’s national security; whoever controls space will have the edge in winning the next war. Indeed, Chinese military and civilian strategists argue that the U.S. search for “absolute security” jeopardizes other countries’ security. It is widely reported in Chinese military literature that the U.S. has already developed and is in fact implementing a master plan for military dominance in space. The challenge for China is to prevent the U.S. from jumping too far ahead. As observed by a major study organized by the General Staff of the PLA, “In recent decades the U.S. has been consistently pursuing dominance in space in order to become its overlord.” 18 also points out that the U.S. is the first country to develop a full set of doctrines for space militarization and dominance:

In April 1998, the U.S. Space Command published its long-term strategic development plan, Vision for 2020, which specifically proposed the concept of space dominance and revealed the goals of allowing the American military to use space weapons to attack the enemy’s land, sea, air, and space targets. World opinion believes this represented the formal debut of U.S. space war theory and indicated an important first step by the U.S. military toward space war. 19

Li Daguang, one of the most influential PLA experts on space war, also alleges that the U.S. has initiated “a new space war” to maintain its status as “the overlord of space.” He claims that the ultimate goal of the U.S. space program is to “build a powerful military empire in outer space that attempts to include any space between earth and moon under American jurisdiction.” Under this empire, “without U.S. permission, any country, including even its allies, will not be able to use outer space for military or other purposes.” 20

One particular concern for the Chinese military is that the U.S. may no longer be content with merely militarizing space, which involves extensive use of satellites for military operations. Instead, weaponization of space is on the agenda. The PLA now believes that the U.S. is on the verge of important breakthroughs in the development of weapons for space war. As one study claims: “Currently, the U.S. military already possesses or will soon possess ASAT technologies with real combat capabilities, such as aircraft-launched ASAT missiles, land-based laser ASAT weapons, and space-based energy ASAT weapons.” 21 Moreover, the PLA suggests that the U.S. is trying to acquire space-based weapons to attack targets on earth:

The U.S. military is developing orbital bombers, which fly on low altitude orbits, and when given combat orders, will re-enter the atmosphere and attack ground targets. This kind of weapon has high accuracy and stealth capability, and is able to launch sudden strikes. These capabilities make it impossible for enemies to defend against. Orbital bombers thus can strike at any target anywhere on the planet. It is the major means for the U.S. military to perform global combat in the 21st century. 2

### China pressed for time—militarizing space as quickly as possible

Zhang 11 – Baohui Zhang is Associate Professor of Political Science and Director of the Center for Asia Pacific Studies at Lingnan University, Hong Kong, March/April 2011, "The Security Dilemma in the U.S.-China Military Space Relationship: The Prospects for Arms Control,” Asian Survey, Volume 51, No. 2, pp. 318

Another driver of the PLA’s efforts to counter U.S. dominance in space is the time factor. There is a genuine sense of urgency about controlling the commanding heights in space. The U.S. is seen as already possessing a decisive lead in the race toward space hegemony. As observed by Lieutenant General Ge Dongsheng, vice president of the PLA Academy of Military Sciences:

Establishing space capability is not only important but also urgent. This is due to the fact that the U.S. and Russia have already taken the steps and now enjoy a vast lead over us. Even India, Japan, and European countries have ambitious plans to develop their own space capabilities. Under this situation, if we do not hasten implementing our own plan, there will be the possibility of having to face a generational gap in space capabilities. 2

### Misperceptions of the US triggers Chinese space militarization

Zhang 11 – Baohui Zhang is Associate Professor of Political Science and Director of the Center for Asia Pacific Studies at Lingnan University, Hong Kong, March/April 2011, "The Security Dilemma in the U.S.-China Military Space Relationship: The Prospects for Arms Control,” Asian Survey, Volume 51, No. 2, pp. 314-316

T HE S E CURI T Y DI LEMMA AND CHI NA’S MI L I TARY S PACE AGE NDA Although many U.S. experts are correct in emphasizing the importance of space war in China’s asymmetric strategy to counter U.S. conventional advantages, this article suggests that China’s military space agenda is also driven by the security dilemma between the two countries. China is pursuing military capabilities in space to counter perceived national security threats posed by the U.S. quest for space dominance and missile defense that could neutralize China’s nuclear deterrence.

In both cases, Chinese security experts believe that the U.S. seeks “absolute security” in order to maximize protection for the American population from external threats. 9 This means that China at least recognizes the defensive motivations behind the U.S. quest for space dominance and missile defense. However, with the chaotic nature of international relations, one country’s efforts to maximize its security could degrade the security of others by changing the balance of power. Inevitably, the U.S. quest for “absolute security” evokes countermeasures from other countries. As Kenneth Waltz observes, when a great power seeks superiority, others will respond in kind, since “maintaining status quo is the minimum goal of any great power.” 10

According to Robert Jervis, “The heart of the security dilemma argument is that an increase in one state’s security can make others less secure, not because of misperceptions or imagined hostility, but because of the anarchic context of international relations.” In this context, “Even if they can be certain that the current intentions of other states are benign, they can neither neglect the possibility that the others will become aggressive in the future nor credibly guarantee that they themselves will remain peaceful.” 11 Inevitably, when one state seeks to expand its military capability, others have to take similar measures.

DE NYI NG T HE U.S .QUE S T F OR S PACE DOMI NANCE The first factor that caused the security dilemma in the Sino-U.S. military space relationship is the professed American quest for space dominance. This quest is a reflection of the U.S. obsession with primacy that predates the Obama administration. The primacy strategy demands undisputed military dominance in different areas, including space, to ensure the best possible protection of U.S. national security. The U.S. is the only country in the world that has articulated a coherent national strategy for space dominance. As emphasized by Michael W. Wynne, former Air Force secretary, “America’s domination of the space domain provides an unrivaled advantage for our nation and remains critical to creating the strategic and tactical conditions for victory.” 12

The U.S. is the leader in the militarization of space. It was the first country that established a dedicated command, the U.S. Space Command, to unify military operations in space. In fact, as its Vision for 2020 proclaims, the Space Command seeks to achieve “full spectrum dominance” in space. 13 Furthermore, it envisions permanent dominance in the military dimension of space operations: “Today, the U.S. is the preeminent military space power. Our vision is one of maintaining that preeminence—providing a solid foundation for our national security.”14

General Lance W. Lord, former commander, Air Force Space Command, points out the importance of space dominance: “Space superiority is the future of warfare. We cannot win a war without controlling the high ground, and the high ground is space.” 15 In December 2007, the U.S. Air Force released a White Paper called The Nation’s Guardians: America’s 21st Century Air Force, in which General T. Michael Moseley made a similar statement: “No future war will be won without air, space and cyberspace superiority”; thus, “the Air Force must attain cross-domain dominance. Cross-domain dominance is the freedom to attack and the freedom from attack in and through the atmosphere, space and electromagnetic spectrum.” 16

This strategy of space dominance, however, generates the classic security dilemma between the U.S. and other countries. Although the U.S. may be motivated by defensive purposes, such as shielding the American population from nuclear weapons and other threats, other countries have to assume the worst in an anarchic world. As observed by Joan Johnson-Freese, “I would argue that the rest of the world accepts U.S. space supremacy. What the Bush Administration claims is space dominance, and that’s what the rest of the world won’t accept.” 17

### China weaponizing space now

Foster 7/13 – Peter Foster, China Correspondent for the Telegraph, July 13, 2011, “China increasing military use of space with new satellites,” http://www.telegraph.co.uk/news/worldnews/asia/china/8632219/China-increasing-military-use-of-space-with-new-satellites.html

The assessment of China's growing space capabilities to be published in the Journal of Strategic Studies deepens concerns that China, which has long promised a "peaceful rise", is now developing a worrying array of offensive weapons technologies.

It comes as China's first aircraft carrier, the 60,000-ton refitted Ukrainian vessel Varyag, prepares is to undergo sea trials within weeks, according to report in China's state-run China Daily newspaper on Tuesday.

China's People's Liberation Army has invested heavily in modernisation in recent years, developing an aircraft carrier, a prototype stealth fighter, the J20, and the Dong Feng-21D missile that could sink US carriers at 1,000 mile range.

"China's constellation of satellites is transitioning from the limited ability to collect general strategic information, into a new era in which it will be able to support tactical operations as they happen," said the article seen by the Reuters news agency.

"The most immediate and strategically disquieting application [of reconnaissance satellites] is a targeting and tracking capability in support of the anti-ship ballistic missile, which could hit U.S. carrier groups," it added.

The report, published in the week that the US launched its space shuttle for the last time, noted that China had made massive advances over the last decade, moving from almost zero real-time surveillance capability to virtual parity with the US.

"China may already be able to match the United States' ability to image a known, stationary target and will likely surpass it in the flurry of launches planned for the next two years," said the analysis by researchers from the World Security Institute, a Washington-based think-tank.

Most military analysts agree that it will be many decades before China can match US ability to project hard power, however in the last year the US defence secretary and senior US generals have begun to question openly China's motivation for developing such offensive capabilities.

### China launching new offensive satellites now

UPI 2/8 – Space Daily, February 8, 2011, “U.S. wary of China space weapons,” http://www.spacedaily.com/reports/US\_wary\_of\_China\_space\_weapons\_999.html

Senior Pentagon officials are sounding concern over China's development of weapons designed to shoot down satellites or jam communication signals.

U.S. Deputy Secretary of Defense for Space Policy Gregory Schulte said China's project was becoming a "matter of concern" for the United States.

Space, he told defense and intelligence officials while unveiling a 10-year strategy for security in space, "is no longer the preserves of the United States and the Soviet Union, at the time in which we could operate with impunity."

"There are more competitors, more countries that are launching satellites ... and we increasingly have to worry about countries developing counter-space capabilities that can be used against the peaceful use of space."

In 2007, China shot an obsolete weather satellite with a ground missile, creating so much space junk that crew members on the International Space Station had to change orbit to avert a collision last year.

Schulte said in his remarks that U.S. concerns had prompted U.S. Defense Secretary Robert Gates to seek to include space in stability talks being pursued with the Chinese.

The official said China's capabilities were going beyond shooting at spacecraft.

Beijing's counter-space activities include jamming satellite signals. It is also in the process of developing directed energy weapons that emit a disabling burst of energy toward a target rather than firing a projectile at it.

Other countries believed to be developing counter-space technology include Iran and Ethiopia.

### China’s militarizing despite the guise of peaceful development

Maginnis 4/11 – Robert Maginnis, retired Army lieutenant colonel, and a national security and foreign affairs analyst for radio and television, April 11, 2011, “China Lies About Its Huge Military Buildup,” Human Events, http://findarticles.com/p/articles/mi\_qa3827/is\_20110411/ai\_n57392735/pg\_2/?tag=mantle\_skin;content

Second, "The Chinese government advocated from the outset the peaceful of outer space, and opposes any tion of outer space," according to the paper.

China's anti-space weaponization hasn't stopped il from developing its own space weapon, however. The white makes no mention of China's 2007 successful direct-ascent anti-satellite (ASAT) weapons test, which destroyed its own satellite in space. "The test raised questions about China's capability and intention to attack U.S. satellites," according to a Congressional Research Service (CRS) report.

The Pentagon's report states: "China continues to develop and refine this |ASAT] system, which is one component of a multidimensional program to limit or preven t the use of space-based assets by potential adversaries during times of crisis or conflict." The report also indicates China is developing kinetic and directed-energy weapons for ASAT missions.

Gen. Xu Qiliang, commander of China's air force, appears to confirm the Pentagon's analysis. He said in 2009 that military competition extending to space is "inevitable" and emphasized the transformation of China's air force into one that "integrates air and space" with both "offensive read ASAT] and defensive" capabilities, according to the Pentagon's report.

### Yes Chinese space mil–they’ll control space

Bennett 10 – John T. Bennett, Defense News, January 13, 2010, “Chinese Buildup Of Cyber, Space Tools Worries U.S.”, 1-13,http://www.defensenews.com/story.php?i=4452407&c=ASI&s=SEA

Senior U.S. officials told a House panel on Jan. 13 that China continues modernizing its missile, naval and fighter aircraft arsenals at a rapid rate, but they raised new concerns about the Asian giant's efforts to develop new offensive cyber and space assets.

"U.S. military and government networks and computer systems continue to be the target of intrusions that appear to have originated from within [the Peoples' Republic of China]," Adm. Robert Willard, U.S. Pacific Command chief, told the House Armed Services Committee. "Although most intrusions focus on exfiltrating data, the skills being demonstrated would also apply to wartime computer network attacks," he said.

Beijing shows no signs of slowing what Willard described as a decade-long "aggressive program of military modernization" tailored to "achieve campaign objectives across a broad spectrum of operations."

And increasingly, that includes new tools designed to project Chinese power across greater distances, striking American information networks, and developing what the Pentagon believes are offensive space systems, according to Willard and Wallace Gregson, assistant secretary of defense for Asian and Pacific security affairs.

China's Peoples' Liberation Army is making "significant strides" in developing cyberwarfare concepts that range from defending Chinese networks to conducting "offensive operations against adversary networks," Gregson told the committee.

The latter, he said, is seen by the Pentagon as part of a broader effort by Beijing "of developing an advanced information warfare capability to establish control of an adversary's information flow and maintain dominance of the battlespace."

While the officials testifying said it remains unclear if the Chinese military was behind attacks on U.S. networks that were launched from China, Gregson called such electronic strikes "consistent with authoritative PLA military writings on the subject." Beijing also is expanding its activities beyond the Earth's atmosphere, the U.S. officials told the lawmakers.

"We are seeing China's emergence as an international space power," Gregson said. "China is investing heavily in a broad range of military and dual-use space programs, including reconnaissance, navigation and timing, and communication satellites, as well as its manned program."

The PLA also is working on tools designed to deny potential foes the ability to use their own satellites, he said, via a "a robust and multidimensional counterspace program featuring direct ascent anti-satellite weapons, directed energy weapons and satellite communication jammers."

Gregson cited China's January 2007 satellite shot-down as an example of its "growing" ability to take out space systems.

The Asian power's cyber and space efforts are part of a broader military build-up Washington and the rest of the world contends remains behind Beijing's steel curtain of secrecy.

### **China is challenging the US military with space weapons now**

Blanchard 7/11 – Ben Blanchard, Reuters staff writer, July 11, 2011, “REFILE-China ramps up military use of space with new satellites-report,” http://www.reuters.com/article/2011/07/12/china-satellites-idUSL3E7I902220110712

(Reuters) - China is developing cutting-edge satellites that will allow it to project power far beyond its shores and deter the United States from using aircraft carriers in any future conflict over its rival Taiwan, a report said.

The piece in October's Journal of Strategic Studies, a U.K.-published defence and security journal, runs at odds with China's stated opposition to the militarization of space.

But the report, an advance copy of which was obtained by Reuters, said that the rapid development of advanced reconnaissance satellites to enable China to track hostile forces in real time and guide ballistic missiles has become a key to the modernisation of its forces.

While the United States used to be unrivaled in this area, China is catching up fast, it added.

"China's constellation of satellites is transitioning from the limited ability to collect general strategic information, into a new era in which it will be able to support tactical operations as they happen," the report said.

"China may already be able to match the United States' ability to image a known, stationary target and will likely surpass it in the flurry of launches planned for the next two years."

Beijing has consistently denied it has anything other than peaceful plans for space and says its growing military spending and prowess are for defensive purposes and modernisation of outdated forces.

But with the recent unveiling of a stealth fighter, the expected launch of its first aircraft carriers and more aggressive posture over territorial disputes such as one in the South China Sea, Beijing has rattled nerves regionally and globally.

China's space program has come a long way since late leader Mao Zedong, who founded Communist China in 1949, lamented that the country could not even launch a potato into space.

Since then, it has launched men into orbit and brought them home, sent out its first lunar probe and begun longer-term programmes to explore Mars and establish a space station.

The successful missile "kill" of an old satellite in early 2007 represented a new level of ability for the Chinese military, and last year China successfully tested emerging technology aimed at destroying missiles in mid-air.

U.S. Defense Secretary Robert Gates warned earlier this year that advances by China's military in cyber and anti-satellite warfare technology could challenge the ability of U.S. forces to operate in the Pacific.

"STRATEGICALLY DISQUIETING"

China's need to use satellites to up its military game became apparent during the 1995-96 Taiwan Straits crisis, when the U.S. dispatched a carrier group after China menaced the self-ruled island with war games, the report said.

Beijing realised it could neither track nor respond to the U.S. ships. The incident also led China to realise it needed the means to keep Washington from using its navy to intervene in a war over Taiwan. Beijing regards the island as a rebel province.

"The most immediate and strategically disquieting application (of reconnaissance satellites) is a targeting and tracking capability in support of the anti-ship ballistic missile, which could hit U.S. carrier groups," the report said.

"But China's growing capability in space is not designed to support any single weapon; instead it is being developed as a dynamic system, applicable to other long-range platforms. With space as the backbone, China will be able to expand the range of its ability to apply force while preserving its policy of not establishing foreign military bases."

More broadly speaking, satellites will be able to help China project power.

"As China's capabilities grow, with space reconnaissance as an example, it will be increasingly hard to reconcile the rhetoric of a defensive posture and a more expansive capability."

## Uniqueness --- Space Weaponization Now

### Space weaponization inevitable

DeBlois 02(“Outer Space and Global Security, Militarization, Weaponization and Space Sanctuary: Past Dialogues, Current Discourse, Important Distinctions”, United States Council on Foreign Relations, http://www.ploughshares.ca/libraries/Abolish/OuterSpaceConfGeneva02/DeBloisConf2002.htm)

**[**And finally, a Summary Proposition favoring the advent of space weapons, Historical Precedent: As stated in the 4 Propositions, social and economic leverage, technological and military doctrinal inertia, prestige and prowess afforded on the international stage, as well as military superiority provided by weapons’ accession to the frontiers are the determining reasons for the historical precedent – Where goes man, goes the clash of opposing wills, goes the instruments to effect that clash: weapons. It was true of the territorial frontiers throughout history, true of the high seas in the Middle Ages, and true of the air realm in the twentieth century. The same is destined to be true in space: the weaponization of space is inevitable.International efforts to secure the frontiers of space need to accept this inevitability, and work toward measured and collaborative agreements to provide a stable space environment. ]

### Other countries perceive weaponization now – makes your impacts inevitable.

Brown 9 – Trevor Brown, MSc, S. Rajaratnam School of International Studies, Nanyang Technological University, Spring 2009, “Soft Power and Space Weaponization,” Air and Space Power Journal, http://www.airpower.au.af.mil/airchronicles/apj/apj09/spr09/brown.html

The problem for the United States is that other nations believe it seeks to monopolize space in order to further its hegemonic dominance. In recent years, a growing number of nations have vocally objected to this perceived agenda. Poor US diplomacy on the issue of space weaponization contributes to increased geopolitical backlashes of the sort leading to the recent decline in US soft power—the ability to attract others by the legitimacy of policies and the values that underlie them—which, in turn, has restrained overall US national power despite any gains in hard power (i.e., the ability to coerce).8

### US developing space weapons now.

Ross and Watt 2/2 – Tim Ross, Social and Religious Affairs Editor, and Holly Watt, February 2, 2011, “WikiLeaks: US vs China in battle of the anti-satellite space weapons,” The Daily Telegraph, http://www.telegraph.co.uk/news/worldnews/wikileaks/8299491/WikiLeaks-US-vs-China-in-battle-of-the-anti-satellite-space-weapons.html

It was a conference call from the Air Force General, Kevin Chilton, the head of US Strategic Command, and Marine General James Cartwright, the vice-chairman of the Joint Chiefs of Staff. They told him the conditions were “ripe” to launch what can now be disclosed was a secret test of America’s anti-satellite weapons, Washington’s first such strike in space for 23 years. That night, the US navy’s Ticonderoga-class cruiser, USS Lake Erie, scored a direct hit on an American spy satellite, known as USA 193. The missile used, a highly sophisticated SM-3, took about three minutes to climb 150 miles above the Earth, where it flew past the satellite before turning back and destroying the target at an impact speed of 22,000mph. The strike came about a year after the Chinese government had launched its own satellithe attack, which started a secret “space war”, The Daily Telegraph can disclose. For months the two super powers had been engaged in a private and increasingly acrimonious row over China’s use of weapons in space – an international taboo since President Ronald Reagan abandoned the “star wars” programme in the 1980s.

### US not leading on space arms control.

Space Daily 1/21 – January 21, 2011, “Obama Administration To Release New Space Security Strategy,” http://www.spacedaily.com/reports/Obama\_Administration\_To\_Release\_New\_Space\_Security\_Strategy\_999.html

Well-crafted arms control proposals could lower the risk of arms races or conflicts in space or on the ground, Grego said, and protect the space environment from the harmful debris caused when countries deliberately destroy satellites. "Agreed-upon limits on weapons in space and interfering with satellites could strengthen stability and security in space and on the ground, and such limits should be part of the U.S. national security strategy," Grego said. "Unfortunately, the National Space Policy had little to say about this issue, and it is unlikely that the new space strategy will urge the United States to take the lead on it."

### **Non-unique – weaponization now – low threshold, Iran, Sri Lanka**

Lynn 6-21 William J. Lynn, III is the U.S. Deputy Secretary of Defense, June 21st, 2011, "A Military Strategy for the New Space Environment," The Washington Quarterly, 34:3, 7-1, www.tandfonline.com/doi/pdf/10.1080/0163660X.2011.586933

Electronically jamming GPS and communications signals are among a range of relatively low-cost options for states seeking counterspace weapons. The threshold for using these weapons has been lowered, with a number of nations employing them for political purposes in peacetime or during crises. For example, Iran has recently jammed the BBC’s Persian television service in an effort to limit information about regional unrest. Furthermore, counterspace weapons are no longer the weapon of last resort in a geo-strategic conflict. Instead, they are becoming tools that advanced nations and sub-regional powers alike are incorporating into conventional military doctrine. Even non-state actors have found utility in employing jammers and manipulating communications satellites. For instance, the Tamil Tigers in Sri Lanka have been accused of hijacking transponders on commercial communications satellites to broadcast propaganda, demonstrating a sophisticated understanding of space technology. Irregular warfare has come to space.

## Uniqueness --- China Rivaling US Now

### China’s space capabilities catching up to the US now

Blair 7/13 – Bruce Blair, president of the World Security Institute, and Co-Coordinator of Global Zero, July 13, 2011, “China's Rapid Space Ascent,” http://battleland.blogs.time.com/2011/07/13/china%E2%80%99s-rapid-space-ascent/

A recent revelatory study by my colleagues Eric Hagt and Matthew Durnin to be published in the Journal of Strategic Studies (October 2011 Vol. 34) describes China's rapid expansion of its space satellite network from humble beginnings only one decade ago. It's constellation of reconnaissance, data-relay, navigation and communications satellites provide global as well as regional capabilities in support of China's power projection.

Having acquired significant real-time space support of real-time military operations, China has moved substantially closer to its paramount goal of acquiring the ability to prevent the United States from operating with near-impunity close to China's shores. And it has laid the spacework for further expanding military operations to wider swaths of Asia and beyond.

China can now peer down from space at stationary targets in and around Taiwan for a significant chunk of the day – some five hours of daily live surveillance. This coverage practically matches U.S. capacity, a stunning advance that doubles China's coverage in only 18 months and pushes its military capability into a new era in which tactical war-fighting missions can be carried out with timely support from reconnaissance platforms in space. This newfound capability brings China to the threshold of fulfilling its ambition of acquiring the ability to target moving platforms, notably U.S. aircraft carriers and their escorts. China lags the United States in the ability to find and monitor moving targets but is fast catching up as a result of progress it has made in radar and electronic intelligence satellites.

China's rapid ascent in space militarization, particularly in spy satellite operations, builds on its exploitation of mature technologies and serial production, a formula that emulates China's broader strategy of technological innovation. The United States still dominates the high-tech frontier. China has concentrated on proven ‘good enough' technology that can be reliably and affordably put into mass production. While China's states military ambitions are largely focused on regional contingencies, its space revolution is conferring capabilities to expand its horizons and support global military missions if that becomes necessary, or just desirable.

### China’s space capabilities almost on par with the US’s

Rabinovitch 7/11 – Simon Rabinovitch, correspondent for Thomson Reuters in Beijing, July 11, 2011, “China’s ‘eye-in-the-sky’ nears par with US,” http://www.ft.com/cms/s/0/cf83817a-abaa-11e0-8a64-00144feabdc0.html?ftcamp=rss#axzz1SfXoIiKY

China’s rapidly expanding satellite programme could alter power dynamics in Asia and reduce the US military’s scope for operations in the region, according to new research.

Chinese reconnaissance satellites can now monitor targets for up to six hours a day, the World Security Institute, a Washington think-tank, has concluded in a new report. The People’s Liberation Army, which could only manage three hours of daily coverage just 18 months ago, is now nearly on a par with the US military in its ability to monitor fixed targets, according to the findings.

“Starting from almost no live surveillance capability 10 years ago, today the PLA has likely equalled the US’s ability to observe targets from space for some real-time operations,” two of the institute’s China researchers, Eric Hagt and Matthew Durnin, write in the Journal of Strategic Studies.

China’s rapidly growing military might has unnerved its neighbours, many of whom are US allies, while a series of disputes this year with Vietnam and the Philippines have added to the concerns.

China’s military build-up has accelerated in recent years, as it has developed an anti-ship ballistic missile, tested a stealth fighter and is poised to launch its first aircraft carrier. The fast-growing network of reconnaissance satellites provides China with the vision to harness this hardware.

Admiral Mike Mullen, America’s top military official, said at the weekend in Beijing that it was clear that the PLA is focused on “access denial” – a term that describes a strategy of pushing the US out of the western Pacific.

“The US is not going away,” Adm Mullen, chairman of the joint chiefs of staff, said. “Our enduring presence in this region has been important to our allies for decades and will continue to be so.”

China warned the US last month not to become involved in its dispute with Vietnam over the South China Sea. “[China’s] strategic priority is to keep the US out of its backyard,” Mr Durnin told the Financial Times, adding that the satellite technology needed for achieving that goal is now in place.

When China tested missiles near Taiwan in 1996, the US deployed two aircraft carriers to nearby waters. The PLA’s inability to locate the ships was a source of great embarrassment that helped spur China’s satellite programme.

“The United States has always felt that if there was a crisis in Taiwan, we could get our naval forces there before China could act and before they would know we were there. This basically takes that off the table,” said Joan Johnson-Freese, a professor at the US Naval War College in Rhode Island.

### Chinese capabilities could strike US ships

GSN 7/13 – Global Security Newswire, July 13, 2011, “Chinese Satellites May Aid Strikes on U.S. Warships: Report,” http://www.globalsecuritynewswire.org/gsn/nw\_20110713\_3836.php

New advanced satellites could enable China to direct its ballistic missiles in striking U.S. naval vessels sailing in the region in the event of an outbreak of hostilities, Reuters reported on Monday (see GSN, Jan. 10).

A soon-to-be-released analysis in the British Journal of Strategic Studies concludes that the fast pace of work on cutting-edge spy orbiters would give China the ability to monitor up-to-the-minute U.S. military movements and to steer its ballistic missiles in strikes on U.S. warships.

"The most immediate and strategically disquieting application (of reconnaissance satellites) is a targeting and tracking capability in support of the antiship ballistic missile, which could hit U.S. carrier groups," according to the report.

"But China's growing capability in space is not designed to support any single weapon; instead it is being developed as a dynamic system, applicable to other long-range platforms," the analysis continues. "With space as the backbone, China will be able to expand the range of its ability to apply force while preserving its policy of not establishing foreign military bases."

China remains aggravated by U.S. military support for Taiwan, which has an autonomous government but remains viewed in Beijing as Chinese territory.

Beijing routinely insists it does not have plans to place weapons in space. China has defended its markedly enhanced military spending as necessary for its own protection and to replace outmoded equipment.

"China's constellation of satellites is transitioning from the limited ability to collect general strategic information, into a new era in which it will be able to support tactical operations as they happen," says the expert analysis, viewed by Reuters.

"China may already be able to match the United States' ability to image a known, stationary target and will likely surpass it in the flurry of launches planned for the next two years," it adds.

In 2007, China successfully used a missile to dislodge one of its aging orbiting satellites and in 2010 the nation saw significant gains in the development of arms capable of eliminating missiles in mid-flight (see GSN, March 10; Ben Blanchard, Reuters, July 11).

## SMIL Good --- Accidental Launch

### Prevents accidents and conflict escalation

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

A limited strike capability from space would allow for the engagement of the highest threat and the most fleeting targets wherever they presented themselves on the globe, regardless of the intention of the perpetrator. The case of a ballistic missile carrying nuclear warheads is exemplary. Two decades ago, the most dangerous threat facing America (and the world) was a massive exchange of nuclear warheads that could destroy all life on the planet. Since a perfect defense was not achievable, negotiators agreed to no defense at all, on the assumption that reasonable leaders would restrain themselves from global catastrophe.

Today, a massive exchange is less likely than at any period of the Cold War, in part because of significant reductions in the primary nations' nuclear arsenals. The most likely and most dangerous threat comes from a single or limited missile launch, and from sources that are unlikely to be either rational or predictable. The first is an accidental launch, a threat we avoided making protections against due to the potentially destabilizing effect on the precarious Cold War balance. That an accidental launch, by definition undeterrable, would today hit its target is almost incomprehensible.

More likely than an accidental launch is the intentional launch of one or a few missiles, either by a nonstate actor (a terrorist or "rogue boat captain" as the scenario was described in the early 1980s) or a rogue state attempting to maximize damage as a prelude to broader conflict. This is especially likely in the underdeveloped theories pertaining to deterring third-party states. The United States can do nothing today to prevent India from launching a nuclear attack against Pakistan (or vice versa) except threaten retaliation. If Iran should launch a nuclear missile at Israel, or in a preemptory strike Israel should attempt the reverse, America and the world could only sit back and watch, hoping that a potentially world-destroying conflict did not spin out of control.

When President Reagan announced his desire for a missile shield in 1983, critics pointed out that even if a 99-percent-reliable defense from space could be achieved, a 10,000-warhead salvo by the Soviet Union still allowed for the detonation of 100 nuclear bombs in American cities—and both we and the Soviets had enough missiles to make such an attack plausible.

But if a single missile were launched out of the blue from deep within the Asian landmass today, for whatever reason, a space-based missile defense system with 99-percent reliability would be a godsend. And if a U.S. space defense could intercept a single Scud missile launched by terrorists from a ship near America's coasts before it detonated a nuclear warhead 100 miles up—creating an electromagnetic pulse that shuts down America's powergrid, halts America's banking and commerce, and reduces the battlefield for America's military to third world status8—it might provide for the very survival of our way of life.

**Accidents escalate – killing billions  
Forrow et al 1998** (Lachlan Forrow, MD, et al, “Accidental Nuclear War – A Post-Cold War Assessment”, New England Journal of Medicine, iis-db.stanford.edu/pubs/20625/acciden\_nuke\_war.pdf)

Earlier assessments have documented in detail the problems of caring for the injured survivors of a nuclear attack: the need for care would completely overwhelm the available health care resources. Most of the major medical centers in each urban area lie within the zone of total destruction. The number of patients with severe burns and other critical injuries would far exceed the available resources of all critical care facilities nationwide, including the country's 1708 beds in burn-care units (most of which are already occupied). The danger of intense radiation exposure would make it very difficult for emergency personnel even to enter the affected areas. The nearly complete destruction of local and regional transportation, communications, and energy networks would make it almost impossible to transport the severely injured to medical facilities outside the affected area. After the 1995 earthquake in Kobe, Japan, which resulted in a much lower number of casualties (6500 people died and 34,900 were injured) and which had few of the complicating factors that would accompany a nuclear attack, there were long delays before outside medical assistance arrived. From Danger to Prevention Public health professionals now recognize that many, if not most, injuries and deaths from violence and accidents result from a predictable series of events that are, at least in principle, preventable. The direct toll that would result from an accidental nuclear attack of the type described above would dwarf all prior accidents in history. Furthermore, such an attack, even if accidental, might prompt a retaliatory response resulting in an all-out nuclear exchange. The World Health Organization has estimated that this would result in billions of direct and indirect casualties worldwide.

## SMIL Good --- China

### No US response to Chinese space mil collapses deterrence—causes prolif

Fisher 10 – Richad D. Fisher, senior fellow at the International Assessment and Strategy Center in Alexandria, Va, January 20, “China's Scary Space Ambitions,” http://online.wsj.com/article/SB10001424052748704320104575014341463615862.html?mod=WSJ\_Opinion\_LEFTTopBucket

China's Jan. 11 test of exoatmospheric missile interception is worth paying attention to—especially in Washington. It isn't just an early step toward development of a missile-defense system; it's also a signal of a radical change in the country's stance on the militarization of space. The United States should take this as a wake-up call that in the long term, China intends to challenge its strategic superiority in aerospace.

The People's Liberation Army publicly unveiled its new strategy as part of the Air Force's 60th anniversary in November last year. It appears that this strategy was formulated in 2004, but the world did not learn about it until PLA Air Force Commander General Xu Qiliang summarized it as "effecting air and space integration, possessing capabilities for both offensive and defensive operations."

Meanwhile, Chinese diplomats continued to hew to the line set down in 1985 by the late leader Deng Xiaoping, when he told former U.S. President Richard Nixon that China "is against whoever goes in for development of outer space weapons." China started an intensive diplomatic and propaganda campaign against American missile defense programs. Most recently Beijing added its vocal assistance to Vladimir Putin's intimidation campaign, which succeeded in helping to convince current U.S. President Barack Obama to reverse his predecessor's commitment to build ground-based defenses in Europe against Iran's Chinese-aided nuclear missile threat.

Today, China is beginning to shed the cloak of deception over its own missile-defense efforts, and has all but declared its intention to build an aerospace power to rival that of the U.S. After General Xu's statements, Chinese media commentaries explained that the new aerospace strategy emerged from Communist Party leader and PLA commander Hu Jintao's December 2004 call for the PLA to implement new "historic missions," which include defending China's international interests. The PLA Air Force in particular will shift from being a "campaign air force" for theater-level wars (such as against Taiwan) in cooperation with the Army, Navy and Second Artillery missile force, to a "strategic air force" increasingly capable of independent action farther from home.

Of particular importance is the PLA's willingness to publicly justify a space combat mission. While it is not yet clear which service will lead this mission, the PLA Air Force is the most vocal booster. In an Oct. 31 interview, General Xu stated that "competition among armed forces is moving toward the space-air domain and is extending from the aviation domain to near space and even deep space . . . having control of space and air means having control of the ground, the seas and oceans, and the electromagnetic space, which also means having the strategic initiative in one's hands . . ."

General Xu's candor forced the Foreign Ministry to inveigh the following month: "We oppose the weaponization of outer space or a space arms race . . ." But even some Chinese scoff at this self-serving propaganda. Also in November, a Chinese military expert stated that as long as "hegemonism" (code for the U.S.) maintains primacy in space, "air-and-space non-militarization is merely people's naive illusion, or just a slogan and banner."

This isn't the first warning to Washington. In 2006, the PLA used ground-based lasers to "dazzle" a U.S. satellite, and in January 2007 demonstrated a ground-launched satellite interception. Last November, Chinese experts noted that the PLA may develop "assassin" satellites and "laser-armed" satellites, and reported China may already be developing an "orbital bomber." The PLA may also consider placing military assets on the moon—the first "Chang'e Three" moon lander may be equipped with a small radar and laser range-finder for "scientific" missions. The strict military-civilian "dual use" policy governing China's space program may mean that future larger unmanned Moon bases could be used to locate and target U.S. deep-space satellites that provide warning of missile strikes.

It's already public knowledge that China is now developing or deploying four new nuclear-armed intercontinental land-mobile and sea-based nuclear missiles. The key variable is whether the PLA will equip these missiles with multiple warheads, as some Asia sources have suggested to me, which could conceivably allow China quickly to achieve 400 or more warheads. These same sources also estimate a national missile-defense capability could emerge before the mid-2020s.

China is upgrading its aerospace capabilities closer to earth, too. Since the November PLA Air Force anniversary, PLA leaders have stated that China's fifth-generation fighter could fly "soon" and be in service by 2017-19, exceeding a recent U.S. government estimate by about a decade. Other Chinese sources speculate the PLA may build 300 of these fighters.

As China signals its intention to build space-combat capabilities, increase the size and survivability of its nuclear missile forces, and build new fifth-generation air combat systems, the Obama administration is signaling retreat on the same fronts. Having declared his disdain for "Cold War" weapons in early 2009, it is unlikely that Mr. Obama will begin U.S. space-combat programs that could match and deter China in space. If anything, in fact, U.S. officials convey an indifference to China's aggressive intent. In early 2009, Mr. Obama reduced the limited number of ground-based missile interceptors to be based in Alaska and terminated a theater missile-defense program to enable one interceptor to shoot down multiple warheads. By August, the administration had defeated a Congressional attempt to extend production beyond 187 of the Lockheed Martin F-22, the premier U.S. fifth-generation jet fighter.

Continuing this course risks sacrificing the air superiority in Asia the U.S. has purchased through great sacrifice. If the PLA is able to attack U.S. space assets, it can limit the U.S. military's ability to detect and respond to PLA movements. Should China decide to increase its warhead numbers to the hundreds and defend them, the U.S. nuclear deterrent extended to Japan and other allies will lose its credibility. And if a larger number of PLA fifth-generation air-superiority fighters is able to overwhelm a lesser number of U.S. F-22s, then U.S. naval forces and bases in the Western Pacific will be more vulnerable to PLA air and missile strikes.

As a new U.S. administration tries to "move beyond the Cold War," primarily by limiting U.S. military power, China is signaling its intent to start an arms race. An American failure to respond would constitute a retreat from leadership. Asians will then face two unpalatable choices: accommodate China or obtain their own military deterrence. Both would increase political instability and in turn threaten the region's economic growth.

### Chinese capabilities means conflict over Taiwan

Johnson-Freese 07 – Joan Johnson-Freese, Professor of National Security Affairs at the Naval War College, Summer 2007, “China’s Space Ambitions,” Proliferation Papers, www.ifri.org/downloads/China\_Space\_Johnson\_Freese.pdf

Let's be clear: Chinese military strategy, planning and capability development is, first and foremost, about Taiwan. If China felt it had to hold Taiwan by force and assumed that the United States would intervene on behalf of Taiwan, China's best option might be to hold the United States at bay for some minimal amount of time, 48 hours for example, to pressure Taiwan into acquiescence. Because the United States military is so dependent on space systems for virtually all activity, being able to disrupt or disable those systems might buy China the time it feels it needs to bring Taiwan back into the fold. While there are a number of scenarios about how China might approach a crisis with Taiwan that do not heavily rely on either space system usage on their part or disruption of U.S. space systems, such as a submarine blockade, the Chinese are acutely aware of U.S. space dependence as a potential Achilles' heel. Disrupting or denying the U.S. military use of its space systems exploits the asymmetrical balance of military power between the U.S. and China in China's favor. It also "fits" with Chinese military doctrine which emphasizing the importance of securing information dominance and the use of "soft kill" rather than "hard- kill" space systems – those that interfere with satellites and their transmissions. The Chinese recognize, as does much of the world, that it is futile to take on the U.S. military directly, and therefore seeks all ways it can to find an asymmetric advantage.

### China will attack US space assets

Brown 10 – Peter J. Brown, satellite journalist, January 20, “China vents anger with missile test,” Asia Times, http://www.atimes.com/atimes/China/LA20Ad01.html.

"It should also be expected that the PLA will soon build on China's early Chang'e unmanned moon missions by placing a range of unmanned sensors or even weapons on the moon to better enable attacks against US deep space assets," said Fisher. That may seem a bit far-fetched to many readers. However, China is not backing off, while the US is intent on maintaining the security of Taiwan. Tensions are not going to subside especially when China is so determined to build increasingly sophisticated weapons systems to counter the US in particular. Is China's anti-missile system as good or as reliable as the systems now deployed by the US - both on land and at sea? Probably not, but it is a significant development nonetheless. China wants the world to know that this is an impressive achievement, and that there will be many more in the years to come.

### China will win over Taiwan

Brown 10 – Peter J. Brown, satellite journalist, January 20, “China vents anger with missile test,” Asia Times, http://www.atimes.com/atimes/China/LA20Ad01.html.

China has conducted a successful "defensive" anti-missile test with the intent of sending the United States a stern message of disapproval over Washington's latest arms sales to Taiwan.

Chinese Foreign Ministry spokeswoman Jiang Yu described the January 11 event as a test of "ground-based midcourse missile interception technology" conducted "within its territory". It was defensive in nature and targeted at no country, she said.

The test "is just a game about the US sales of weapons to Taiwan; about the non-proliferation of missiles; and about the prevention of an arms race in outer space between the US and China." according to Li Shouping, professor in international law at the School of Law of Beijing Institute of Technology and director of the Institute of Space Law.

The test was a direct response to the US Department of Defense decision on January 6 to sell weapons, including the Patriot III anti-missile system, to Taiwan, Li said in a commentary at the Res Communis web site [1]. Since the sale would integrate Taiwan into the Theater Missile Defense System (TMD) of the US, the Chinese government thought it harmed the sovereignty of China and violated the principle in international law, he wrote. Li declined to respond to questions from Asia Times Online.

Professor Tan Kaijia, of the People's Liberation Army's (PLA) National Defense University told Xinhua news agency "If the ballistic missile is regarded as a spear, now we have succeeded in building a shield for self-defense."

The test was conducted within China's territory, "so the missile that intercepted the incoming target would not fly or [fall into] another country's territory, China had no obligation to declare the missile test, but doing so revealed that the military was becoming more transparent," Tan said.

Many missile experts contend that what China really carried out was a test of anti-satellite capabilities without actually shooting down a satellite.

"We still do not know exactly what happened, but it the current hypothesis is that China tested the same system that it used to destroy a satellite in 2007, this time in an anti-ballistic missile mode. The technology is essentially the same," said Jeffrey Lewis, director of the Nuclear Strategy and Non-proliferation Initiative at the Washington DC-based New America Foundation. [2]

Brian Weeden, technical advisor with the Colorado-based Secure World Foundation, says that while none of the objectives for the test are "apparent due to the opaqueness of the PRC [People's Republic of China] decision-making process," the ultimate objective of the test was as a strategic communication to the US.

"First, the timing of the test - exactly three years after the successful 2007 Chinese ASAT [anti-satellite weapon] test - indicates that whatever motivated China to do the ASAT test has not gone away," said Weeden. "Some have argued that the Chinese ASAT test was an attempt to push the US towards serious negotiations on a space weapons treaty in the Conference on Disarmament. Others have argued that it was a demonstration of Chinese capability to disrupt and degrade US space capabilities in the event of a Taiwan Strait conflict. Whatever the real reason or reasons were, it can be said that they still apply."

China implemented a significant change in the way it communicated this most recent test to the public which indicates that they learned a great deal from the strategic communications failure that took place after the 2007 ASAT test, according to Weeden. "It has gone way beyond the stoic silence displayed in 2007," he said.

"An objective [in 2010] for China was to see if it could carry out this sort of coordinated communications strategy and what sort of geopolitical response it would engender," said Weeden. "A large part of this learning came from watching how the US did strategic communications for the 2008 destruction of USA 193. While the USA 193 destruction was in fact a test of an anti-satellite system, the US went to extraordinary lengths to communicate that it was no such thing and that it was all about public safety. The US was also ahead of the curve, bringing the issue to the public spotlight itself with a coordinated communications strategy."

This test also enabled China to communicate that it too can develop an ASAT capability as a side effect of working on kinetic kill missile defense interceptors.

"This just further cements the fact that hit-to-kill technologies for both missile defense and ASAT are really the same capability. However, in the current geopolitical climate testing a hit-to-kill missile defense system is politically acceptable while testing a hit-to-kill ASAT system is not," said Weeden.

It has long been US policy to continue to develop technology for anti-satellite weapons while not actually building an operational system. This "hedging" strategy was seen as a way for the US to publicly state it opposed weapons in space while still having an option to deploy them.

"This Chinese test and the recent Indian announcement both indicate the flaw in that strategy: it allows other states to use the same policy to develop weapon systems that pose a threat to US space capabilities," said Weeden. "This flaw is not new, in fact it has been pointed out by arms control advocates for decades. But this flaw was derided by the missile defense and space weapons advocates in the US as overblown."

### Taiwan conflict’s coming–Chinese space mil takes out US advantages

Ong-Webb 11 – Dr. Graham Ong-Webb, Managing Editor with IHS Jane's & PhD from the Department of War Studies, King's College London, March 15, 2011, “How Far Will China's Navy Reach?”, <http://www.isn.ethz.ch/isn/Current-Affairs/ISN-Insights/Detail?lng=en&id=127560&contextid734=127560&contextid735=127476&tabid=127476>

Not only economic interests but also geopolitical ones are fueling China's naval prowess, particularly in the Taiwan Straits - the most likely naval flashpoint. Beijing's option to unify Taiwan with the mainland by military force if necessary is no longer fuelled by ideology but geopolitics. As a 2008 US government report correctly put it, Taiwan is regarded as the focal point from which China can 'break out' from its centuries-long containment along the Pacific littoral" and secure its immediate security environment within the Asia-Pacific region. This 'line of containment' is also known as the oft-mentioned "first-island chain" running south from the Japanese archipelago to the Philippines, which naturally denies the mainland from having unfettered access to the oceanic thoroughfare. The possession of Taiwan would permanently break China's geographical curse. As a result, the Taiwan Straits - as well as the South China Sea and the Yellow Sea - have become pressing geopolitical priorities that drive China's expansive military planning and procurement.

Naval prowess - only one head of the hydra

Moreover, it must be said that China's growing 'naval power' is not only about an expanding fleet of ships and submarines. All militaries advancing towards greater sophistication seek to integrate their sea, air, land and space capabilities in order to increase overall lethality, efficiency and effectiveness. The Chinese Navy is but one head of the country's military hydra. In a larger sense, the Chinese Navy should be regarded as a placeholder for the sea, air, land, and space-related capabilities that China will bring to bear against an adversary in the maritime realm of conflict.

US strategic planners have been increasingly concerned with China's recent development and impending deployment of certain air, land, and space-related capabilities, which affect Taiwan's ability to impede a Chinese naval advance toward its shores and also the US Navy's capacity to project its military power in the Straits. Some of these developments include an aircraft carrier, anti-ship ballistic missiles, stealth fighter-aircraft and anti-satellite missiles.

In January, the Chinese media published a video of China's first aircraft carrier undergoing sea trials. The bid to field a Chinese aircraft carrier may look like an unwieldy proposition because of the indomitable presence of 11 US aircraft carrier groups policing the world's oceans. The Chinese carrier, which is an upgraded version of a partially-built vessel purchased from Ukraine in 1998, is generations behind American carrier technology. However, China's plan to field an aircraft carrier since the 1990s is not an arms-race-type rejoinder to the US. It is simply borne out of a pragmatic need to use carrier-based aviation to better protect China's surface fleet. The Chinese Navy has calculated that an aircraft carrier with 40 aircraft on board would generate a combat effectiveness of between 200 and 800 land-based fighters in air-support functions. A Chinese carrier, supported by a fleet of attack submarines, may allow the rest of the Chinese Navy to secure an area up to the 'second-island chain' stretching from the Aleutians to Papua New Guinea.

China's fledgling anti-ship missile capability threatens US aircraft carriers. In early January, the US Navy's intelligence director acknowledged that China's anti-ship ballistic missile, the DF-21D, had finally reached its initial operating capability, leaving US carriers open to attack. Previously, US observers were sceptical that Chinese engineers could master the complicated science of hitting a manoeuvrable target such as a moving aircraft carrier. With the impending deployment of the DF-21D, its immediate role would be to deter the US Seventh Fleet from approaching the Taiwan Strait. The key target would be the USS George Washington, the aircraft carrier assigned to this fleet which carries the US Navy's best strike aircraft capable of attacking Chinese sea, air and land targets and destroying vital Chinese radar systems. These carried-launched aircraft have a range of less than 1,000 kilometers. Therefore, the DF-21D, which shares a similar range, is intended to keep the aircraft belonging to the George Washington out of lethal range.

The US and Taiwanese airborn-early-warning aircraft that support their respective navies are also not immune from attack. It was reported in early January that the Chinese military successfully test flew their own indigenously-built fifth-generation stealth fighter aircraft known as the J-20 "Black Eagle", designed to creep up and destroy those aircraft that would otherwise provide real-time intelligence and surveillance of a Chinese naval attack. Until recently, US officials have played down China's ability to make advances on its J-20 program launched in the 1990s. In fact, the American defence community previously estimated that the J-20 would be operational only around 2020 when it is more likely to be ready in about three years from now.

Lastly, the Chinese military is very close to fielding an anti-satellite missile capability that stands to cripple the network of satellites that the US military depends upon to marshal and coordinate its air, land and naval forces effectively. Chinese military planners realize that the US military satellite and communications network is both its greatest strength and greatest weakness. While it makes the US military more effective and efficient, it is also reduced to fighting 'blind, deaf and dumb' without it. In January 2007, Beijing successfully destroyed one of its own weather satellites with a direct ascent anti-satellite missile, based on the same missile airframe used for the DF-21D, hence proving that it could obliterate US satellites in low earth orbit.

These developments bolster the Chinese military's confidence in achieving what it views to be its national security imperatives. Whether or not China does possess hegemonic aspirations, it is becoming clear that Beijing is removing the shackles that previously placed limits on its strategic reach. In particular, as a recent US Office of Naval Intelligence report has noted, the Chinese Navy has begun removing the geographical limits to its 'offshore defense' thinking. It appears to have been given the mandate to venture "as far as [its] capabilities will allow it to operate task forces out at sea with the requisite amount of support and security." The deployment of a Chinese naval convoy to the Gulf of Aden to protect the country's shipping from Somali pirates in early January is instructive. The question that should now be asked is how much maritime security is really enough for Beijing. The answer determines how far Beijing will ask its navy to go.

### Chinese space attack means any conflict over Taiwan escalates

Tellis 7 – Ashley J. Tellis, senior associate at the Carnegie Endowment, specializing in international security, defense, and Asian strategic issues, June 2007, “Punching the U.S. Military's "Soft Ribs": China's Antisatellite Weapon Test in Strategic Perspective,” Policy Brief No. 51, <http://www.carnegieendowment.org/2007/06/19/punching-u.s.-military-s-soft-ribs-china-s-antisatellite-weapon-test-in-strategic-perspective/21u>

Third, the growing Chinese capability for space warfare implies that a major conflict in the Taiwan Strait would entail serious deterrence and crisis instabilities. If such a clash were to compel Beijing to attack U.S. space systems—primarily intelligence, surveillance and reconnaissance, military communications, navigation and guidance, and meteorology assets— right at the beginning of a war to increase China’s chances of achieving its objectives, the very prospect of such a “Space Pearl Harbor” could, in turn, provoke the United States to contemplate preemptive attacks or horizontal escalation on the Chinese mainland, particularly if such a conflict were to occur before Washington had the opportunity to fully invest in survivable space capabilities. Already, U.S. Strategic Command officials have publicly signaled that conventionally-armed Trident submarine-launched ballistic missiles would be appropriate weapons for executing the prompt strikes that might be necessary in such a contingency. These types of attacks on space launch sites, sensor nodes, and command- and-control installations on the Chinese mainland could well be perceived as precursors to an all-out war. This indicates how difficult it would be for all sides to limit the intensification of such a conflict, even if one discounts the complications of accidents and misperception.

### Nuclear war

Hunkovic 9 – Lee Hunkovic, American Military University, 2009, “The Chinese-Taiwanese Conflict: Possible Futures of a Confrontation between China, Taiwan, and the United States,” American Military University Course Paper, <http://www.lamp-method.org/eCommons/Hunkovic.pdf>

World News Connection (2006) then addresses American responses to each scenario, which notably vary. They conclude that all three scenarios suppose a situation in which the U.S. will be unavoidably involved in the regional conflict, due to the Taiwan Relations Act. World News Connection (2006) then also states that due to geographical distance, the U.S. finds it difficult to respond quickly to the potential conflict, especially since its military is stretched thin in Iraq. They also state that the U.S. cannot predict the consequences of using nuclear weapons or putting excessive military in the conflict in a hurry. World News Connection (2006) then states that their report settles for predicting the U.S. response to the conflict by classifying it in four stages: deterrence, crisis stability, war fighting and war termination and analyzing. World News Connection (2006) then addresses these options that the United States has for each of the previously listed scenarios. They state that the first scenario of a low-intensity conflict, would be difficult for the U.S., in that it would not be able to easily step in, presumably because covert operations are difficult to attribute to the party responsible, especially if plausible deniability is maintained. World News Connection (2006) also states that while the U.S. is expected to be proficient in intelligence in the early days of such a conflict, after intervening, conditions would make it difficult to secure a quick victory and the U.S. would be taking the risk of having to engage in street warfare as in Iraq. World News Connection (2006) addresses the U.S. response to the second relevant scenario involving a massive Chinese invasion, stating that this is the worst case scenario and possibly a nuclear war. They state that the U.S. is thought to be able to target China with its nuclear weapons to end the conflict quickly, but that their report cautions that the ensuing political repercussions after a nuclear war could be serious. They also state that the U.S. might have to risk a long-term dispatch of its forces in Taiwan in the case of a conventional war. World News Connection (2006) also states that the scenario of Taiwan attacking is equally difficult to respond to as the one involving a low-intensity conflict. They state that this would be so because once a war breaks out in the Taiwan Strait, unless it ends with a one-side victory, nobody will surrender. They also state that while the deploying of responding forces in a massive scale by the U.S. might guarantee winning for Taiwan, it would take the tremendous cost of a long-time dispatch of its forces and a very unstable post-war situation. While this article once again addressed strategic and tactical issues, which are not the focus of this study, they are very valuable for the establishment of indicators of a conflict between China and Taiwan. The first scenario involving the deployment of Chinese special forces into Taiwan to carry out covert operations to eliminate key members of the Taiwanese government, military and attack early warning stations could be an excellent indicator that a surprise attack is in order, as well as the third, where the Taiwanese attack a Chinese joint forces exercise, which may or may not be a stealth attack. The indicators that will be addressed later that these situations would present could give warning of an imminent war, especially if it is not the massive conventional invasion that the United States expects from China and is the most prepared for. A crucially important part of the analysis to examine the chances for transposition, as well as the establishment of indicators, is a knowledge of the Chinese perspective on the situation, particularly, what actions they will not tolerate from the Taiwanese. Studying the AntiSecession Law, as well as other rhetoric from Chinese leaders, particularly Hu Jintao, as to which actions on behalf of Taiwan would lead to their going to war is enlightening, as well as paramount, because the tone of these proverbial lines in the sand can also potentially give insight as to whether China’s primary objective for Taiwan is really forcing reintegration or merely preventing secession. While political rhetoric, particularly from the Chinese, who have a rich history of strategic deception, can never be taken at absolute face value, it is nonetheless invaluable, to establish the intentions of governments, which can be used to weigh the pairwise comparisons, as well as establish indicators of whether war in on the horizon or diplomacy will prevail. Xu (2007) wrote his article shortly before the 2008 Taiwanese Presidential elections and begins his article by stating that while neither the Kuomintang or Democratic Progressive Party being a sure win in the election, from the mainland’s perspective, peace and stability are at stake across the Strait no matter which party wins. He then states that upholding peace and stability is the motivating force behind the mainland’s policy response. Xu (2007) then states that as far as China is concerned, Cross-Strait peace and stability hinge on the one-China principle. Xu (2007) then states that in order to make this concept applicable to reality, the mainland has set the “1992 consensus” as the political requirement and that the “magic” of the “1992 consensus” is that it is the only formula involving the one-China principle that both sides have accepted and cannot make any further provisions on and that it leaves a “creative ambiguity” about the political meaning of one China. He explains this ambiguity, as being that Taiwan insists that one China is the “Republic of China”, whereas the mainland, as a concession, holds that in Cross-Strait talks and negotiations, it does not need to touch on the political meaning of one China. Xu (2007) reveals that this inconclusiveness of the consensus is what made it possible to hold the Wang-Koo meeting in Singapore in 1993. Xu (2007) then delves into some of the Taiwanese political candidates vying for the presidency in 2008, mentioning that if the KMT wins the election, it will be possible to reactivate the “1992 consensus” and that Cross-Strait dialogue and negotiations can resume, which will lessen tensions between the two sides, although not tangible results will probably be achieved in the short term. He also mentions that if the DPP wins the election, it will not accept the “1992 consensus”, but will pursue the “consensus” that now exists in the DPP, the “Resolution on Taiwan’s Future” that was adopted on May 8, 1999, which says that Taiwan is “an independent sovereign country” that is called the “Republic of China”. Xu (2007) also mentions the position of the DPP is that any change in the present state of “independence” must be decided through a referendum conducted among all of the residents of Taiwan. Xu (2007) later in the article mentions Ma Ying-jeou, stating that if he won, the two sides across the Strait should be able to implement the five “common aspirations and prospects for Cross-Strait peace and development”, as announced in the press communiqué signed by Lien Chan and Hu Jintao in April 2005. He lists them as reopening talks on the basis of the 1992 consensus, reaching a peace accord, promoting the “three direct links” fourth discussing the issue of Taiwan’s participation in international activities and establishing a platform for regular exchanges between the two parties, which has already been put into practice. Xu (2007) notes that the KMT has included the five “prospects” into its working agenda. Xu (2007) then get to the most revealing part of the article, stating that if Ma Ying-jeou were the winner, his basic position on the Cross-Strait relationship would be the maintenance of the status quo—“the status quo of the Republic of China”. He states that the status quo should not be changed unilaterally or by nonpeaceful means. Xu (2007) goes on to claim that neither independence nor reunification is the immediate priority. Xu (2007) then states that no matter which party wins the 2008 elections in Taiwan, the mainland’s Taiwan policy would remain “peaceful reunification, one country two systems.” He further states that the most recent and authoritative exposition of the policy is President Hu’s “Four Nevers” of March 2005, which are to “Never swerve from the one-China principle; never give up efforts for a peaceful solution of the Taiwan issue; never change the policy of pinning hope on Taiwan compatriots; and never compromise on the struggle against secessionist forces in Taiwan” and that the code of conduct is the Antisecession Law. He ends his article by stating that maintaining peace and stability in the Taiwan Strait by containing secessionist activities in Taiwan would remain the mainland’s policy priority after the 2008 election. While the author of this article is clearly biased, as he is a reporter in the People’s Republic of China, where people are not allowed to speak against government policies and much of his article is nothing more than pro-Beijing political propaganda, some of his points were very revealing, particularly about the issues that Beijing would not be willing to compromise on regarding Taiwan and their claim that their objective is the maintenance of the status quo, rather than coercing Taiwan into being annexed. Despite much of the self-serving rhetoric justifying Chinese aggression and intimidation towards Taiwan that this article contained, it is very useful to establish indicators of action on behalf of Taiwan that could cause China to use military force, particularly the violation of the Antisecession Law or President Hu’s “Four Nevers”. For the meantime, this article makes it abundantly clear that Beijing considers Taiwanese President Ma to be a facilitator and ally, which dramatically lessens the prospects for Chinese military action against Taiwan before 2012 and alters the weighing of alternate scenarios during the pairwise comparison process. Actors and Perceptions: A war between China, Taiwan and the United States has the potential to escalate into a nuclear conflict and a third world war, therefore, many countries other than the primary actors could be affected by such a conflict, including Japan, both Koreas, Russia, Australia, India and Great Britain, if they were drawn into the war, as well as all other countries in the world that participate in the global economy, in which the United States and China are the two most dominant members. If China were able to successfully annex Taiwan, the possibility exists that they could then plan to attack Japan and begin a policy of aggressive expansionism in East and Southeast Asia, as well as the Pacific and even into India, which could in turn create an international standoff and deployment of military forces to contain the threat. In any case, if China and the United States engage in a full-scale conflict, there are few countries in the world that will not be economically and/or militarily affected by it. However, China, Taiwan and United States are the primary actors in this scenario, whose actions will determine its eventual outcome, therefore, other countries will not be considered in this study.

## SMIL Good --- Deterrence

### Space weapons key to deterrence

Morgan 10 – Forest E. Morgan, Senior Political Scientist at RAND, 2010, “Deterrence and first-strike stability in space : a preliminary assessment,” http://www.rand.org/content/dam/rand/pubs/monographs/2010/RAND\_MG916.sum.pdf

Although this assessment focuses specifically on space deterrence and first-strike stability in space, it is important to appreciate the interdependencies between these factors and general deterrence and stability writ large. Given the extent to which space support enhances U.S. conventional military capabilities, an adversary weighing the risks and potential benefits of war with the United States might be encouraged toward greater aggression by the belief that attacking space systems would degrade U.S. warfighting capabilities enough to enable the attainment of objectives at acceptable costs. As a result, weaknesses in space deterrence can undermine general deterrence. Conversely, if a prospective adversary concludes that the probable cost-benefit outcome of attacking U.S. space systems is unacceptable, it is forced to weigh the risks and benefits of aggressive designs in the terrestrial domain against the prospect of facing fully capable, space-enhanced U.S. military forces. In sum, effective space deterrence fortifies general deterrence and stability. (See p. 21.)

### Space weapons key to deter and deescalate conflicts

Kekauoha 3 – Stanford K. Kekauoha, Major, Commander, Air Operations Strategy Flight, 502nd Air Operations Squadron, Pacific Air Forces, Hickam AFB, Hawaii, June 2003, “SPACE WEAPONS AND SPACEPOWER,” The School of Advanced Air and Space Studies, https://www.afresearch.org/skins/rims/q\_mod.../display.aspx?...

While difficult at best, the deterrent nature and the rapid response potential of spacepower should also be factored into the cost benefit calculation. In maintaining a constant global presence, space weapons could play a vital deterrent role in preventing conflicts. Should deterrence fail, space weapons could rapidly respond to a global crisis as the initial stopping force. Such preemptive actions could reduce the possibility of large-scale and costly deployment of troops—an immense cost, both in terms of loss of life and the more tangible computations associated with the logistics of war. The price of war is enormous—operating expenses for the first Gulf War approached $80 billion and cost 148 lives.44 From a cost benefit analysis, the price of fielding a constant orbital presence begins to look reasonable when compared to such figures. In comparison, the United States spent trillions fielding a nuclear deterrent force to prevent a World War III with the Soviet Union. Since the Cold War ended favorably for the United States, with (barely) a shot fired, the purchase of thousands of never-used nuclear weapons could be seen as a very cost-efficient expenditure.

## SMIL Good --- Hegemony Module

### **Space mil key to heg and solves arms races**

Dolman 6 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, March 10, “Toward a U.S. Grand Strategy in Space,” Washington Round Table on Science & Public Policy, http://www.marshall.org/pdf/materials/408.pdf

After resolving whether space can be controlled, we then get into arguments about whether space should be controlled. Karl Mueller and Pete Hays and I have talked at great length, and it is this debate that we are fostering, that we are all very proud of – should it be done? The real question is not inevitability; nothing is inevitable, but I think that things are probable and Karl and I disagree on the probability. We should be planning or expecting or at least thinking about it. The real question is not whether the United States should be the first to weaponize space, as I advocate, but whether or not the United States can afford to be the second to weaponize space. It is at least theoreti-cally possible (and I think it is more than theoretically possible) that one state, with a given will, could seize low-earth orbit with enough weapons (or use other means available for control of space) and take control of that high ground, that low earth orbit, which is glob-ally high ground. It is not the trivial example of Mt. Everest, though I like that example, Karl, I’m going to have to look closer at that. Space is a global high ground. Yes, it is visible; the high ground is always visible. Despite Mt. Everest’s disadvantages, the high ground has always been sought by military planners and military strategists and it has al-ways provided an advantage. It does not guarantee victory; it provides an advantage and that is what is sought. If a nation can seize low-earth orbit and prevent other states from getting there, and we have several arguments about how that might be possible, then it will have gained a tremendous advantage that may not be disruptable as space, at least in some senses, is unflankable. There are a number of analogies that are used in this process of weighing options; one of the most common is to hearken back to Eisenhower in the Cold War. But rou-tinely the analogy is miscast. Eisenhower was operating in a context where the United States was spending a great deal of money on ICBMs and missile development; that would go into the 1960s engaged in a war with Vietnam and then in implementing the Great Society, a domestic program of tremendous spending. The Soviet Union, for its part, was spending a great deal of money, too. Neither side wanted to get into an arms race where it did not know who would prevail. The Soviet system was not as technically advanced, but it was very robust. So it was quite easy to decide bilaterally that weapons in space or any kind of militarization of space might be damaging to both sides. Nonetheless, we have a different system today and, as Karl has pointed out, it may be that if the United States were to unilaterally militarize space – and I am not advocating that necessarily, but it is an option – that it could in fact prevent an arms race. The tril-lions of dollars that would have to be spent to dislodge the United States from space, if it were to quickly seize control of the low-earth orbit, might be seen as not worthwhile to another state. However, if we wait fifteen or twenty years until a state is able to challenge the United States in space, then we will have a space race. By putting weapons in space to enhance its military capabilities the United States today is saying to the world that in this period of American hegemony, it is not going to wait for problems to develop over-seas until they bubble over into its area of interest, and then massively and forcefully fix that problem. No. The American way of war today, based on precision and on space capabilities, is to engage early using less force, using more precise force and more deadly force in a specific area, but with far less collateral damage. That is the new American way of war and we really cannot get out of it. This is the fight that we are going to be taking into the world today and space is a tremendous part of that. Space weaponization, space militarization, is going to become the issue of the first the twenty-five years of this century, as for the last half of the 20th century the nuclear paradigm was the great issue in military power and studies. It is not the same issue, however; it is different. PAROS (Prevention of an Arms Race in Outer Space) for the last fifteen years has been trying to come up with some sort of acceptable treaty to prevent weaponization and militarization of space. It has been deadlocked. I submit to you that if the United States were to say, “Unless you can come up with a useful treaty that is acceptable to the space-faring nations of the world, we will begin weaponiz-ing low-earth orbit,” (and I suspect we would be able to), PAROS would quite quickly come break its impasse. Thus, PAROS is miscast in where its delegates think a treaty or an arms race might come from, and the importance of military transformation becomes the prime motivator for meaningful change. What we have to think about then is what would a space-weapons-heavy American military force structure look like? And here we get a number of issues. It would be very, very expensive. I would like to leave you with one thought here: what are the opportunity costs forgone? The money that will have to go into space is not going to come from school budgets or from transportation budgets; it is going to come from the DOD. It is going to be at the cost of other military things. It has been pointed out that space weaponization and military space operations are not going to do anything new. These things could be done by other cheaper and possibly less incendiary means. The billions it would cost for a proper recapitalization of all of the aging space support systems that we have and for potentially using space as an integral part of our ability to project violence abroad, which we will be doing – we are not going to give up the right to do that – means that we will have to atrophy some of our existing capabilities to go into other countries and stay there for a long time. Space-enabled force application for the United States, in the sense of going in and getting the job done, was amply demonstrated in Operation Iraqi Freedom. The conven-tional part of that war was a spectacular success. The occupation has been equivocal, to say the least. Now we could imagine, say, that for the price of what we are talking about for space weapons, we could get another five heavy divisions, three more carrier battle groups, and/or fund all of the weapons systems that the Air Force might want. Fine. What is more threatening to foreign states: the ability of the United States to apply a lim-ited amount of violence in a very precise way anywhere on the globe at almost any time, or five more heavy divisions, three more carrier battle groups, or whatever, giving the United States the capacity to occupy and control foreign states physically? I submit to you that space weaponization and military space is not an attempt by the United States to be-come an imperial power around the world, but to extend its current period of hegemony into the foreseeable future. This is the point that I was sidetracked on. I will plot an ex-ample: say ten or fifteen years from now, China sees taking space as a way of guarantee-ing its sovereignty and giving it advantages in the Taiwan straits or any place else it deems in its security interest. Seizing low-earth orbit would thus be an attempt to overthrow the existing international order (not continue it), and the United States would have to oppose such actions. On the other hand, the United States militarizing space aggressively, at least through an aggressive doctrine of space supremacy, would not be an attempt to over-throw the extant global system, but to extend it and it may not – it probably would not – be directly challenged in its efforts.

### That’s key to deterring a nuclear war in space

Tucker 8 – Dennis P. Tucker, Jr., Lieutenant Colonel, commander of the 336th Recruiting Squadron at Moody Air Force Base, June 2008, “PRESERVING UNITED STATES DOMINANCE: THE BENEFITS OF WEAPONIZING THE HIGH GROUND,” School of Advanced Air and Space Studies, https://www.afresearch.org/skins/rims/q\_mod.../display.aspx?...

Space Hegemonists

Finally, the most radical of the US pro-space weaponization advocates are the space hegemonists. This school of thought has roots in Lupton’s high-ground school, whose believers were focused on dominating space with space-based ballistic missile defenses so that a nuclear war could be deterred and or won by winning the war in space. Today the United States places less emphasis on deterring and winning a nuclear war than it did in the bipolar Cold War era, and the space hegemonists have branched out to cover the rest of the spectrum with their beliefs. They assert that space hegemony should be the goal—and that space is the critical battlefield where wars must be fought and won. In the words of Dr. Everett Dolman, “An optimum deployment of space assets is essential for victory on the current terrestrial and future space-based battlefields….In accordance with the examples set by Sir Halford Mackinder and Nicholas Spykman, the formulation of a neoclassical astropolitical dictum is established: Who controls low-Earth orbit controls near-space. Who controls near-Earth space dominates Terra. Who dominates Terra determines the destiny of humankind.”16

In 1999, then-Senator Bob Smith, the most prominent spokesman for this perspective, clearly articulated the value of space weapons:

American development of space weapons will buy generations of security that all the ships, tanks, and airplanes in the world will not provide…With credible offensive and defensive space control, we will deter and dissuade our adversaries, reassure our allies, and guard our nation’s growing reliance on global commerce. Without it, we will become vulnerable beyond our wildest dreams.17

Unlike space controllers who believe space weapons should be deployed as soon as they are militarily useful, the hegemonists are much more aggressive. They consider space weapons essential, and advocate their deployment as soon as possible. They believe these weapons will one day dominate terrestrial as well as outer space battlefields, and eventually will replace the need for most terrestrial weapons. Hegemonists believe that controlling space will truly lead to controlling the world.18

Dr. Dolman argues that it makes the most sense for the United States to take on this hegemonic role. In his book Astropolitik: Classical Geopolitics in the Space Age, he insists: “If any one state should dominate space, it ought to be one with a constitutive political principal that government should be responsible and responsive to its people, tolerant and accepting of their views, and willing to extend legal and political equality to all. In other words, the United States should seize control of outer space and become the shepherd (or perhaps watchdog) for all who would venture there, for if any one state must do so, it is the most likely to establish a benign hegemony.”19

### US dominance is key to global stability

Brookes 7/20 – Peter Brookes, Senior Fellow, National Security Affairs and Chung Ju-Yung Fellow for Policy in the Douglas and Sarah Allison Center for Studies at The Heritage Foundation, July 20, 2011, “Why the World Needs a Strong America,” http://www.familysecuritymatters.org/publications/id.9986/pub\_detail.asp

It’s funny, but sometimes you don’t miss something until it’s gone.

While this old chestnut gets rolled out most often when referring to a trying but departed friend, it might also be said of the potential for the decline, or withdrawal, of a powerful America from the world stage.

Some say American clout is waning—that we’ve declined relative to others, especially with the rise (or re-rise) of China, Russia, India and Brazil, which have been developing into major powers in recent years.

Indeed, there seems to be plenty of people out there, especially abroad—and perhaps a few at home, sadly—who would welcome the absolute decline of American strength and influence across the globe.

To those who naively feel this way, another old adage applies: Be careful what you wish for.

Go-to Gal

It turns out that on security issues, the United States is the global balance of power. When the 911 call for the crisis de jour comes in, the first thing the world wants to know is what Washington thinks—and what is it willing to do.

While it has never been our preference, we have been a force for stability, providing American “can-do” spirit to problems and places that many Americans have never even heard of, much less been to.

Fact is the world doesn’t look to other big powers like China or Russia when there is a pressing problem for the so-called “international community,” knowing Beijing and Moscow are willing to look the other way unless they’re directly affected, or happy to let someone else to the heavy-lifting, usually Washington.

The world, instead, looks to the United States as the country with the will and capability to make things happen—and to do so in some of the planet’s toughest neighborhoods.

This, of course, comes courtesy of the world’s best military. It’s the only one with a true global, we-can-get-there-supply-ourselves-get-the-job-done-and-get-home type of mobility and sustainability that is the envy of all other armed forces.

But it’s not just U.S. military muscle that makes us unique. We also have strong diplomatic forces in embassies, consulates and international institutions that span the globe, giving us sway and a say on important issues.

It doesn’t hurt that we also have the world’s largest and arguably most innovative economy, based on the free market. In fact, it’s a major source of our strength, bolstering our efforts around the globe.

We’re the hardest workers, too. We spend more time in the office, the factory and in the farm field than just about anyone else. Even the U.N. has said the United States, “leads the world in productivity.”

Fortunately, we also have the world’s finest intelligence services, from the Central Intelligence Agency to the Defense Intelligence Agency. They don’t always get it right, but intelligence is a tough business and they get it right a lot more than they get it wrong—by a long stretch.

The fact is that you don’t pull off first-rate diplomacy or military operations without top-notch intelligence, collected from the ground by daring spies, in the air by manned and unmanned aircraft or from space by advanced “eye in the sky” satellites.

For instance, without great, painstaking intelligence work, there would have been no special forces raid on Osama bin Laden’s compound in Pakistan in May. Period.

Our diplomatic, military and intelligence professionals do it so well so often, people just take it for granted they’ll get it right. It’s on those rare times where they get it wrong that you hear about it from Capitol Hill or read about it in the newspapers.

And while enemies—and sometimes friends and allies—criticize Lady Liberty for being big, powerful and out and about, the truth is this country of ours has provided, and continues to provide, a “world” of good.

Regional Role

While few take the time to realize all America does, much less acknowledge our often-selfless contributions, the fact is we’re making a difference in so many places around the world. Let’s start with the Korean Peninsula.

Ever since the cease-fire between North Korean and Chinese forces and the United Nations, led by the Americans, was concluded in 1953, we’ve been a stabilizing force reducing the risk of another conflict on the divided Korean peninsula.

Even today, 25,000 U.S. troops (far from home) help keep the peace across the misnamed demilitarized zone (DMZ) against a North Korean regime, which still harbors dreams of uniting—militarily, if necessary—the North and South under its despotic rule.

Without the presence of American forces, a second Korean war has been—and still is—a distinct possibility. It's easy to assume that another war would be even more horrific than the last, especially considering North Korea now has nuclear weapons.

And what about Japan, where 45,000 U.S. troops are stationed?

The U.S. military has also played a huge role in Japanese security since the end of World War II. This has not only allowed Japan to prosper economically and politically—like South Korea—but it helped stabilize Asia in the aftermath of war, too.

The presence of U.S. forces and the extension of our strategic nuclear deterrent has also kept both Japan and South Korea from developing a nuclear “option” that many believe they might have taken in light of North Korean atomic actions.

Plus, America’s military might, diplomatic presence and economic engagement is a source of comfort to many in East Asia due to China’s growing power—and serious questions about its intentions in the region.

Perhaps most troubling is Beijing’s unprecedented military buildup, supported by the world’s second largest defense budget. Its military spending has been growing at a double-digit rate, meaning 10 percent or more, for the last two decades, raising eyebrows across the region.

Despite the absence of a threat to China, Beijing is developing a highly potent military, capable of projecting power in the air and on the seas well into the Pacific, dwarfing other regional militaries, especially cross-Strait rival Taiwan.

In South Asia, the United States has also played a key diplomatic role in keeping rivals India and Pakistan from unleashing the dogs of war in South Asia—possibly leading to history's first nuclear (weapons) exchange—or, worse yet, war. Talk about Fourth of July fireworks.

In Afghanistan, the Taliban would likely still have al Qaeda as honored guest, helping them scheme how they would create a global Islamist caliphate stretching from Spain in Europe to Indonesia in Asia, using terrorism as a key tool.

And what about the Middle East?

Of course, in the mother of all terror battles, our brave young men and women put the hurt on al Qaeda in Iraq, stemming the momentum of the extremist group that had only been gaining steam since 9/11.

Next door, the United States has been the bulwark against Iran’s rise in the region since the fall of the Shah in 1979. Today, it serves as the driving force to counter its nuclear program. Without U.S. leadership, we’d already be dealing with atomic ayatollahs.

Plus, for years, we’ve been the country that has guaranteed the free flow of oil shipped through the Persian Gulf’s Strait of Hormuz, where as much as 40 percent of the world’s black gold flows to markets across the globe, courtesy of the U.S. Navy.

Today, the likelihood of a major war in Europe is thankfully just about nil, but considering weak European defense spending, absent American military might, NATO might be little more than a paper tiger in the face of an increasingly growly Russian bear.

Moscow, which has ambitions of being a major power broker internationally, is already breathing down the neck of its "near abroad" neighbors, especially in its old Soviet Union-era stompin’ grounds like Georgia and Ukraine.

It doesn’t end there.

Transnational Trouble

If it weren’t for our spooks and special operations forces, Osama bin Laden would still be stalking the Earth, calling the shots for al Qaeda and its affiliates around the world against a slew of countries that have suffered at his hands and those of his terror cohorts.

While killing bin Laden may not be the knockout punch to al Qaeda that we all hope it is, it was certainly a major body blow, and the group will likely be shaking it off on the canvas for a bit.

American drone strikes in the Pakistani tribal areas on the Taliban and in Yemen on al Qaeda factions make sure the terrorists know that they’re never completely out of reach of the long arm of Lady Liberty.

Weapons of mass destruction (WMD) would be more common than they are today without U.S. efforts like the Bush-era Proliferation Security Initiative, which joins states together to fight the spread of these deadly technologies and weapons.

For instance, American efforts in recent years led directly to Libya surrendering its nuclear program, and without our uncovering the network of Pakistan's prodigious proliferator, A.Q. Khan, he’d still be going door to door, hawking his nuclear wares to who-knows-who.

Not surprisingly, our cutting-edge engineers and scientists are developing the world’s most prodigious ballistic missile defense system to protect the American homeland, our deployed troops, allies and friends that face the growing WMD and missile threat.

Why be held hostage to North Korea, which can likely hit the West Coast of the United States with a nuclear missile, or Iran, which will have an intercontinental ballistic missile (ICBM) that can reach out an touch us as soon as 2015?

Moreover, our Navy patrols the world’s oceans, providing freedom of the seas—free of charge. It also protects international shipping against sea banditry and modern-day piracy, a growing problem especially in Southeast Asia and off the Horn of Africa.

But that’s not all.

Uncle Sugar

In addition, U.S. intelligence assets, especially satellites, provide critical information to the international community, including early warning of crises and ongoing support during hostilities or humanitarian emergencies on a scale no one else can.

Washington has also been key in conducting humanitarian relief operations to tsunami victims in Southeast Asia and Japan and to those struggling in the aftermath of the devastating earthquakes in Pakistan and Haiti.

In addition, the American medical ship USNS Mercy and other U.S. Navy ships ply the Seven Seas performing numerous humanitarian missions around the world every year, bringing much-needed help to those without access to basic medical care.

Of course, there are other generous gifts from Uncle Sam, starting with the lion’s share of the United Nations’ budget. We also fund half the operations of the World Food Program, feeding more than 100 million people in nearly 80 countries.

Moreover, we also contribute to U.N. programs which fight HIV/AIDS; vaccinates, educates and protects children across the globe; battles human trafficking; combats child labor; and supports international peacekeeping.

We’re also the world’s trainer, providing military, counterterror and counternarcotics education, and equipment to some 130 countries around the world, especially in places like Latin America and the Middle East, where the need runs high.

Colombia, which came close to falling to the narcoterrorist group, the FARC, turned into the counterterror and counterinsurgency success story it is today because of American assistance and training. Colombia isnow helping Mexico with its drug cartel problem.

The United States even created African Command [AFRICOM]which supports and trains armed forces in African states so that they can appropriately respond to possible crises or disasters on that continent.

The U.S. government has also funded new technologies, often through military research and development, that have primed the pumps of the private sector, stirred further innovations and made life better for so many, from the Internet to the microwave oven to GPS.

But what about a world without today’s America?

Absent America

Singapore’s former prime minister, Lee Kwan Yew, had it right when he told the Wall Street Journal recently, “The world has developed because of the stability America established…If that stability is rocked, we are going to have a different situation.”

By “different,” it’s unlikely Lee believes things will be better.

Unfortunately, in the role of providing for global stability and public goods, there is nobody else to relieve the United States of this duty—at least for the moment. Nor are any of the prospective candidates looking good.

While some would like to see the United Nations in this role, it has been nothing short of a disappointment. While some at the U.N. mean well, it is hamstrung by its own diversity of values and interests, leaving it often quite feckless in dealing with the matters that everyone agrees requires action.

China and Russia seem to be aspiring for a U.S.-type role, although it’s unlikely that the world would be happy with their style, or manner, of international leadership or approach to world problems such as human or political rights or security issues.

Indeed, absent predominant U.S. leadership, diplomatic influence, free market economics and military might, life aboard Planet Earth would be pretty grim, indeed.

## SMIL Good --- Economy

### Space mil key to econ and heg

DeBlois 02(“Outer Space and Global Security, Militarization, Weaponization and Space Sanctuary: Past Dialogues, Current Discourse, Important Distinctions”, United States Council on Foreign Relations, http://www.ploughshares.ca/libraries/Abolish/OuterSpaceConfGeneva02/DeBloisConf2002.htm)

Proposition 1, Social and Economic Interests: Civil and commercial interests in space are rapidly outpacing military concerns and are becoming a central focus for many national economies. As a service to the nation, the military role is typically to organize, train, equip, and posture forces – complete with weapons - to defend those interests. Space weapons will necessarily follow space commerce – that is, they will “follow the money.”

## Hegemony Link Extensions

### US heg due to militarization of space

Theresa Hitchens 2002(CDI Vice President, Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons)

[The United States already enjoys an overwhelming advantage in military use of space; space assets such as the Global Positioning System satellite network have proven invaluable in improving precision-targeting giving the U.S. military a decisive battlefield edge. There would be even a more formidable military advantage to possession of weapons in space — global power projection and the enormous difficulty in defending against space weapons aimed at terrestrial targets. "It is ... possible to project power through and from space in response to events anywhere in the world. Having this capability would give the United States a much stronger deterrent and, in a conflict, an extraordinary military advantage," notes the Space Commission report.

Space weapons — even those primarily designed for defense of U.S. satellites — would have inherent offensive and first-strike capabilities, however, (whether aimed at space-based or earth-based targets) and would demand a military and political response from U.S. competitors. ]

### Space mill good- military strength

DeBlois 02(“Outer Space and Global Security, Militarization, Weaponization and Space Sanctuary: Past Dialogues, Current Discourse, Important Distinctions”, United States Council on Foreign Relations, http://www.ploughshares.ca/libraries/Abolish/OuterSpaceConfGeneva02/DeBloisConf2002.htm)

Proposition 4, Military Superiority: The exercise of 21st Century military power is critically dependent upon communications and intelligence, much of which is collected from and/or passed through space systems. The world witnessed the incredible advantage this supplied in the first “space war” Desert Storm. Future adversaries will not allow such an advantage to go unchallenged, and it must be defended. Additionally, the prospect of a secure homeland and space-based defense, combined with overwhelming offensive potential, represents the ultimate military high ground. Any nation that achieves space weaponization will readily become a preeminent military power.

### Space mill good- US readiness and strategic advantages

O'Hanlon 11(senior fellow in Foreign Policy Studies at the [Brookings Institution](http://www.sourcewatch.org/index.php?title=Brookings_Institution), where he specializes in U.S. defense strategy and budgeting, [homeland security](http://www.sourcewatch.org/index.php?title=Homeland_security), Northeast Asian security, and humanitarian intervention. He is also adjunct professor at the public policy school of Columbia University, a visiting lecturer at Princeton University, and a member of the [International Institute for Strategic Studies](http://www.sourcewatch.org/index.php?title=International_Institute_for_Strategic_Studies) and the [Council on Foreign Relations](http://www.sourcewatch.org/index.php?title=Council_on_Foreign_Relations)."[[1]](http://www.sourcewatch.org/index.php?title=Michael_E._O%27Hanlon#cite_note-MEHan-0), Balancing U.S. Security Interests in Space)

In contrast, developing more military applications for outer space is an important imperative for most American defense planners today. Much thinking about the so-called revolution in military affairs and transformation of defense emphasizes space capabilities. Ensuring American military dominance in the coming years—something proponents tend to see as critical for global stability as well as for unilateral advantage—will require the United States to remain well ahead of its potential adversaries technologically. For some defense futurists, the key requirement will be to control space, denying its effective use to U.S. adversaries while preserving the unfettered operation of American satellites that help make up a "reconnaissance-strike complex." Others favor an even more ambitious approach. Given that fixed bases on land and large assets such as ships are increasingly vulnerable to precision-strike weaponry and other enemy capabilities—or to the political opposition of allies such as Turkey, Saudi Arabia, and France, which have sometimes opposed use of their territories or airspace for military operations (as in the 2003 war in Iraq and in the 1986 U.S. bombing of Libya)—these advocates favor greater U.S. reliance on long-range strike systems, including platforms in space.5

## SMIL Good --- Soft Power

### Space mill good – soft power

DeBlois 02(“Outer Space and Global Security, Militarization, Weaponization and Space Sanctuary: Past Dialogues, Current Discourse, Important Distinctions”, United States Council on Foreign Relations, http://www.ploughshares.ca/libraries/Abolish/OuterSpaceConfGeneva02/DeBloisConf2002.htm)

Proposition 3, Diplomatic Leverage: We have played this game before – and one need only look to the Sputnik era: the confluence of prestige, prowess, and leverage offered by space presence – a witness to the perceived superiority of a particular ideology – will compel a space race, to include the pursuit of military dominance by way of space weapons.

## SMIL Good --- Space Arms Races

### Weaponizing first discourages other countries

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

Indeed, it is just this concern for the unanticipated arrival of technology X that initially motivates my own preference for the immediate deployment of space weapons. So long as America is the state most likely to acquire a breakthrough technology in this area, my concern is limited to the problem of letting technology take us where it will. But what if an enemy of democratic liberalism suddenly should acquire the means to place multiple weapons into orbit quickly and cheaply? The advantages gained from controlling the high ground of space would accrue to it as surely as to any liberal state, and the concomitant loss of military power from the denial of space to our already-dependent military forces could cause the immediate demise of the extant international system. The longer the United States dithers on its responsibilities, the more likely a potential opponent could seize low-Earth orbit before America is able to respond.

In such circumstances, America certainly would respond eventually. Conversely, if America were to weaponize space today, it is unlikely that any other state or group of states would find it rational to counter in kind. The entry cost to provide the necessary infrastructure is too high—hundreds of billions of dollars, at minimum. The years of investment needed to achieve a minimal counter-force capability—essentially from scratch—would provide more than ample time for the United States to entrench itself in space and readily counter preliminary efforts to displace it. The tremendous effort in time and resources would be worse than wasted. Most states, if not all, would opt not to counter U.S. deployments in kind. They might oppose U.S. interests with asymmetric balancing, depending on how aggressively America uses its new power, but the likelihood of a hemorrhaging arms race in space should the United States deploy weapons there—at least for the next few years—is extremely remote.

### Space mil prevents arms races

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

Hence, the argument that the unilateral deployment of space weapons will precipitate a disastrous arms race is further eroded. To be sure, space weapons are offensive by their very nature. They deter violence by the omnipresent threat of precise, measured, and unstoppable retaliation. But they offer no advantage in the mission of territorial occupation. As such, they are far less threatening to the international environment than any combination of conventional weapons employed in their stead. What would be more threatening to a state in opposition to American hegemony: a dozen lasers in space with pinpoint accuracy, or (for about the same price) 15 infantry divisions massed on the border? A state employing offensive deterrence through space weapons can punish a transgressor state, but it is in a poor position to challenge that state's sovereignty. A transgressor state is less likely to succumb to the security dilemma if it perceives that its national survival is not at risk. Moreover, the tremendous expense of space weapons would inhibit their indiscriminate use. Over time, the world of sovereign states would recognize that the United States could not and would not use space weapons to threaten another country's internal self-determination. The United States still would challenge any attempts to intervene militarily in the politics of others, and it would have severely restricted its own capacity to do the latter. Judicious and non-arbitrary use of a weaponized space eventually could be seen as a net positive, an effective global police force that punishes criminal acts but does not threaten to engage in aggressive behavior.

Seizing the initiative and securing low-Earth orbit now, while the United States is unchallenged in space, would do much to stabilize the international system and prevent an arms race in space. The enhanced ability to deny any attempt by another nation to place military assets in space and to readily engage and destroy terrestrial anti-satellite capacity would make the possibility of large-scale space war or military space races less likely, not more. Why would a state expend the effort to compete in space with a superpower that has the extraordinary advantage of holding securely the highest ground at the top of the gravity well? So long as the controlling state demonstrates a capacity and a will to use force to defend its position, in effect expending a small amount of violence as needed to prevent a greater conflagration in the future, the likelihood of a future war in space is remote.

### Militarizing first key to stop arms races

Dolman 5 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Winter 2005, “Strategy Lost: Taking the Middle Road to Wherever,” High Frontier Journal, Vol. 1, No. 3, http://www.afspc.af.mil/shared/media/document/AFD-070622-057.pdf

The most palatable of the hedging strategy arguments is that the US should maintain itself at the forefront of space weapons technology, so that in the event of another state choosing to place weapons in space, the US could quickly match or exceed its capabilities. Ceding the initiative to an opponent is rarely considered a good strategy, however, and then only for states that are in an inferior strategic position. Moreover, such a strategy is fraught with dangers and pitfalls. It is difficult enough to gain sufficient funding for a weapons program that will likely see deployment, more so for one that it is expected will never be deployed and that cannot be developed or tested until after it is needed.

Common to all hedging strategy proponents is the fear that placing weapons in space will spur a new arms race. Unfortunately, such a strategy increases the likelihood of a space arms race if and when space weapons are ultimately deployed, as the only plausible response by the US would be to at least match the opposing capabilities. This dithering approach blatantly ignores the current real world situation. At present, the US has no peer competitors in space. For the US to refrain from weaponizing until another state proves the capacity to challenge it allows for potential enemies to catch up to American capabilities. At a minimum, there is no risk for potential peer competitors to try. On the other hand, should the US reject the hedging strategy and unilaterally deploy weapons in space, other states may rationally decide not to compete. The cost of entry will simply be too great; the probability of failure palpable. In other words, the fear of an arms race in space, the most powerful argument in favor of the hedging plan, is most likely if the US follows its counsel.

### Space mil deters other countries from weaponizing

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

Space is too vast to be controlled. If one state weaponizes, then all other states will follow suit, and a crippling arms race in space will ensue. Space is indeed vast, but a quick analysis of the fundamentals of space terrain and geography shows that control of just LEO would be tantamount to a global gate or checkpoint for entrance into space, a position that could not be flanked and would require an incredible exertion of military power to dislodge. Thus, the real question quickly becomes not whether the United States should weaponize space first, but whether it can afford to be the second to weaponize space.

Space has been dubbed the ultimate high ground (see figure 19–2). As with the high ground throughout history, whosoever sits ensconced upon it accrues incredible benefit on the terrestrial battlefield. This comes from the dual advantages of enhanced span of command acuity (visibility and control) and kinetic power. It is simply easier and more powerful to shoot down the hill than up it.

The pace of technological development, particularly in microsatellites and networked operations, could allow a major spacefaring state to quickly establish enough independent kinetic kill vehicles in LEO (through multiple payload launches) to effectively deny entry or transit to any other state. Currently, the United States has the infrastructure and capacity to do so; China may in the very near future. Russia is also a potential candidate for a space coup. Should any one of these states put enough weapons in orbit, they could engage and shoot down attempts to place counterspace assets in orbit, effectively taking control of outer space. Indeed, the potential to be gained from ensuring spacepower projection while denying that capability in others is so great that some state, some day, will make the attempt.

In order to ensure that no one tries, space weapons opponents argue that the best defense is a good example. So long as the United States does not make any effort to weaponize space, why would any competing state be tempted to do so? And even if another state does attempt it, the United States has the infrastructure to quickly follow suit and commence a campaign of retrieval in space. Not only does the logic escape us, but also it seems that by waiting, the United States is guaranteeing what space weapons opponents fear most: a space arms race.

### US efforts to go at it alone will not work to prevent space arms race- only if US takes the lead in wep development

Krepon and Clary 03- Michael Krepon with Christopher Clary, Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College., Clary is currently a PhD student in the Department of Political Science of the Massachusetts Institute of Technology., Space Assurance or Space Dominance?

Put another way, the dominant position of the United States provides agenda-setting powers in space. The flight-testing and deployment of space warfare capabilities is surely inevitable if the United States takes the lead in this pursuit, but not if Washington maintains prudent hedges against unwelcome developments in the form of a readiness to respond in kind to any flight tests or deployments of space weapons by weaker states. These hedges, as discussed in Chapter 3, should be sufficiently persuasive to foreclose such a competition, unless weaker space-faring nations make very unwise choices. While a hedging strategy is necessary, it is also insufficient. Hedges against the flight-testing and deployment of space warfare capabilities need to be accompanied by initiatives that underscore the positive and affirming uses of space for the benefit of humankind. Space assurance, broadly defined, also requires the reaffirmation of existing norms against the weaponization of space.

## SMIL Good --- Space Dominance

### Space mil key heg, prevents arms races and increases cooperation in space

Park 6 – Andrew T. Park, J.D. Candidate 2006, University of Houston Law Center; M.A., New York University; B.A., Columbia University, 2006, “INCREMENTAL STEPS FOR ACHIEVING SPACE SECURITY: THE NEED FOR A NEW WAY OF THINKING TO ENHANCE THE LEGAL REGIME FOR SPACE,” Houston Journal of International Law, Vol. 28, No. 3, www.hjil.org/ArticleFiles/28\_3\_871.pdf

Instead of being a reactionary measure to the circumstances and actions of other state and nonstate actors, the United States’ control argument for space weaponization asserts that a proactive effort by its military is necessary to assure stability and security. The reason a proactive effort is needed is because the utility of the arms control approach has dissipated as the international system has moved into a scenario in which nonstate actors play an increasingly visible role.155 This debate has boiled down to a difference in ideologies and interpretations of history, but progress can be achieved by refocusing on U.S. interests in the form of enhancements to the current legal regime.

1. The Quest for Space Dominance

Many feel the United States has the most to lose by weaponizing space because of its reliance on space assets.156 Others believe, for the same reasons, that the United States actually has the most to gain.157 As the most powerful military nation in the world, many U.S. advocates of space weaponization seek to extend America’s military hegemony into space.158 To counter this argument, arms controllers contend that any degree of hegemony achieved would be short-lived because “effective defensive weapon systems will inevitably be countered by effective offensive systems.”159 This will spark a spiraling arms race that will ultimately level the playing field and leave all sides less secure.160 On the other hand, many space weaponizers believe that the first state to deploy space weapons will have an insurmountable advantage over its rivals.161

The Rumsfeld Commission made it quite clear that the best way to secure U.S. interests is to transition from space superiority to space dominance.162 Yet, U.S. space warriors assure other nations that the quest for space dominance is motivated by a desire to promote international stability in space rather than by a desire to take over the world.163 In all fairness, Washington currently has the power to tyrannize other nations with its unparalleled nuclear and conventional military forces, yet it does not.164 Moreover, the face of overwhelming American military power has neither alarmed allies nor incited aggression.165

The direct benefits to the United States of implementing space weapons are clear. Not only can space weapons be the primary tool for information warfare, they can also provide an increased capability for stopping “potential aggressors more effectively, with less collateral damage, compared to conventional arms.”166 However, the United States also stands to gain indirect benefits from achieving space dominance. It is possible that U.S. efforts to achieve space weaponization primacy would prevent an arms race in space before it ever starts by establishing “a globally dominant, stabilizing force in space.”167 Also, a space-based weapons system could be the basis of a stabilizing cooperative security regime in outer space that abides by agreed upon rules of the road.168

The fact of the matter is that the world has not fallen apart after sixty years of increasing military activity in space.169 The evolution of the militarization of space has been particularly shaped by pressing national security requirements of the United States, and as many space hawks firmly believe, “this is how it will continue to be.”170 The U.S. quest for space dominance may arguably serve to further selfish military desires, but it can also provide a degree of stability that the current legal regime has been unable to provide.171

### If the US doesn’t weaponize first, it would kill heg

Deblois 3 – Bruce M. Deblois, Director of Systems Integration at BAE SYSTEMS, July 5 2003, “The Advent of Space Weapons,” www.cfr.org/content/publications/attachments/Bergman\_11ast03.pdf

In a world of emerging terrorist and rogue nation threats coupled with proliferating WMD technologies, a strong case can be made for the pressing demand for national missile defense systems to protect responsible nations and their territories against land-, air- or sea-launched ballistic and cruise missiles. One attractive model for a layered missile defense calls for interception during the boost phase. In the absence of local terrestrial interceptors, boost-phase intercept would require the capability to apply sufficient destructive force as soon as missile launch was detected. This capability is almost inconceivable without a space-based weapon system.

Additionally, space-based weapons offer the ultimate military offensive high ground. Capabilities that space weapons could confer include:

• strategic attack of slow-moving or fixed targets requiring vertical penetration,

such as ships, buildings or missile silos;

• strategic attack of targets requiring horizontal effects such as runways and

bridges;

• strategic attack of fast-moving surface targets, such as Scud and mobile

missiles, using space-based ISR to probe denied areas;

• elimination of an adversary’s airpower by attacking aircraft on the ground and

in flight, and;

• attack of an adversary’s air defenses by attacking ground-based anti-aircraft

assets.

The prospect of a secure homeland and space-based defense, combined with overwhelming offensive capabilities, represents the ultimate military high ground. The first country to achieve full space weaponization could easily become the preeminent military power in the world. To not seize this is to concede it to another.

### Countries rising—space mil key to protect spacedom

Story 10 – Kurt S. Story, Deputy Commanding General for Operations, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, Winter/Spring, “Protecting SPACE in a Contested and Congested Domain,” Army Space Journal, Winter/Spring Edition, <http://www.smdc-armyforces.army.mil/Pic_Archive/ASJ_PDFs/ASJ_VOL_9_NO_1_004.pdf>

Our Nation is in a period of “persistent conflict” where we are confronted by state, non-state, and individual players who are not constrained from using violence to achieve their goals. The Army has a role in dealing with this persistent conflict: “to prevail in protracted counterinsurgency campaigns; engage to help other countries build capacity and assure friends and allies; support civil authorities at home and abroad; and deter and defeat hybrid threats and hostile state actors.”1 Today’s military is increasingly reliant on space-based assets to provide critical enablers for mission success, i.e., satellite communications, positioning, navigation and timing, and intelligence, surveillance, and reconnaissance, just to name a few. If our space systems are ambushed, how do we quickly understand what happened and react? How will the Army prevail in a denied, degraded, disrupted space operational environment (D3SOE)?2 Determining the answers to those questions is a critical task for every FA40 Space Operations Officer and space Enabler.

Why is this a critical task? Space is clearly a contested and congested domain. Consider these reports:

• North Korea has detonated a nuclear weapon underground and is testing missiles that could someday carry nuclear warheads. Iran says their nuclear ambitions are for peaceful energy purposes, but they resist inspections to verify their claims. The electro-magnetic pulse from a nuclear warhead aboard a missile could disable our satellites along with those of our allies.

• China disavowed its air force commander Xu Qiliang’s statement last fall that called the militarization of space a “historical inevitability.”3 Yet, China has recently demonstrated a proven anti-satellite capability.

• Aside from a direct threat from a nation-state, American onorbit technology faces threats from debris and out-of-control satellites like the defunct Russian satellite that smashed into and destroyed an Iridium satellite in February 2009.

• Since the cyber domain links space assets to the ground, and because that domain inherently relies upon space assets as a component of Department of Defense networks, we must acknowledge the threat our systems, networks, and forces face in this realm. Reports from the Government Accountability Office, other reports to Congress, and statements by the commander, U.S. Strategic Command assert that the country’s commercial, private and government sectors are constantly under cyber attack and the number of attacks on our networks continue to grow: from 24,097 attacks in 2007 to 72,065 in 2008.4 These attacks come “from the least sophisticated – what I would say the bored teenager – all the way up to the sophisticated nation-state, with some petty criminal elements sandwiched in between,” says Gen. Kevin Chilton, Commander, U.S. Strategic Command. 5

Because of the threats to on-orbit assets and the challenges facing Army forces in D3SOE, the Chief of Staff of the Army listed this as one of the Army’s Title 10 Wargame Unified Quest 2010 key tasks: “Determine how to protect or mitigate the loss of space, cyber, and network-related capabilities.” To that end, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command’s Future Warfare Center Wargames Division launched a series of events to feed into Unified Quest 2010 which will be held at Carlisle Barracks this May. The results of each of these events will be published in this and future Army Space Journals. The final reports will lead to a better understanding of the space dependencies and vulnerabilities of strategic and tactical warfighters and will identify mitigation strategies in a denied, degraded, disrupted space operational environment to ensure delivery of critical enablers.

What follows are preliminary findings from the first two events.

In December 2009 the USASMDC Future Warfare Center Wargames Division met with Soldiers assigned to 4th Infantry Division and 10th Special Forces Group to gain insight into how warfighters use space. Who better to know how they and their units are impacted by access, or non-access, to space-based capabilities than recently returned Soldiers who had been directly engaged in ground force missions. Not surprisingly, in this Warfighter Forum these warriors identified satellite communications and positioning, navigation and timing as their most critical space-based capabilities along with assured access to space capabilities. (Read the full report starting at page 34).

The findings from the Warfighter Forum were incorporated into the most recent event this past February called the Space Power Seminar Wargame on D3SOE. This seminar brought together senior FA40s; reps from the intelligence community, U.S. Army Training and Doctrine Command, and the signal community; senior advisors; and representatives from industry. Their task was to understand the Warfighters’ space needs, dependencies, and vulnerabilities and then identify strategies to prevent or mitigate the loss of space, Cyber or network-related capabilities. The findings and recommendations from this will be rolled into Unified Quest 2010 to be tested and validated.

In his article on the 21st Century Army6, the Army Chief of Staff GEN George W. Casey Jr writes that land forces need to be versatile, tailorable, networked, and trained and ready for full spectrum operations. When the Army Chief of Staff talks about versatility, he is referring to being capable of operating across the spectrum of conflict. We must ask ourselves whether our units, be they space, infantry, field artillery, etc, are versatile enough to go from extensive reliance on space capabilities to a situation where they must continue to operate in an environment where space enabled capabilities are severely degraded or do not exist. I suggest we have a long way to go.

As we wait for the published results of this wargame series, members of our space community can implement at least one of the recommendations: train as we expect to fight. You can prepare your Soldiers, their units, and the ones they support to operate, survive, and win in a degraded, denied or disrupted space operational environment. To do this, Space Operations Officers and Space Enablers must understand exactly how their units rely on space. This is a critical task. Map the organization’s use of space. Less battlespace – more time required to complete mission – more uncertainty – greater casualties – more fog of war) on your unit’s ability to accomplish its mission essential tasks. The next step is to determine for each space system what the primary, alternate, contingency, and emergency backups, redundancies and pathways are and to develop solid battle drills using them which will allow your unit to complete the mission by working through D3SOE. You need to practice these drills at every opportunity. Take the time to work through the impacts and avoid the tendency to just acknowledge there is an impact and move on before a full assessment is accomplished.

Another recommendation: we should strongly advocate for robust, redundant capabilities in the ground, air, high altitude, space and cyber domains. Pushing for a multi-domain resilient solution to D3SOE is accomplished at the strategic level with tactical implications. However, today space officers can educate their unit commanders on this need and commanders can then call for action and support realistic training.

Some of these strategies and recommendations for dealing with D3SOE may be validated in Unified Quest 2010. Some may not. Regardless, finding, advocating and implementing the doctrinal, operational, training, leadership, materiel, personnel and facility solutions to D3SOE is going to be necessary for the 21st Century Army that GEN Casey challenges us to build.

Space is now a contested and congested domain and it will become even more so. The threats are present today and growing. And the time it takes for bad actors to access the network links between space and ground terminals and to disseminate their chaos continues to shrink as does the time we have to respond. In fact, that amount of time is approaching nil. FA40s and space enablers are empowered to be “change agents” in their units NOW! We simply cannot continue conducting business as usual; we must be proactive. The Army Space community is charged to prepare and train their units to prevail if and when enabling space capabilities are stripped away. The most critical task today for the space community is to take action to ensure that Army units can recognize when their enabling space assets have been interfered with and to quickly adapt and sustain operations in order to prevail in a denied, degraded or disrupted space operational environment.

### No competitors in space post spacemil

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

All states will oppose an American military occupation of space, and their combined power will accelerate the demise of the United States. There is no doubt that the United States will be opposed in its efforts to dominate space militarily. There will always be fear that any state attempting to enhance its power may use it to act capriciously, but to suggest that the inevitable result is a space arms competition is the worst kind of mirror-imaging. If the United States, in the very near future, were to seize space, it would do so in an attempt to extend its current hegemonic power. Other states may feel threatened by this and will certainly begrudge it, but would any be willing to bankrupt their economies to develop the multi-trillion-dollar infrastructure necessary to defeat the United States in space, all the way up the daunting gravity well of Earth? Especially after the first billions were spent and a weapons system was launched, if the United States showed the will to destroy that rocket in flight (or the laser on the ground), how long would another state be willing to sustain its commitment to replacing America as controller of space?

On the other hand, any attempt by another power to seize and control space must be viewed as an attempt to overturn the extant international order, to replace America as the global hegemon. The United States, with investment already made in the necessary space infrastructure, would be forced to compete or cede world leadership—the latter an unlikely decision, one never historically taken by the reigning hegemon. The lesson is unambiguous; if you want an arms race in space, wait for it.

### Space weapons key to attacks on US space assets – key to hegemony and preventing conflict

Cynamon 9 – Charles H. Cynamon, Colonel, USAF, February 12, 2009, “Defending America’s Interests in Space,” https://www.afresearch.org/skins/rims/display.aspx?rs=enginespage&ModuleID=be0e99f3-fc56-4ccb-8dfe-670c0822a153&Action=downloadpaper&ObjectID=236c0cec-26d6-4053-ab82-19a783259606

Projecting 20 years into the future, the United States will likely face challenges from competitors to retain its dominant warfighting advantage. The US military has organized, trained and equipped its forces around information generated from and flowing through the space medium. While superior nuclear and conventional military capabilities can do much to prevent war among near-peers, the United States must be prepared to encounter conflict with non-peer nations (spacefaring or not) and non-state actors. In the post Cold War era, these actors have proven their resolve to pursue self interests notwithstanding their overwhelming disadvantages militarily. The non-peer, spacefaring nation represents an especially dangerous actor who would be the most likely to lash out against US space assets to curb its asymmetric disadvantage or act as a dangerous proxy in facilitating another state or non-state actor. The difficulty in deterring this type of actor necessitates the US development of active countermeasures against ASAT weapons in defense of America’s space interests. Employment of defensive space weapons must be considered in the context of an overarching space defense strategy.

### Space weaponization is key to competitiveness of US industry

Hitchens 2002(CDI Vice President, Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons)

[The competitive and cost challenges the U.S. satellite industry faces could be increased if the United States moved to make space a battlefield. Up to now, the threat that commercial satellites could become direct wartime casualties has been negligible. But an aggressive U.S. pursuit of ASATs would likely encourage others to do the same, thus potentially heightening the threat to U.S. satellites. Space industry executives, whose companies often are working at the margins of profitability, are concerned about U.S. commercial satellites and their operations becoming targets, especially because current commercial satellites have little protection (electronic hardening, for example, has been considered too expensive). There would be costs to commercial providers for increasi[[1]](#footnote-1)n[[2]](#footnote-2)g protection, and it is highly unclear whether the U.S. government would cover all those costs.

Another area where Defense Department policy could threaten U.S. industry competitiveness is in access to the radio spectrum. DoD has been resisting calls from the telecommunications industry to free from government-only access a portion of the spect[[3]](#footnote-3)r[[4]](#footnote-4)um that companies believe is essential to providing high-speed Internet access over cellular phones. That portion of the spectrum (1755-1850 megahertz) is now denied to U.S. commercial users because it is the spectrum band of choice for military (and other government) communications, as well as precision targeting. However, that band is being used by many other firms abroad for commercial wireless communications, raising the possibility that a continued U.S. policy of denial, although perhaps making short-term military sense, will inhibit the ability of U.S. firms to compete abroad. Stephen Price, head of the Pentagon's new office for spectrum management, recently said that the greater information demands of the war on terrorism and increased homeland security efforts are making DoD even more leery of freeing the disputed spectrum bands.49

The health of the U.S. commercial space and telecommunications industry is critically important to the computerized, globalized U.S. economy, but also directly to the U.S. military. The Department of Defense now uses commercial satellite systems to cover about 60 percent of its satellite communications needs, and that dependence is growing.50 Military use of commercial assets is unlikely to significantly decline, in part due to the high costs of building and operating military-dedicated satellites. ]

## SMIL Good --- Stability

### Countries would accept US spacedom—being beaten in space disrupts the international order

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

This reasoning does not dispute the fact that U.S. deployment of weapons in outer space would represent the addition of a potent new military capacity, one that would assist in extending the current period of American hegemony well into the future. Clearly this would be threatening, and America must expect severe condemnation and increased competition in peripheral areas. But such an outcome is less threatening than any other state doing so.

Placement of weapons in space by the United States would be perceived correctly as an attempt at continuing American hegemony. Although [End Page 169] there is obvious opposition to the current international balance of power, the majority of states seem to regard it as at least tolerable. A continuation of the status quo is thus minimally acceptable, even to states working toward its demise. As long as the United States does not employ its power arbitrarily, the situation would be bearable initially and grudgingly accepted over time.

On the other hand, an attempt by any other state to dominate space would be part of an effort to break the land-sea-air dominance of the United States in preparation for a new international order, with the weaponizing state at the top. Such an action would challenge the status quo, rather than seek to perpetuate it. This would be disconcerting to nations that accept the current international order—including the venerable institutions of trade, finance and law that operate within it—and intolerable to the United States. As leader of the current system, the United States could do no less than engage in a perhaps ruinous space arms race, save graciously decide to step aside.

### Accepted as public good/encourages coop and commerce—naval and air superiority prove

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

Moreover, if the United States were willing to deploy and use a military space force that maintained effective control of space, and did so in a way that was perceived as tough, non-arbitrary, and efficient, such an action [End Page 171] would serve to discourage competing states from fielding opposing systems. Should the United States use its advantage to police the heavens and allow unhindered peaceful use of space by any and all nations for economic and scientific development, over time its control of low-Earth orbit could be viewed as a global asset and a public good. In much the same way the British maintained control of the high seas, enforcing international norms of innocent passage and property rights, the United States could prepare outer space for a long-overdue burst of economic expansion.

There is reasonable historic support for the notion that the most peaceful and prosperous periods in modern history coincide with the appearance of a strong, liberal hegemon. America has been essentially unchallenged in its naval dominance over the last 60 years, and in global air supremacy for the last 15 or more. Today, there is more international commerce on the oceans and in the air than ever. Ships and aircraft of all nations worry more about running into bad weather than about being commandeered by a military vessel or set upon by pirates. Search and rescue is a far more common task than forced embargo, and the transfer of humanitarian aid is a regular mission. Lest one think this era of cooperation is predicated on intentions rather than military stability, recall that the policy of open skies advocated by every president since Eisenhower did not take effect until after the fall of the Soviet Union and the singular rise of American power to the fore of international politics. The legacy of American military domination of the sea and air has been positive, and the same should be expected for space.

### Improves stability

Lambakis 2 – Steven Lambakis, senior defense analyst at the National Institute for Public Policy, July 2002, “Putting Military Uses of Space in Context,” kms1.isn.ethz.ch/serviceengine/Files/ISN/38949/.../06\_Lambakis.pdf

Second, enhanced military power in the hands of states that uphold the rule of international law can work to improve peace and stability in the world. Treaties dealing with the space environment are written to establish stability and order on the space frontier. And this is good. Washington has never considered space to be a domain of anarchy. Indeed, it is in the U.S. interest to develop proper laws and exercise force in a restrained and responsible manner to prevent space from devolving into a lawless, disorderly realm.

Some international treaties act as arms control agreements to ban, reduce, or limit weapons. But we ought not lose sight of the fact that weapons, in the hands of the right governments, can serve the international common good and be a positive catalyst for stability—even in space. This view of arms in space is consistent with the freedom of space principle and the peaceful uses of space tradition that Washington has followed throughout the space era.

### at: destabilization

Lambakis 1 – Steven Lambakis, senior defense analyst at the National Institute for Public Policy, February 1, 2001, “Space Weapons: Refuting the Critics,” The Hoover Institution Policy Review, No. 105, <http://www.hoover.org/publications/policy-review/article/6612>

Stability revisited

Whether the vast, empty ocean enveloping Earth will be traversable for military purposes and a battlefield where major political stakes are decided may be, ultimately, not a question for policy or deliberation but an inevitability. Yet having been brought up on a steady diet of bumper-sticker slogans concerning space and strategic stability, the country remains intellectually unprepared to discuss and deal with grave defense and foreign policy decisions involving space. "ASATs are destabilizing" and "space must remain a sanctuary" are punchy trumpet blasts, but they are not expressions of sober strategic thought.

A confident military power should strive to influence and be capable of controlling activities in all geographic environments affecting its prosperity and security. The United States does so on the land with its armies and border guards, at sea with a world-class navy, coast guards, and fortified bases, and in the air with fighters, bombers, and air defense assets.

Responsible leaders, it seems to follow, should strive to ensure a similar ability to influence and control activities in space. Given the increasingly commercial and international character of satellite operations, we must expect that America’s public and private interests one day will be challenged or even attacked. To leave the initiative to others is to expose U.S. interests to the whims of the ambitious, the cunning, and the truculent.

A second reason for exploring new military uses of space is that they could provide our leadership and commanders life-saving options. Consider this. In fourth century bc Athens, the modern thinkers of the day proposed designing cities without traditional defenses — which included a street layout designed to confuse an invading enemy and a fortified wall around the city. Those who objected to such "old-fashioned" concepts proposed laying the streets out in tidy rows to improve the city’s appearance. Removal of the costly and aesthetically offensive walls would avoid a hostile appearance that might unnecessarily provoke Athens’ neighbors.

Critics of this "new thinking" believed that, while a visually pleasing and open city would be attractive, one should not adopt this approach at the expense of safety. The suggestion to remove the walls irked the more defense-minded, especially in light of the fact that the armies of the time were introducing new missiles and machines for improving sieges. The advocates for the city’s strategic defenses — the walls — argued that the city’s leaders would retain the option of treating the city as an open city, whereas the option of defense would not be available to leaders who chose to ignore the city’s military requirements. Particular weapons, in other words, do not commit a country to a particular policy course; rather, they offer offensive and defensive options in a world that often punishes inflexible policies and is unforgiving of those who blunder through decisions that can make the difference between war and peace.

Finally, strength at home and assertiveness abroad have ensured stability for the United States and much of the world during the past century. Capricious misfortune and aggression, after all, are the bane of the republic — and of international security. Military strength can help the United States and its allies direct chance more favorably and, in the worst of times, deter and turn aside aggression.

### Space weaponization key to heg and global stability

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

Space weaponization is a critical and necessary component in the process of transformation well under way, a process that cannot be reversed. Now [End Page 172] that America has demonstrated the capacity to strike precisely, it would not return to the kind of indiscriminant targeting and heavy collateral damage that characterized pre-space warfare unless it were engaged in a war of national survival. Moreover, any technological, economic or social benefits to be derived from developing and deploying weapons certainly would not come from increasing the stock of current systems. They would come, if at all, only from the development of innovative, highly complex and scientifically sophisticated space, stealth, precision, and information systems.

As leader of the international community, the United States finds itself in the unenviable position of having to make decisions for the good of all. On the issue of space weaponization, a single best option is elusive. No matter the choice, some parties will benefit and others will suffer. The tragedy of American power is that it must make a choice, and the worst choice is to do nothing. Fortunately, the United States has a great advantage — its people's moral ambiguity about the use of power. There is no question that corrupted power is dangerous, but perhaps only Americans are so concerned with the possibility that they themselves will be corrupted. They fear what they could become. No other state has such potential for self-restraint. It is this introspection, this self-angst that makes America the best choice to lead the world today and tomorrow. America is not perfect, but perhaps it is perfectible.

Space weapons, along with the parallel development of information, precision, and stealth capabilities, represent a true revolution in military affairs. These technologies and capabilities will propel the world into an uncertain New Age. Only a spasm of nuclear nihilism could curtail this future. By moving forward against the fears of the many, and harnessing these new technologies to a forward-looking strategy of cooperative advantage for all, the United States has the potential to initiate mankind's first global golden age. The nature of international relations and the lessons of history dictate that such a course begin with the vision and will of a few acting in the benefit of all.

## SMIL Good --- Terrorism

### Space weapons aid counterterrorist operations

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

Weapons in space could provide the global security needed to disrupt and counter small groups of terrorists wherever they operate, at the very moment they are identified. Currently, UAVs, dependent on space support for operations, fly persistent missions above areas of suspected terrorist activity in Iraq, providing real-time intelligence and, in some cases, onboard weapons to support ground forces in a specific area. Tactical units are informed of approaching hostiles, and due to all-weather and multi-spectral imaging systems, both friendly (Blue Force) and enemy tracking can occur throughout engagement operations. When ground troops are unable to respond to threatening situations beyond their line of sight or are unable to catch fleeing hostiles, armed UAVs can engage those threats. The other option in a large-scale counterterror operation is to bring in an overwhelming number of troops, enough to create a line across the entire country that can move forward, rousting and checking every shack and hovel, every tree and ditch, with enough Soldiers in reserve to prevent enemy combatants from re-infiltrating the previously checked zones. America could in this manner combat low-tech terrorism with low-tech mass military maneuvers, perhaps at a cost savings over an effective space-based surveillance and engagement capability (if one does not count the value of a Soldier's life), but we do not think dollar value is the overriding consideration in this situation. Terrorism in the form of limited, low-technology attacks is the most likely direct threat against America and its allies today, and space support is enabling the most sophisticated response ever seen. All-source intelligence has foiled dozens of attacks by al Qaeda and its associates. But what of the most dangerous threats today? Weapons of mass destruction, particularly nuclear but also chemical and biological ones, could be delivered in a variety of means vulnerable to interception if knowledge of their location is achieved in time for counteroperations to be effective. In situations where there is no defense available, or the need for one has not been anticipated, then time is the most precious commodity.

**Winning the war on terrorism is key to global survival**

**Jerusalem Post 2004**/5/12 (lexis)

In the first case, he maintained that submission only serves to encourage terrorists and their leaders and boost their motivation, while survival would depend on nations taking all necessary steps to reduce the risks, including international intelligence cooperation. "Dealing with terrorism requires a broad range of responses, starting with clear and coherent policies. It is necessary to have quality intelligence, as well as law enforcement, the military, and the means to counter technological and cyber-terrorism," said Alexander. "We also need an educational response because the children of today will be the terrorists of tomorrow. Unless we can defuse the extremist ideological and theological elements and their propaganda, the measures won't work. "We have to deal with the root causes and try to improve economic and social conditions - a sort of global Marshall plan - but first it is necessary to deal with the terror leadership. "To this end some innocent civilians might be harmed but, make no mistake, this is war and to fight it nations have to pool their resources. No nation can deal with the problem unilaterally."In the past, terrorism was regarded as a tactical rather than a strategic threat but it has become a permanent fixture and a challenge to the strategic interests of nations. "In fact," said Alexander, "it represents the most threatening challenge to civilization in the 21st century. The question of survival will depend to a great extent on how civilized society tackles this threat."

## SMIL Good --- Warfighting

### Space mil key to warfighting

Bloomfield and Sinnreich 2 – Lincoln P. Bloomfield, Jr. served as Principal Deputy Assistant Secretary of Defense for International Security Affairs, Deputy Assistant to the Vice President for National Security Affairs, and Deputy Assistant Secretary of State for Near Eastern Affairs in the Reagan and Bush Administrations. Richard Hart Sinnreich, a retired Army officer, is a former director of the Army’s School of Advanced Military Studies and served on the Army, Joint, Supreme Headquarters Allied Powers Europe (SHAPE), and National Security Council staffs. Both authors have participated in recent Army seminars and wargames, Spring 2002, “SPACE: A Military Far Frontier No more,” Army Space Journal, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA525868

If recent reports are accurate, those who hold out hope that the militarization of Space can yet be avoided are doomed to disappointment. As Space platforms and the services they provide to U.S. military forces proliferate, Space is drawing closer to becoming a theater of war. The implications are as profound as they are unexpected.

Thanks to an innovative wargaming program sponsored by the U.S. Army, national security specialists in and out of government have experienced a taste of the world we may inhabit not long from now. This experience has yielded an early look at significant policy issues likely to arise from the growing integration of Space in U.S. military operations.

Riding the Technological Revolution

That Space has become an inescapable adjunct of military power is an empirical observation, not an ideological statement. During the past two decades, the military no less than society at large has become an avid consumer — and industry an equally avid producer of Space-enabled products from communications to intelligence. Military reliance on Space increasingly extends to commercial as well as government systems.

Expertise on Space capabilities is rapidly becoming embedded in military organizations at virtually every level of command. Today, involvement of Space experts in theater-level planning and operations is routine. Tomorrow, the interplay of Space systems with individual soldiers may be just as common. In Space, the Revolution in Military Affairs is already here.

Our country’s growing reliance on Space as an integral dimension of its military as well as its commercial strength poses profound policy challenges. Should Space-based communications and intelligence collection systems be defended? Should they be armed? Does the growing reliance on Space assets to achieve “information dominance” over an adversary suggest a potential need for pre-emption? And are crisis decision-making processes swift enough to respond successfully to threats to the peace in the Space “theater”?

Moreover, how grave a matter would we consider an attack on a U.S. satellite - as much an act of war as an act of aggression sited within U.S. Air, Land, Sea or Space? As grave as a strike against a U.S. vessel, aircraft, or facility where no persons were harmed? And how much certainty must U.S. leaders have about the apparent sudden loss of the use of one or more Space assets before determining that retaliatory action is justified?

Because questions such as these are central to our capacity to manage a future crisis on acceptable terms, they ought to be considered at the front end of the U.S. military’s move into Space. From the perspective of military planners and arms controllers alike, the accelerating military reliance on Space marks a seminal change in the security environment. Already today, Space is host to global mobile telephony, beeper-based services, intercontinental bulk data transmission, multi-spectral imagery-assisted industry and agriculture, navigational tracking, and other information age services. Why should the military be expected to operate at any less a technological baseline than society at large?

On the contrary, the imperative of assuring reliable use of these capabilities in military contingencies will only intensify in the coming years as more capable orbiting systems are added to the world’s commercial and governmental Space inventories. With the expanding ability to move information between continents, the military is availing itself of new efficiencies in much the same manner as sophisticated global commercial entities. All of which is to say that, even though no country yet has emplaced weapons in Space, the effective militarization of Space has already occurred, because Space is fundamental to our own military superiority.

Political efforts to keep the Space militarization ‘cat’ in the ‘bag’ or, failing that, ‘walk it back’ before some line of no return is crossed, have simply been bypassed by the natural evolution in civil-military Space utilization. Space defies any existing ‘arms race’ paradigm: here there is no bag, no reverse gear on the cat, and no obvious line at which to halt the cat’s forward movement even were it desirable.

Many will argue that the United States still can and, indeed must, refrain from deploying lethal weapons in Space to dissuade the rest of the world from doing so. Yet that is precisely the policy ideal we believe is already well on its way to being usurped by the inherent operational logic of the Space age.

### Space mil assets more important to the US than other countries

Bloomfield and Sinnreich 2 – Lincoln P. Bloomfield, Jr. served as Principal Deputy Assistant Secretary of Defense for International Security Affairs, Deputy Assistant to the Vice President for National Security Affairs, and Deputy Assistant Secretary of State for Near Eastern Affairs in the Reagan and Bush Administrations. Richard Hart Sinnreich, a retired Army officer, is a former director of the Army’s School of Advanced Military Studies and served on the Army, Joint, Supreme Headquarters Allied Powers Europe (SHAPE), and National Security Council staffs. Both authors have participated in recent Army seminars and wargames, Spring 2002, “SPACE: A Military Far Frontier No more,” Army Space Journal, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA525868

Pre-emption Problem

As the world’s most extensive user of military Space resources and the most reliant on them, the United States would seem to have little incentive to initiate hostilities in Space. But as the likely military responder in a crisis rather than the aggressor, U.S. forces typically will be more vulnerable than their adversaries during the early stages of mobilization and deployment, and both information and information security will be precious. Hence, there will be immense pressure on U.S. decision-makers to deprive a potential adversary of Space-based information and communication capabilities before the latter can be used to target deploying U.S. and allied forces. Those pressures will increase in proportion to the expansion of potentially hostile non-U.S. Space capabilities.

Complicating matters is the likelihood that some of the capabilities used by an adversary very likely will be owned and operated by third parties such as multinational corporations, global private investment consortia, and nonbelligerent foreign governments. Attacking these assets would present legal and political problems not unlike those historically associated with naval blockades. Meanwhile, our own Space-based assets are likely to be increasingly vulnerable to damage or destruction by an enemy whose familiarity with the contested ground makes him less sensitive to a mutual degradation of Space-based capabilities.

Put differently, access to Space systems will be more valuable to the United States than to its adversaries in a future conflict. A general degradation of Space capabilities on both sides will be expected to benefit the adversary. That prospect will only intensify pressures on U.S. commanders to deprive an enemy of the ability to interfere with friendly Space systems.

### Space mil key future military capabilities and success

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

No nation relies on space more than the United States—none is even close—and its reliance grows daily. A widespread loss of space capabilities would prove disastrous for American military security and civilian welfare. America's economy would collapse, bringing the rest of the world down with it. Its military would be obliged to hunker down in a defensive crouch while it prepared to withdraw from dozens of then-untenable foreign deployments. To prevent such disasters from occurring, the United States military—in particular the United States Air Force—is charged with protecting space capabilities from harm and ensuring reliable space operations for the foreseeable future. As a martial organization, the Air Force naturally looks to military means to achieve these desired ends. And so it should.

A New American Way of War

The United States has embarked on a revolutionary military transformation designed to extend its dominance in military engagements. Space capabilities are the lynchpin of this transformation, enabling a level of precision, stealth, command and control, intelligence gathering, speed, maneuverability, flexibility, and lethality heretofore unknown. This 21st-century way of [End Page 163] war promises to give the United States a capacity to use force to influence events around the world in a timely, effective, and sustainable manner.

Russell Weigley described a long-standing American way of war that was based on an essentially isolationist preference to allow issues beyond its borders to sort themselves out.1 Only when events spilled out of hand and threatened U.S. interests directly did America feel compelled to intervene. Only then did it mobilize for war. In the first half of the 20th century, however, this model had to be substantially refined. It was predicated on taking the fight to the enemy's shores, away from American soil, but only after other means of influence had failed and the military option was deemed the only one likely to succeed. And then, when America finally chose to bring force, it was overwhelming force. The country braced for long build-ups. American leaders made the public feel confident in its righteousness. Friendly casualties were to be limited to the extent practical, but damage to the enemy could be maximized. The strategy was suitable in an era when the U.S. homeland was safe from attack, when its industrial production ensured the stockpiling of vital supplies and innumerable armaments, and excess resources could be provided to friends and allies to do the fighting where prudent. In these conditions, America could afford to wait for problems to incubate and mature before reacting with colossal expenditure and terrible force. For the most part, this way of war was effective.

But then came the debacle in Vietnam, where U.S. forces arguably won every battle but lost the war, at home as well as in Southeast Asia. Television had come to war; rampant carnage was available for viewing in every American home. Indiscriminant area bombing was particularly horrific, and from that time forward U.S. leaders would not contemplate using such tactics except at desperate times, when the very survival of the state was at stake. In wars of lesser urgency, those characterized by international theorists as wars for less than the vital national interest, it would be incumbent on America to win the hearts and minds of not just the domestic audience, but of allies, potential allies, and erstwhile enemies as well. Overwhelming force on a broad scale would be ruled out in advance. Success would be achieved through the employment of high-tech means and weapons: by computers, satellites, and whole new classes of technological marvel. America's future wars would be less destructive. They would have far fewer casualties, both friendly and enemy. And they would be short.

That this transformation was well underway became evident in 1991, when U.S. forces defeated the world's fourth-largest military in just ten days of ground combat. The Gulf War witnessed the public and operational debut of unfathomably complicated battle equipment, sleek new aircraft employing stealth technology, and promising new missile interceptors. Arthur C. Clarke went so far as to dub Operation Desert Storm the world's first space war, as none of the accomplishments of America's new look military would have been possible without support from space.2 Twelve years later Operation Iraqi Freedom proved that the central role of space power could no longer be denied. America's military had made the transition from a space-supported to a fully space-enabled force, with astonishing results. [End Page 164] Indeed, the military successfully exercised most of its current space power functions, including space lift, command and control, rapid battle damage assessment, meteorological support, and timing and navigation techniques such as Blue Force tracking, which significantly reduced incidences of fratricide.

The tremendous growth in space reliance from Desert Storm to Iraqi Freedom is evident in the raw numbers. The use of operational satellite communications increased four-fold, despite being used to support a much smaller force (fewer than 200,000 personnel compared with more than 500,000). New operational concepts such as reach back (intelligence analysts in the United States sending information directly to frontline units) and reach forward (rear-deployed commanders able to direct battlefield operations in real time) reconfigured the tactical concept of war. The value of Predator and Global Hawk Unmanned Aerial Vehicles (UAVs), completely reliant on satellite communications and navigation for their operation, was confirmed. Satellite support also allowed Special Forces units to range across Iraq in extremely disruptive independent operations, practically unfettered in their silent movements.

But the paramount effect of space-enabled warfare was in the area of combat efficiency. Space assets allowed all-weather, day-night precision munitions to provide the bulk of America's striking power. Attacks from standoff platforms, including Vietnam-era B-52s, allowed maximum target devastation with extraordinarily low casualty rates and collateral damage. In Desert Storm, only 8 percent of munitions used were precision-guided, none of which were GPS-capable. By Iraqi Freedom, nearly 70 percent were precision-guided, more than half from GPS satellites.3 In Desert Storm, fewer than 5 percent of aircraft were GPS-equipped. By Iraqi Freedom, all were. During Desert Storm, GPS proved so valuable to the army that it procured and rushed into theater more than 4,500 commercial receivers to augment the meager 800 military-band ones it could deploy from stockpiles, an average of one per company (about 200 personnel). By Iraqi Freedom, each army squad (6–10 soldiers) had at least one military GPS receiver.

Given the demonstrated utility of and reliance upon military assets in space, there is no question the United States must guarantee space access if it is to be successful in future conflicts. Its military has stepped well over the threshold of a new way of war. It is simply not possible to go back to the violently spasmodic mode of combat typical of pre-space interventions. The United States is now highly discriminating in the projection of violence, and parsimonious in the intended breadth of its destruction. For the positive process of transformation to continue, however, space weapons must enter the combat inventory of the United States.[End Page 165]

### Space mil increases military capacity—not perceived as aggressive

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

To be sure, America will maintain the capacity to influence decisions and events beyond its borders, with military force if necessary. The operational deployment of space weapons would increase that capacity by providing for nearly instantaneous force projection worldwide. This force would be precise, unstoppable and deadly. At the same time, the United States would forgo some of its ability to intervene directly in other states because the necessary budget tradeoffs would diminish its capacity to do so. Space weapons offer no advantage if the opponent is not dispersed broadly around the globe. Against massed and regionally concentrated forces, conventional weaponry is far more efficient. As such, transformation of the American military assures that the intentions of current and future leaders will have but a minor role to play in international affairs. The need to limit collateral damage, the requirement for precision to allay the low volume of fire, and the tremendous cost of space weapons will guarantee they are used only for high-value, time-sensitive targets. An opposing state's calculation of survival no longer would depend on interpreting whether or not the United States desires to be a good neighbor. Without sovereignty at risk, fear of a space-dominant American military will subside. The United States will maintain its position of hegemony as well as its security, and the world will not be threatened by the specter of a future American empire.

### Controlling space key to military operations

Tucker 8 – Dennis P. Tucker, Jr., Lieutenant Colonel, commander of the 336th Recruiting Squadron at Moody Air Force Base, June 2008, “PRESERVING UNITED STATES DOMINANCE: THE BENEFITS OF WEAPONIZING THE HIGH GROUND,” School of Advanced Air and Space Studies, https://www.afresearch.org/skins/rims/q\_mod.../display.aspx?...

Space Controllers

Space controllers are common in the military space community. These individuals favor development of space weapons because the military is heavily dependent on space capabilities. Similar to Lupton’s control school, Mueller’s space controllers subscribe to the view that space is becoming essential to terrestrial military operations and control of space is essential to success. Therefore adversaries will look to attack US space systems to take that advantage away. In addition, other space faring adversaries will look to control space in order to support their own terrestrial forces with communication, targeting, navigation, and other functions. Space controllers believe space weapons are needed to defend their own satellites and to attack enemy satellites. “In addition, as the relevant technologies improve, space-to-Earth weapons will become a potent military instrument.”13

Like space racers, space controllers are not particularly concerned with the political costs associated with fielding space weapons. Their view is that weaponization is inevitable, and it does not make sense to become reliant on space systems and then not protect them. Unlike space racers, however, space controllers do not agree that the United States can afford to wait until there is an urgent and pressing space threat before fielding space weapons. The key for criterion for deciding to weaponize space “will not be a comparison of potential US space weapon capabilities with those of rival states, but a comparison of future US military capabilities with and without space weapons.”14 The bottom line for space controllers is that the United States should weaponize space as soon it appears that it will be useful to do so.15

### Controlling space key to future military operations and protecting space assets

Tucker 8 – Dennis P. Tucker, Jr., Lieutenant Colonel, commander of the 336th Recruiting Squadron at Moody Air Force Base, June 2008, “PRESERVING UNITED STATES DOMINANCE: THE BENEFITS OF WEAPONIZING THE HIGH GROUND,” School of Advanced Air and Space Studies, https://www.afresearch.org/skins/rims/q\_mod.../display.aspx?...

Space Control

Twenty-first century joint operations are critically dependent on space capabilities, and this dependence will continue to grow in the future. America’s ability to achieve victory in future conflict rests heavily on its ability to gain and maintain space superiority. Space control operations are designed to achieve this space superiority, ensuring access to and freedom of action in, from, and through space while denying the same to the adversary. The threat to space is real, and it is a contested medium. It is long past time to treat space like a combat medium, to use passive and active defense capabilities to protect space assets from hostile attack, and be prepared to use offensive capabilities to take away an opponent’s hostile use of space when required. These are, in fact, missions previously assigned to the nation’s military and reiterated when President Bush, in his 2006 national space policy, stated:

The United States considers space capabilities—including the ground and space segments and supporting links—vital to its national interests. Consistent with this policy, the United States will: preserve its rights, capabilities, and freedom of action in space; dissuade or deter others from either impeding on those rights or developing capabilities intended to do so; take those actions necessary to protect its space capabilities; respond to interference; and deny, if necessary, adversaries the use of space capabilities hostile to US national interests.29

President Bush’s aligns well with current military doctrine with regards to space control. Joint Publication 3-14, Joint Doctrine for Space Operations, defines space control as “combat, combat support, and combat service support operations to ensure freedom of action in space for the United States and its allies and, when directed, deny an adversary freedom of action in space. The space control mission area includes: surveillance of space; protection of US and friendly space systems; prevention of an adversary’s ability to use space systems and services for purposes hostile to US national security interests; negation of space systems and services used for purposes hostile to US national security interests; and directly supporting battle management, command, control, communications, and intelligence”30 For its part, Air Force doctrine accepts the mission of counterspace activities to achieve space control. According to AFDD 2-2, Space Operations, counterspace operations are defined as “Operations to attain and maintain a desired degree of space superiority by allowing friendly forces to exploit space capabilities while denying an adversaries ability to do the same”31 The Air Force further divides counterspace operations into offensive and defensive operations, both of which are dependent on robust space situational awareness.

Defensive Counterspace (DCS) operations “provide the means to deter and defend against attacks and to continue operations by limiting the effectiveness of hostile action against US space assets and forces. DCS operations include deterrence of attacks against our space system, defense of our space systems as they come under attack, and where necessary, recovery of our space forces and assets.”32 The defense portion of the DCS definition is broken down into attack detection and characterization, passive and active measures. DCS operations may target an adversary’s counterspace capability to ensure access to space capabilities and freedom of action in space. Examples include destruction of adversary GPS or satellite communication jammers, intercept of enemy antisatellite weapons, system hardening, jam-resistance, and satellite maneuver.

Adversaries recognize they cannot battle the United States force-on-force, so they are seeking to ways to attack asymmetrically. This plays right into “China’s indigenous military traditions, which emphasize ‘stealth, deception, and indirect approaches to warfare—and the opportunities offered by emerging technologies—which permit effective asymmetric strategies focuses on attacking an adversaries weaknesses rather than its strengths.’”33 China and other countries have come to the realization that:

The advanced military might of the United States depends inordinately on a complex, exposed network of command, control, communications, and computer-based systems that provide intelligence, surveillance, and reconnaissance; and these systems operate synergistically in and through the medium of space. These space-based capabilities enable American forces to detect and identify different kinds of targets, exchange vast and diverse military relevant information and data streams, and contribute to the success of combat operations by providing everything from meteorological assessment to navigation and guidance to different platforms and weapon systems to early warning and situational 34 awareness.

The bottom line is that America’s adversaries have figured out that its space-based capabilities are its Achilles heel. US policy makers must provide for the military means to defend these space assets against a variety of threats. No longer can the United States take the high ground for granted, in the next war it is very clear that its space advantage will be challenged. In the words of Senator Joseph Lieberman, “space…has become an inseparable and vital part of our personal and daily lives. The implications for security are critical. Our dependence on space, will change warfare itself just as the rise of sea borne trade centuries ago expanded warfare from the land to the seas….We are rapidly creating new ‘sea lanes’—space and cyberspace lanes—that can be attacked and that must in turn be defended.”35

Threats to US space systems abound, and the United States needs to be prepared to detect and defeat those threats. In 2001, Donald Rumsfeld’s Space Commission concluded that “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”36 The commission also reported “that the U.S. is not…well prepared to handle the range of potential threats to its space systems.”37 This conclusion was based on the threat report prepared for the commission by Tom Wilson, which listed the following threats against space-based systems: Non-directed nuclear ASATs, interceptor ASAT weapons (direct ascent ASATs, short-duration orbital ASATs, long-duration orbital interceptors (farsats, nearsats, space mines, fragmentation or pellet rings, space-to-space missiles, microsatellites)), stand off weapons (laser ASATs, radio frequency ASAT, high-power laser and microwave weapons, particle-beam ASATs), and electronic attack on communication, data, and command links.38 From this lengthy list of threats, some already fielded, some in various phases of research and development, it is evident that the United States cannot assume freedom of operation in space without adequate defensive capabilities and weapons.

Over the last five years America’s potential adversaries have developed numerous advances in counterspace technology. Several states have the capability to send high-altitude nuclear detonations (HAND) into low-Earth orbit and have outwardly expressed the need to counter adversary space capabilities. Many more could reach highly populated orbits with simple medium-range ballistic missiles and detonate a payload that would leave a dangerous debris cloud. Russia has the largest offensive counterspace capability, and is known to possess direct ascent ASAT means, HAND weapons fielded around Moscow, and a variety of non-kinetic laser systems and satellite jammers. As previously noted, China has recently demonstrated a laser ASAT capability and a direct ascent ASAT capability. These are the most developed potential adversarial capabilities in space, but are by no means the only or even most likely threats.

### Space is the new war medium—controlling it key to military success

Tucker 8 – Dennis P. Tucker, Jr., Lieutenant Colonel, commander of the 336th Recruiting Squadron at Moody Air Force Base, June 2008, “PRESERVING UNITED STATES DOMINANCE: THE BENEFITS OF WEAPONIZING THE HIGH GROUND,” School of Advanced Air and Space Studies, https://www.afresearch.org/skins/rims/q\_mod.../display.aspx?...

The medium of air became a medium of warfare during World War I. Airpower was used in all four primary mission areas of force application, force enhancement, control, and support, and led to World War I being called the first air war. “As World War I provided the efficacy of airpower as a valuable tool for future conflict, the Gulf War seems to have proved the efficacy of space power as a viable arm of future military operations.”88 However, in the first space war, space forces were only operative in space support and force enhancement, and were not equipped to perform the missions of space control and space force application. Today, these two mission areas still lack resources and political support.

Adversaries have evaluated America’s advantageous utilization of space from 1991 forward, and have plans to negate that advantage. With the current demonstrated threat to US space systems, the two mission areas of space control and space force application need to be fully embraced. No longer can the United States get by with unenforceable (and endlessly debated) legal protections or passive defenses such as shielding and hardening. Space is a medium of warfare, and the high-ground must be defended and must be utilized to defend the United States, its allies, and its interests.

### US military depends on space assets

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

America's reliance on space is so extensive that a widespread loss of space capabilities would prove disastrous for both its military security and its civilian welfare. The Armed Forces would be obliged to hunker down in a defensive crouch awaiting withdrawal from dozens of no-longer-tenable foreign deployments. America's economy, and along with it the rest of the world's, would collapse.

For these reasons, the Air Force is charged with protecting space capabilities from harm and ensuring reliable space operations for the foreseeable future. As a martial organization, the Air Force looks to military means to achieve these assigned ends—as well it should. The military means it seeks include the ability to apply force in, through, and from space, as well as enabling and enhancing terrestrially based forces. Is this not self-evident?

Consider for a moment that the Navy has a similar charge: to ensure freedom of access to international waters and, when directed in times of conflict, to ensure that other states cannot operate there. Now imagine how the Navy might achieve these objectives if it were denied the use of weapons, to include shore-based weapons or those owned by other Services. What if it were further denied the capacity or legal power to research, develop, or test weapons? How effective could it be? Such restrictions would be absurd, of course. And yet this scenario is almost perfectly parallel with the conundrum facing the Air Force in space.

In this chapter, we make the case that opposition to increasing the militarization and weaponization of space is a misapplied legacy of the Cold War and that dramatic policy shifts are necessary to free the scientific, academic, and military communities to develop and deploy an optimum array of space capabilities, including weapons in space, eventually under the control of a U.S. Space Force.

## A2 Aggression

### Status quo disproves

Lambakis 1 – Steven Lambakis, senior defense analyst at the National Institute for Public Policy, February 1, 2001, “Space Weapons: Refuting the Critics,” The Hoover Institution Policy Review, No. 105, <http://www.hoover.org/publications/policy-review/article/6612>

No more coalitions?

It is further assumed that deploying arms not possessed by other states in regions unexploited by other states would put the United States in a position to coerce, even terrify, other nations. One must note, however, that Washington already has the power to tyrannize and bully with its current arsenal — but it does not. The United States deploys unparalleled — even "uncustomary" — nuclear and conventional military forces and engages in peace and combat missions on a global basis. Yet the face of overwhelming American military might neither alarms allies nor incites aggression. The U.S. retreat from several forward bases and its positive global leadership, moreover, belie suspicions that, in this unipolar world, Washington harbors imperialist ambitions.

Recent criticisms surrounding the MIRACL test and the U.S. National Missile Defense program were well orchestrated and vociferous, but numerically shallow when put up against the larger body of international opinion. In fact, voices will inevitably rise, from all corners of the globe, to condemn U.S. military decisions and actions. Political assault is the price the United States pays for having global interests and power. There will always be attempts by foreign leaders and vocal minorities to influence U.S. procurement decisions through arms control and public condemnation. It costs little, and the potential gains are great.

## A2 Commerce

### Empirically disproven—commerce will increase

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

The second argument concerns commerce and tourism. Opponents say that space weapons would make individuals afraid to do business in space or travel there for pleasure, for fear of being blown to smithereens. This is an emotional appeal that has no basis in fact. Currently, for example, weapons are pervasive on the seas, in the air, and on land, but wherever there is a dominating power, commerce and travel are secure. America's Navy has dominated the open oceans for the last half-century, ensuring that commerce is fair and free for all nations, as has its Air Force in nonterritorial airspace. A ship leaving port today is more likely than ever to make it to its destination, safer from pirates, rogue states, navigational hazards, and even weather—all due to the enforcement of the rule of law on the seas and the assistance of sea- and space-based navigational assistance. Why would American dominance in space be different?

### US space dominance key to promoting commerce in space

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

Moreover, if the United States were willing to deploy and use a military space force that maintained effective control of space, and did so in a way that was perceived as tough, non-arbitrary, and efficient, such an action [End Page 171] would serve to discourage competing states from fielding opposing systems. Should the United States use its advantage to police the heavens and allow unhindered peaceful use of space by any and all nations for economic and scientific development, over time its control of low-Earth orbit could be viewed as a global asset and a public good. In much the same way the British maintained control of the high seas, enforcing international norms of innocent passage and property rights, the United States could prepare outer space for a long-overdue burst of economic expansion.

There is reasonable historic support for the notion that the most peaceful and prosperous periods in modern history coincide with the appearance of a strong, liberal hegemon. America has been essentially unchallenged in its naval dominance over the last 60 years, and in global air supremacy for the last 15 or more. Today, there is more international commerce on the oceans and in the air than ever. Ships and aircraft of all nations worry more about running into bad weather than about being commandeered by a military vessel or set upon by pirates. Search and rescue is a far more common task than forced embargo, and the transfer of humanitarian aid is a regular mission. Lest one think this era of cooperation is predicated on intentions rather than military stability, recall that the policy of open skies advocated by every president since Eisenhower did not take effect until after the fall of the Soviet Union and the singular rise of American power to the fore of international politics. The legacy of American military domination of the sea and air has been positive, and the same should be expected for space.

## A2 Conventional Arms Races

### Weaponization causes conventional system budget cuts—means no arms races in the CONVENTIONAL sector—space mil not perceived as threatening

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

There is another, perhaps far more compelling reason that weaponizing space would in time be less threatening to the international system than the failure to do so. The weaponization of space would decrease the likelihood of an arms race by shifting spending away from conventional weapons systems. One of the more cacophonous refrains against weapons procurement of any kind is that the money needed to purchase them is better spent elsewhere. It is a simple cliché but a powerful one. Space weapons in particular will be very, very expensive. Are there not a thousand better ways to spend the money? But funding for weapons does not come directly from education, housing or transportation budgets. It comes from military budgets. Thus the question should be directed not at particular weapons, but at all weapons.

The immediate budget impact of significant funding increases for space weapons would be to decrease funding for combat aircraft, the surface battle fleet, and ground forces. This may well set the proponents of space weaponization at odds with both proponents and opponents of increased defense spending. Space advocates must sell their ideas to fellow pro-weapons groups by making the case that the advantages they provide outweigh the capabilities forgone. This is a mighty task. The tens or even hundreds of billions of dollars needed to develop, test and deploy a minimal space weapons system with the capacity to engage a few targets around the world could displace a half-dozen or more aircraft carrier battle groups, entire aircraft procurement programs such as the F-22, and several heavy armored divisions. This is a tough sell for supporters of a strong military.

It is an even more difficult dilemma for those who oppose weapons in general, and space weapons in particular. Ramifications for the most critical current function of the Army, Navy, and Marines—pacification, occupation, and control of foreign territory—are profound. With the downsizing of traditional weapons to accommodate heightened space expenditures, the U.S. ability to do all three would wane significantly. At a time when many are calling for increased capability to pacify and police foreign lands, in light [End Page 170] of the no-end-in-sight occupations of Iraq and Afghanistan, space weapons proponents must advocate reduction of these capabilities in favor of a system that will have no direct potential to do so.

## A2 Conventional Warfare

### Tradeoff irrelevant—space weapons are net better

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

A follow-on argument is rhetorical and usually takes the form, "Wouldn't the money spent on space weapons be better spent elsewhere?" It would be lovely if the tens of billions of dollars necessary to effectively weaponize space could be spent on education, or the environment, or dozens of other worthy causes, but this is a moot argument. Money necessary for space weapons will not come from the Departments of the Interior or State or from any other department except Defense. Any windfall for not pursuing space weaponization is speculative only and is therefore not transitive. This means that the funds for space weaponization will come at the expense of other military projects, from within the budget of the Department of Defense. This observation is the basis for criticism among military traditionalists, who see the advent of space weapons as the beginning of the end for conventional warfare.

Current conventional military forces and means are enough to ensure America's security needs, so why risk weaponization of space? The United States has the greatest military force the world has known; why change it when it is not broken? This argument is, obviously, tightly connected to the previous response, which points out that states failing to adapt to change eventually fall by the wayside. But more so, it shows a paucity of moral righteousness on the opposition's side. For the cost of deploying an effective space weapons program, America could buy and maintain 10 more heavy divisions (or, say, 6 more carrier battlegroups and 6 fighter wings). Let us suppose that is true. What would be more threatening to the international environment, to the sovereignty of states: a few hundred antiballistic missile satellites in low Earth orbit (LEO) backed by a handful of space lasers, or 10 heavy divisions with the support infrastructure to move and supply them anywhere on the globe?

### Space weapons are superior

Preston et al 2 – Bob Preston, former U.S. Air Force officer who is now with RAND, author of *Plowshares and Power: The Military Uses of Civil of Space*, Dana J. Johnson, Senior Analyst at the Northrop Grumman Corporation's Analysis Center, Sean Edwards, doctoral fellow at the RAND Graduate School and author of Swarming on the Battlefield: Past, Present, Future, Michael Miller, mathematical consultant at The RAND Corporation, Calvin Shipbaugh, RAND physicist, 2002, “Space Weapons: Earth Wars,” RAND Corporation, <http://library.northsouth.edu/Upload/Space%20Weapons%20Earth%20Wars.pdf>

Access and Reach

Here, access means access to a target without political constraints on overflight or passage of the platform carrying the weapon, and reach refers to the ability to engage a broader, perhaps global, range of targets than other weapons can. Space weapons share these attributes to a degree with ICBMs. Space weapons generally have global reach, although some weapons can reach into the northern or southern hemisphere using roughly half the weapons needed for global reach. ICBMs have roughly hemispheric reach. If there is some concern about limiting the countries that might feel threatened by a space weapon, reach could be a liability. Within a budget for the number and size of weapons and platforms, reach and responsiveness will be trade-offs.

Responsiveness

Even with relatively few space weapons and platforms, the time it takes to have one in position to attack a particular target will be less than the time needed for most terrestrial weapons—unless the terrestrial weapons have already been deployed to the theater of operations containing the target. It could take a few hours for a spacebased kinetic-energy weapon to strike its target after release, given weapon logistics comparable to those of terrestrial alternatives. It could take about 20 minutes after release for a space-based conventional weapon to be deployed in the vicinity of a surface target. In contrast, it takes a few days to some weeks for terrestrial weapons to reach a theater of operations from the United States. Long-range ballistic missiles, which reach their targets in times comparable with space weapons, are the exception. However, long-range ballistic missiles are strongly associated with weapons of mass destruction.

The responsiveness of space-based weapons may also be seen as a disadvantage. When the objective of owning weapons of mass destruction is to deter others who have weapons of mass destruction, shorter times make stable deterrence more difficult if they threaten the survivability of the opponent’s deterrent. Some have suggested that the timeliness of ground attack weapons from space would threaten the stability of nuclear deterrence. But this is not necessarily so. Because the deorbit times for practical space-based weapons are at best comparable with and generally longer than those of existing ballistic missiles, short warning times would degrade deterrence only if surveillance systems were unable to see space weapons deorbit and if the terrestrial nuclear deterrent forces were vulnerable to the space weapons. Surveillance of space for reliable attack warning is more difficult than surveillance of the earth for missile warning, but it is possible from space. However, warning of an attack is not absolutely necessary for preserving stable deterrence if enough of the opponent’s deterrent forces are survivable. Among terrestrial nuclear deterrent forces, only stationary or slow-moving surface platforms, such as silo-based missiles, would be vulnerable to a first strike from space. But thanks to accurate ballistic missiles, silobased missiles have been vulnerable for a long time, so most nuclear deterrent forces are at least partially based on mobile launchers or submarines to improve survivability. These measures are just as effective against space-based threats.

Distance

Distance from other weapons and basing modes may help to distinguish a space-based weapon from another kind. For example, spacebased kinetic or conventional weapons that might be more economically based on terrestrial ballistic missiles could be usefully differentiated from nuclear weapons normally based on terrestrial ballistic missiles, if others were confident that the space platforms did not carry weapons of mass destruction. The great distance from other things that is normal in space can improve the survivability of spacebased weapons. There is also a downside to distance. If the spacebased weapons were weapons of mass destruction, their physical distance from other targets might make stable deterrence more difficult by inviting a disarming first strike with less collateral damage. Also, distance and gravity are the sources of the logistic limitations we will see in the next section.

### Space weapons are more effective than conventional ones

Tucker 8 – Dennis P. Tucker, Jr., Lieutenant Colonel, commander of the 336th Recruiting Squadron at Moody Air Force Base, June 2008, “PRESERVING UNITED STATES DOMINANCE: THE BENEFITS OF WEAPONIZING THE HIGH GROUND,” School of Advanced Air and Space Studies, https://www.afresearch.org/skins/rims/q\_mod.../display.aspx?...

Space-based weapons can provide a number of distinct advantages to include rapid response, overcoming access and distance limitations, and creating difficulties for adversary defense. The National Defense Strategy says that America’s ability to operate in and from the global commons, to include space, enables it to project power anywhere in the world and is critical to the direct defense of the United States and its partners.71 The key is that space weapons could attack targets that are inaccessible to other weapons, and can provide access to targets without concern for violating denied airspace. Throughout its current national strategy documents, the need for the United States to project force rapidly in denied access environments is emphasized, and there is no more comprehensive means than with space-based weapons.

### Space weapons technologically superior

Lambakis 2 – Steven Lambakis, senior defense analyst at the National Institute for Public Policy, July 2002, “Putting Military Uses of Space in Context,” kms1.isn.ethz.ch/serviceengine/Files/ISN/38949/.../06\_Lambakis.pdf

Space can offer global reach and host a capability to strike targets in a timely manner. Given the great distances that missiles travel, a defender will have to operate in and from space to defend different areas around the globe. Lasers, or speed of light weapons, in space may provide an even better tool for conquering distance, in a very short span of time, perhaps allowing the defender to counter hostile missiles a few thousand miles away. Given adequate numbers of satellites, space also accommodates around the clock coverage of the earth, helping to provide early warning, track threat missiles, and discriminate target complexes.

## A2 Destabilizing

### Space weaponization wouldn’t destabilize the international system

Lambakis 1 – Steven Lambakis, senior defense analyst at the National Institute for Public Policy, February 1, 2001, “Space Weapons: Refuting the Critics,” The Hoover Institution Policy Review, No. 105, <http://www.hoover.org/publications/policy-review/article/6612>

Academic assumptions

The case against deploying weapons in space rests on a number of assumptions, often unstated. A careful look at the validity of these assumptions reveals serious problems — in many cases undermining the conclusions the critics draw.

One such assumption is that military developments over the past 50 years have created a security environment in which certain tactical events or localized crises run an unacceptably high risk of triggering a general, possibly even nuclear, war. We are therefore more secure when we do nothing to upset the global military balance, especially in space — where we station key stabilizing assets.

Yet we have little experience in reality to ground this freely wielded and rather academic assumption. By definition, anything that causes instability in armed relationships is to be avoided. But would "shots" in space, any more than shots on the ground, be that cause?

When we look at what incites war, history instructs us that what matter most are the character and motivation of the states involved, along with the general balance of power (i.e., are we in the world of 1914, 1945, or 2001?). Fluctuations in national arsenals, be they based on earth or in space, do not determine, but rather more accurately are a reflection of, the course of politics among nations. In other words, it matters not so much that there are nuclear weapons, but rather whether Saddam Hussein or Tony Blair controls them and in what security context. The same may be said for space weapons.

The sway of major powers historically has regulated world stability. It follows that influential countries that support the rule of law and the right of all states to use orbits for nonaggressive purposes would help ensure stability in the age of satellites. The world is not more stable, in other words, if countries like the United States, a standard-bearer for such ideas, "do nothing." Washington’s deterrence and engagement strategies would assume new dimensions with the added influence of space weapons, the presence of which could help bolster peacemaking diplomacy and prevent aggression on earth or in space.

Insofar as we have no experience in space warfare, no cases exist to justify what is in essence a theoretically derived conclusion — that space combat must be destabilizing. We do know, however, that the causes of war are rarely so uncomplicated. Small events, by themselves, seldom ever explain large-scale events. When ardent Israeli nationalist Ariel Sharon visited this past fall the holy site around the Al Aksa Mosque at Jerusalem’s Temple Mount, his arrival fired up a series of riots among impassioned Palestinians and so widened the scale of violence that it kicked up the embers of regional war yet again. Yet the visit itself would have been inconsequential were it not for the inveterate hostility underlying Israeli-Palestinian relations.

## A2 Expensive

### Cost as much as ground-based systems—no impact

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

Space weapons are expensive; alternatives are cheaper and just as effective. This is the first argument against space weaponization, although it is an easy one to set aside. Of course space weapons are expensive—very expensive, though not necessarily more expensive than terrestrially based systems that may accomplish the same objectives, not to mention objectives that cannot be met otherwise—but so are all revolutionary technologies, particularly those that pioneer a new medium. Furthermore, the state that achieves cutting-edge military technology first has historically been the recipient of tremendous battlefield advantage, and so pursuit of cut-ting-edge technology continues—despite the enormous cost. Moreover, the cultural and economic infrastructure that allows for and promotes innovation in the highest technologies tends to remain at the forefront of international influence.

All empires decline and eventually are subsumed, but it has not been their search for the newest technologies or desire to stay at the forefront of innovation that causes their declines. Rather, it has been the policies of those states, generally an overexpansion of imperial control or an economic decision to freeze technologies, that result in their stagnation and demise. Space and space technology represent both the resources and the innovation that can keep a liberal and responsible American hegemony in place for decades, if not centuries, to come; furthermore, unless America maintains this technological edge, it will likely lose its preeminence.

## A2 International Backlash

### No backlash to space weapons—coop still possible

Lambakis 1 – Steven Lambakis, senior defense analyst at the National Institute for Public Policy, February 1, 2001, “Space Weapons: Refuting the Critics,” The Hoover Institution Policy Review, No. 105, <http://www.hoover.org/publications/policy-review/article/6612>

Would a vigorous military space program alienate foreign governments to the point at which Washington could never again assemble a coalition similar to the one that defeated Saddam Hussein in 1991? This is doubtful. Leading up to the onset of war, the Iraqi leader’s actions, not President Bush’s initiatives, dominated foreign policy discussions abroad. Indeed, many Arab countries joined the coalition, despite America’s stout support for the much-hated Israel. Any significant anti-American rhetoric was quickly overshadowed by the singular goal of turning back naked aggression.

Similar international support may be expected in the future, even if the United States were to deploy space-based interceptors to slap down ballistic missiles aimed at New York or Los Angeles or antisatellite weapons to blind prying eyes in times of crisis or conflict. When the stakes are high and the United States must act militarily in self-defense or to protect its interests, allies and friends are likely to judge U.S. activities in space to affect politico-strategic conditions on Earth appropriately and in context.

## A2 Miscalculation

### Space mil prevents miscalc and conflict escalation

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

A limited strike capability from space would allow for the engagement of the highest threat and the most fleeting targets wherever they presented themselves on the globe, regardless of the intention of the perpetrator. The case of a ballistic missile carrying nuclear warheads is exemplary. Two decades ago, the most dangerous threat facing America (and the world) was a massive exchange of nuclear warheads that could destroy all life on the planet. Since a perfect defense was not achievable, negotiators agreed to no defense at all, on the assumption that reasonable leaders would restrain themselves from global catastrophe.

Today, a massive exchange is less likely than at any period of the Cold War, in part because of significant reductions in the primary nations' nuclear arsenals. The most likely and most dangerous threat comes from a single or limited missile launch, and from sources that are unlikely to be either rational or predictable. The first is an accidental launch, a threat we avoided making protections against due to the potentially destabilizing effect on the precarious Cold War balance. That an accidental launch, by definition undeterrable, would today hit its target is almost incomprehensible.

More likely than an accidental launch is the intentional launch of one or a few missiles, either by a nonstate actor (a terrorist or "rogue boat captain" as the scenario was described in the early 1980s) or a rogue state attempting to maximize damage as a prelude to broader conflict. This is especially likely in the underdeveloped theories pertaining to deterring third-party states. The United States can do nothing today to prevent India from launching a nuclear attack against Pakistan (or vice versa) except threaten retaliation. If Iran should launch a nuclear missile at Israel, or in a preemptory strike Israel should attempt the reverse, America and the world could only sit back and watch, hoping that a potentially world-destroying conflict did not spin out of control.

When President Reagan announced his desire for a missile shield in 1983, critics pointed out that even if a 99-percent-reliable defense from space could be achieved, a 10,000-warhead salvo by the Soviet Union still allowed for the detonation of 100 nuclear bombs in American cities—and both we and the Soviets had enough missiles to make such an attack plausible.

But if a single missile were launched out of the blue from deep within the Asian landmass today, for whatever reason, a space-based missile defense system with 99-percent reliability would be a godsend. And if a U.S. space defense could intercept a single Scud missile launched by terrorists from a ship near America's coasts before it detonated a nuclear warhead 100 miles up—creating an electromagnetic pulse that shuts down America's powergrid, halts America's banking and commerce, and reduces the battlefield for America's military to third world status8—it might provide for the very survival of our way of life.

### No impact to miscalc

Lambakis 1 – Steven Lambakis, senior defense analyst at the National Institute for Public Policy, February 1, 2001, “Space Weapons: Refuting the Critics,” The Hoover Institution Policy Review, No. 105, <http://www.hoover.org/publications/policy-review/article/6612>

Those who believe we run extraordinary risks stemming from clouded perceptions and misunderstandings in an age of computerized space warfare might want to take a look at some real-world situations of high volatility in which potentially provocative actions took place. Take, for example, the tragedies involving the USS Stark and USS Vincennes. In May 1987, an Iraqi F-1 Mirage jet fighter attacked the Stark on patrol to protect neutral shipping in the Persian Gulf, killing 37 sailors. Iraq, a "near-ally" of the United States at the time, had never before attacked a U.S. ship. Analysts concluded that misperception and faulty assumptions led to Iraq’s errant attack.

The memory of the USS Stark no doubt preoccupied the crew of the USS Vincennes, which little over a year later, in July 1988, was also on patrol in hostile Persian Gulf waters. The Vincennes crew was involved in a "half war" against Iran, and at the time was fending off surface attacks from small Iranian gunboats. Operating sophisticated technical systems under high stress and rules of engagement that allowed for anticipatory self-defense, the advanced Aegis cruiser fired anti-aircraft missiles at what it believed to be an Iranian military aircraft set on an attack course. The aircraft turned out to be a commercial Iran Air flight, and 290 people perished owing to mistakes in identification and communications.

To these examples we may add a long list of tactical blunders growing out of ambiguous circumstances and faulty intelligence, including the U.S. bombing in 1999 of the Chinese Embassy in Belgrade during Kosovo operations. Yet though these tragic actions occurred in near-war or tinderbox situations, they did not escalate or exacerbate local instability. The world also survived U.S.-Soviet "near encounters" during the 1948 Berlin crisis, the 1961 Cuban missile crisis, and the 1967 and 1973 Arab-Israeli wars. Guarded diplomacy won the day in all cases. Why would disputes affecting space be any different?

In other words, it is not at all self-evident that a sudden loss of a communications satellite, for example, would precipitate a wider-scale war or make warfare termination impossible. In the context of U.S.-Russian relations, communications systems to command authorities and forces are redundant. Urgent communications may be routed through land lines or the airwaves. Other means are also available to perform special reconnaissance missions for monitoring a crisis or compliance with an armistice. While improvements are needed, our ability to know what transpires in space is growing — so we are not always in the dark.

The burden is on the critics, therefore, to present convincing analogical evidence to support the notion that, in wartime or peacetime, attempts by the United States to control space or exploit orbits for defensive or offensive purposes would increase significantly the chances for crisis instability or nuclear war. In Washington and other capitals, the historical pattern is to use every available means to clarify perceptions and to consider decisions that might lead to war or escalation with care, not dispatch.

## A2 No Technology

### Scientific arguments are outdated

Dolman 6 – Everett C. Dolman, Associate Professor of Comparative Military Studies at the U.S. Air Force's School of Advanced Air and Space Studies, “U.S. Military Transformation and Weapons in Space,” SAIS Review 26.1, <http://muse.jhu.edu/journals/sais_review/v026/26.1dolman.html>

We have learned much, it would seem, or else bluntly negative scientific opinion on space weapons has been weeded out over time. Less encompassing arguments are now the rule. As the debate moved completely away from the complete impossibility of weapons and wars in space to more subtle and scientifically sustainable arguments that a particular space weapon is not feasible, mountains of mathematical formulae have been piled high in an effort, one by one, simply to bury the concept. But these limitations on specific systems are less due to theoretical analysis than to assumptions about future funding and available technology.8 The real objection, too often hidden from view, is that a particular weapons system or capability cannot be developed and deployed within the planned budget, or within narrowly specified means. When one relaxes those assumptions, opposition on technical grounds generally falls away.

The devil may very well be in the details. But when critics oppose an entire class of weapons based upon analyses that show particular weapons will not work, their arguments fail to consider the inevitable arrival of fresh concepts or new technologies that change all notions of current capabilities. Have we thought out the details enough we can say categorically that no technology will allow for a viable space weapons capability? If so, then the argument is pat; no counter is possible. But if there are technologies or [End Page 168] conditions that could allow for the successful weaponization of space, then ought we not argue the policy details first, lest we be swept away by a course of action that merely chases the technology wherever it may go?

### Also empirically disproven

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

Space Weapons Are Possible

Arguments in the first category spill the most ink in opposition, but they are relatively easy to dispatch. Consider first that history is littered with prophesies of technical and scientific inadequacy, such as Lord Kelvin's famous retort, "Heavier-than-air flying machines are impossible." Kelvin, a leading physicist and president of the Royal Society, made this boast in 1895, and no less an inventor than Thomas Edison agreed. The possibility of spaceflight prompted even more gloomy pessimism. A New York Times editorial in 1921 excoriated Robert Goddard for his silly notions of rocket-propelled space exploration (an opinion it has since retracted): "Goddard does not know the relation between action and reaction and the need to have something better than a vacuum against which to react. He seems to lack the basic knowledge ladled out daily in high schools." Compounding its error in judgment, opining in 1936, the Times stated flatly, "A rocket will never be able to leave the Earth's atmosphere."3

Bluntly negative scientific opinion on the possibility of space weapons writ large has been weeded out over time. No credible scientist today makes the claim of impossibility, and so less encompassing arguments are now the rule. The debate has moved to more subtle and scientifically sustainable arguments that a particular space weapon is not feasible. Mountains of mathematical formulae have been piled high in an effort, one by one, simply to bury the concept. But these limitations on specific systems are less due to theoretical analysis than to assumptions about future funding and available technology.4 The real objection, too often hidden from view, is that a particular weapons system or capability cannot be developed and deployed within the planned budget or within narrowly specified means. When one relaxes those assumptions, opposition on technical grounds generally falls away.

Furthermore, counterexamples exist—for example, the Brilliant Pebbles space-based interceptor system was the most advanced defense concept to emerge from the Strategic Defense Initiative (SDI). After a comprehensive series of technical reviews by even the strongest critics in 1989, it achieved major defense acquisition program status in 1990, was curtailed by congressional cuts in 1991 and 1992, and then was canceled by the Clinton administration in 1993. But the cancellation of the most advanced, least expensive, and most cost-effective missile defense system produced by the SDI program was for political, not technical, reasons.5

The devil may very well be in the details. But when critics oppose an entire class of weapons based upon analyses that show particular weapons will not work, their arguments fail to consider the inevitable arrival of fresh concepts or new technologies that change all notions of current capabilities. Have we thought out the details enough to say categorically that no technology will allow for a viable space weapons capability? If so, then the argument is pat; no counter is possible. But if there are technologies or conditions that could allow for the successful weaponization of space, then ought we not argue the policy details first, lest we be swept away by a course of action that merely chases the technology wherever it may go?

### New technology already making space weaponization feasible

Hoey 6 – Matthew Hoey, Research Associate at the Institute for Defense and Disarmament Studies February 27, 2006, “Military space systems: the road ahead,” The Space Review, http://www.thespacereview.com/article/563/1

In sum, we have three rapidly evolving technologies that will accelerate military space projects and make them more affordable. These are: short-notice launch capabilities; next generation small satellites that significantly reduce launch costs and are capable of direct engagement; and ESPA-ring technologies and similar deployment stages for launch vehicles. Technology forecasting suggests that once fully integrated, these technologies will significantly reduce the cost of the militarization of space process and its transition to weaponization. Programs are in development, the defense and research communities are hard at work, and there is no adequate international legal framework in place to ensure that ASAT systems and weapons will not be placed in space. Weaponization will first be initiated in space asset protection systems, built on small satellite platforms, under the guise of asset protect systems with active defense capabilities. Once such systems are in place, the act of attacking or compromising an enemy space system will be limited only the intention of the user. The road to space being weaponized may also be shortened thanks in part to a space-based missile defense system—should it be developed.

### MKV program proves deployment is short-term.

Hoey 6 – Matthew Hoey, Research Associate at the Institute for Defense and Disarmament Studies February 27, 2006, “Military space systems: the road ahead,” The Space Review, http://www.thespacereview.com/article/563/1

I want now to highlight several other military space systems that are in various stages of research and development. Systems under the umbrella of military space systems number in the dozens. There are nearly 50 different technologies in various stages of R&D across multiple programs—not including missile defense technologies that have direct connection to possible space weapons systems. Here I will focus on just four systems that, if successful, could radically alter the future military environment. I have highlighted these systems for various reasons ranging from probability of deployment to sheer entertainments sake. First, there is the Multiple Kill Vehicle platform, or MKV. This best links missile defense technology with potential space weapons systems in the here and now. The MKV program is a product of the space and missile defense test center at Redstone Arsenal, whose stated mission is to manage advances missile defense and space technology research and development for the Army, the Missile Defense Agency (MDA), and other defense-related government organizations. Technology development areas include radar, optics, interceptors, lasers, information systems, space control, and space applications. The missile defense installation at Fort Greely is the first integration site for MKVs. The current interceptors at Ft. Greely are single-shot interceptors—one interceptor per rocket, meaning one chance to achieve a successful hit to kill against a ballistic missile. With MKVs integrated into the current ground-based midcourse (GMD) systems, that hit-to-kill capability will increase to seven shots per interceptor. The funding has been secured for this project. The systems will be integrated into the current ground based systems at Ft Greely—deployed on up to 7 interceptors—as early as FY07.

## A2 Space Debris

### Debris would burn up and countries will be more careful

Dolman and Cooper 11 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

Weaponization of space will create conditions that will make space travel risky if not impossible. Having extended the illogic of opposing space weapons to the limit, opponents then take on the mechanics of war and the evils of the military. As for the first argument, orbital debris is the challenge, which the recent Chinese antisatellite (ASAT) test confirms. The destruction of its own dying satellite in 2007 created thousands of bits of debris that are now floating at orbital velocity, an expanding cloud that poses a lasting navigational hazard to legitimate space flight. True, the Chinese test was criminal, especially since it could have engaged with almost no debris remnants if it had altered its engagement path. In over a dozen antisatellite tests that the Soviet Union held in the 1970s and 1980s, only the first left appreciable debris. After that, the massive co-orbital ASAT engaged in a kinetic direction toward the Earth, down the gravity well, causing all of the detritus of the ASAT and target to burn up in the atmosphere. Indeed, in a scenario where the United States is controlling space, most engagements would occur in launch phase, before the weapons even reach orbit. Any debris that is not burned up or destroyed will fall onto the launching state. Because tested weapons systems have maximized destruction to validate capabilities does not mean that future engagements must create long-lasting debris fields. Satellites are very fragile, and a bump or a push in the wrong direction is all that is necessary to send them spinning off into a useless or uncontrollable orbit—if you get to space first. Space war does not have to be dirty war, and in fact spacefaring nations will go out of their way to ensure that it is not (an argument that non-spacefaring powers may wish to fight dirty, and the only reliable defense against them would be in space, occurs below).

# \*\*SPACE WEAPONIZATION BAD\*\*

## Uniqueness --- No Weaponization Now

### **No weaponization now and it’s not inevitable**

Smith 11 – Colonel M.V. Smith, USAF, is Director of the Air Force Space and Cyber Center at Air University, 2011, "Spacepower and Warfare," Institute for National Strategic Studies, Spacepower Theory Project, http://www.ndu.edu/press/spacepower-and-warfare.html

A discussion of the nexus of spacepower and warfare is controversial because space has yet to be overtly weaponized or generally recognized as an arena of open combat. Many, if not most, nations want to keep space a weapons-free peaceful sanctuary, particularly the suprastate actors. Just because all other media are weaponized and used as arenas of combat does not mean that space will automatically follow suit.1 Perhaps this generation will figure out how to keep the beast of war in chains short enough to prevent it from going to space. But the next (and each succeeding) generation must also keep the chains short. Unfortunately, the constant march of technology is making space more important to states at the same time it is making it easier to build space weapons.

### Space weaponization not inevitable – no weapons now

Stimson 10 – Founded in 1989, the Henry L. Stimson Center is a nonproﬁt, nonpartisan institution devoted to enhancing international peace and security through a unique combination of rigorous analysis and outreach. September 21, 2010, "Key Elements of Space Assurance," http://www.stimson.org/research-pages/key-elements-of-space-assurance-/

Other nations are similarly also engaged in research and development programs relating to space warfare. There is no compelling need, however, to engage in the flight testing and deployment of dedicated space weapons, in part because the United States and many other nations already possess military capabilities designed for other missions that could, in extreme circumstances, serve as a response to the first use of space weapons by another state. Such "residual" space warfare capabilities have paradoxically served as a brake against the flight testing and deployment of space weapons in the past. The weaponization of space is not inevitable. If it were, this would have occurred during the Cold War. Rather than to engage in such a competition now, a far wiser course would be to strengthen efforts to promote space assurance.

### Space is not being weaponized now

Washington Times 1/27 – Eli Lake, January 1 2011, “U.S., EU eye anti-satellite weapons pact,” Washington Times, http://www.washingtontimes.com/news/2011/jan/27/us-eu-eye-anti-satellite-weapons-pact/?page=1

The [Obama administration](http://www.washingtontimes.com/topics/barack-obama/) is negotiating with the [European Union](http://www.washingtontimes.com/topics/european-union/) on an agreement limiting the use of anti-satellite weapons, a move that some critics say could curb [U.S.](http://www.washingtontimes.com/topics/united-states-of-america/) development of space weapons in general. Three congressional staffers told [The Washington Times](http://www.washingtontimes.com/topics/the-washington-times/) that [Pentagon](http://www.washingtontimes.com/topics/pentagon/) and intelligence analysts said in a briefing Monday that the [administration](http://www.washingtontimes.com/topics/barack-obama/) is looking to sign on to the [European Union](http://www.washingtontimes.com/topics/european-union/)’s Code of Conduct for Outer Space Activities. The briefing followed the completion of an interagency review that recommends the [United States](http://www.washingtontimes.com/topics/united-states-of-america/) sign on to the document with only a few minor changes to its language, according to two administration officials familiar with the review. That recommendation is awaiting final approval from the [National Security Council](http://www.washingtontimes.com/topics/national-security-council/). “The [United States](http://www.washingtontimes.com/topics/united-states-of-america/) is continuing to consult with the [European Union](http://www.washingtontimes.com/topics/european-union/) on its initiative to develop a comprehensive set of multilateral TCBMs, also known as the Code of Conduct for Outer Space Activities,” [Rose Gottemoeller](http://www.washingtontimes.com/topics/rose-gottemoeller/), assistant secretary of state for arms control, verification and compliance, said Thursday at the [U.N.](http://www.washingtontimes.com/topics/united-nations/) Conference on Disarmament. TCBM stands for “transparency and confidence-building measures.”

### No space weaponization now – both the US and China are committed to peace

Zhang 11 – Baohui Zhang is Associate Professor of Political Science and Director of the Center for Asia Pacific Studies at Lingnan University, Hong Kong, March/April 2011, "The Security Dilemma in the U.S.-China Military Space Relationship: The Prospects for Arms Control,” Asian Survey, Volume 51, No. 2, pp. 313-314

Perhaps reflecting this new context of space security, when meeting with the heads of foreign air force delegations in November 2009, President Hu Jintao promised that China would “unswervingly uphold the principle of peaceful use of space and actively participate in international cooperation on space security.” 7 Li Daguang, a leading PLA space war expert known for his pessimistic views on international space cooperation, recently argued that “ensuring the peaceful use of outer space and preventing its weaponization represent a consensus of the international community.” 8 These messages show that China has perhaps modified its previous assessment of the feasibility of arms control in outer space. This shift, together with President Obama’s new space policies could dilute the security dilemma between China and the U.S. and pave the way for arms control.

No space weaponization now – the US is key

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

The United States has a very important choice to make between space security and space weapons. Space security means that the satellites we depend on every day to save lives, grow our economy, and support national security will remain available when needed. No nation benefits more from space or has more to lose if space becomes a shooting gallery than the United States. Space is now mercifully free of weapons. The last Cold War test of a satellite-killing weapon occurred twenty years ago. This moratorium is now being challenged. The US Air Force has published and seeks to implement a new doctrine calling for space weapons. If the US tests and deploys these weapons, other nations will surely follow suit, and then everyone’s satellites will be endangered. Satellites are expensive and extremely hard to defend. Space weapons don’t cost very much and are easy to build. Debris in space kills indiscriminately. Space warfare would risk the loss of live-saving satellites. We can also expect far greater casualties in war. US leadership, global commerce, and US alliances will suffer. Space weapons undercut national and international security.

### UX- space mill now, but not weaponization – there’s a key distinction

DeBlois 02(“Outer Space and Global Security, Militarization, Weaponization and Space Sanctuary: Past Dialogues, Current Discourse, Important Distinctions”, United States Council on Foreign Relations, http://www.ploughshares.ca/libraries/Abolish/OuterSpaceConfGeneva02/DeBloisConf2002.htm)

[To be clear on what is meant by space “weaponization,”……….. the current state of affairs reflects that space is currently militarized - but not weaponized. Globally, we are postured with communications and intelligence gathering capabilities that offer the possibility of everyone watching everyone – nurturing global stability. These capabilities are used in military force enhancement roles and are accurately referred to as “space militarization,” but few would argue that these force enhancement capabilities constitute “space weapons”. There may be latent terrestrial-to-space capable systems such as Airborne Lasers, but they are not dedicated ASAT systems, nor has their use as “space weapons” been exercised to any great extent. In fact, both Russia and the United States have opted in favor of restraint on ASAT deployment. So in these terms, the issue becomes clear: Given that space is currently militarized - but not weaponized….. should we allow space weaponization (either explicitly by collaborative and coordinated action, or implicitly by inaction)? At this juncture, I would simply like to frame the debate, by making several propositions, and several counter-propositions, as to the advent of space weapons. I will not attempt to support or attack these here, but I contend that they are credible, they are supportable, and they are at odds with each other – hence the debate]

### No space weaponization now – Cold War weapons were destroyed

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

SPACE IS NOW A SANCTUARY While satellites in space have long been used to assist military operations, space has remained a sanctuary free of weapons. No weapons have ever been deployed or used in space. The 1963 Limited Test Ban Treaty bans nuclear testing above ground, and the 1967 Outer Space Treaty bans all weapons of mass destruction in space. Weapons in space can be particularly deadly. Low levels of radiation from nuclear tests in the atmosphere before 1963 linger to this day. Radiation from the Pentagon’s 1962 STARFISH nuclear test damaged or destroyed five US satellites and one British satellite. Ground-based, anti-satellite weapons were tested occasionally during the Cold War, and rudimentary satellite-killing weapons were considered ready for use during brief periods. These weapons were mothballed or destroyed. The sanctuary of space was protected during the Cold War. With wise leadership, it can remain protected today

## Uniqueness --- Not Inevitable

### **Saying weaponization is inevitable is a self-fulfilling prophecy**

Park 6 – Andrew T. Park, 2006, "Incremental Steps for Achieving Space Security: The Neec for a New Way of Thinking to Enchance the Legal Regime for Space," Houston Journal of International Law, Volume 28, No. 3, pg 871-911, <http://www.hjil.org/ArticleFiles/28_3_871.pdf>

The simplest argument for space weaponization (inevitability) may also be the most reckless because of its self-fulfilling nature. Proponents of the inevitability of space weaponization have proffered multiple theories as to why the realm of space will eventually become weaponized. According to the logic of these inevitability proponents, the United States should lead the way rather than be left in the dust as military technology continues to rapidly develop. However, while the inevitability argument may have some merit, its true danger lies in its unverifiable nature until weaponization actually occurs. Moreover, it is important to note that this premise is driven not only by American insecurities, but also by the need for the United States to control its own future. Since the ideological divide between “space doves” and those who believe space weaponization is inevitable is not likely to be bridged soon, the international community must recognize the need for a legal regime for space with teeth—or, put another way, a legal regime that goes beyond simply establishing a set of norms that have little to no consequences.

### **Space weaponization is not inevitable – no US funding now**

Wilkerson 8 – Don L. Wilkerson, Lieutenant Colonel of the United States Army, US Army War College, Master of Strategic Studies Degree, 2008, "Space Power Theory, Controlling the Medium Without Weapons in Space," [www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300)

It is difficult to support Oberg’s prognostication that weapons in space are inevitable for the U.S. in the 21st Century. The extensive cost of current space programs like Global Positioning System (GPS), Space-Based Infrared System (SIBIRS), the Rapid Attack Identification Detection Reporting System (RAIDRS) and Space Based Radar (SBR) along with numerous service military programs competing7 within a limited defense budget, it is highly unlikely that the U.S. government will make more funding available for space weapons when the currently perceived threat can be mitigated using existing cost effective capabilities. The August 2006 U.S. National Space Policy states that its primary objective is to ensure that the U.S. maintains and enables free access to and the use of space for peaceful purposes. The policy mandates that the U.S. will pursue programs and capabilities to ensure space assets are protected since they are vital to our national security and economic interests. 13

### **Space militarization is not inevitable – it’s a choice**

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

Space weapons are not inevitable. The decision to place weapons in space is a choice, not certainty. Those who argue otherwise point to human nature, historical analogies, economic vulnerability and military necessity to make their case that space weapons are unavoidable. 28 Each of these arguments has merit but none hold up to scrutiny to make a strong case for the inevitability of space weapons. The human nature argument states that people are warlike and the nation states they run will do whatever is in their national interest, which naturally includes taking weapons wherever they go, including space. 29 The implication is that humans cannot control the tendency to develop and deploy any weapon that could give them an actual or perceived military advantage6 over an adversary. It should be noted however, that for the last forty-five years space has in fact been free from weapons. 30 Humans and nations have resisted the temptation so far. Other weapons, such as chemical and biological weapons and land mines have also fallen into disrepute and though not yet eliminated, they are certainly out of favor. 31

Space militarization is not inevitable – it’s different from sea and air power

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

In the case of Sea Power, militarization followed because the sea transported people and commerce and served as a means for armies to invade enemy lands. 33 Unlike the sea, commerce and people do not transit through space, only information does. While information is vital in today’s global economy, it is not solely dependent on space as a medium of transit. The idea of invasion from space is only an issue in Hollywood. As for militarization under the sea, it is important to note that weapons were the first and, for a long time, the only use for subsurface vessels. Their purpose, tied to the surface, was denying the use of the seas for commerce and transport.

The case for Air Power seems more promising as argued by Gen Estes above, but further examination finds some significant flaws as well. One significant difference between air and space is that air is territorial and space is not. 34 Though the two mediums evolved similarly initially, they have not continued to do so. 35 Weaponization of the air took only ten years from the development of the first aircraft. As stated earlier, it has been forty-five years now without the weaponization of space. The development of observation aircraft and bombers necessitated the development of fighters to defend against them; therefore, weaponization of the air was inevitable for the defense of a nation’s territory. 36 In contrast, observation and reconnaissance from space has had a stabilizing effect internationally. The freedom of the United States and Russia to see what the other side was doing became so important that it was codified in several arms control treaties. This necessity, in part, led both sides to unilaterally abandoned anti-satellite programs that could threaten the other’s reconnaissance satellites, something without precedence in Air Power history. 37

### Weaponization is not inevitable – the US is key

Johnson 3 – Dr Rebecca Johnson is the Executive Director of the Acronym Institute for Disarmament Diplomacy, based in London, and has written widely on nonproliferation, arms control and space security policy. 2003, "Security Without Weapons in Space: Challenges and Options," www.unidir.org/pdf/articles/pdf-art1990.pdf

Placing weapons in space is not the inevitable outcome of the use of space for commercial purposes. Many of the perceived vulnerabilities of space assets can be addressed in other ways. At present, no one but the United States has the capability, intention and resources to pose a significant risk to space-based assets. In addition, no State with the technological potential to pose a future threat to US (or other) space assets (for example, the Russian Federation, China, France/European Union, India) is prioritizing financial or technical resources to developing weapons capable of threatening space assets, and all of these are more interested in building or maintaining cooperative (if sometimes uneasy) alliances with the hyper-Power. If US military developments in space continue their drive towards weaponization, however, other Governments may feel under pressure to devote political, financial and technological resources to counter or offset US space-based superiority. Before such expensive and dangerous military responses become necessary, a number of Governments and NGOs are exploring legal, political and diplomatic ways to address space security and weapons.

### Space weaponization not inevitable – their arguments are based on faulty logic

Krepon and Clary 3 – Michael Krepon, served as the president and CEO of the Henry L. Stimson Center, Christopher Clary, Research Assistant for the Weaponization of Space Project at the Stimson Center, April 2, 2003, “Space Assurance or Space Dominance? The Case Against Weaponizing Space,” Henry L. Stimson Center, http://www.stimson.org/images/uploads/research-pdfs/spacebook.pdf

The Rumsfeld Commission’s report did not dwell on, or even mention, these possibilities. Instead, it focused on foreign threats while citing historical examples and future projections. One keen analyst of U.S. space policy, Karl Mueller of the RAND Corporation, argues that the Commission’s conclusion that space warfare was virtually inevitable is “based on a smattering of evidence and logic, extrapolated into facile overgeneralizations that are well-suited for television talk-show punditry but which are a poor basis for national policymaking.” In this view, human nature has not filled every vacuum with weapons or warfare, with some environments and regions escaping this fate entirely. Nor is the postulate that warfare follows commerce correct in all cases. Indeed, air warfare preceded commercial aviation.18

### Space weaponization is not inevitable – logic overrides violence

Lowery 7 – Scott Lowery, systems engineer at Lockheed Martin, 2007, “Why the Weaponization of Space Should Not Be Pursued,” http://www.colorado.edu/pwr/occasions/articles/Lowery\_Why%20the%20Weaponization%20of%20Space%20Should%20Not%20Be%20Pursued.pdf

The pro-weaponization adherents’ arguments of inevitability focus on the notion that the United States must have an early lead in space weapons or suffer the consequences. They have several reasons for believing in inevitability; however, each argument contains logical fallacies that preclude it from representing a rational policy. Karl Mueller of the International Studies Association best sums up the deficiency of their arguments, which are “based on a smattering of evidence and logic, extrapolated into facile overgeneralizations that are well-suited for television talk-show punditry but which provide a poor basis for national policymaking (Mueller).” Their first argument is that inevitability is a consequence of human nature. This is blatant pessimism as there are many weapons such as chemical missiles and radiation bombs that provide tactical advantages but have been shied away from. Agreements such as the Chemical Weapons Convention banned the use of these weapons, because it is difficult to control their effects and they create hazardous environmental conditions. The signature of 182 states (Status) on this agreement signifies that logic can override baser instincts towards violence.

### Space weaponization is not inevitable – there are no motives

Lowery 7 – Scott Lowery, systems engineer at Lockheed Martin, 2007, “Why the Weaponization of Space Should Not Be Pursued,” http://www.colorado.edu/pwr/occasions/articles/Lowery\_Why%20the%20Weaponization%20of%20Space%20Should%20Not%20Be%20Pursued.pdf

The third argument for inevitability is that the expanding influence space has on the economy will precipitate an attack on space systems. Pro-weaponizers see the economic dependence on space as a vulnerability waiting to be exploited. However, the logic behind such an attack is lacking. It is unreasonable for another nation state to attack US space assets for the sole purpose of economic disruption. Because the US is a superpower, its economy is interlinked with the rest of the world, so that if another nation—for instance, China—damaged US space assets, it would most likely feel the economic effects of the attack itself, namely through the loss of the $200 billion (Trade) of goods it exports to the United States. Similarly, attacking space assets as a terrorist action is also illogical. There are many surface targets whose destruction would also cause widespread havoc such as dams, bridges, refineries, computer systems, and so on. All of them require far less sophistication to destroy than satellites.

### Space weaponization is not inevitable – ground systems will be exploited instead

Lowery 7 – Scott Lowery, systems engineer at Lockheed Martin, 2007, “Why the Weaponization of Space Should Not Be Pursued,” http://www.colorado.edu/pwr/occasions/articles/Lowery\_Why%20the%20Weaponization%20of%20Space%20Should%20Not%20Be%20Pursued.pdf

The final and most solid case for inevitability rests on the fact that space assets are an excellent military target, and attacking them would be an effective precursor to terrestrial warfare. The argument has some merit, as it has been shown that space plays a key role in the abilities of the US military. The argument states that if the US does not develop space weapons, someone else will, placing the US at a disadvantage. This is reasonable but not conclusive. If an enemy did want to disrupt US space power, it would not necessarily need to weaponize space. The earth-based portions of space systems, such as ground control stations and communication dishes, are equally vulnerable and can be destroyed with existing, far cheaper systems: a few men with bombs can disable a satellite network just as well as a ballistic missile. In summary, the arguments for inevitability fall short of being substantive, relying on little more than the “sky is falling mentality” (Belote).

### Countries are avoiding weaponization if possible

Krepon 4 – Michael Krepon, president and CEO of the Henry L. Stimson Center, November 2004, “Weapons in the Heavens: A Radical and Reckless Option,” Arms Control Association, http://www.armscontrol.org/act/2004\_11/Krepon#Lewis2

Rumsfeld’s transformation in U.S. military space policy is driven by worst-case assumptions that the weaponization of space is inevitable; that conflict follows commerce in space, as on the ground; and that the United States must not wait to suffer a “Space Pearl Harbor.”[[3]](http://www.armscontrol.org/act/2004_11/Krepon#notes3) Yet, the countries most capable of developing such weapons, such as Russia and China, have professed strong interest in avoiding the weaponization of space. The Bush administration has refused negotiations on this subject.

### Space wep not inev- Rumsfeld commission indicte

Krepon and Clary 03- Michael Krepon with Christopher Clary, Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College., Clary is currently a PhD student in the Department of Political Science of the Massachusetts Institute of Technology., Space Assurance or Space Dominance?

The Rumsfeld Commission’s report did not dwell on, or even mention, these possibilities. Instead, it focused on foreign threats while citing historical examples and future projections. One keen analyst of U.S. space policy, Karl Mueller of the RAND Corporation, argues that the Commission’s conclusion that space warfare was virtually inevitable is “based on a smattering of evidence and logic, extrapolated into facile overgeneralizations that are well-suited for television talk-show punditry but which are a poor basis for national policymaking.” In this view, human nature has not filled every vacuum with weapons or warfare, with some environments and regions escaping this fate entirely. Nor is the postulate that warfare follows commerce correct in all cases. Indeed, air warfare preceded commercial aviation.18

### Space weponization is not inev

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

The weaponization of space is not inevitable. If it were, it would have occurred during the Cold War. Rather than engaging in such a competition now, a far wiser course would be to strengthen efforts to promote space assurance. Key elements of a space assurance posture include unilateral initiatives that enhance situational awareness in space and reduce satellite vulnerability; research and development programmes that deter others from crossing key thresholds and hedge against adverse developments by potential adversaries; and cooperative measures, international agreements and codes of conduct for responsible space space-faring nations. Cooperative measures, including information exchanges and greater transparency regarding space launches and payloads, could lend credence to declaratory statements of peaceful intent, while also serving to clarify threatening and destabilizing activities in space. Transparency measures must be sufficient enough to alleviate concerns over worrisome activities, particularly that military capabilities designed for other purposes are not being tested in ways that are virtually indistinguishable from preparations for space warfare. If states are sufficiently concerned about the 52 weaponization of space, they will agree to significant, intrusive and broadranging cooperative and transparency measures. Cooperative behaviour could be codified in bilateral or multilateral executive agreements as well as in treaty form. Alternatively, cooperative behaviour might result from quiet consultations that do not yield written accords of any kind. It makes sense to accomplish what is politically feasible and useful first, while still pursuing other avenues of cooperation in space that are not yet ripe for accomplishment. The pursuit of initiatives that are unlikely in the short term—such as an international convention banning certain destabilizing activities in space—could still have utility, as this effort would demonstrate global sentiment in favour of space assurance and against the flight-testing, deployment and use of space weaponry. If a bipartisan consensus in Washington in favour of space assurance and against space weapons is not forthcoming, the clarification of this choice elsewhere—particularly among US allies, friends and major powers—has particular value.

### DEFENSE CARD against space mill inev

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

The potential for space warfare has long existed in the form of longrange missiles carrying nuclear weapons, as well as additional weapon systems designed for other missions, such as missile defence interceptors. These latent or residual capabilities have not led inexorably to an arms race in space. To the contrary, these residual capabilities serve as hedges against unwelcome and unwise decisions by potential adversaries. Residual capabilities to engage in space warfare will continue to exist and serve as a necessary hedge against unwelcome surprises as well as an alternative to dedicated platforms designed for space warfare. Existing military capabilities designed for other missions that could be used for space warfare do not impair space assurance, as long as they are not tested in ways that mimic space warfare.

## Uniqueness --- Space Leadership High Now

### Space leadership high now – China and Russia are far behind

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

US advantages in outer space have never been greater, while threats to US satellites are far less than during the Cold War. Today, the United States spends $36 billion a year for activities in outer space — over 70% of all global expenditures. The numbers are even more lopsided for defense spending: Washington spends approximately $20 billion a year — almost 90% of the global pie — on military-related activities in space. During the Cold War, the Soviet Union was a significant competitor in outer space, typically launching over seventy space missions every year. Today, the Russian space program launches less than one-third of this amount. The Pentagon’s budget is now over 10 times larger than Russia’s military budget. The Chinese space program is on the move, but it is still decades behind the United States. Beijing has launched eighty satellites in the past thirty-five years, compared to 1,200 for the United States. The Pentagon’s budget is over four times larger than Beijing’s military spending.

## Uniqueness --- No Space Threats Now

### **No risk of space conflict now – their evidence is hype and US deterrence checks back**

Weston 9 – Major Scott A. Weston, US Air Force, Troy University; MA, Naval Postgraduate School, 2009, "Examining Space Warfare: Scenarios, Risks, and US Policy Implications," Air & Space Power Journal. XXIII, No. 1, 73-82, [www.airpower.maxwell.af.mil/airchronicles/apj/apj09/spr09/weston.html](http://www.airpower.maxwell.af.mil/airchronicles/apj/apj09/spr09/weston.html)

After all the hype about space warfare and space weapons, an examination of currently fielded forces capable of direct counterspace operations against satellites clearly shows that few countries can conduct this type of warfare. Most threats envisioned in the US military's space doctrine simply do not exist in an operationally deployed form. Space-Conflict Scenarios Because current US space policy considers the entire space infrastructure a vital national interest, an attack against it or even preparation for one would likely incur a military response. (31) Rationally, then, we would think that other nations would refrain from attacking US space assets unless they are engaging or already engaged militarily with us. In this regard, the deterrent threat of US retaliation would establish a lower limit to space conflict, much as it does with other forms of military confrontation.

### There are no threats to space assets now – hostile ASATs are decades away

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

While it is true that other countries are pursuing both space assets and counter-space options, there is some reason to question whether the current threat assessment is justified. Leaving aside the question of the ballistic missile threat, it is unclear what real threats to U.S. space assets exist today or will exist in the near and medium term. Proponents of weaponizing space usually cite the emergence of an acute threat in the 2020 time frame or beyond; the Space Commission report puts the possible development of hostile anti-satellite systems at decades away.They cite as an indicator of the threat trend the fact that there are more and more countries, now 50-plus, with space capabilities. Available technologies, from imaging to telecommunications to tracking and signals intelligence, are progressing rapidly; and many are available on the commercial marketplace.The Space Commission report also includes extensive analysis of the possible vulnerabilities of U.S. space assets, especially commercial satellites and communications grids: "The reality is that there are many extant capabilities to deny, disrupt or physically destroy space systems and the ground facilities that use and control them." For example, a September 2001 report by the U.S. Department of Transportation, "Vulnerability Assessment of the Transportation Infrastructure Relying on the Global Positioning System," highlights the fact that the GPS network is easily disrupted in part due to its low power signals and because its characteristics are well known due to its civil uses.[25](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn25" \o ")  The Space Commission noted that there already are available Russian-made, handheld jamming devices that can block GPS receivers for up to 120 miles. In addition, like other satellite networks, the 24 GPS satellites have stable and predictable orbits. However, vulnerabilities do not necessarily result in threats. In order to threaten U.S. space assets, military or commercial, a potential adversary must have both technological capabilities and intent to use them in a hostile manner. There is little hard evidence that any other country or hostile non-state actor possesses either the technology or the intention to seriously threaten U.S. military or commercial operations in space — nor is there much evidence of serious pursuit of space-based weapons by potentially hostile actors.

### **Space assets are not vulnerable and will not be targeted**

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

The third argument for weapons in space is that there is a threat to the ever-growing United States economic dependence on space. This presumably makes space assets a target for a potential enemy and requires we defend those assets with space weapons. The questions to consider here are many. How great is the cost to defend those assets with space weapons verses the cost of the assets themselves? Most military space systems are many times more expensive than the civilian satellites they would presumably protect. How likely are civilian space assets to be targeted by an adversary in any case? Most civilian systems or systems with significant economic value operate in very high earth orbit (11,000 nm to 24,000 nm) making them more difficult to target than a military reconnaissance satellite in low earth orbit (350 nm). Finally, why would an enemy want to threaten such systems? Presumably, the reason would be to hurt the United States economically or coerce behavior. 38 Since most economic space assets have terrestrial alternatives like fiber optic communications or terrestrial navigation aids, it would seem space assets would be an unlikely target given the technical capabilities necessary to damage them decisively. Precision would be difficult to achieve. In a highly globalized world economy, damaging space infrastructure would very likely affect more than just the United States economy. Finally, numerous earthbound targets exist that would cause comparable or greater impact at significantly less cost and effort to an adversary.

### **There is no coming space war – conventional weapons solve**

Wilkerson 8 – Don L. Wilkerson, Lieutenant Colonel of the United States Army, US Army War College, Master of Strategic Studies Degree, 2008, "Space Power Theory, Controlling the Medium Without Weapons in Space," [www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300)

Space power as a theory illustrates the importance of strategic space systems and demonstrates that space is the “ultimate high ground” in which policy makers and commanders will need to formulate actions to seize and control in support of strategic objectives. Theoretically, on-orbit offensive space capabilities would be used to find, fix, track, and destroy targets in space, air, on land and at sea. Again, if this capability existed, the employment of space weapons would be more of a combat multiplier in support of the other geographical mediums rather than providing unilateral control of all environments from space. Gray contends that space power “adds the greatest value for lethality in combat in the twentieth century.” 22 However, since most of the United States’ current offensive space power capabilities are ground-based and augmented with superior conventional as well as other non-kinetic weapons and forces, one could argue that we currently control the space medium without the cost, proliferation and hazards associated with placing weapon systems in orbit. Gray believes that the strategic interest in terms of space power theory “lies in the consequences of its application for deterrence and the conduct of war as a whole.” 2 The concept of space control put forth by Gray compares the control of the space medium as similar to conducting blockades and ‘choke points’ like Mahan’s maritime strategy for sea power. Space has similar choke points such as specific launch sites attempting to launch offensive space weapons or satellites that are susceptible to attack or that can be held at risk. 24 Again, these choke points or space blockades can be affected using existing capabilities without the need for placing weapons in space. The naval theories of Sir Julian Corbett are probably more fitting when considering a space power theory based on the control of space. Corbett emphasized the “conditional nature” of sea control. He believed that the conditional nature could be positive and defined as one’s ability to travel the seas freely. Corbett also believed that the conditional nature could be negative or the ability to deny this freedom to the enemy. It could either be local or global, permanent or temporary. This theory is very similar and applicable to the strategy of space control. 25

No matter how integral and essential space operations will be during combat operations, it is doubtful that today’s wars and those in the immediate future will be decided in space. Therefore, Gray’s prospect of space control is less likely to be contested under that Mahanian concept of “battle fleets” clashing in space whether manned or unmanned.2

### No countries currently threaten US satellites, and space weapons do nothing to help

Zhang 5 – Hui Zhang, research associate in the Project on Managing the Atom at Harvard University, December 5, 2005, “Action/Reaction: U.S. Space Weaponization and China,” Arms Control Association, http://www.armscontrol.org/print/1943

The United States clearly has legitimate concerns about its space assets, given that U.S. military operations and the U.S. economy are increasingly dependent on them. Satellites are inherently vulnerable to attacks from many different sources, including ground-based missiles, lasers, and radiation from a high-altitude nuclear explosion. However, it does not mean that the United States currently faces credible threats from states that might exploit those vulnerabilities.[[8](http://www.armscontrol.org/act/2005_12/print/1943#note08)] Most analysts believe no country seriously threatens U.S. space assets.[[9](http://www.armscontrol.org/act/2005_12/print/1943#note09)] Only the United States and, in the Cold War era, the Soviet Union have explored, tested, and developed space weapons; Russia placed a moratorium on its program in the 1980s. To be sure, a number of countries, including China, are capable of attacking U.S. satellites with nuclear weapons, but such an attack would be foolhardy, as it would almost certainly be met by a deadly U.S. response. Moreover, as many experts point out, space-based weapons cannot protect satellites because these weapons are nearly as vulnerable to attack as the satellites themselves.[[10](http://www.armscontrol.org/act/2005_12/print/1943#note10)] No wonder that many countries, including China and Russia, have sought multilateral negotiations on the prevention of space weaponization.

### There is no need to protect space assets – ground-based components would be attacked instead

Pena and Hudgins 2 – Charles V. Pena, senior defense policy analyst, Edward L. Hudgins, former director of regulatory studies at the Cato Institute, March 18, 2002, “Should the United States ‘Weaponize’ Space? Military and Commercial Implications,” Policy Analysis, No. 427, page 6, http://www.cato.org/pubs/pas/pa427.pdf

According to the Space Commission, “Nations hostile to the U.S. possess or can acquire the means to disrupt or destroy U.S. space systems by attacking the satellites in space, their communications nodes on the ground and in space, or ground nodes that command the satellites.”29 Much of the Space Commission’s focus has been on the vulnerability of and threat posed to satellites in space. However, Hays and Mueller point out, “Satellites . . . are likely to be a more difficult and thus less attractive target set for direct attack under most circumstances than are other components of space systems, such as launch facilities or ground-control stations, and if they are attacked, it will most likely be through indirect means such as communications jamming.”30 A background paper prepared for the Rumsfeld Commission also states that “one of the easiest ways to disrupt, deny, degrade, or destroy the utility of space systems is to attack or sabotage the associated ground segments.”31 Thus, the more immediate concern should be the vulnerability of ground-based components. Those elements could be susceptible to a variety of threats, including direct military attack (e.g., with aircraft or missiles), terrorist attack, sabotage, and jamming. Space-based assets themselves are not the most likely or easiest targets of attack, particularly for so-called poor rogue states. Thus, there is a less pressing need to focus on space itself and the potential threats to spacebased assets.

### It’s easier to attack ground-based components

**Pena and Hudgins 2** – Charles V. Pena, senior defense policy analyst, Edward L. Hudgins, former director of regulatory studies at the Cato Institute, March 18, 2002, “Should the United States ‘Weaponize’ Space? Military and Commercial Implications,” Policy Analysis, No. 427, page 6, http://www.cato.org/pubs/pas/pa427.pdf

Electronic jamming is already within the technical competence of many countries, including Russia, China, Iraq, North Korea, Iran, and Cuba.32 Most commercial and civilian satellites do not have anti-jamming capability and are, therefore, susceptible to such attacks. Electronic jamming is a legitimate concern because it can be done relatively easily and cheaply. For example, two rookie engineers from the U.S. Air Force Research Laboratory were able to build a homemade jammer using a petrol-driven electricity generator, wood, plastic piping, and copper tubing. The total cost was only $7,500, and all of the required parts were obtained at an electronics enthusiasts’ swap meet.33 According to Steve Blum, president of Tellus Venture Associates, a satellite consulting firm, sending a signal up to a given satellite and jamming it is nothing new.34 Also, satellite jamming is relatively easy to trace.35

### Space assets are in no danger – adversaries are targeting military on Earth

Krepon and Clary 3 – Michael Krepon, served as the president and CEO of the Henry L. Stimson Center, Christopher Clary, Research Assistant for the Weaponization of Space Project at the Stimson Center, April 2, 2003, “Space Assurance or Space Dominance? The Case Against Weaponizing Space,” Henry L. Stimson Center, http://www.stimson.org/images/uploads/research-pdfs/spacebook.pdf

Space warfare initiated by a far weaker adversary offers the prospect of mass disruption, whereas terrestrial attacks offer the prospect of mass disruption and mass casualties. Is poking a much stronger foe in the eye, ear, cell phone, or pager a particularly compelling strategy for those who wish to harm the United States? Terrorists and their state sponsors have chosen far different categories of targets in the past, with disturbingly successful results. Have efforts to counter terrorist designs been so successful that sworn foes would need to move from terrestrial to space warfare? It stretches credulity to argue that asymmetric warfare in space is a virtual certainty by the weak against the strong when the powerful have better means to compensate for vulnerabilities in space than on Earth. The prioritization of threats facing the United States and U.S. friends and allies is essential for developing appropriate countermeasures. A wide spectrum of asymmetric threats continues to plague U.S. citizens and preoccupy the U.S. armed forces. These threats and appropriate responses are not in the heavens; they are thoroughly terrestrial.

## A2 Iran Threat

### **Iran is not a space threat**

Weston 9 – Major Scott A. Weston, US Air Force, Troy University; MA, Naval Postgraduate School, 2009, "Examining Space Warfare: Scenarios, Risks, and US Policy Implications," Air & Space Power Journal. XXIII, No. 1, 73-82, [www.airpower.maxwell.af.mil/airchronicles/apj/apj09/spr09/weston.html](http://www.airpower.maxwell.af.mil/airchronicles/apj/apj09/spr09/weston.html)

Finally, any scenario involving conflict with Iran includes the possibility that that country would use its ballistic missiles to attack US space assets. Because attacking a specific satellite would involve tracking and targeting resources that Iran does not possess, such an attempt would amount to a blind strike against the orbital environment. By scattering debris at altitudes used by the United States’ ISR satellites, Iran could hope to degrade or disable as many such satellites as possible. Although this threat is real, many reasons argue against carrying it out. First, debris clouds are indiscriminate and would potentially damage satellites from every nation that uses those specific altitudes. The guaranteed international condemnation would only serve to strengthen the US political position globally with respect to the conflict. Second, the United States’ ability to model and track debris clouds to a certain extent would enable it to mitigate some postattack risk from debris. Finally, the use of Iranian ballistic missiles in this manner would make them unavailable for attacks against US forces on the ground.

## A2 North Korea Threat

### **North Korea is not a space threat**

Weston 9 – Major Scott A. Weston, US Air Force, Troy University; MA, Naval Postgraduate School, 2009, "Examining Space Warfare: Scenarios, Risks, and US Policy Implications," Air & Space Power Journal. XXIII, No. 1, 73-82, [www.airpower.maxwell.af.mil/airchronicles/apj/apj09/spr09/weston.html](http://www.airpower.maxwell.af.mil/airchronicles/apj/apj09/spr09/weston.html)

Despite the great damage, no lives have been lost, so nuclear retaliation against North Korea resulting in heavy civilian casualties would be inappropriate. Although military confrontation with North Korea would similarly put many lives at risk, it remains the most likely international response to ensure regime change and prevent additional nuclear explosions. In this case, there is little place for counterspace operations because North Korea has no space assets for the United States to attack. The United States would deem any remaining missiles and launch facilities high-priority targets in its first retaliatory strikes. Destruction of launch and satellite communication centers would obviate the need for further offensive space operations. One could possibly consider this case an attack justifying the “Pearl Harbor” label, but all spacefaring nations—not only the United States—would become victims. Rather than derive strategic benefit from the attack, the North Korean regime would only guarantee its demise.

## SMIL Bad – Laundry List

### Weaponization hurts arms control agreements, space assets, and the environment

Maogoto & Freeland 8 – Jackson Nyamuya Maogoto, Senior Lecturer in International Law, University of Newcastle, \*\*AND Steven Freeland, Associate Professor in International Law, University of Western Sydney (Australia); Visiting Professor of International Law, University of Copenhagen, (Denmark); Member of the Space Law Committee of the International Law Association; Member of the International Institute of Space Law. "From Star Wars to Space Wars - the next strategic frontier: paradigms to anchor space security," January 1st, 2008, Journal of Air and Space Law, Volume 33, pp. 35

Because of its uniquely commanding height, outer space has gained even greater military and strategic value in the post-cold-war international strategic environment. This provides for the possibility that outer space will become a platform for warfare. This development will only result in negative consequences. It will disrupt global strategic balances and stability, undermine international and national security and harm existing arms control arrangements, in particular those related to nuclear weapons and missiles. All of these will inexorably trigger a new arms race — the symptoms of which we are already witnessing. In addition, the deployment and use of space weapons will seriously threaten the security of space assets and risks causing irreversible harm to the biosphere of the earth. A common sense approach will not unduly jeopardize the economic and strategic interests of those States utilizing space technology, but will make it clear that there are strict binding limits as to how far and for what purposes this technology can be implemented.

## SMIL Bad – Accidental Launch 1NC

### Space weaponization causes US-Russian accidental war

Graham 5 – Thomas Graham, Jr., former special representative of the president for arms control, nonproliferation, and disarmament, December 2005, “Space Weapons and the Risk of Accidental Nuclear War,” Arms Control Association, http://www.armscontrol.org/act/2005\_12/DEC-SpaceWeapons

The United States and Russia maintain thousands of nuclear warheads on long-range ballistic missiles on 15-minute alert. Once launched, they cannot be recalled, and they will strike their targets in roughly 30 minutes. Fifteen years after the end of the Cold War, the chance of an accidental nuclear exchange has far from decreased. Yet, the United States may be contemplating further exacerbating this threat by deploying missile interceptors in space. Both the United States and Russia rely on space-based systems to provide early warning of a nuclear attack. If deployed, however, U.S. space-based missile defense interceptors could eliminate the Russian early warning satellites quickly and without warning. So, **just the existence of U.S. space weapons could make Russia’s strategic trigger fingers itchy.** The potential protection space-based defenses might offer the United States is swamped therefore by their potential cost: a failure of or false signal from a component of the Russian early warning system could lead to a disastrous reaction and accidental nuclear war. There is no conceivable missile defense, space-based or not, that would offer protection in the event that the Russian nuclear arsenal was launched at the United States. Nor are the Russians or other countries likely to stand still and watch the United States construct space-based defenses. These states are likely to respond by developing advanced anti-satellite weapon systems.[[1](http://www.armscontrol.org/act/2005_12/DEC-SpaceWeapons#note01)] These weapons, in turn, would endanger U.S. early warning systems, impair valuable U.S. weapons intelligence efforts, and increase the jitteriness of U.S. officials.

## Accidental Launch 2NC --- Link Extension

### Wep causes arms race with china and mis calc

Hui 05 (Zhang Hui is a research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government. His research includes nuclear arms control verification techniques, the control of fissile material, nuclear terrorism, nuclear safeguards, nonproliferation and space. An extended version of this paper was produced for the, Space Weaponization And Space Security: A Chinese Perspective, www.wsichina.org/attach/CS2\_3.pdf)

[Due to the threatening nature of space weapons, it is reasonable to assume that China and others would attempt to block their deployment and use by political and, if necessary, military means.11 Many Chinese officials and scholars believe that China should take every possible step to maintain the effectiveness of its nuclear deterrent. This includes negating the threats from missile defense and space weaponization plans.12 In responding to any U.S. move toward deployment space weapons, the first and best option for China is to pursue an arms control agreement to prevent not just the United States but any nation from doing so -- as it is advocating presently. However, if this effort fails and if what China perceives as its legitimate security concerns are ignored, it would very likely develop responses to counter and neutralize such a threat.

Despite the enormous cost of space-based weapon systems, they are vulnerable to a number of low-cost and relatively low-technology ASAT attacks including the use of ground-launched small kinetic-kill vehicles, pellet clouds or space mines. It is reasonable to believe that China and others could resort to these ASAT weapons to counter any U.S. space-based weapons.13 This, however, would lead to an arms race in space.

To protect against the potential loss of its deterrent capability, China could potentially resort to enhancing its nuclear forces. Such a move could, in turn, encourage India and then Pakistan to follow suit. Furthermore, Russia has threatened to respond to any country's deployment of space weapons.14 Moreover, constructing additional weapons would produce a need for more plutonium and highly enriched uranium to fuel those weapons. This impacts China's participation in the fissile material cut-off treaty (FMCT).15 Eventually, failure to proceed with the nuclear disarmament process, to which the nuclear weapon states committed themselves under the Non-Proliferation Treaty, would damage the entire nuclear nonproliferation regime itself, which is already at the breaking point. As Hu Xiaodi, China's ambassador for disarmament affairs, asked, "With lethal weapons flying overhead in orbit and disrupting global strategic stability, why should people eliminate weapons of mass destruction or missiles on the ground? This cannot but do harm to global peace, security and stability, and hence be detrimental to the fundamental interests of all States."16 ]

### US space mill would cause international arms race and possible miscalc due to valuerablilites as well as offensive incentive

Theresa Hitchens 2002(CDI Vice President, Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons)

[It is inconceivable that either Russia or China would allow the United States to become the sole nation with space-based weapons. "Once a nation embarks down the road to gain a huge asymmetric advantage, the natural tendency of others is to close that gap. An arms race tends to develop an inertia of its own," writes Air Force Lt. Col. Bruce M. DeBlois, in a 1998 article in Airpower Journal.29

Chinese moves to put weapons in space would trigger regional rival India to consider the same, in turn, spurring Pakistan to strive for parity with India. Even U.S. allies in Europe might feel pressure to "keep up with the Joneses." It is quite easy to imagine the course of a new arms race in space that would be nearly as destabilizing as the atomic weapons race proved to be.

Such a strategic-level space race could have negative consequences for U.S. security in the long run that would outweigh the obvious (and tremendous) short-term advantage of being the first with space-based weapons. There would be direct economic costs to sustaining orbital weapon systems and keeping ahead of opponents intent on matching U.S. space-weapon capabilities — raising the proverbial question of whether we would be starting a game we might not be able to win. (It should be remembered that the attacker will always have an advantage in space warfare, in that space assets are inherently static, moving in predictable orbits. Space weapons, just like satellites, have inherent vulnerabilities.) Again, the price tag of space weapons systems would not be trivial — with maintenance costs a key issue. For example, it now costs commercial firms between $300 million and $350 million to replace a single satellite that has a lifespan of about 15 years, according to Ed Cornet, vice president of Booz Allen and Hamilton consulting firm.30 ]

**Space weaponization puts nukes on high alert, causes accidental launch, theft, nuclear terrorism, and miscalc**

**Lewis 4** – Jeffrey Lewis, postdoctoral fellow in the Advanced Methods of Cooperative Security Program at the Center for International and Security Studies at the University of Maryland School of Public Policy, July 2004, “What if Space Were Weaponized?” Center for Defense Information, http://www.cdi.org/PDFs/scenarios.pdf

While China currently maintains its forces on a “no alert” status, Beijing has indicated considerable concern about how a U.S. spacebased missile defense system might undercut its nuclear deterrent. The Chinese ambassador to the Conference on Disarmament warned that the deployment of space weapons would “jeopardize the global strategic balance and stability” and “trigger off … another round of arms race.”38 China currently does not appear to keep nuclear warheads mated to its ballistic missiles, nor aboard its single ballistic missile submarine (which stays in port). All Chinese nuclear weapons appear to be under lock and key in storage facilities that are physically separate from their launch pads. The deployment of space weapons could create strong incentives to reverse this restraint, and increase the alert rates of Chinese forces.39 Raising the alert rates of Russian and Chinese nuclear forces would undermine U.S. security on a day-to-day basis, because forces on alert are inherently more vulnerable to the inherent risks of accident or unauthorized use. Accidents happen, including accidents with U.S. nuclear weapons. In some cases, the warheads were lost – the United States lost at least two nuclear weapons during aircraft crashes in 1958 off the coast of Savannah, Georgia, and in 1966 off the coast of Spain.40 In other cases, warheads have been recovered: In 1996, an Energy Department tractor trailer overturned in a Nebraska blizzard carrying “classified cargo” – later confirmed to be several nuclear warheads. Fortunately, the weapons were recovered undamaged after several hours.41 These kinds of accidents are more likely to happen when forces are kept on alert and moved around. There is also the risk that nuclear warheads might be stolen by terrorists or sold by military units. Although Russian soldiers are now paid regularly, obviating concerns that they might sell nuclear weapons on the black market, both Russia and China have indigenous terrorist groups with ties to al Qaeda. These groups would have strong incentives to attempt to steal one or more nuclear weapons – and mobile missiles patrolling in remote areas, for example, might be an inviting target. Forces on high rates of alert are also vulnerable to the nightmare scenario of an unauthorized launch by a field commander. Although the United States has instituted extensive human reliability programs to ensure that U.S. military personnel are psychologically stable, there is little evidence of comparable programs in Russia or China. Even in a perfect program, mistakes are made. As one U.S. officer recalled: “I used to worry about Gen. [Thomas] Power. I used to worry that Gen. Power was not stable. I used to worry about the fact that he had control over so many weapons and weapon systems and could, under certain conditions, launch the force. Back in the days before we had real positive control, [Stratgeic Air Command] had the power to do a lot of things, and it was in his hands, and he knew it.”42 These problems are a feature of what some call the “always/never” dilemma: “nuclear weapons must always detonate when those authorized direct and never detonate when those authorized do not.” These are cross purposes – finding the right balance between the two requires making intelligent judgments about which risks one chooses to run. Given the enormous destructive power of nuclear weapons and important economic and political interests that the United States shares with both Russia and China, all sides should be more interested in the “never” part of the equation. Yet space weapons, by threatening the nuclear forces of both countries, could well create incentives for Russia and China to do the opposite.

## Accidental Launch 2NC --- Nuclear War

### Space weaponization causes accidental launch and nuclear war

Mitchell et al 1 – Dr. Gordon R. Mitchell, Associate professor of Communication and Director of Debate at the University of Pittsburgh, Kevin J. Ayotte and David Cram Helwich, Teaching Fellows in the Department of Communication at the University of Pittsburgh, July 2001, “Missile Defense: Trans-Atlantic Diplomacy at a Crossroads,” ISIS, http://www.pitt.edu/~gordonm/JPubs/Mitchelletal2001b.pdf

A buildup of space weapons might begin with noble intentions of 'peace through strength' deterrence, but this rationale glosses over the tendency that '… the presence of space weapons…will result in the increased likelihood of their use'.33 This drift toward usage is strengthened by a strategic fact elucidated by Frank Barnaby: when it comes to arming the heavens, 'anti-ballistic missiles and anti-satellite warfare technologies go hand-in-hand'.34 The interlocking nature of offense and defense in military space technology stems from the inherent 'dual capability' of spaceborne weapon components. As Marc Vidricaire, Delegation of Canada to the UN Conference on Disarmament, explains: 'If you want to intercept something in space, you could use the same capability to target something on land'. 35 To the extent that ballistic missile interceptors based in space can knock out enemy missiles in mid-flight, such interceptors can also be used as orbiting 'Death Stars', capable of sending munitions hurtling through the Earth's atmosphere. The dizzying speed of space warfare would introduce intense 'use or lose' pressure into strategic calculations, with the spectre of split-second attacks creating incentives to rig orbiting Death Stars with automated 'hair trigger' devices. In theory, this automation would enhance survivability of vulnerable space weapon platforms. However, by taking the decision to commit violence out of human hands and endowing computers with authority to make war, military planners could sow insidious seeds of accidental conflict. Yale sociologist Charles Perrow has analyzed 'complexly interactive, tightly coupled' industrial systems such as space weapons, which have many sophisticated components that all depend on each other's flawless performance. According to Perrow, this interlocking complexity makes it impossible to foresee all the different ways such systems could fail. As Perrow explains, '[t]he odd term "normal accident" is meant to signal that, given the system characteristics, multiple and unexpected interactions of failures are inevitable'.36 Deployment of space weapons with pre-delegated authority to fire death rays or unleash killer projectiles would likely make war itself inevitable, given the susceptibility of such systems to 'normal accidents'. It is chilling to contemplate the possible effects of a space war. According to retired Lt. Col. Robert M. Bowman, 'even a tiny projectile reentering from space strikes the earth with such high velocity that it can do enormous damage — even more than would be done by a nuclear weapon of the same size!'. 37 In the same Star Wars technology touted as a quintessential tool of peace, defence analyst David Langford sees one of the most destabilizing offensive weapons ever conceived: 'One imagines dead cities of microwave-grilled people'.38 Given this unique potential for destruction, it is not hard to imagine that any nation subjected to space weapon attack would retaliate with maximum force, including use of nuclear, biological, and/or chemical weapons. An accidental war sparked by a computer glitch in space could plunge the world into the most destructive military conflict ever seen.

## Accidental Launch 2NC – Russia Miscalc

### Space weaponization causes miscalc – frequent glitches in Russian early-warning systems would be misinterpreted as attacks

**Lewis 4** – Jeffrey Lewis, postdoctoral fellow in the Advanced Methods of Cooperative Security Program at the Center for International and Security Studies at the University of Maryland School of Public Policy, July 2004, “What if Space Were Weaponized?” Center for Defense Information, http://www.cdi.org/PDFs/scenarios.pdf

During peacetime, it is easy to imagine that the Russians would conclude that the loss of a satellite was either a malfunction or a debris strike. But how confident could U.S. planners be that the Russians would be so calm if the accident in space occurred in tandem with a second false alarm, or occurred during the middle of a crisis? What might happen if the debris strike occurred shortly after a false alarm showing a missile launch? False alarms are appallingly common – according to information obtained under the Freedom of Information Act, the U.S.-Canadian North American Aerospace Defense Command (NORAD) experienced 1,172 “moderately serious” false alarms between 1977 and 1983 – an average of almost three false alarms per week. Comparable information is not available about the Russian system, but there is no reason to believe that it is any more reliable.51 Assessing the likelihood of these sorts of coincidences is difficult because Russia has never provided data about the frequency or duration of false alarms; nor indicated how seriously earlywarning data is taken by Russian leaders. Moreover, there is no reliable estimate of the debris risk for Russian satellites in highly elliptical orbits.52 The important point, however, is that such a coincidence would only appear suspicious if the United States were in the business of disabling satellites – in other words, there is much less risk if Washington does not develop ASATs. The loss of an early-warning satellite could look rather ominous if it occurred during a period of major tension in the relationship. While NATO no longer sees Russia as much of a threat, the same cannot be said of the converse. Despite the warm talk, Russian leaders remain wary of NATO expansion, particularly the effect expansion may have on the Baltic port of Kaliningrad. Although part of Russia, Kaliningrad is separated from the rest of Russia by Lithuania and Poland. Russia has already complained about its decreasing lack of access to the port, particularly the uncooperative attitude of the Lithuanian government. 53 News reports suggest that an edgy Russia may have moved tactical nuclear weapons into the enclave.54 If the Lithuanian government were to close access to Kaliningrad in a fit of pique, this would trigger a major crisis between NATO and Russia. Under these circumstances, the loss of an early-warning satellite would be extremely suspicious. It is any military’s nature during a crisis to interpret events in their worst-case light. For example, consider the coincidences that occurred in early September 1956, during the extraordinarily tense period in international relations marked by the Suez Crisis and Hungarian uprising.55 On one evening the White House received messages indicating: 1. the Turkish Air Force had gone on alert in response to unidentified aircraft penetrating its airspace; 2. one hundred Soviet MiG-15s were flying over Syria; 3. a British Canberra bomber had been shot down over Syria, most likely by a MiG; and 4. The Russian fleet was moving through the Dardanelles. Gen. Andrew Goodpaster was reported to have worried that the confluence of events “might trigger off … the NATO operations plan” that called for a nuclear strike on the Soviet Union.

### There’s a high risk of Russia accidental launch – early warning system are aging and it’s empirically proven

Graham 5 – Ambassador Thomas Graham Jr. is a former senior-level diplomat and a world-renowned authority on nuclear nonproliferation. As a U.S. diplomat, Ambassador Graham was involved in the negotiation of every major arms control and nonproliferation agreement from 1970 to 1997. He participated in nuclear talks with more than 100 countries. Graham was general counsel for the Arms Control and Disarmament Agency. He has advised five U.S. presidents. He earned his J.D. from Harvard Law School and his bachelor’s degree from Princeton. December 2005, "Space weapons and the risk of accidental nuclear war," Arms Control Today, 35.10, p. 12

The Dangers of Failed Early Warning Systems The Russian early warning system is in serious disrepair. This system consists of older radar systems nearing the end of their operational life and just three functioning satellites, although the Russian military has plans to deploy more. The United States has 15 such satellites. Ten years ago, on January 25, 1995, this aging early warning network picked up a rocket launch from Norway. The Russian military could not determine the nature of the missile or its destination. Fearing that it might be a submarine-launched missile aimed at Moscow with the purpose of decapitating the Russian command and control structure, the Russian military alerted President Boris Yeltsin, his defense minister, and the chief of the general staff. They immediately opened an emergency teleconference to determine whether they needed to order Russia's strategic forces to launch a counterattack. The rocket that had been launched was actually an atmospheric sounding rocket conducting scientific observations of the aurora borealis. Norway had notified Russia of this launch several weeks earlier, but the message had not reached the relevant sections of the military. In little more than two minutes before the deadline to order nuclear retaliation, the Russians realized their mistake and stood down their strategic forces. Thus, 10 years ago, when the declining Russian early warning system was stronger than today, it read this single small missile test launch as a U.S. nuclear missile attack on Russia. The alarm went up the Russian chain of command all the way to the top. The briefcase containing the nuclear missile launch codes was brought to Yeltsin as he was told of the attack. Fortunately, Yeltsin and the Russian leadership made the correct decision that day and directed the Russian strategic nuclear forces to stand down.

## SMIL Bad --- China War 1NC

### Space weaponization causes US-Chinese war over Taiwan

Zhang 5 – Hui Zhang, research associate in the Project on Managing the Atom at Harvard University, December 5, 2005, “Action/Reaction: U.S. Space Weaponization and China,” Arms Control Association, http://www.armscontrol.org/print/1943

Historically, China’s stated purpose for developing nuclear weapons was to guard itself against nuclear blackmail. Beijing’s official statements do not discuss potential responses to U.S. space weaponization, but many Chinese officials and scholars argue that China must ensure that U.S. efforts do not negate the effectiveness of its nuclear deterrent. As one Chinese official stated: China is not in a position to conduct an arms race with the United States and it does not intend to do so, particularly in the field of missile defense. However, China will not sit idly by and watch its strategic interests being jeopardized without taking necessary measures. It is quite possible and natural for China to review its military doctrine and a series of policies on the relationship with big powers, Taiwan issues, arms control and nonproliferation, etc. Certainly, the best option for China is to reach an arms control agreement to prevent space weaponization, as it is advocating now. However, if this effort fails and if what China perceives as its legitimate security concerns are ignored, China would very likely develop other responses to neutralize the perceived threat. Because it is not clear what type of missile defense system the United States will finally deploy or whether the U.S. space control plans will be implemented, it is difficult to identify conclusively China’s specific countermeasures. Yet, there are certain options that it would be likely to consider. It should be noted that these discussions are based on China’s capabilities and do not characterize China’s intentions.

### US-China war leads to extinction

Cheong 1 –Ching Cheong, Journalist at the Straits Times and Hong Kong Bureau 2001 (“China, Will Taiwan Break Away? The Rise of Taiwanese Nationalism,” p. 7)

The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities. Beijing also seems prepared to go for the nuclear option. A Chinese military official disclosed recently that Beijing was considering a review of its “non first use” principle regarding nuclear weapons. Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it. He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention. Gen Ridgeway said that should that come to pass, we would see the destruction of civilization. There would be no victors in such a war. While the prospect of a nuclear Armageddon over Taiwan might seem inconceivable, it cannot be ruled out entirely, for China puts sovereignty above everything else.

## China War 2NC --- Arms Race

### Space weaponization causes US-China arms race and makes China change its nuclear policy

Blazejewski 8 – Kenneth S. Blazejewski, master's degree in public affairs from Princeton, JD degree from the New York University School of Law, Spring 2008, "Space Weaponization and US-China Relation" [www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf](http://www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf)

First, if the United States proceeds with space weaponization China will respond by bolstering its own military capabilities. 37 China’s response will seek to preserve the asymmetric threat it poses to US space assets and maintain its nuclear deterrent. Under each of the interpretations considered, China is not willing to allow the United States to build up its space weapons program unchallenged. In the least, China would develop additional ASAT weapons to which the United States would seek to develop effective countermeasures. 38 Alternatively or in addition, China could invest in more ICBMs and nuclear warheads, 39 acquiring the capacity to overwhelm a BMD shield. An option less likely in the near future, China could counter US space weaponization by deploying its own space weapons. Other potential Chinese responses include adopting a “launch on warning” policy or abandoning its no-first-use pledge. 40 Each of these strategies would seek to counter the effectiveness of US space weapons. The United States, of course, could always respond to China’s response, but such tit-for-tat policy making risks devolving into an arms race. Chinese officials claim that an arms race would “likely emerge” unless a negotiated solution can be reached on PAROS. 41 It is noteworthy, however, that under at least two interpretations, this is not China’s preferred outcome. Under the first and second interpretations, China will only proceed with further developing ASAT technology and acquiring additional weapons if it cannot be assured that the United States does not plan to weaponize outer space.

### US weaponization causes China weaponization – perception is key

Zhang 11 – Baohui Zhang is Associate Professor of Political Science and Director of the Center for Asia Pacific Studies at Lingnan University, Hong Kong, March/April 2011, "The Security Dilemma in the U.S.-China Military Space Relationship: The Prospects for Arms Control,” Asian Survey, Volume 51, No. 2, pp. 318

This perception of the American lead in space militarization and attempts for its weaponization is a major motive for the Chinese military to develop similar projects and thus avoid U.S. domination in future wars. The PLA believes that control of the commanding heights will decide the outcome of future wars, and China cannot afford to cede that control to the U.S. As a result, space war is a key component of the PLA Air Force’s (PLAAF) new doctrines. In 2006 the PLAAF released a comprehensive study called Military Doctrines for Air Force, which makes the following statement: In future wars, merely possessing air superiority will no longer be sufficient for seizing the initiative of battles. In significant ways, only obtaining space superiority could ensure controlling the initiative of war. The contest in outer space has become the contest for the new commanding heights. Seizing control of space will mean control of the global commanding heights, which will in turn enable dominance in air, land, and sea battles. Thus, it is impossible to achieve national security without obtaining space security. 23

### US militarization leads to China militarization

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

Like Russia, China would need to evaluate the threat space weapons pose to their national security and respond accordingly. With a less mobile, more static strategic nuclear force, China may have less assurance than Russia that their forces could survive a first strike. If they perceive retaliatory forces could not penetrate a combined space and ground based missile to inflict enough damage to provide deterrent, space based defense may drive them to rapidly advance the capabilities of their strategic forces, increasing numbers, modernizing reentry systems and improving mobility. Regarding the most likely point of future conflict with China, the issue of Taiwan, any offensive or defensive space system that improves the United States’ ability to project force in the western Pacific Ocean will be seen as a threat. As a growing space power, China is perhaps in the best position to pose a threat to American space dominance. Regardless of our actions, China may pursue means to attack or defeat our space systems (weaponized or otherwise), but by developing space weapons first, the United States surely invites that conclusion.

### US space weapons bad – China arms race, accidental launch, and terrorism

Blazejewski 8 – Kenneth S. Blazejewski, master's degree in public affairs from Princeton, JD degree from the New York University School of Law, Spring 2008, "Space Weaponization and US-China Relation" [www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf](http://www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf)

I recommend that the United States accept a commitment to forgo placement of weapons in outer space. The costs of space weaponization simply outweigh the benefits. Above, I argue that China would respond to US space weaponization with some level of military buildup. In the least, this response would include the deployment of a more robust ASAT system capable of attacking and potentially eliminating space weapons. 52 After all, space weapons, like military satellites, make for vulnerable military targets. 53 The use of space-based weapons in a conflict must be discounted by the likelihood that they would be eliminated by Chinese ASAT attack. More importantly, increased ASAT deployment would have the counterproductive effect of exposing US satellites to greater threat. Aside from ASAT issues, Chinese response to US space weaponization would include an increase in China’s ICBM fleet and nuclear arsenal. Vertical proliferation cannot be in the interests of the United States, if only for the increased peacetime risks of accidental launch or the terrorist risk associated with increased availability of weapons technology and components. Finally, the United States should not discount the possibility, often cited by opponents of space weaponization, that the deployment of US space weapons would instigate a space arms race.

### Space weaponization causes Chinese prolif

Zhang 5 – Hui Zhang, research associate in the Project on Managing the Atom at Harvard University, December 5, 2005, “Action/Reaction: U.S. Space Weaponization and China,” Arms Control Association, http://www.armscontrol.org/print/1943

One of China’s simplest options would be to build more ICBMs. Until now, although China has the smallest declared nuclear arsenal of the five nuclear-weapon states, its modernization efforts have been aimed more at quality than quantity. The current effort focuses mainly on enhancing the survivability of its strategic nuclear force through greater mobility. By contrast, the size of the force has grown quite modestly. Absent U.S. missile defense plans, China might be expected to build no more than 50 ICBMs by 2015. China’s plans could change significantly were the United States to deploy a more comprehensive or more operationally successful missile defense. To maintain a credible minimum retaliatory capability, the size and quality of China’s nuclear arsenal would have to shift. Predicting an exact response is difficult without knowing the specifications of a U.S. missile defense system, including the numbers of interceptors and the firing doctrine. However, one could project the potential changes in size of China’s nuclear arsenal based on a few simple assumptions. For example, China might need about 100-300 ICBMs to defeat the current U.S. system if that system employed 100-250 interceptors. Clearly, China would need even more warheads to penetrate a layered ballistic missile defense system.

## SMIL Bad --- Colonization

### US space wep bad- hinder the colonization of space- innovation- science development- communications

Krepon and Clary 03- Michael Krepon with Christopher Clary, Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College., Clary is currently a PhD student in the Department of Political Science of the Massachusetts Institute of Technology., Space Assurance or Space Dominance?

What compelling need is there to weaponize space when American military superiority is so extensive, and terrestrial developments to extend U.S. power projection capabilities are so promising? One argument is that portions of the earth’s surface are not quickly reached by conventional U.S. power projection capabilities, and that space-based weapons could remedy this apparent shortcoming. Perceived gains by somewhat longer and quicker reach into the interior of, say, Russia, China, or Iran must be weighed against the resulting impairment of U.S. diplomacy, non-proliferation efforts, and alliance ties. Moreover, space warfare initiatives would threaten commercial networks on which advanced industrial societies have become increasingly dependent. They could also impair the continuation of an extraordinary phase of scientific exploration that fosters new insights about the origins and future of our planet, our solar system, and the mysteries that lie beyond.

## SMIL Bad – Deterrence

### Space weaponization kills deterrence and causes nuclear war

Krepon and Clary 3 – Michael Krepon, served as the president and CEO of the Henry L. Stimson Center, Christopher Clary, Research Assistant for the Weaponization of Space Project at the Stimson Center, April 2, 2003, “Space Assurance or Space Dominance? The Case Against Weaponizing Space,” Henry L. Stimson Center, http://www.stimson.org/images/uploads/research-pdfs/spacebook.pdf

The presumed additional deterrent value of U.S. space weapons is also questionable. If existing U.S. conventional military and nuclear superiority prove insufficient to deter, it is doubtful that the addition of space warfare capabilities would make an appreciable difference in an adversary’s calculus of decision. The search to strengthen or supplant nuclear deterrence by means of space warfare capabilities will therefore appear to many as a quest to escape from, rather than “enhance,” deterrence. When viewed though this lens, the pursuit of space weapons appears designed less for strengthening deterrence and more for negating the deterrents of potential adversaries. To the extent that this perception holds, the flight-testing and deployment of space weapons is unlikely to raise the nuclear threshold, as proponents claim. To the contrary, the use of conventionally armed "space-strike" weapons could prompt unwanted escalation by threatening the nuclear forces of a weaker foe. In this event, the United States will receive little or no applause of the choice of weaponry used in preemptive strikes.

## SMIL Bad --- Economy 1NC

### Space weapons are very expensive and hurt the economy

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

Such a strategic-level space race could have negative consequences for U.S. security in the long run that would outweigh the obvious (and tremendous) short-term advantage of being the first with space-based weapons. There would be direct economic costs to sustaining orbital weapon systems and keeping ahead of opponents intent on matching U.S. space-weapon capabilities — raising the proverbial question of whether we would be starting a game we might not be able to win. (It should be remembered that the attacker will always have an advantage in space warfare, in that space assets are inherently static, moving in predictable orbits. Space weapons, just like satellites, have inherent vulnerabilities.) Again, the price tag of space weapons systems would not be trivial — with maintenance costs a key issue. For example, it now costs commercial firms between $300 million and $350 million to replace a single satellite that has a lifespan of about 15 years, according to Ed Cornet, vice president of Booz Allen and Hamilton consulting firm.[30](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn30" \o ")

### Global economic crisis causes war---strong statistical support---their defense doesn’t account for global crises properly

Royal 10 – Jedediah Royal, Director of Cooperative Threat Reduction at the U.S. Department of Defense, 2010, “Economic Integration, Economic Signaling and the Problem of Economic Crises,” in Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-215

**Thus, the answer to the first question set out at the beginning of this section, whether economic integration and economic crises are linked, seems reasonably well-established. Substantial recent scholarship indicates a positive association between interdependence and economic crises. What then about the second question?** Is there a correlation between economic crises and armed conflict? **The** impacts **at an individual level and** on a state level are **intuitive and** well-documented **(see, e.g., Richards & Gelleny, 2006). Rodrik (1997a, 1997b), among others, argues that** instability in the global economic system contributes tosocial disintegration and political conflict**. Social unrest, regime change and even** civil war have directly resulted from the vagaries of economic integration**.3 Less intuitive is how periods of** economic decline mayincrease the likelihood of external conflict**. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that** rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the **often** bloody transitionfrom one pre-eminent leader to the next**. As such, exogenous shocks such as** economic crises could usher in a redistribution of relative power **(see also Gilpin. 1981) that leads to uncertainty about power balances,** increasing the risk of miscalculation **(Feaver, 1995). Alternatively,** even a relatively certain redistribution of power could lead to a permissive environment for conflict **as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that '**future expectation of trade' is asignificant variablein understanding economic conditions and security behaviour of states**. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However,** if the expectations of future trade decline**, particularly for difficult to replace items such as energy resources,** the likelihood for conflict increases, as states will be inclined to use force to gain access to those resources**.** Crises could **potentially be the** trigger **for** decreased trade expectations **either on its own or because it triggers protectionist moves by interdependent states.4 Third,** others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess **(2002)** find astrong correlationbetween internal conflict and external conflict**,** particularly during **periods of** economic downturn**. They write: The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the** presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other**. (Blomberg & Hess, 2002. p. 89)** Economic decline has **also** been linked with anincrease in the likelihood of terrorism **(Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government.** “Diversionary theory" suggests **that,** when facing unpopularity arising from economic decline**, sitting** governments have increased incentives to fabricate external military conflicts **to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that** the tendency towards diversionary tactics are greater for democratic states **than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that** periods of weak economic performance in the U**nited** S**tates, and thus weak Presidential popularity,** are statistically linked to an increase in the use of force. **In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas** political sciencescholarship links economic decline with external conflictat systemic, dyadic and national levels**.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention. This observation is not contradictory to other** perspectives that link economic interdependence with a decrease in the likelihood of external conflict**, such as those mentioned in the first paragraph of this chapter. Those studies** tend to focus on dyadic interdependence instead of global interdependenceand do not specifically consider the occurrence of and conditions created byeconomic crises**. As such, the view presented here should be considered ancillary to those views.**

## **Economy 2NC --- Link Extensions**

### Space mill bad-Econ-Space weapons would damage key components to the econ

O'Hanlon 11(senior fellow in Foreign Policy Studies at the [Brookings Institution](http://www.sourcewatch.org/index.php?title=Brookings_Institution), where he specializes in U.S. defense strategy and budgeting, [homeland security](http://www.sourcewatch.org/index.php?title=Homeland_security), Northeast Asian security, and humanitarian intervention. He is also adjunct professor at the public policy school of Columbia University, a visiting lecturer at Princeton University, and a member of the [International Institute for Strategic Studies](http://www.sourcewatch.org/index.php?title=International_Institute_for_Strategic_Studies) and the [Council on Foreign Relations](http://www.sourcewatch.org/index.php?title=Council_on_Foreign_Relations)."[[1]](http://www.sourcewatch.org/index.php?title=Michael_E._O%27Hanlon#cite_note-MEHan-0), Balancing U.S. Security Interests in Space)

Space systems were a focus of arms control debate during the Cold War, and many would still like outer space, the last physical frontier of the human experience, to be a sanctuary from military competition.1 These proponents favor binding, permanent, multilateral bans on space weaponry. Beyond their philosophical motivation, American opponents of the weaponization of space make a practical national-interest argument: as the world's principal space power today, the United States stands to lose the most from weaponization, since it could jeopardize the communications and reconnaissance systems on which the U.S. military and economy so disproportionately depend.2 Opponents of weaponizing space also point to the world's growing economic dependence on space assets and to the risk of damaging those assets should weaponry be based in or used outside of the atmosphere.

### Space weponization would kill us economy and us econ competitiveness due to the negative effects on the satilites

Krepon 4- Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt., Avoiding the Weaponization of Space

[Space warfare would have far-reaching adverse effects for global commerce, especially commercial transactions and telecommunication services that use satellites. Worldwide space industry revenues now total almost $110 billion a year, $40 billion of which go to US companies.4 These numbers do not begin to illuminate how much disruption would occur in the event of space warfare. For a glimpse of what could transpire, the failure of a Galaxy IV satellite in May 1998 is instructive. Eighty-nine percent of all US pagers used by 45 million customers became inoperative, and direct broadcast transmissions, financial transactions, and gas station pumps were also affected.5 ]

## **Economy 2NC --- War**

### Crisis makes diversionary theory true – states will start wars to head off domestic discontent

Rothkopf 9 – David Rothkopf, Visiting Scholar at the Carnegie Endowment for International Peace, 3-11, 2009, “Security and the Financial Crisis,” Testimony Before the House Armed Services Committee, CQ Congressional Testimony, lexis

--Destabilizing Bilateral or Regional Effects of the Crisis: The weakening of states can produce instability that spills across borders or can produce social pressures that increase migration and create associated tensions along borders. The rise of opposition groups can create an opportunity for like-minded neighbors to support their activities and thus cause rifts and potential conflicts to spread. Political and economic weakness in nations can be seen by opportunistic neighbors (some wishing to produce distractions from their own crises) as an invitation to intervene in their neighbors politics or even to step in and take control of neighboring territories or to seek to use force to resolve in their favor long-simmering disputes. In the same vein, old animosities may be inflamed by the crisis either because they produce tensions that play into the origins of old rivalries or because political leaders seek to play on those rivalries to produce a distraction from their inability to manage the economic crisis. Need may enhance tensions and produce conflicts over shared or disputed resources. A desire to preserve national resources, jobs, or capital may produce reactive economic, border or other policies that can increase tension with neighbors. This can include both trade and capital markets protectionism (in traditional and new forms see below), closed or more tightly monitored borders, more disputes on cross-border issues and thus both an increase in tensions and a decreased ability to effectively cooperate with neighbors on issues of common concern.

Global economic crisis causes nuclear great-power war

Mead 9 – Walter Russell Mead, the Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations, 2-4, 2009, “Only Makes You Stronger,” The New Republic, http://www.tnr.com/politics/story.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8&p=2

If current market turmoil seriously damaged the performance and prospects of India and China, the current crisis could join the Great Depression in the list of economic events that changed history, even if the recessions in the West are relatively short and mild. The United States should stand ready to assist Chinese and Indian financial authorities on an emergency basis--and work very hard to help both countries escape or at least weather any economic downturn. It may test the political will of the Obama administration, but the United States must avoid a protectionist response to the economic slowdown. U.S. moves to limit market access for Chinese and Indian producers could poison relations for years. For billions of people in nuclear-armed countries to emerge from this crisis believing either that the United States was indifferent to their well-being or that it had profited from their distress could damage U.S. foreign policy far more severely than any mistake made by George W. Bush. It's not just the great powers whose trajectories have been affected by the crash. Lesser powers like Saudi Arabia and Iran also face new constraints. The crisis has strengthened the U.S. position in the Middle East as falling oil prices reduce Iranian influence and increase the dependence of the oil sheikdoms on U.S. protection. Success in Iraq--however late, however undeserved, however limited--had already improved the Obama administration's prospects for addressing regional crises. Now, the collapse in oil prices has put the Iranian regime on the defensive. The annual inflation rate rose above 29 percent last September, up from about 17 percent in 2007, according to Iran's Bank Markazi. Economists forecast that Iran's real GDP growth will drop markedly in the coming months as stagnating oil revenues and the continued global economic downturn force the government to rein in its expansionary fiscal policy. All this has weakened Ahmadinejad at home and Iran abroad. Iranian officials must balance the relative merits of support for allies like Hamas, Hezbollah, and Syria against domestic needs, while international sanctions and other diplomatic sticks have been made more painful and Western carrots (like trade opportunities) have become more attractive. Meanwhile, Saudi Arabia and other oil states have become more dependent on the United States for protection against Iran, and they have fewer resources to fund religious extremism as they use diminished oil revenues to support basic domestic spending and development goals. None of this makes the Middle East an easy target for U.S. diplomacy, but thanks in part to the economic crisis, the incoming administration has the chance to try some new ideas and to enter negotiations with Iran (and Syria) from a position of enhanced strength. Every crisis is different, but there seem to be reasons why, over time, financial crises on balance reinforce rather than undermine the world position of the leading capitalist countries. Since capitalism first emerged in early modern Europe, the ability to exploit the advantages of rapid economic development has been a key factor in international competition. Countries that can encourage--or at least allow and sustain--the change, dislocation, upheaval, and pain that capitalism often involves, while providing their tumultuous market societies with appropriate regulatory and legal frameworks, grow swiftly. They produce cutting-edge technologies that translate into military and economic power. They are able to invest in education, making their workforces ever more productive. They typically develop liberal political institutions and cultural norms that value, or at least tolerate, dissent and that allow people of different political and religious viewpoints to collaborate on a vast social project of modernization--and to maintain political stability in the face of accelerating social and economic change. The vast productive capacity of leading capitalist powers gives them the ability to project influence around the world and, to some degree, to remake the world to suit their own interests and preferences. This is what the United Kingdom and the United States have done in past centuries, and what other capitalist powers like France, Germany, and Japan have done to a lesser extent. In these countries, the social forces that support the idea of a competitive market economy within an appropriately liberal legal and political framework are relatively strong. But, in many other countries where capitalism rubs people the wrong way, this is not the case. On either side of the Atlantic, for example, the Latin world is often drawn to anti-capitalist movements and rulers on both the right and the left. Russia, too, has never really taken to capitalism and liberal society--whether during the time of the czars, the commissars, or the post-cold war leaders who so signally failed to build a stable, open system of liberal democratic capitalism even as many former Warsaw Pact nations were making rapid transitions. Partly as a result of these internal cultural pressures, and partly because, in much of the world, capitalism has appeared as an unwelcome interloper, imposed by foreign forces and shaped to fit foreign rather than domestic interests and preferences, many countries are only half-heartedly capitalist. When crisis strikes, they are quick to decide that capitalism is a failure and look for alternatives. So far, such half-hearted experiments not only have failed to work; they have left the societies that have tried them in a progressively worse position, farther behind the front-runners as time goes by. Argentina has lost ground to Chile; Russian development has fallen farther behind that of the Baltic states and Central Europe. Frequently, the crisis has weakened the power of the merchants, industrialists, financiers, and professionals who want to develop a liberal capitalist society integrated into the world. Crisis can also strengthen the hand of religious extremists, populist radicals, or authoritarian traditionalists who are determined to resist liberal capitalist society for a variety of reasons. Meanwhile, the companies and banks based in these societies are often less established and more vulnerable to the consequences of a financial crisis than more established firms in wealthier societies. As a result, developing countries and countries where capitalism has relatively recent and shallow roots tend to suffer greater economic and political damage when crisis strikes--as, inevitably, it does. And, consequently, financial crises often reinforce rather than challenge the global distribution of power and wealth. This may be happening yet again. None of which means that we can just sit back and enjoy the recession. History may suggest that financial crises actually help capitalist great powers maintain their leads--but it has other, less reassuring messages as well. If financial crises have been a normal part of life during the 300-year rise of the liberal capitalist system under the Anglophone powers, so has war. The wars of the League of Augsburg and the Spanish Succession; the Seven Years War; the American Revolution; the Napoleonic Wars; the two World Wars; the cold war: The list of wars is almost as long as the list of financial crises. Bad economic times can breed wars. Europe was a pretty peaceful place in 1928, but the Depression poisoned German public opinion and helped bring Adolf Hitler to power. If the current crisis turns into a depression, what rough beasts might start slouching toward Moscow, Karachi, Beijing, or New Delhi to be born? The United States may not, yet, decline, but, if we can't get the world economy back on track, we may still have to fight.

## SMIL Bad --- Hegemony 1NC

### Space weapons kill hegemony – it leads to balancing and destroys military flexibility

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

Karl Mueller, now at RAND, in an analysis for the School of Advanced Airpower Studies at Maxwell Air Force Base, wrote, "The United States would not be able to maintain unchallenged hegemony in the weaponization of space, and while a space-weapons race would threaten international stability, it would be even more dangerous to U.S. security and relative power projection capability, due to other states' significant ability and probably inclination to balance symmetrically and asymmetrically against ascendant U.S. power."[31](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn31" \o ") Spurring other nations to acquire space-based weapons of their own, especially weapons aimed at terrestrial targets, would certainly undercut the ability of U.S. forces to operate freely on the ground on a worldwide basis — negating what today is a unique advantage of being a military superpower.[32](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn32" \o ")  U.S. commercial satellites would also become targets, as well as military assets (especially considering the fact that the U.S. military is heavily reliant on commercial providers, particularly in communications). Depending on how widespread such weapons became, it also could even put U.S. cities at a greater risk than they face today from ballistic missiles.

### US hegemonic decline causes nuclear transition wars

Ikenberry 08 (John is a professor of Politics and International Affairs at [Princeton University](http://en.wikipedia.org/wiki/Princeton_University). The Rise of China and the Future of the West Can the Liberal System Survive?, Foreign Affairs, Jan/Feb)

Power transitions are a recurring problem in international relations. As scholars such as Paul Kennedy and Robert Gilpin have described it, world politics has been marked by a succession of powerful states rising up to organize the international system. A powerful state can create and enforce the rules and institutions of a stable global order in which to pursue its interests and security. But nothing lasts forever: long-term changes in the distribution of power give rise to new challenger states, who set off a struggle over the terms of that international order. Rising states want to translate their newly acquired power into greater authority in the global system -- to reshape the rules and institutions in accordance with their own interests. Declining states, in turn, fear their loss of control and worry about the security implications of their weakened position. These moments are fraught with danger. When a state occupies a commanding position in the international system, neither it nor weaker states have an incentive to change the existing order. But when the power of a challenger state grows and the power of the leading state weakens, a strategic rivalry ensues, and conflict -- perhaps leading to war -- becomes likely. The danger of power transitions is captured most dramatically in the case of late-nineteenth-century Germany. In 1870, the United Kingdom had a three-to-one advantage in economic power over Germany and a significant military advantage as well; by 1903, Germany had pulled ahead in terms of both economic and military power. As Germany unified and grew, so, too, did its dissatisfactions and demands, and as it grew more powerful, it increasingly appeared as a threat to other great powers in Europe, and security competition began. In the strategic realignments that followed, France, Russia, and the United Kingdom, formerly enemies, banded together to confront an emerging Germany. The result was a European war. Many observers see this dynamic emerging in U.S.-Chinese relations. "If China continues its impressive economic growth over the next few decades," the realist scholar John Mearsheimer has written, "the United States and China are likely to engage in an intense security competition with considerable potential for war."

## Hegemony 2NC --- Link Extension

### Space weaponization kills heg and triggers war

MacDonald 9 – Bruce W. MacDonald, Senior Director of the Congressional Commission on the Strategic Posture of the United States, Winter 2009, “Steps to strategic security and stability in space: a view from the United States,” http://www.unidir.org/pdf/articles/pdf-art2907.pdf

It would be unwise for any country to seek space dominance, for quite practical and strategic reasons. There are many ways to attack space assets, and it is easier and cheaper to attack than to defend them, which would likely frustrate any sustained attempt at dominance and leave every country worse off. In trying to maintain dominance, any country would be at the mercy of unpredictably advancing space technologies that could favour another country. In the face of likely resistance to such a provocative and hegemonic posture, any country seeking to dominate in space would constantly be trying to stay ahead technologically to maintain this dominance, demanding large expenditures that would be a growing burden on other national security and economic needs. Such a situation would also be very unstable, especially if another country achieved a technological breakthrough that threatened to upset the previously dominant country’s hegemony. A crisis occurring in this context could provide a compelling incentive to the about-to-be-dethroned country to pre-empt before its space dominance slipped away.

### Space weapons reduce US military superiority – opposing views are flawed

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

In the event, this analysis indicates that space-based weapons, though in the short term increasing military capabilities, are in the long term very likely to have a negative effect on the national security of the United States. Specifically, I will argue, the vulnerabilities of space-based systems would largely negate their projected advantages. Further, potential enemies would react to U.S. deployments, either avoiding their effects or, more ominously, space-basing weapons of their own. These deployments would fundamentally reduce the current relative advantages the United States enjoys in conventional forces and strategic depth—reducing the time and distance in which effective defenses must be created. Arguments for the necessity of space-basing weapons are politically untenable, based on false assumptions, or narrowly focused on space-centric concepts that fail to integrate and take full advantage of capabilities of terrestrially based forces. Finally, I will propose a balanced policy and strategy that should optimize maintenance of relative advantages while hedging against uncooperative adversaries.

### Space weponization for the us would be bad- due to military capability

Theresa Hitchens 2002(CDI Vice President, Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons)

[Spurring other nations to acquire space-based weapons of their own, especially weapons aimed at terrestrial targets, would certainly undercut the ability of U.S. forces to operate freely on the ground on a worldwide basis — negating what today is a unique advantage of being a military superpower.32 U.S. commercial satellites would also become targets, as well as military assets (especially considering the fact that the U.S. military is heavily reliant on commercial providers, particularly in communications). Depending on how widespread such weapons became, it also could even put U.S. cities at a greater risk than they face today from ballistic missiles.

The potential for strategic consequences of a space race has led many experts, including within the military, to tout a space arms control regime as an alternative. A ban on space weapons and ASATs could help preserve — at least for some time — the status quo of U.S. advantage (especially if coupled with U.S. moves to shore up passive satellite defenses). In a recent article in Georgetown Journal of International Affairs, Jeffrey Lewis, a graduate research fellow at the Center for International Security Studies at the University of Maryland, makes a good case for an arms control approach, arguing: "If defensive deployments in space cannot keep pace with offensive developments on the ground, then some measure of restraining offensive capabilities needs to be found to even the playing field.[[5]](#footnote-5)"[[6]](#footnote-6)33

In any event, it is clear that U.S. policy-makers must look at the potential strategic and direct military risks, and the costs, of weaponizing space.]

### Military space use bad could cause miscalc and loss of US credibility

Gallagher 5– Nancy Gallagher, Nancy Gallagher is the Associate Director for Research at the Center for International and Security Studies at Maryland (CISSM) and a Senior Research Scholar at the University of Maryland's School of Public Policy. he has been an arms control specialist in the State Department, a Foster Fellow in the Arms Control and Disarmament Agency, and a faculty member at Wesleyan University. , Towards a Reconsideration of the Rules for Space Security,

- Even though the line between “benign” military-support satellites and “threatening” military space capabilities is less clear now than it was in the 1950s and 1960s, it is still valuable to differentiate between uses of space that enhance mutual security and those that are destabilizing. In scenarios where adversaries were both armed with anti-satellite weapons, there would be strong incentives to strike first. But space-based weapons can be destabilizing even if only one country possesses them. For example, one of the main arguments for space-based weapons is to shorten the response time between target identification and attack. A pre-emptive security strategy that places a premium on speed, however, quickly runs up against the limits of intelligence and human judgment. In Iraq and Afghanistan, the United States launched a number of fast, precise, lethal attacks against purported leadership targets, only to learn later that some attack decisions were spectacularly wrong. The United States pays a high price in lost legitimacy for such mistakes, especially when it goes to war with few allies and little foreign support. The “collateral damage” in these cases was relatively minor compared with the general carnage of war, but a single mistake could cause mass casualties if, for example, a precision attack on a biological weapons storage facility pinpointed the explosion a few meters away from where weapons were actually stored — close enough for the shock wave to rupture the containers and disperse the agents, but not close enough for the heat (and radiation, if nuclear warheads were used) to sterilize the pathogens.63

## Hegemony 2NC --- Trades Off With Military

### **Tight budgets mean space weapons trade off with conventional military funding**

Coleman 2 – [Sean](http://spacedebate.org/author/1007) J. Coleman, February 2002, "Space Based Weapons are Wrong." [U.S. Naval Institute Proceedings](http://spacedebate.org/source/U.S.%20Naval%20Institute%20Proceedings). (February 2002): pg. 96

Despite a proposed 7% increase in the Department of Defense (DoD) budget, resources are constrained. The billions of dollars -- some estimates are in the tens of billions -- needed to develop space-based weapon capabilities will take money from transformation efforts that will make greater contributions to the nation's security, both now and in the long term. Retired Navy Vice Admiral Arthur Cebrowski, DoD's new Director of Force Transformation is correct in his oft-stated view that "numbers matter." Weaponizing space will mean fewer ships, planes, tanks, and other platforms capable of taking the fight to the enemy.

### **Even minor space weapons cost hundreds of billions and trade off with the Army, Navy, and Marines**

Dolman 6 – Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force?s School of Advanced Air and Space Studies, Dr. Dolman began his career as an intelligence analyst for the National Security Agency, and moved to the United States Space Command in 1986. In 1991, he received the Director of Central Intelligence?s Outstanding Intelligence Analyst award. 2006, "U.S. Military Transformation and Weapons in Space," School of Advanced International Studies (SAIS) Review, XXVI, No. 1 (Winter-Spring 2006), pg. 163-174, <http://spacedebate.org/evidence/2309/>

The immediate budget impact of significant funding increases for space weapons would be to decrease funding for combat aircraft, the surface battle fleet, and ground forces. This may well set the proponents of space weaponization at odds with both proponents and opponents of increased defense spending. Space advocates must sell their ideas to fellow pro-weapons groups by making the case that the advantages they provide outweigh the capabilities forgone. This is a mighty task. The tens or even hundreds of billions of dollars needed to develop, test and deploy a minimal space weapons system with the capacity to engage a few targets around the world could displace a half-dozen or more aircraft carrier battle groups, entire aircraft procurement programs such as the F-22, and several heavy armored divisions. This is a tough sell for supporters of a strong military. It is an even more difficult dilemma for those who oppose weapons in general, and space weapons in particular. Ramifications for the most critical current function of the Army, Navy, and Marines—pacification, occupation, and control of foreign territory—are profound. With the downsizing of traditional weapons to accommodate heightened space expenditures, the U.S. ability to do all three would wane significantly. At a time when many are calling for increased capability to pacify and police foreign lands, in light of the no-end-in-sight occupations of Iraq and Afghanistan, space weapons proponents must advocate reduction of these capabilities in favor of a system that will have no direct potential to do so.

## SMIL Bad --- Indo-Pak War 1NC

### India and Pakistan would build space weapons in response to the US

Lewis 4 – Jeffrey Lewis, postdoctoral fellow in the Advanced Methods of Cooperative Security Program at the Center for International and Security Studies at the University of Maryland School of Public Policy, July 2004, “What if Space Were Weaponized?” Center for Defense Information, http://www.cdi.org/PDFs/scenarios.pdf

India is a state that may pursue ASAT capabilities, if other states do so first. The chief of the Indian Air Force, S. Krishnaswamy, recently remarked that: “Any country on the fringe of space technology like India has to work towards such a command as advanced countries are already moving towards laser weapons platforms in space and killer satellites.”57 Pakistan has a much smaller industrial base, but has long attempted to match Indian deployments – particularly in military matters. Pakistan is likely to emulate Indian ASAT efforts, given the enmity between the two countries and the relative advantage that India derives from the use of space for military operations.

### Indo-Pak space weaponization causes nuclear war

Lewis 4 – Jeffrey Lewis, postdoctoral fellow in the Advanced Methods of Cooperative Security Program at the Center for International and Security Studies at the University of Maryland School of Public Policy, July 2004, “What if Space Were Weaponized?” Center for Defense Information, http://www.cdi.org/PDFs/scenarios.pdf

Perhaps more importantly, the risk of Pakistani ASAT attacks would create the same escalatory incentives for India that the United States faces in the second scenario. U.S. war games suggest that future conflicts in South Asia may not be very stable.72 A contractor who has conduct more than two dozen war games for the Pentagon and other military-planning centers told the *Wall Street Journal* that the India-Pakistan scenarios usually escalate to the use of nuclear weapons “within the first 12 ‘days’ of the war game.” “It’s a scary scenario,” said one participant. Anti-satellite weapons would reinforce the strong escalatory dynamic that many war games have revealed. For example, war games that quickly escalate to nuclear use are often restarted to allow the Indian side to reconsider some of the moves that lead to Pakistani escalation. The Indian side, however, generally learns the opposite lesson and attempts a “lighting strike” to destroy the Pakistani nuclear stockpile. When asked if the Indian Armed Force could really execute a preemptive strategy, one participant noted, “Probably not, but they believe they could.”

## Indo-Pak War 2NC --- Turns Case

### Indo-Pakistan space war kills GPS and turn case

Lewis 4 – Jeffrey Lewis, postdoctoral fellow in the Advanced Methods of Cooperative Security Program at the Center for International and Security Studies at the University of Maryland School of Public Policy, July 2004, “What if Space Were Weaponized?” Center for Defense Information, http://www.cdi.org/PDFs/scenarios.pdf

In war games conducting by the United States Navy, very similar scenarios were played out.67 In each of these scenarios, Pakistan used limited nuclear weapon attacks to attempt to disrupt Indian conventional operations. During a conflict in 2010, Pakistan may have a strong incentive to launch preemptive strikes against satellites used by the Indian military for reconnaissance and communications. Such strikes would pose substantial challenges to U.S. security policy. First, even limited strikes against Indian satellites could very well endanger U.S. space assets, including imaging satellites and civil space missions. A 1985 ASAT test conducted by the United States created hundreds of pieces of debris, many of which remained in orbit for a decade. In 1999, one of these pieces of debris came within about one kilometer from the International Space Station. 68 Although unlikely, the National Academy of Sciences has warned of the possibility of “collisional cascading” from debris impacts at crowded altitudes.69 High altitude nuclear detonations could also create substantial collateral damage, through electromagnetic pulse (EMP) and radiation effects. Second, Pakistan might target third-party satellites used by the Indian Army. Potential targets would include commercial imaging and communications satellites, as well as the GPS or European Galileo system if Indian forces were allowed to utilize those services during an offensive. Such attacks would have unanticipated affects on the United States. In one war game, the United States faced what one participant called “ugly choices” about commercial satellites being used by potential opponents. Participants discovered that they were unable to determine who might be affected by a decision to shoot down a commercial satellite. This, according to one participant, “vastly complicates the national security landscape.”70

## Indo-Pak War 2NC --- Extinction

### India-Pakistan nuclear war destroys the ozone layer and causes extinction

Fox 8 – “India-Pakistan Nuclear War Would Cause Ozone Hole” by Maggie Fox, April 8th, 2008, Planet Ark, http://www.planetark.com/dailynewsstory.cfm/newsid/47829/story.htm

Eight nations are known to have nuclear weapons, and Pakistan and India are believed to have at least 50 weapons apiece, each with the power of the weapon the United States used to destroy Hiroshima in 1945. Mills said the study added a new factor to the worries about what might damage the world's ozone layer, as well as to research about the effects of even a limited nuclear exchange. "The smoke is the key and it is coming from these firestorms that build up actually several hours after the explosions," he said. "We are talking about modern megacities that have a lot of material in them that would burn. We saw these kinds of megafires in World War Two in Dresden and Tokyo. The difference is we are talking about a large number of cities that would be bombed within a few days." Nothing natural could create this much black smoke in the same way, Mill noted. Volcanic ash, dust and smoke is of a different nature, for example, and forest fires are not big or hot enough. The University of Colorado's Brian Toon, who also worked on the study, said the damage to the ozone layer would be worse than what has been predicted by "nuclear winter" and "ultraviolet spring" scenarios. "The big surprise is that this study demonstrates that a small-scale, regional nuclear conflict is capable of triggering ozone losses even larger than losses that were predicted following a full-scale nuclear war," Toon said in a statement.

## SMIL Bad --- Preemptive Strike

### **Space weaponization leads to hair trigger posture in space**

Krepon and Clary 3 – Michael Krepon, served as the president and CEO of the Henry L. Stimson Center, Christopher Clary, Research Assistant for the Weaponization of Space Project at the Stimson Center, April 2, 2003, “Space Assurance or Space Dominance? The Case Against Weaponizing Space,” Henry L. Stimson Center, http://www.stimson.org/images/uploads/research-pdfs/spacebook.pdf

During the Cold War, the United States and the Soviet Union maintained nuclear forces on hair trigger alert, ready to be fired within minutes of an order to launch. One of the likely consequences of seeking a space dominance posture would be to elevate this hair trigger posture into space. Space weapons would beget space mines; ASATs would beget more ASATs. The side that shoots first in space would cross a critical threshold in the history of combat, but it would not alter the dynamics of asymmetric warfare. If the United States carries out preemptive strikes in space, it would still expect retaliation in unconventional ways. And if the weaker party carries out a surprise attack in space, it would still expect a devastating response. Nonetheless, both potential adversaries would perceive more value in shooting first than in asking questions later.

### **Space weapons encourage preemptive strikes because of anonymity and detachment from earth**

Ruhm 3 – Brian C. Ruhm is a major in the U.S. Air Force, April 2003, "Finding the Middle Ground: The U.S. Air Force, Space Weaponization, and Arms Control," <http://www.au.af.mil/au/awc/awcgate/acsc/03-1394.pdf>

Other characteristics of the space environment reinforce space weapons’ destabilizing tendencies. The first is anonymity. Especially with respect to ASAT weapons, space may provide a degree of plausible deniability that would encourage attacks on space assets. The vastness of space and its isolation from population centers may also contribute to a perceived lack of collateral damage. An adversary could launch an attack on space assets with little or no risk of directly harming any human population. A related consideration for the US is that it may be hard pressed to justify responding to such a non-lethal attack, in terms of human lives, even if it vaporized billions of dollars in assets and undermined valuable earth services. These considerations could all reinforce an adversary's inclination to preemptively attack in space. Short of achieving absolute space supremacy, there is little that the US could do to avert this situation. James Oberg comes to a similar conclusion near the end of his book Space Power Theory, which was commissioned by then Commander in Chief of US Space Command General Howell M. Estes III. Oberg writes that "the possibility of a preemptive strike in space will become all too likely. The strategic military gain, system vulnerability, and detachment from an earthbound public's concerns will combine to render space a target much too tempting to pass over."

### **The vulnerability of space weapons leads to preemptive attacks**

Tannenwald 3 – Nina Tannenwald is a research professor at Brown University, Ph.D. in international relations and political theory from Cornell, April 2003, "Law Versus Power on the High Frontier: The Case for a Rule-Based Regime for Outer Space," <http://drum.lib.umd.edu/bitstream/1903/7902/1/tannenwald.pdf>

In terms of their geostrategic impact, space-based weapons do not simply enhance existing threats but introduce a new and greater danger because of the threat they pose to strategic stability. The vulnerability of space-based weapons will likely create incentives for preemptive attack to protect them during a crisis, greatly increasing the likelihood of war. Further, although supporters of space weapons claim that, consistent with the United States' defensive orientation to the world, such weapons would be for defensive purposes, the reality is that, given their characteristics, many of them are inherently offensive weapons. It is widely recognized that space-based ballistic missile defense systems could carry out surprise attacks against terrestrial targets or satellites.

## SMIL Bad --- Proliferation 1NC

### Space weaponization causes proliferation

Krepon and Katz-Hyman 5 – Michael Krepon, president and CEO of the Henry L. Stimson Center, Michael Katz-Hyman, research assistant at Stimson, July 2005, “Space Weapons and Proliferation,” Stimson Institute, http://www.stimson.org/images/uploads/research-pdfs/Space\_Weapons\_and\_Proliferation.pdf

Successful efforts to stop and reverse proliferation face long odds when the dominant state demands to play by its own rules. These odds become even longer when the dominant state cannot enlist the active support of Moscow and Beijing on hard proliferation cases that bother Washington more than them. Nor do Russian or Chinese leaders appear unduly distressed over the difficulties US forces presently face in Iraq. Burden sharing with respect to proliferation is not high on their list of priorities, and is likely to drop lower if US space warfare initiatives are pursued. Official Chinese and Russian threat perceptions of the United States are not articulated in public, but they may reasonably be inferred. Both capitals might well question why Washington seeks to extend its military dominance into space by pursuing capabilities that would not be particularly helpful in scenarios involving Iran, North Korea, or other developing countries. Instead, the pursuit of US dominance into space may well be viewed by Moscow and Beijing as part of a broader effort to negate their nuclear deterrents. If so, prospects for nonproliferation and disarmament would further decline. When dominance poses a threat to major powers whose cooperation is most needed to halt and reverse proliferation, dominance becomes part of the problem, rather than part of the solution.

### Prolif causes extinction

Hellman 8 – Martin Hellman8, Prof Emeritus of Engineering @ Stanford, “Defusing the Nuclear Threat: A Necessary First Step,” <http://www.nuclearrisk.org/statement.php>

Nuclear deterrence has worked for over fifty years, while attempts at nuclear disarmament have borne very limited fruit. The success of deterrence combined with the failure of disarmament has fostered the belief that, repulsive as nuclear deterrence might be, it is the only strategy we can depend on for the indefinite future. Given the horrific consequences of even a single failure, the real question is whether deterrence will work until it is no longer needed. Anything less is a modern day version of Neville Chamberlain’s infamous 1938 statement promising “Peace in our time,” implicitly leaving the problem and likely destruction to our children’s generation. And, as occurred to Chamberlain’s Britain, devastation could come much sooner than anticipated. The danger increases with each new entrant into the nuclear weapons club and more new members, including terrorist groups, are likely in the near future. Given that the survival of humanity is at stake, it is surprising that risk analysis studies of nuclear deterrence are incomplete. A number of studies have estimated the cost of a failure, with estimates ranging from megadeaths for a limited exchange or terrorist act, through possible human extinction for a full-scale nuclear war. But there is a lack of studies of an equally important component of the risk, namely the failure rate of deterrence.

## Proliferation 2NC --- Link Extension

### Space weaponization causes widespread prolif and US/Russia war

Zhang 5 – Hui Zhang, research associate in the Project on Managing the Atom at Harvard University, December 5, 2005, “Action/Reaction: U.S. Space Weaponization and China,” Arms Control Association, http://www.armscontrol.org/print/1943

Moreover, space weaponization would seriously disrupt the arms control and disarmament process. The initiation of U.S. space-based missile defenses would likely cause Russia as well as the United States (in response to Russia) to make smaller reductions in their nuclear arsenals. China would likely be forced to build more warheads to maintain its nuclear deterrent, which could in turn encourage India and then Pakistan to follow suit. Also, Russia has threatened to respond to any country’s deployment of space weapons. Failure to proceed with the nuclear disarmament process would also further undermine the already fragile nuclear nonproliferation regime. As Ambassador Hu Xiaodi warned in 2001, “With lethal weapons flying overhead in orbit and disrupting global strategic stability, why should people eliminate [weapons of mass destruction] or missiles on the ground? This cannot but do harm to global peace, security and stability, hence be detrimental to the fundamental interests of all states.”

### Space weaponization causes global proliferation

Krepon and Katz-Hyman 5 – Michael Krepon, president and CEO of the Henry L. Stimson Center, Michael Katz-Hyman, research assistant at Stimson, July 2005, “Space Weapons and Proliferation,” Stimson Institute, http://www.stimson.org/images/uploads/research-pdfs/Space\_Weapons\_and\_Proliferation.pdf

We argue that additional proliferation of nuclear weapons, rather than new arms races, is the most likely outcome in the event of renewed interest in space warfare. Proliferation will be a natural consequence of more nations feeling less secure as a result of space weapons. Adverse proliferation consequences could be both direct and indirect. China and Russia will likely feel most directly threatened by US space warfare initiatives. Beijing will likely increase its nuclear weapon requirements to counter increased threat perceptions without engaging in an arms race, while Moscow will likely seek to adjust the contraction of its nuclear arsenal, to the extent the Kremlin believes that its deterrent might be challenged by US initiatives. Indirect, horizontal proliferation is likely to result from greater strains in major power relations and in US-alliance ties triggered by US initiatives to dominate space. In the absence of united fronts against proliferation by major powers and by US friends and allies, international efforts to strengthen nonproliferation and disarmament norms are likely to fail, and hedging strategies against a more worrisome future are likely to multiply.

## SMIL Bad – Relations

### Weaponization kills relations with China and Russia and causes global proliferation

Krepon 4 – Michael Krepon, president and CEO of the Henry L. Stimson Center, November 2004, “Weapons in the Heavens: A Radical and Reckless Option,” Arms Control Association, http://www.armscontrol.org/act/2004\_11/Krepon#Lewis2

Weaponizing space would poison relations with China and Russia, whose help is essential to stop and reverse proliferation. ASAT weapon tests and deployments would surely reinforce Russia’s hair-trigger nuclear posture, and China would likely feel compelled to alter its relaxed nuclear posture, which would then have negative repercussions on India and Pakistan. The Bush administration’s plans would also further alienate America’s friends and allies, which, with the possible exception of Israel, strongly oppose the weaponization of space. The fabric of international controls over weapons of mass destruction, which is being severely challenged by Iran’s and North Korea’s nuclear ambitions, could rip apart if the Bush administration’s interest in testing space and nuclear weapons is realized.

### Space weapons hurt relations with China and Russia

Krepon 4 – Michael Krepon, president and CEO of the Henry L. Stimson Center, November 2004, “Weapons in the Heavens: A Radical and Reckless Option,” Arms Control Association, http://www.armscontrol.org/act/2004\_11/Krepon#Lewis2

Even if space weapons are not used, their flight-testing or presence overhead, capable of impairing a country’s ability to see, hear, navigate, detect impending danger, and fight, would have profound implications for international relations. The medium of space is not country-specific. The placement of space weapons in low-Earth orbit will be of concern to any country over which the space weapon passes or could pass with orbital adjustments. Washington policymakers do not talk often or publicly about space warfare, and China and Russia continue to seek improved ties to the United States. There is, however, considerable awareness in Moscow and Beijing about the Pentagon’s plans and deep skepticism that the Pentagon’s interest in space warfare is directed solely at states such as North Korea and Iran. Instead, the Air Force’s new counterspace doctrine is widely viewed in the broader context of the Bush administration’s endorsement of pre-emptive strikes and preventive wars, open-ended national missile defense deployments, and the integration of improved broad-area surveillance and conventional deep-strike capabilities alongside U.S. nuclear forces, which remain on high states of alert.

### US space wep development would hurt US China and US Russian relations

Krepon and Clary 03- Michael Krepon with Christopher Clary, Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College., Clary is currently a PhD student in the Department of Political Science of the Massachusetts Institute of Technology., Space Assurance or Space Dominance?

The likely consequences of a dynamic, but uneven, space warfare competition are not hard to envision. Potential adversaries are likely to perceive American initiatives to weaponize space as adjuncts to a U.S. military doctrine of preemption and preventive war. Depending on the scope and nature of U.S. space warfare preparations, they could also add to Chinese and Russian concerns over the viability of their nuclear deterrents. U.S. initiatives to extend military dominance into space are therefore likely to raise tensions and impact negatively on U.S.-China and U.S.-Russia relations at a time when bilateral relations have some promising, but tenuous, elements. Cooperative relations with both countries will be needed to successfully combat proliferation, but Moscow and Beijing are unlikely to tender such cooperation if they perceive that U.S. strategic objectives include the negation of their deterrents. Under these circumstances, proliferation of weapons in space would be accompanied by terrestrial proliferation.

## **MIL Bad --- Space Arms Race 1NC**

### **Space militarization leads to an arms race**

Maogoto & Freeland 8 – Jackson Nyamuya Maogoto, Senior Lecturer in International Law, University of Newcastle, \*\*AND Steven Freeland, Associate Professor in International Law, University of Western Sydney (Australia); Visiting Professor of International Law, University of Copenhagen, (Denmark); Member of the Space Law Committee of the International Law Association; Member of the International Institute of Space Law. "From Star Wars to Space Wars - the next strategic frontier: paradigms to anchor space security," January 1st, 2008, Journal of Air and Space Law, Volume 33, pp. 11-12

One of the most profound events at the start of the 21st century in relation to international peace and security was the devastating terrorist attacks on 11 September 2001.38 While these attacks marked what many have regarded as the ‘maturation’ of global terrorism, their ramifications were far wider. They pointed to the fact that drastic events beyond the contemplation of the drafters of the United Nations Charter would irrevocably change the international security environment. This was exemplified in the speech by President George W Bush in June 2002, when he asserted that: [t]he gravest danger to freedom lies at the crossroads of radicalism and technology. When the spread of chemical and biological and nuclear weapons, along with ballistic missile technology—when that occurs, even weak States and small groups could attain a catastrophic power to strike great nations.39

Though the speech was largely directed towards the growth of global terrorism, another theme was also present — the dangers of proliferation of technology. While President Bush focused on the dangers of advanced technology in the hands of terrorists, it is equally important that States themselves avoid developing space weaponization technology, which will otherwise lead the international community towards greater insecurity and an arms race. In this regard, several factors are relevant. First, States have proven to be just as irresponsible as non-State entities in the use of armaments. Secondly, new weapons technology has often only served to open new avenues for efficient killing, whether through the use of atomic devices, landmines or cluster bombs. Lastly, the nature of State hegemonic competition has always been dominated by a belief that economic and political power is underwritten by military might. In the international arena, any threat to global security is a problem shared by all members of the United Nations, particularly when new technology points to development of deadly, devastating space weaponry. In this respect, it is important to recall that the security system established under the United Nations structure addresses both form and substance. Indeed, the United Nations Charter does not absolutely prohibit the use of force in all circumstances, but it does seek to regulate its use. As the use of military force becomes more sophisticated and complicated, the United Nations must contribute to both the practice and scope of the disarmament agenda with regard to space.

### If space were weaponized, war strategy dictates pre-emptive strikes against possible threats – this causes global nuclear war

Krepon 4 – Michael Krepon, president and CEO of the Henry L. Stimson Center, November 2004, “Weapons in the Heavens: A Radical and Reckless Option,” Arms Control Association, http://www.armscontrol.org/act/2004\_11/Krepon#Lewis2

To prevent adversaries from shooting back, the United States would need to know exactly where all threatening space objects are located, to neutralize them without producing debris that can damage U.S. or allied space objects, and to target and defeat all ground-based military activities that could join the fight in space. In other words, **successful space warfare mandates pre-emptive strikes and a preventive war in space as well as on the ground**. War plans and execution often go awry here on Earth. It takes enormous hubris to believe that space warfare would be any different. If ASAT and space-based, ground-attack weapons are flight-tested and deployed, space warriors will have succeeded in the dubious achievement of replicating the hair-trigger nuclear postures that plagued humankind during the Cold War. Armageddon nuclear postures continue to this day, with thousands of U.S. and Russian nuclear weapons ready to be launched in minutes to incinerate opposing forces, command and control nodes, and other targets, some of which happen to be located within large metropolitan areas. If the heavens were weaponized, these nuclear postures would be reinforced and elevated into space. U.S. space warriors now have a doctrine and plans for counterspace operations, **but they do not have a credible plan to stop inadvertent or uncontrolled escalation** once the shooting starts. Like U.S. war-fighting scenarios, there is a huge chasm between plans and consequences, in which requirements for escalation dominance make uncontrolled escalation far more likely. A pre-emptive strike in space on a nation that possesses nuclear weapons would invite the gravest possible consequences. Attacks on satellites that provide early warning and other critical military support functions would most likely be viewed either as a surrogate or as a prelude to attacks on nuclear forces.

## **SMIL Bad --- Russia War**

### Space-based missile defense causes US-Russia nuke war

Edland 2k - Eland Ivan Eland, is Senior Fellow and Director of the [Center on Peace & Liberty](http://www.independent.org/research/copal/) at The Independent Institute. Dr. Eland is a graduate of Iowa State University and received an M.B.A. in applied economics and Ph.D. in national security policy from George Washington University. He has been Director of Defense Policy Studies at the Cato Institute, and he spent 15 years working for Congress on national security issues, including stints as an investigator for the House Foreign Affairs Committee and Principal Defense Analyst at the Congressional Budget Office., January 24, 2000, Should U.S. Missile Defense Be Limited to a Ground-Based Systems? Yes, We Can Build a Limited Homeland Shield Without Breaking an ABM Treaty

[Russia’s greatest fear is a much grander U.S. missile-defense system that includes space-based weapons and undermines the ability of the Russian nuclear arsenal to ride out a surprise American attack and have enough warheads left to inflict unacceptable damage on the United States. Although the Russians are strapped for cash, large U.S. defenses could cause them to take desperate actions that would destabilize the nuclear balance--retaining missiles with multiple warheads that they are supposed to eliminate under the as-yet-unratified START II treaty or converting their new single-warhead Topol-M missile into one with multiple warheads. (Missiles with multiple warheads are destabilizing because an adversary might be tempted to launch a preemptive attack to wipe out several warheads in each silo or to launch its weapons on warning of a preemptive attack on its own missiles with multiple warheads.)]

### US space weponization causes Russia to freak out and modernize kill relations

Gallagher 5– Nancy Gallagher, Nancy Gallagher is the Associate Director for Research at the Center for International and Security Studies at Maryland (CISSM) and a Senior Research Scholar at the University of Maryland's School of Public Policy. he has been an arms control specialist in the State Department, a Foster Fellow in the Arms Control and Disarmament Agency, and a faculty member at Wesleyan University. , Towards a Reconsideration of the Rules for Space Security,

The challenge for Russian security planners is to maintain deterrence stability while US capabilities are steadily improving and Russian capabilities are declining both quantitatively and qualitatively. The Bush and Putin administrations speak warmly of their new strategic partnership, yet suspicions linger along with massive nuclear arsenals on continual alert. In February 2004, Russia used its largest war game since the early Reagan years to demonstrate that Russia’s deterrent remains strong and that Russia could match the United States in areas such as new nuclear weapons development and war-time satellite launch. Russia claims to have developed a hypersonic missile that could maneuver through a future US anti-missile system and to have tested a modernized version of its nuclear-tipped ABM system around Moscow. Several missile launch failures during the Russian war game, however, were embarrassing reminders that the Russian military has serious reliability problems and it is hard to know whether these modernization efforts are more than public relations exercises.42 Moreover, pervasive gaps in Russia’s early-warning satellite systems prevent Russian military leaders from having confidence that they would know if they were to come under attack at any time from any direction. The more that space-based systems reduce US concerns about the costs of using force, the more likely Russia is to seek asymmetrical, and potentially very destabilizing, ways to shore up its own deterrent.

## Space Arms Race 2NC --- Link Extension

### Space weapons bad – leads to arms race, China ASATs, Russia, China, India

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

"To be sure, not deploying weapons in space is no guarantee that potentially hostile nations (such as China) will not develop and deploy ASATs. However, it is virtually certain that deploying U.S. weapons in space will lead to the development and deployment of ASATs to counter such weapons," notes a new policy brief by the Cato Institute.[27](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn27" \o ") China and Russia long have been worried about possible U.S. breakout on space-based weaponry. Officials from both countries have expressed concern that the U.S. missile defense program is aimed not at what Moscow and Beijing see as a non-credible threat from rogue-nation ballistic missiles, but rather at launching a long-term U.S. effort to dominate space. Both Russia and China also are key proponents of negotiations at the UN Conference on Disarmament to expand the 1967 Outer Space Treaty to ban all types of weapons. The effort to start talks known as PAROS, for "prevention of an arms race in outer space," has been stalled due in large part to the objection of the United States. For example, in November 2000, the United States was one of three countries (the others were Israel and Micronesia) to refuse to vote for a UN resolution citing the need for steps to prevent the arming of space.[28](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn28" \o ")  It is inconceivable that either Russia or China would allow the United States to become the sole nation with space-based weapons. "Once a nation embarks down the road to gain a huge asymmetric advantage, the natural tendency of others is to close that gap. An arms race tends to develop an inertia of its own," writes Air Force Lt. Col. Bruce M. DeBlois, in a 1998 article in Airpower Journal.[29](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn29" \o ") Chinese moves to put weapons in space would trigger regional rival India to consider the same, in turn, spurring Pakistan to strive for parity with India. Even U.S. allies in Europe might feel pressure to "keep up with the Joneses." It is quite easy to imagine the course of a new arms race in space that would be nearly as destabilizing as the atomic weapons race proved to be.

### **Space weaponization leads to an arms race that threatens US**

Wilkerson 8 – Don L. Wilkerson, Lieutenant Colonel of the United States Army, US Army War College, Master of Strategic Studies Degree, 2008, "Space Power Theory, Controlling the Medium Without Weapons in Space," [www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300)

Conversely, the other side of the argument to not deploy weapons in space is probably more compelling. The proliferation of space-based weapons will allow potential adversaries to place U.S. space assets at risk without the long-term equivalent investment in technology and hardware, and potentially without placing similar space systems in orbit. If the U.S. withdraws from the Outer Space Treaty and begins pursuing weapons in space to justify the defense of vital national space systems, other countries will undoubtedly pursue these weapons as well. Once other space-faring nations deploy weapons in space, not only will on-orbit assets be in danger, but also terrestrial targets within the U.S., such as cities, conceivably may be held at risk from attack from space. The proliferation of space weapons could become tomorrow’s “nuclear arms control” issue that would be a costly venture for all involved. Countries would begin to12 channel resources to develop the technology and systems to place weapons in space in order to demonstrate their power, modernity and their desire to compete with the world’s most powerful countries. However, current U.S. ground-based space weapon systems and conventional warfighting systems already provide the necessary offensive capabilities and deterrence to support a space power theory without deploying weapons into space.

## Space Arms Race 2NC --- US Spillover

### US weapons causes other countries to weaponize space

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

Here again, the question of enemy reaction is critical. It seems likely that given the U.S. reliance on space assets, once the United States deploys RF space-control weapons, other nations will find it to their advantage to do the same. However, their lack of detailed intelligence on target vulnerabilities may drive them to different space-control solutions. An opponent might fall back on an offensive concept, using large numbers of destructive weapons—again, with a premium on first use. Placing space mines in the immediate vicinity of high-value American satellites would likely be a major component of an opponent’s strategy. These weapons could be fairly lightweight and possess considerable range. “For example, a directional fragmentation warhead similar to that of a Claymore mine could project 100,000 one-gram pellets in a pattern that would cover a 100 x 100 meter area with 10 pellets per square meter at a range of 1 kilometer.” 17 One approach to the space mine is to “design a very small stealth weapon that is moved into position over a long period of time” and in secrecy. 18 However, while a stealthy space mine has definite advantages, it is not clear that an unobserved approach is required. In a fully weaponized space environment, U.S. space-based lasers and mirrors, each capable of attacking satellites thousands of kilometers away, threaten distant satellites as much as would a space mine in close proximity. In any case, until space mines actually damaged or interfered with their victims, it would be difficult to challenge their legitimacy. To attack or disable them as a potential threat would set a precedent for preemptive strikes against U.S. space-based weapons, if not all its satellites. Thus, it is likely that other countries will respond to deployment of space-based weapons by the United States with space-control programs of their own. Lower-technology kinetic weapons may even be seen as attractive deterrents to the sophisticated, reversible effects preferred by the United States. Would we jam a surveillance satellite, however important, if it meant having one of ours destroyed by a space mine? Would we not be deterred by the prospect of seeing the critical low-earth and geosynchronous orbital zones littered with the debris of kinetic weapons? In this area, simplicity may offer advantages to the opposition.

### Other countries will build space weapons in response to US

Lewis 4 – Jeffrey Lewis, postdoctoral fellow in the Advanced Methods of Cooperative Security Program at the Center for International and Security Studies at the University of Maryland School of Public Policy, July 2004, “What if Space Were Weaponized?” Center for Defense Information, http://www.cdi.org/PDFs/scenarios.pdf

It is important to understand that there is another, more likely “inevitability” involved if the United States pursues these capabilities, that is: other nations almost assuredly would, too. Although Russia and China have declared a moratorium on ASAT testing, it would be irresponsible for either state not to acquire their own deterrent to potential U.S. ASAT attacks. Russian and Chinese ASATs may, in turn, be a reason (or, perhaps, just an excuse) for states such as India to follow suit. Still other countries – and this includes North Korea and probably Iran – that have the desire, but not yet the skills, would then be able to “draft” in the wake of the big powers through espionage, declassification and, perhaps, the black market. The point is this: once the United States has gone down the ASAT road, there likely won’t be an option of negotiating a ban on ASATs or discouraging the proliferation of legitimate dual-use technologies such as microsatellites. As we have learned with nuclear and missile proliferation, once the genie is out of the bottle, it is out for good.

### Space weaponization spills over globally

Lewis 4 – Jeffrey Lewis, postdoctoral fellow in the Advanced Methods of Cooperative Security Program at the Center for International and Security Studies at the University of Maryland School of Public Policy, July 2004, “What if Space Were Weaponized?” Center for Defense Information, http://www.cdi.org/PDFs/scenarios.pdf

Space weapons are frightening to potential opponents – this presents both opportunities and dangers. On one hand, proponents of space weapons focus on the ability of such weapons to dissuade potential opponents from developing certain military capabilities and deter them from threatening U.S. interests. Although space weapons may dissuade some states from investing in, for example, ballistic missiles, two states – Russia and China – are unlikely to get out of the business of nuclear deterrence. Both states are the subject of extensive nuclear war planning by the United States, despite political rhetoric from Washington about “moving beyond” the Cold War. Far from leaving behind such concerns, the most recent Nuclear Posture Review recommends sizing the U.S. nuclear forces for “immediate and unexpected contingencies.”30 The NPR identifies China as “a country that could be involved in an immediate or potential contingency” and notes that “a contingency involving Russia, while plausible, is not expected.”31

### Space mill bad-angers international actors

O'Hanlon 11(senior fellow in Foreign Policy Studies at the [Brookings Institution](http://www.sourcewatch.org/index.php?title=Brookings_Institution), where he specializes in U.S. defense strategy and budgeting, [homeland security](http://www.sourcewatch.org/index.php?title=Homeland_security), Northeast Asian security, and humanitarian intervention. He is also adjunct professor at the public policy school of Columbia University, a visiting lecturer at Princeton University, and a member of the [International Institute for Strategic Studies](http://www.sourcewatch.org/index.php?title=International_Institute_for_Strategic_Studies) and the [Council on Foreign Relations](http://www.sourcewatch.org/index.php?title=Council_on_Foreign_Relations)."[[1]](http://www.sourcewatch.org/index.php?title=Michael_E._O%27Hanlon#cite_note-MEHan-0), Balancing U.S. Security Interests in Space)

Non-American opponents of weaponizing space also worry about a unilateralist America pursuing its own military advantage at the expense of other countries, most of which do not favor putting weapons in space. This dispute has much of its origins and motivation in the history of the ballistic missile defense debate, as well as in the antisatellite weapons debate of the 1980s. But it has taken on a new tone in what many view as an era of American unipolarity or hegemony. In recent years, China and Russia have been consistent in their opposition to the weaponization of space and in their desire for a treaty banning the testing, deployment, and use of weapons in space.3 So have a number of U.S. allies, including Canada, which proposed in 1998 that the United Nations (UN) convene a committee on outer space during its conference on disarmament in Geneva.4 The UN General Assembly passed resolutions for more than 20 straight years opposing the weaponization of space.

### Space militarization causes arms race with other international actors

Graham 2-Thomas Graham, Former Ambassador, International Law and the Military Uses of Space, April 2002, <http://www.acronym.org.uk/dd/dd77/77mkmh.htm>

[The realisation of the increasing vulnerability of the United States to attacks against space assets has caused some to encourage Washington to begin to deploy defensive weapon systems to protect those assets from new weapons. While this could appear to make sense on a visceral or superficial level, a thoughtful analysis of the history of military development reveals basic flaws with this notion. Most importantly, history categorically demonstrates that effective defensive weapon systems will inevitably be countered by effective offensive systems, sparking an ever-spiralling arms race that ultimately leaves all sides less secure. For evidence supporting this contention, one need look no further than the second half of the 20th century and the nuclear arms race that dominated it. Until the United States and the Soviet Union signed the Anti-Ballistic Missile (ABM) Treaty in 1972, effectively preventing each side from deploying defensive systems, the world was engaged in a nuclear confrontation constantly threatening to escalate out of control. For this reason, I believe that - as with the Antarctic Treaty and the strategic nuclear arms control accords of the last three decades - the international community of space-faring nations will ultimately recognise the need for restraint and seek to develop some legal regime to preserve outer space as a non-militarised - or at least non-weaponised - realm. It is crucial that this happen as soon as possible.]

### Space weaponization causes space race – countries want to counter US weapons

Zhang 5 – Hui Zhang, research associate in the Project on Managing the Atom at Harvard University, December 5, 2005, “Action/Reaction: U.S. Space Weaponization and China,” Arms Control Association, http://www.armscontrol.org/print/1943

One major Chinese concern about U.S. space weaponization plans, as addressed frequently in statements at the UN Conference on Disarmament (CD), is that the deployment of space weapons “will disrupt strategic balance and stability, undermine international and national security and do harm to the existing arms control instruments, in particular those related to nuclear weapons and missiles, thus triggering new arms races.”[[14](http://www.armscontrol.org/act/2005_12/print/1943#note14)] Because space weapons are at once threatening and vulnerable, it is reasonable to assume that other countries would attempt to block such a move by political and, if necessary, military means. One possible response, for example, would be the development of anti-satellite weapons to target space-based weapon systems. It is widely believed that space weapons and sensor satellites would themselves become prime high-value targets and the most vulnerable elements for defense suppression attacks.[[15](http://www.armscontrol.org/act/2005_12/print/1943#note15)] It is reasonable to believe that other countries could resort to a number of low-cost and relatively low-technology anti-satellite devices to counter those critical and vulnerable U.S. space-based weapons. Eventually, China fears that the U.S. space weaponization plan would lead to an arms race in outer space and turn outer space into a battlefield.

### Nuclear weapons analogy proves other countries will follow US in space proliferation

Lowery 7 – Scott Lowery, systems engineer at Lockheed Martin, 2007, “Why the Weaponization of Space Should Not Be Pursued,” http://www.colorado.edu/pwr/occasions/articles/Lowery\_Why%20the%20Weaponization%20of%20Space%20Should%20Not%20Be%20Pursued.pdf

It is clear that the weaponization of space is not inevitable. However, does the concern of foreign weaponization justify the pursuit of space weapons anyway? The answer is an emphatic no. Although doing so would seem to increase the asymmetric space advantage the US has, it would actually have a destabilizing effect and result in a decreased advantage. The idea of space weapons brings to mind visions of military omnipotence, with the US able to easily strike down any adversary without fear of retaliation. Such an ability would deter many conflicts. A similar rationale developed in the 1940s with the creation of the atom bomb. It too seemed to provide infinite power that would cause the rest of the world to kneel before the US or suffer unimaginable retaliation. This idea worked once, ending World War II. Once the atom bomb became public, it sparked a massive arms race as other nations developed nuclear power. The stockpiling of nuclear arms led to the Cold War, an era defined by a world on the brink of destruction and rapidly shifting political climates. It is not a large leap in logic to conclude that since space weapons offer advantages of similar magnitude to nuclear weapons, their development will cause a similar situation. Other nations will not stand idle as the US weaponizes space—they will follow suit. In the end, space will become a volatile political liability and the medium for a new Cold War–style weapons spiral.

## SMIL Bad --- Russia Weaponization 1NC

### Russia hates US space militarization and will respond to it – ground ballistic missile defense proves

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

The Potential Adversaries Are space weapons necessary to counter adversaries? The environment in which the United States might choose to develop and deploy space-based weapons is complex. In making the decision, policy makers must take into account the reaction and response of potential adversaries with a wide array of capabilities with the ultimate goal of increasing national security. At one end of the spectrum lies Russia, with its large and diverse, if somewhat decaying, strategic arsenal and significant space capabilities. One-step below is China, with less capable and stationary strategic forces, but growing space capabilities. At the bottom tier are the so-called rogue states such as North Korea and Iran, with limited, but growing missile and nuclear forces and virtually non-existent space capabilities. Finally, the United States must also consider the impact on the Global War on Terrorism. This section examines the dynamic of space weapons on these potential or existing adversaries. Russia is clearly concerned about the potential pursuit of space weapons by the United States. As previously mentioned, Russia is leading the charge in the United Nations to prevent the weaponization of space. Despite their concern, Russia has perhaps the least to worry about if the United States develops and deploys these weapons. 56 It is possible that even with a small space based defensive combined with ground-based defenses that are currently under development and deployment, it would not upset the strategic deterrence balance between the United States and Russia. 57 Undoubtedly, however, they would be compelled to respond. Flush with revenues from crude oil sales, Russia has embarked on a program to upgrade its strategic deterrence capabilities. In a direct response to American ground based missile defense activities, Russia is developing maneuverable re-entry vehicles for its nuclear arsenal designed to foil these ground-based systems. 58 This is clearly a defensive posture designed to preserve the perceived balance of deterrence. In reaction to a space-based component of missile defense, Russia would evaluate the threat and again, likely respond in some manner. How that response would manifest itself is unknown. Russia could respond in kind with their own space-based systems, they could develop anti-satellite capabilities to attack opposing space systems or they could further increase the capabilities of their strategic forces in an effort to overwhelm the system. Alternatively, Russia or any other potential adversary, might publicly link the use of space-based weapons to the first use of nuclear weapons in the same way that the United States and others have lumped chemical, biological and nuclear weapons into the category of Weapons of Mass Destruction (WMD). 59 If that categorization took root internationally, it could have the effect of significantly raising the stakes for using the weapons rendering a space weapons as politically impotent as our stockpile of chemical weapons.

### Russian nuclear upgrades cause nuke war

Lambert and Miller 97[Stephen and David, USAF Institute for National Security Studies, “Russia’s Crumbling Tactical Nuclear Weapons Complex: An Opportunity for Arms Control” April, <http://fas.org/irp/threat/ocp12.htm>]

Nuclear Dependency in the Face of Conventional Contingencies. Concerns regarding Russia's nuclear policies have been deepened by Russia's increasing reliance on its nuclear forces in the face of dramatically reduced conventional force quality and readiness. Igor Khripunov, a former Soviet diplomat and expert on security affairs, recently noted that some Russian military analysts "make a strong case for maintaining and improving nuclear weapons, *air-based weapons in particular*, without which Russia cannot adequately protect its security in the current geostrategic situation." It seems to be clear that "the demise of the Red Army that formerly protected Russia shifted the burden of security onto nuclear forces. Russia's new military doctrine abandons its former pledge of no-first-use of nuclear arms, and widens the conditions under which it might use them. By increasing its reliance on these weapons, Russia also magnifies the significance of its nuclear strategy." In order to operationalize this new reliance on nuclear weapons, Russian officials have chosen to emphasize the value and role of tactical nuclear weapons. They understand that posturing with strategic nuclear systems is practically useless, since they perceive there is a very basic state of strategic equilibrium between the United States, Russia, and China. Therefore, the solution to making the nuclear threat more credible is to articulate a greater role for tactical nuclear weapons since these weapons are viewed as "war fighting weapons." In fact, there has been evidence that some Russian officials have not ruled out redeploying tactical nuclear weapons in forward locations (such as land-based systems in Belarus and Kaliningrad and sea-based systems on the ships of the Baltic fleet). Sergei Kortunov, a member of the Russian security council and the deputy director of the Analytic Directorate of the President of the Russian Federation, recently warned that in the face of a mounting unfavorable balance in the correlation of forces, Russia might resolve to re-evaluate the 1991 unilateral tactical nuclear weapons initiatives. Other Russian officials have also alluded to potential initiatives regarding tactical nuclear systems. Major General Belous has stated that "there is no doubt that in the present geopolitical situation a number of Russian TNW [theater nuclear weapons], particularly air-based ones, should be retained...." Belous regards tactical nuclear weapons as "the equalizer which would deprive NATO of its new-found military superiority." He mentions the possibility that Russia may choose to "carry out a 'demonstration' TNW detonation to prove to an aggressor our resolve to use nuclear weapons," and concludes that, "faced with an economic crisis and a rather modest ability to equip its army and navy, for the foreseeable future Russia will be forced to rely on nuclear weapons to ensure its security

## SMIL Bad --- Satellite Attack 1NC

### Space weaponization bad – it encourages ASATs which make satellites more vulnerable

Blazejewski 8 – Kenneth S. Blazejewski, master's degree in public affairs from Princeton, JD degree from the New York University School of Law, Spring 2008, "Space Weaponization and US-China Relation" [www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf](http://www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf)

I argue that the United States should take a proactive role in developing international rules for the military use of outer space. The United States can use its significant international influence to shape rules that preserve its national interests, such as deploying a limited ballistic missile defense (BMD) system but placing a ban on the testing of ASAT weapons. To maximize US long-term security, however, I would argue that the United States not deploy space weapons as part of a multilayered BMD shield or otherwise. Space weapons would not contribute to US security in the way that many proponents suggest. Ultimately, space weapons deployment is likely to expose US satellites to greater threat by encouraging foreign states to develop more advanced ASAT technology and expedite nuclear proliferation. Even when considered in isolation, the decision to forgo space weaponization is a wise one; when considered within the larger context of arms control negotiations, it clearly presents an opportunity to advance US long-term security. The United States should concede to negotiate on space weaponization with China in return for Chinese cooperation in other more critical areas of counterproliferation, such as the Fissile Material Cut-Off Treaty (FMCT) and the Proliferation Security. Finally, the United States should continue to push for increased transparency in China’s military and space programs.

### A satellite attack would cause massive debris and nuclear war

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

One reason is that satellites serve as the eyes and ears of nations that have nuclear weapons. An attack on satellites could therefore trigger a nuclear war. Second, satellites are very vulnerable. The nation that starts a space war would have great difficulty protecting its satellites. Third, space warfare would cause debris, and debris lingers and kills indiscriminately in space. Fourth, satellites support global business and commerce. Every nation would be harmed by a space war. Lastly, space is widely viewed as a global commons that should remain a sanctuary blessedly free from the disputes that plague us on planet Earth.

## SMIL Bad --- Satellite Industry 1NC

### Space weapons would destroy the US satellite industry

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

The 15-nation European Union already is moving forward on plans to buy a European version of the U.S. Global Positioning System navigation satellite network, called Galileo, in part due to fears that future access might be denied or downgraded by the U.S. military. "Europe cannot accept reliance on a military system which has the possibility of being cut off," Rene Oosterlinck, head of the European Space Agency's navigation department, was quoted by the New York Times.[48](http://www.cdi.org/missile-defense/spaceweapons.cfm#_ftn48)

Some international customers also already are questioning the reliability of U.S. suppliers (and government-supplied products). After the 1998 change in export-licensing authority, German-controlled Daimler-Chrysler Aerospace announced it would no longer purchase U.S.-made satellite components.

The competitive and cost challenges the U.S. satellite industry faces could be increased if the United States moved to make space a battlefield. Up to now, the threat that commercial satellites could become direct wartime casualties has been negligible. But an aggressive U.S. pursuit of ASATs would likely encourage others to do the same, thus potentially heightening the threat to U.S. satellites. Space industry executives, whose companies often are working at the margins of profitability, are concerned about U.S. commercial satellites and their operations becoming targets, especially because current commercial satellites have little protection (electronic hardening, for example, has been considered too expensive). There would be costs to commercial providers for increasing protection, and it is highly unclear whether the U.S. government would cover all those costs.

### The global economy runs on satellites

Gydesen 6 – Paul W. Gydesen, Lieutenant Colonel of USAF, February 2006, “What Is The Impact To National Security Without Commercial Space Applications?” http://www.au.af.mil/au/awc/awcgate/awc/gydesen.pdf

The world economy runs off the United States economy. Any country or business that wants to successfully sell products to a large population with disposable income needs to penetrate the United States market. The amount of disposable income available to an American family cannot be equaled. If American consumers pull back due to failed networks or panic, this would immediately impact global markets starting in two particular areas: telecommunication services and the international stock markets. Satellite telecommunication is enabling worldwide globalization. The ability of satellites to deliver services to remote regions without great amounts of land-based infrastructure has created new entrepreneurs. India has a large population of highly educated technicians. Indian entrepreneurs want to complete your taxes, read x-rays, trace lost luggage, and write new software, all from Bangalore, India.35 Satellite communications have made India a leading country in handling technical service call centers for computer equipment and software. This is providing jobs and wages to areas previously struggling to provide employment for an educated under utilized work force. These workers, with money in their pockets, are demanding additional services thus creating more employment within their region. These inroads will evaporate without satellite telecommunications capability. Further consideration must be given to the type of information affected by the satellite loss. While the Galaxy 4 outage was an inconvenience, the service outage was not catastrophic. The international stock markets depend on both secure computer networks and tele-communications. Without the ability to post transactions and conduct trades, companies cannot capitalize or provide returns to shareholders. If the outage affected the world’s financial markets such as transmission of stock exchange information, International Monetary Fund or World Bank transactions, or Federal Reserve Bank settlements, the impact could be profound. The world financial community is interwoven; investor confidence and speculation rule the day. If that confidence is shaken and investors pull back, the world economy can be impacted. To understand this point, one only needs to look at the impact of the World Trade Center attacks on the New York financial district. When New York Stock Exchange computers went down, exchanges around the world could not open or were very limited in their trading. It took several days to restart the markets. Once the markets reopened, investors were nervous and stock prices declined. The same scenario is possible with a sudden loss of numerous communication satellites. This makes space superiority a vital interest.

### Global economic crisis causes war---strong statistical support---their defense doesn’t account for global crises properly

Royal 10 – Jedediah Royal, Director of Cooperative Threat Reduction at the U.S. Department of Defense, 2010, “Economic Integration, Economic Signaling and the Problem of Economic Crises,” in Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-215

**Thus, the answer to the first question set out at the beginning of this section, whether economic integration and economic crises are linked, seems reasonably well-established. Substantial recent scholarship indicates a positive association between interdependence and economic crises. What then about the second question?** Is there a correlation between economic crises and armed conflict? **The** impacts **at an individual level and** on a state level are **intuitive and** well-documented **(see, e.g., Richards & Gelleny, 2006). Rodrik (1997a, 1997b), among others, argues that** instability in the global economic system contributes tosocial disintegration and political conflict**. Social unrest, regime change and even** civil war have directly resulted from the vagaries of economic integration**.3 Less intuitive is how periods of** economic decline mayincrease the likelihood of external conflict**. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that** rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the **often** bloody transitionfrom one pre-eminent leader to the next**. As such, exogenous shocks such as** economic crises could usher in a redistribution of relative power **(see also Gilpin. 1981) that leads to uncertainty about power balances,** increasing the risk of miscalculation **(Feaver, 1995). Alternatively,** even a relatively certain redistribution of power could lead to a permissive environment for conflict **as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that '**future expectation of trade' is asignificant variablein understanding economic conditions and security behaviour of states**. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However,** if the expectations of future trade decline**, particularly for difficult to replace items such as energy resources,** the likelihood for conflict increases, as states will be inclined to use force to gain access to those resources**.** Crises could **potentially be the** trigger **for** decreased trade expectations **either on its own or because it triggers protectionist moves by interdependent states.4 Third,** others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess **(2002)** find astrong correlationbetween internal conflict and external conflict**,** particularly during **periods of** economic downturn**. They write: The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the** presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other**. (Blomberg & Hess, 2002. p. 89)** Economic decline has **also** been linked with anincrease in the likelihood of terrorism **(Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government.** “Diversionary theory" suggests **that,** when facing unpopularity arising from economic decline**, sitting** governments have increased incentives to fabricate external military conflicts **to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that** the tendency towards diversionary tactics are greater for democratic states **than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that** periods of weak economic performance in the U**nited** S**tates, and thus weak Presidential popularity,** are statistically linked to an increase in the use of force. **In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas** political sciencescholarship links economic decline with external conflictat systemic, dyadic and national levels**.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention. This observation is not contradictory to other** perspectives that link economic interdependence with a decrease in the likelihood of external conflict**, such as those mentioned in the first paragraph of this chapter. Those studies** tend to focus on dyadic interdependence instead of global interdependenceand do not specifically consider the occurrence of and conditions created byeconomic crises**. As such, the view presented here should be considered ancillary to those views.**

## Satellites 2NC --- Link Extension

### Weaponization hurts satellites, which monitor proliferation

Graham 5 – Ambassador Thomas Graham Jr. is a former senior-level diplomat and a world-renowned authority on nuclear nonproliferation. As a U.S. diplomat, Ambassador Graham was involved in the negotiation of every major arms control and nonproliferation agreement from 1970 to 1997. He participated in nuclear talks with more than 100 countries. Graham was general counsel for the Arms Control and Disarmament Agency. He has advised five U.S. presidents. He earned his J.D. from Harvard Law School and his bachelor’s degree from Princeton. December 2005, "Space weapons and the risk of accidental nuclear war," Arms Control Today, 35.10, p. 12

Moreover, a space arms competition could hinder the flow of satellite imagery that can be used to track activities that might reveal programs to develop weapons of mass destruction in countries of concern. For example, activities detected through space-based collection systems can be used to trigger requests for inspections pursuant to the Chemical Weapons Convention (CWC) (implicitly) or the Comprehensive Nuclear Test Ban Treaty (explicitly), should that treaty be brought into force. It is important in this respect to recall that the suspicions that Israel and South Africa may have conducted an atmospheric nuclear test in 1979 were driven by readout from a U.S. VELA satellite. Similarly, the United States has benefited from the revolution in national intelligence that began with and is based on photographic reconnaissance satellites and related systems, which has helped bring to an end the worst-case analysis and close calls with nuclear war that existed throughout the Cold War. If a truly peaceful and stable world order is ever achieved, the advent of this technology beginning in the late 1950s will be regarded by future generations as a major historical turning point. These are crucial efforts that must never be allowed to be disrupted, either by space-based weapons or with the relatively simplistic ground-based anti-satellite weapon systems that could today be deployed. The United States has considerable anti-satellite weapons capability. An F-15-based homing vehicle system was successfully tested in the 1980s, and the anti-ballistic missile system currently being deployed in Alaska and California has an inherent anti-satellite capability. Right now, no other country is developing a counterspace system, although the Soviet Union successfully tested a co-orbital anti-satellite system in the 1970s and 1980s and Russia and China are believed to be capable of doing so. Notably, 28 countries have ballistic missiles that can reach LEO satellites, and all have the technical capability to develop a LEO anti-satellite system by modifying these missiles. Active defenses--the deployment of devices intended to deflect, destroy, or render unworkable offensive systems--cannot by themselves be expected to provide adequate protection of space assets either now or in the long term. These technologies, as well as hardening and other passive means of defense, may provide some means of defending against the current generation of anti-satellite technology. Eventually, however, our would-be attackers would find ways to counter those defenses. Thus, it would appear that an agreed legal regime, predicated on mutually beneficial and, of course, verifiable restraint, should at least be considered.

### **Weaponization hurts US satellites – the US is very dependent on satellites**

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

The case for counter space requires thoughtful consideration. Conceivably, the United States could pursue weapons such as micro-satellites designed to disable or destroy an adversary’s space systems. These satellites could be concealed and parked near potential targets and employed only if necessary to take away an adversary’s. The peril of this is two fold. First is the potential of creating space debris that interferes with everyone’s peaceful or military use of space. The second reason, and perhaps of greater concern, was articulated well by John Pike, director of the think tank Globalsecurity.org, when he said, “People who live in glass houses should not organize rock-throwing contests.” 44 The United States has more satellites in orbit than any other country and has greater civilian and military dependence on space than any other nation.

## Satellites 2NC –-- Key to Economy

### US satellites are key to the economy and military

Blazejewski 8 – Kenneth S. Blazejewski, master's degree in public affairs from Princeton, JD degree from the New York University School of Law, Spring 2008, "Space Weaponization and US-China Relation" [www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf](http://www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf)

First, as the world’s most technologically advanced country, the United States owns a highly disproportionate share of the world’s space assets and satellites. These satellites play a vital role in US economic activity and military operations. 45 Foreign states have certainly taken note. “The political, economic, and military value of space systems makes them attractive targets for state and non-state actors hostile to the United States and its interests.” 46 Unfortunately, satellites also make relatively easy targets for foreign antagonists. Satellites move in predictable patterns, cannot remain over friendly territory, and are easily located by other states. 47 While most commercial satellites are in geosynchronous Earth orbit, beyond the reach of existing Chinese ASAT weapons, China could reach US satellites in LEO with its current basic ballistic missile technology. In the case of a limited US-China conflict, perhaps over Taiwan, US military satellites, most of which orbit in LEO, would make for a tempting target. Strategic elimination of US military satellites could effectively blind US forces. China might consider such a limited attack especially attractive since it would be unlikely to incite a full-scale nuclear response.

### Satellites are key to the US economy

Gydesen 6 – Paul W. Gydesen, Lieutenant Colonel of USAF, February 2006, “What Is The Impact To National Security Without Commercial Space Applications?” http://www.au.af.mil/au/awc/awcgate/awc/gydesen.pdf

There is also a significant impact to just-in-time inventory management. Many companies have reduced storage costs and freed up capital by not maintaining a large supply of parts on-hand. This is possible due to computer networking. As new goods are ordered, requests to parts suppliers are simultaneously made. This ensures a just-in-time delivery of parts. It reduces expenses and improves profitability. If businesses are forced to return to holding a large supply of parts on-hand, profitability will decrease, which will lead to a loss of investor confidence and lower stock prices. This sequence of events, repeated throughout many businesses, will start a cascading cycle of second and third order effects. Some of the more direct impacts are easy to identify; however, there will be numerous second and third order effects that will be difficult to predict. History offers numerous examples of human behavior when people are uneasy about the market place. The stock market crash of 1929 caused thousands of individuals to withdraw money from banks. It did not take long for banks to deplete their cash reserves. Once the assets were gone, the banks failed, leaving many people destitute. The withdrawal of capital from the nation’s money supply dried up lending and investment opportunities which inhibited growth. Consumers started to panic and stopped spending what little money they had left. The job markets contracted due to decreased sales which led to more business failures. Soon the nation was in a depression. One only needs to look at Hurricane Katrina for a more recent example. Soon after the hurricane, rumors abounded that gasoline supplies were running low. Consumers panicked and started a run on gasoline stations which led to a self-fulfilling prophecy. A large demand was placed on gas supplies at the same time that suppliers were unable to provide additional resources. Customers sat in gas lines for hours to fill their tanks, all the while getting worried over their future ability to buy gas. This demand caused gas prices to rise to exorbitant levels, over $5.00 a gallon in some areas. This rise in prices further led to reductions in consumer spending due to less disposable income and fewer trips to the store in order to save fuel. This action increased speculation of a post-hurricane recession. A widespread loss of all or numerous satellites will have a global affect on the world economy. Second and third order effects are easier to see in hindsight than they are to predict ahead of time, especially when it comes to satellite services which have become embedded in many parts of the economy. Money and finances project power and wealth; this leads to prosperity and confidence. When the ability to access money and finances is removed, an individual’s daily routine is interrupted. This begins a cascading effect driven in part by human behavior and partially by the actual loss of services. One can see both of these examples in the stock market crash and Hurricane Katrina aftermath. If the networks that process and reconcile payments (mortgage, automobile, credit card and student loans), taxes (sales, corporate, income, and social security), and financial transactions (grocery store, retail clothing, restaurant, accounts receivable) are not quickly restored, a loss of confidence will result. When automatic teller machines, instant check-writing approval, and credit and debit card processing stops, individuals will try and turn to cash. When checks do not clear the banking system quickly, business will not have funds to make payroll or tax payments. Without tax payments, cities cannot provide services or make payroll. When individuals revert to cash, there will not be enough cash in the system to supply the demand. Additionally, individuals with large amounts of cash draw attention. Those that are without means to obtain basic needs may turn to violence. As observed during Hurricane Katrina, this will place a greater demand on law enforcement and create further distrust and loss of confidence.

## Satellites 2NC --- Key to Military

### Space weapons hurt satellites, which are key to the military and disaster relief

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

SPACE WEAPONS PLACE LIVES AT RISK Emergency response crews, police cruisers, and search and rescue teams rely on satellite navigation to find their destinations. Our armed forces depend on satellites to win decisively, with a minimum of casualties. Humanitarian relief workers and doctors using pagers and cell phones also depend on satellites. When satellites are endangered, lives are endangered. PROTECTING OUR SATELLITES What can be done to improve the safety of our satellites? We can add passive protective features to new satellites. We need spares and substitutes. We need to be smarter about potential threats to our satellites — natural and man-made. All of these steps will be undermined if space weapons are tested and deployed. To protect satellites and save lives, we need to prevent space weapons. EVERYONE RELIES ON SATELLITES Every day lives are saved through the help of satellites. Here are just a few of the life-saving services that require satellites: • Police/Fire/Emergency Management Navigation • 911 Services • Search and Rescue Operations • Natural Disaster Damage Assessment • Disease Tracking • Hurricane and Tornado Prediction • Parolee Monitoring • Remote Diagnosis and Surgery Assistance • Earthquake and Volcano Monitoring • Emergency Communication • Airplane Navigation • Precise Marine Vessel Navigation • Train Control and Collision Avoidance SATELLITES HELP RELIEF OPERATIONS During natural disasters, first responders rely on satellite information to save lives. Supply and airlift routes are planned with the help of picture-taking and navigation satellites. Rescuers use the Global Positioning System to help pinpoint victims and relay their location to rescue teams and medical personnel. The life-saving value of satellites was never clearer than after the December 2004 tsunami.

### Satellites are key to the US military

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

Satellites save lives every day by predicting storms and helping those who are lost and in need. No one benefits more from satellites than US soldiers in harm’s way. The US armed forces depend on satellites to make their way safely through trackless deserts and dangerous neighborhoods. Satellites help with communication, navigation, and targeting. They help our soldiers win quickly, decisively, and with a minimum of casualties. No nation gains more military benefit from the use of satellites than the United States – and no nation has more to lose if space becomes a shooting gallery.

## **SMIL Bad --- Space Debris 1NC**

### **Space weapons cause massive space debris – causes fallout in space like nuclear weapons on earth**

Weston 9 – Major Scott A. Weston, US Air Force, Troy University; MA, Naval Postgraduate School, 2009, "Examining Space Warfare: Scenarios, Risks, and US Policy Implications," Air & Space Power Journal. XXIII, No. 1, 73-82, [www.airpower.maxwell.af.mil/airchronicles/apj/apj09/spr09/weston.html](http://www.airpower.maxwell.af.mil/airchronicles/apj/apj09/spr09/weston.html)

Of the conflicts that would utilize the space-based weapons sought by those who advocate space dominance, we are left with limited, regional fights with nuclear and spacefaring nations as the only current, applicable scenarios for robust counterspace operations. Even in the most vivid dreams of such advocates, the development of space-based kinetic or directed-energy defenses against dominant space powers would not prevent jamming, laser, or ground-station attacks from denying or damaging space capabilities. In the worst case of unintended consequences, these new weapons in space would inspire attacks from other space-based weapons or from ground-based kinetic ASAT weapons, likely leading to a multiplication of space debris.The scenario of a space Pearl Harbor fails to take into account the fact that a kinetic attack against a single satellite becomes a debris-cloud attack against all satellites in or crossing that orbit. Thus, what is presented as a handful of limited attacks against one nation becomes an indiscriminate attack against all present spacefaring nations—and could create a debris field that might render many valuable orbits unusable for decades or even centuries.41 Kinetic space weapons, therefore, have long-lasting environmental effects similar to those produced by the use of nuclear weapons on the ground, in that they create contaminated, idle regions.

### Any further increase in space debris would threaten GPS

Ansdell 10 – Megan Ansdell, second year graduate student in the Master in International Science and Technology Policy program at the George Washington University’s Elliot School of International Affairs where she focuses on space policy, “Active Space Debris Removal: Needs, Implications, and Recommendations for Today’s Geopolitical Environment,” http://www.princeton.edu/jpia/past-issues-1/2010/Space-Debris-Removal.pdf

There are currently hundreds of millions of space debris fragments orbiting the Earth at speeds of up to several kilometers per second. Although the majority of these fragments result from the space activities of only three countries—China, Russia, and the United States—the indiscriminate nature of orbital mechanics means that they pose a continuous threat to all assets in Earth’s orbit. There are now roughly 300,000 pieces of space debris large enough to completely destroy operating satellites upon impact (Wright 2007, 36; Johnson 2009a, 1). It is likely that space debris will become a significant problem within the next several decades. Predictive studies show that if humans do not take action to control the space debris population, an increasing number of unintentional collisions between orbiting objects will lead to the runaway growth of space debris in Earth’s orbit (Liou and Johnson 2006). This uncontrolled growth of space debris threatens the ability of satellites to deliver the services humanity has come to rely on in its day-to-day activities. For example, Global Positioning System (GPS) precision timing and navigation signals are a significant component of the modern global economy; a GPS failure could disrupt emergency response services, cripple global banking systems, and interrupt electric power grids (Logsdon 2001).

### GPS is key to the economy – jobs

Gydesen 6 – Paul W. Gydesen, Lieutenant Colonel of USAF, February 2006, “What Is The Impact To National Security Without Commercial Space Applications?” http://www.au.af.mil/au/awc/awcgate/awc/gydesen.pdf

The last few years have shown significant growth in space-related industries. The commercial space industry is comprised of the manufacturers, service providers, space applications, and space support services. The manufacturing segment is further broken down into the building of the satellite bus, satellite sensors, launch vehicles, and equipment for ground stations. The service providers include broadcast television, telecommunications, internet, and mobile phone. The space application area includes Global Positioning System (GPS) users, remote sensing (imagery), and weather data. Support services are the external business requirements such as legal service, licensing, and insurance. After a manufacturing slump in the late 1990s and early 2000s due to the dot com failures, and again in 2002 due to over capitalization, the manufacturing market took an upward swing in 2003. Orders for new satellites went from three in 2002 to 17 in 2003.24 This in turn improved the space industry job market in the United States as well as other countries. The jobs created by the space industry are typically high paying technical jobs. Employers are looking for engineers, mathematicians, physicists, accountants, etc. These higher paying jobs bring educated professionals with disposable income into communities. This in turn grows the local economy as these individuals demand homes, cars, furniture, and all manner of services. This leads to additional employment opportunities in the community and expands the government’s tax base. All this growth is due to the demand for space-related services from the general population and by businesses that see space as a way to improve efficiency and lower costs.

## Space Debris 2NC --- ASATs

### Space weapons will be shot down by ASATs

Krepon and Clary 3 – Michael Krepon, served as the president and CEO of the Henry L. Stimson Center, Christopher Clary, Research Assistant for the Weaponization of Space Project at the Stimson Center, April 2, 2003, “Space Assurance or Space Dominance? The Case Against Weaponizing Space,” Henry L. Stimson Center, http://www.stimson.org/images/uploads/research-pdfs/spacebook.pdf

The quest for preemptive space warfare capabilities alongside dominant conventional military capabilities is therefore bound to be viewed in worrisome terms by potential adversaries. The flight-testing and deployment of space weaponry is thus likely to generate low-cost blocking action, comparable to the countermeasures likely to be employed by states fearing the viability of prospective U.S. missile defenses. Space weaponry, like missile defenses, can be designed and sized for the limited purpose of dealing with maverick leaders. Both need not be confined to specific locations; they can go where directed. Additional deployments can be added rather quickly from covert stocks. Moreover, the goal sought by advocates of U.S. space weaponry, as well as missile defenses, is not deterrence but dominance. Space weapons have another thing in common with missile defenses: They are both vulnerable to countermeasures. The deployment of dominating, yet vulnerable, capabilities by one state will not go unanswered by potential adversaries with access to space. Therefore, the deployment by the United States of satellite killers or battle stations in space would naturally generate company in the form of space mines or other countermeasures. Space would thus become a mixed venue, populated by satellites and satellite killers. Because of their presumed military value and because of trailing space mines, deployed space weapons would require considerable protection against attack, like the screening by surface combatants and submarines that accompany aircraft carriers at sea. An alternative to this expensive panoply of defensive measures could be to attack preemptively space mines before their deployment, but this would not only constitute the “appropriation of space” that is prohibited by international law and customary practice, it would also constitute an act of warfare against a space-faring nation or consortium claiming to exercise legitimate rights protected—or at least not prohibited—by international law. Space warfare capabilities and preemption strategies are therefore linked, as well as inferentially advertised by the Bush administration’s national security strategy. Because the prospective military utility of preemptive strikes from space, added to U.S. terrestrial strategic capabilities and prospective missile defenses, is sufficiently great to threaten the viability of the Chinese and perhaps the Russian nuclear deterrents, countermeasures could be expected. Preemption capabilities would thus become a two-way street in space. The weaker adversary would be able to gain only temporary advantage by the first use of ASAT weapons, but this would be better than ceding all advantage to the side with stronger space and terrestrial warfare capabilities. The hair trigger that characterized nuclear deterrence during the Cold War would be elevated to the heavens through the deployment of ASAT weapons. As one close observer of U.S. space policy, Bruce DeBlois of the Council on Foreign Relations, has asked, “Will this generation’s legacy be to provide a constant threat of space weapons, just as the constant threat of nuclear weapons has diminished?”43

### ASATs substantially increases space debris

Kaufman, Hertzfeld, and Lewis 8 – Richard Kaufman, member of the board of directors and a vice chair of Economists for Peace and Security and Director of Bethesda Research Institute, Henry Hertzfeld, Senior Research Scientist at the Space Policy Institute of the Elliott School of International Affairs at George Washington University, Jeffrey Lewis, Director of the Nuclear Strategy and Nonproliferation Initiative at the New America Foundation, September 2008, “Space, Security and the Economy,” http://www.epsusa.org/publications/papers/spacesecurity.pdf

It is known that the satellite that China destroyed was failing and would have been destroyed of its own accord when it entered earth’s atmosphere. Its destruction by a missile is a matter of great concern because of what it suggests about space policy and because of the problem of space debris. The impact created thousands of large pieces of debris that will remain in orbit in the most densely utilized portion of space for decades. Given the speed that space debris travels, any satellite in its path is endangered.8 It is estimated that a piece of debris in low earth orbit would strike a satellite with the force of a one-ton object that fell off a five-story building.9 At some point the buildup of debris from such events could threaten the safety of space operations. In 2007 there were about 13,000 pieces of debris in orbit large enough to damage or destroy spacecraft. This includes objects of various sizes. If other nations conduct their own ASAT tests causing the weapons or the satellites to break up, the debris problem will become much worse. This issue is contributing to the increasingly serious issue of space traffic management because of the growing number of space launches by government and non-government organizations and the positioning of satellite constellations, among other factors.10

### Their evidence is based on US ASATs, but other nations wouldn’t restrain themselves

Krepon and Katz-Hyman 5 – Michael Krepon, president and CEO of the Henry L. Stimson Center, Michael Katz-Hyman, research assistant at Stimson, July 2005, “Space Weapons and Proliferation,” Stimson Institute, http://www.stimson.org/images/uploads/research-pdfs/Space\_Weapons\_and\_Proliferation.pdf

Because of the potential dangers posed by debris to US and friendly satellites, the Pentagon now proposes to focus on offensive space warfare capabilities featuring temporary and reversible effects. There are, however, no guarantees that adversaries would engage in space warfare using similarly polite rules. Dictating the rules of warfare has not been easy for the United States on the ground, and may be no easier in space.

## Space Debris 2NC --- GPS Key to Economy

### GPS is key to heg and the global economy

Logsdon 1 – John M. Logsdon, director of the Space Policy Institute at George Washington University’s Elliott School of International Affairs in Washington, DC, Spring 2001, “Just Say Wait to Space Power,” Issues in Science and Technologies, <http://www.issues.org/17.3/p_logsdon.htm>

For the new Bush administration, U.S. national security strategy will be based on two pillars: information dominance as key to global power projection, and protection of the U.S. homeland and troops overseas through defense against ballistic missile attack. Space capabilities are essential to achieving success in the first of these undertakings. Intelligence, surveillance, and communication satellites and satellites for navigation, positioning, and timing are key to information dominance. Space-based early warning sensors are also essential to an effective ballistic missile defense system that includes the capability to intercept missiles during their vulnerable boost phase; such a system appears to be under consideration. Using space systems in these ways would not involve space weaponization. However, under some missile defense scenarios, kinetic energy weapons could be based in space; they could thus become the first space weapons and open the door to stationing additional types of weapons in space in coming decades. Worth particular attention as a likely indication of the administration's stance on space power issues is a report released on January 11, 2001, on how best to ensure that U.S. space capabilities can be used in support of national security objectives. The report ([www.space.gov](http://www.space.gov)) was prepared by the congressionally chartered Commission to Assess United States National Security Space Management and Organization, which was chaired by Donald Rumsfeld, now the secretary of defense. It was created at the behest of Senator Robert Smith (R-N.H.), a strong supporter of military space power who has suggested in the past the need for a U.S. Space Force as a fourth military service. The conclusions and recommendations of the report deserve careful scrutiny and discussion; they sketch an image of the future role of space systems that implies a significant upgrading of their contributions to U.S. national security, including the eventual development of space weapons. There is a common theme running through this and other recent space policy studies. In the words of the commission report, "the security and economic well being of the United States and its allies and friends depends on the nation's ability to operate successfully in space." This is clearly a valid conclusion, but one that has seemingly not yet made much of an impression on the public's consciousness. The availability of the many services dependent on space systems appears to be taken for granted by the public. However, if space capabilities were denied to the U.S. military, it would be impossible to carry out a modern military operation, particularly one distant from the United States. The civilian sector is equally dependent on space. Communication satellites carry voice, video, and data to all corners of Earth and are integral to the functioning of the global economy. The commission noted that failure of a single satellite in May 1998 disabled 80 percent of the pagers in the United States, as well as video feeds for cable and broadcast transmission, credit card authorization networks, and corporate communication systems. If the U.S. GPS system were to experience a major failure, it would disrupt fire, ambulance, and police operations around the world; cripple the global financial and banking system; interrupt electric power distribution; and in the future could threaten air traffic control.

### GPS is key to power grids

Gydesen 6 – Paul W. Gydesen, Lieutenant Colonel of USAF, February 2006, “What Is The Impact To National Security Without Commercial Space Applications?” http://www.au.af.mil/au/awc/awcgate/awc/gydesen.pdf

In addition to navigation, GPS provides extremely accurate timing data. This highly reliable, very accurate time source is being incorporated into many commercial applications. Mr. Norman Martello, in an article for *Electric Perspectives*, notes: “Timing data synchronizes power plant generators to provide electric phase matching and fault detection throughout power grids in the United States. Timing and synchronization is critical to control the generation and distribution loop within the power grid, to share power with adjacent grids, and to identify quickly the location of short circuits within the system.”21 GPS eliminated the need to maintain costly microwave towers which proved to be expensive in remote regions.

### GPS loss kills the economy

Gydesen 6 – Paul W. Gydesen, Lieutenant Colonel of USAF, February 2006, “What Is The Impact To National Security Without Commercial Space Applications?” http://www.au.af.mil/au/awc/awcgate/awc/gydesen.pdf

All vital networks use some type of encryption. The Federal Reserve, the stock markets and brokerage firms, social security and Medicare are a few examples of encrypted networks that use GPS data.31 The loss of timing data is less critical to the computers within the network, but it would affect the ability of the network to connect with another network. For example, the computers at Bank of America would continue to operate; however, their computer network would not be able to synchronize with the Federal Reserve system if the time stamps do not agree. Failure to connect means the daily transactions cannot be reconciled. This could quickly become significant. In a study of Year 2000-related foreign exchange failures, a single major bank’s inability to settle its trades could reach $3.3 billion per week.32 That amount was only for foreign stock exchanges. The amounts for daily United States transactions would be higher. Twenty-five years ago, the banking industry used reel-to-reel tapes to reconcile daily transactions. At the end of the banking day, a tape was run of all transactions and sent via courier to the Federal Reserve. Reconciliation was conducted by the Federal Reserve in the early morning hours. It was not until the next day that a bank received its formal ledger from the Federal Reserve. In the event of a network failure a similar type of system could be reinstituted using compact disks; however, there are no procedures in place to perform this task. It could take days to put a system in place. A long delay would add to people’s apprehension and loss of confidence. A single failure like this could easily lead to chaos. Recall the impact of PanAmSat's Galaxy 4 satellite outage in 1998. The malfunction interrupted television and cable transmission, rendered idle millions of pagers and blanked out thousands of private networks that operate such services as fast-pay pumps at gas stations. It was estimated that the failure disrupted pager services for tens of millions of people in the United States.33 The failure of one satellite caused this wide-spread disruption. Try to imagine that type of impact multiplied across many systems simultaneously. It is a nightmare scenario. The Honorable Emmett Paige, Jr., Assistant Secretary of Defense for Command, Control, Communications, and Intelligence stated in testimony to congress regarding Year 2000 computer network issues, “If a particular system fails, we have generally learned how to work around an individual failure. However, if a problem, that happens to be common in most of our systems, were to cause failures in all of those systems at the same instant, the consequences might be catastrophic.”34

## Space Debris 2NC --- Hurts GPS

### Space debris is the biggest threat to GPS systems

Ashley 98 – David Ashley, University of Colorado at Colorado Springs, May 8 1998, “Risk Assessment of Space Debris Hazards for Global Positioning Spacecraft,” http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA356208&Location=U2&doc=GetTRDoc.pdf

Although in an altitude not known for heavy amounts of space debris, the GPS satellite constellation has potential for several types of disabling collisions that shielding will not absorb. The satellites are located in a relatively narrow altitude range of approximately 50 kilometers. Also, the mission lifetime of individual satellites is long and exposes the system to a number of hazards. These hazards include USSPACECOM cataloged objects whose orbits cross GPS orbital altitude, GPS apogee kick motor explosions, the Soviet GLONASS constellation, and inactive GPS satellites. In a 1991 report entitled “Global Positioning System Long-Term Collision Hazards,” M. E. Sorge of the Aerospace Corporation analyzed the potential space debris hazards to the GPS system. Each type of hazard was investigated using available debris information and statistical modeling, and Sorge found that the largest debris risk to GPS is “from inactive GPS satellites which continuously remain in the vicinity of the active constellation.” The results of the study support the current Air Force disposal policy.

### Iridium-Cosmos collision proves space isn’t big enough to avoid future satellite crashes – controlling space debris is key to prevent collisions

Ansdell 10 – Megan Ansdell, second year graduate student in the Master in International Science and Technology Policy program at the George Washington University’s Elliot School of International Affairs where she focuses on space policy, “Active Space Debris Removal: Needs, Implications, and Recommendations for Today’s Geopolitical Environment,” http://www.princeton.edu/jpia/past-issues-1/2010/Space-Debris-Removal.pdf

The second major space-debris creating event was the accidental collision between an active Iridium satellite and a defunct Russian military satellite on February 10, 2009. The collision created two debris clouds holding more than 200,000 pieces of debris larger than one centimeter at similar altitudes to those of the 2007 Chinese ASAT test (Johnson 2009b). It was the first time two intact satellites accidentally crashed in orbit, challenging the “Big Sky Theory,” which asserts that the vastness of space makes the chances of a collision between two orbiting satellites negligible (Newman et al. 2009). Iridium uses a constellation of sixty-six satellites to provide voice and data services to 300,000 subscribers globally. As the company keeps several spare satellites in orbit, the collision caused only brief service interruptions directly after the event (Wolf 2009). Nevertheless, the event was highly significant as it demonstrated that the current population of space objects is already sufficient to lead to accidental collisions, which, in turn, can lead to the creation of more space debris and increased risks to operational space systems. This type of progressive space debris growth is worrisome. The U.S. military, for example, relies on commercial satellites like Iridium for over 80 percent of its wartime communications (Cavossa 2006, 5).

## Space Debris 2NC --- Hurts Satellites

### Space weapons cause debris, which threatens all satellites

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

SPACE DEBRIS KILLS Space debris is deadly. Almost 3,500 tons of space debris is orbiting the earth. We now track approximately 8,000 pieces of space junk, including defunct satellites and stray nuts and bolts. No one knows for sure how much debris is in space. Larger objects can be monitored, but even paint chips and small fragments can still be deadly because debris travels through space in low earth orbit at ten times the speed of a rifle bullet. Blowing up satellites can create enormous debris fields that will kill indiscriminately anything in their path, including US and allied satellites, the International Space Station, the Space Shuttle, and the Hubble Space Telescope. Our best efforts to reduce debris will be undermined by the flighttesting and deployment of space weapons. Even if the US chooses non-destructive methods to disable or kill satellites, weaker adversaries may fight by different rules. How dangerous is space debris? A marble-sized piece of debris in low earth orbit would impact a satellite with about the same energy as a one ton safe dropped from the top of a five story building

### Space weaponization causes cascading space debris that takes out use of Earth’s orbit

Zhang 5 – Hui Zhang, research associate in the Project on Managing the Atom at Harvard University, December 5, 2005, “Action/Reaction: U.S. Space Weaponization and China,” Arms Control Association, http://www.armscontrol.org/print/1943

China also fears the increasing population of space debris. Such debris, resulting from 50 years of space activity, already poses a considerable hazard to spacecraft. Under U.S. space weaponization plans, this crowding problem could worsen as a large number of space weapons could be deployed in LEO. The launching and testing of weapons would also increase space debris. Moreover, deploying space-based weapons in the increasingly crowded realm of LEO would leave less room for civilian systems. Those problems would also occur during periods of peace. If a number of satellites were to be destroyed during the course of a war, some scientists warn, they would create so much debris that it would prevent future satellites from being stationed in space and generally limit space access. Indeed, pointing to the debris problem, Chinese scientists and officials have said that space weaponization should be considered an environmental threat as well as a security problem.

### Space war creates an overwhelming number of space debris that threaten satellites

Krepon and Katz-Hyman 5 – Michael Krepon, president and CEO of the Henry L. Stimson Center, Michael Katz-Hyman, research assistant at Stimson, July 2005, “Space Weapons and Proliferation,” Stimson Institute, http://www.stimson.org/images/uploads/research-pdfs/Space\_Weapons\_and\_Proliferation.pdf

The last Cold War-era ASAT test was in 1985, when a US F-15 fired a direct homing device against an old Air Force Solwind scientific satellite. The resulting impact created over 250 pieces of space debris that were visible to US space surveillance systems.13 One piece of space junk from this ASAT test came within one mile of the International Space Station.14 Seventeen years later, the last piece of hazardous space junk created by this ASAT test decayed out of low earth orbit.15 As with the earlier atmospheric nuclear tests, during the 1970s and 1980s few appreciated how debris created by ASAT tests could cause harm to one's own or friendly satellites.16 Now there is far greater recognition that space debris is an indiscriminate killer. It remains the biggest threat to satellites, the space shuttle, and the international space station. NASA has preliminarily reported that if another catastrophic accident occurs to the space shuttle, there is a 50 percent chance that it would be the result of space debris.17 Space shuttle windows have needed to be replaced 55 times between 1981 and 1996 due to pits caused by tiny pieces of debris.18 Even in the absence of ASAT tests over the past two decades, the amount of orbital debris has doubled. In a typical year, 150 metric tons of debris, including paint flecks, pieces of rocket boosters, and stray nuts and bolts are added into orbit.19 Over 13,000 objects greater than ten centimeters in diameter are now tracked by US Air Force Space Command.20 With new appreciation for the dangers created by space debris, the international community has begun working on mitigation strategies. Eleven space agencies, including NASA and the European Space Agency, have formed the Inter-Agency Debris Coordination Committee and have published a set of guidelines to mitigate space debris. **These worthwhile steps would be overwhelmed if space warfare occurred and produced debris fields**.

## **Space Debris 2NC --- Link Extension**

### Space war creates an overwhelming number of debris

MacDonald 9 – Bruce W. MacDonald, Senior Director of the Congressional Commission on the Strategic Posture of the United States, Winter 2009, “Steps to strategic security and stability in space: a view from the United States,” http://www.unidir.org/pdf/articles/pdf-art2907.pdf

The continued testing of KE-ASAT weapons could seriously interfere with space operations and space traffic management. Space debris is growing by about 10% per year, even without space conflict. Already satellites must occasionally be moved because of debris near-misses: one satellite operator has said that one of its fleet of satellites must be moved every three months because of debris. At this rate, in 25 years there will be ten times as much debris in orbit as we have today. Cascading effects, where debris collides with other debris in space to create still more, known as the Kessler Syndrome, is also a matter of growing concern. Even a modest space war, involving the destruction of 30 satellites, could increase the level of space debris by almost a factor of four, if each destroyed satellite produced the same level of debris as the Chinese satellite event of 2007.12 A larger conflict, involving the destruction of 100 satellites, would quickly increase space debris by over 1250%, and that does not include Kessler Syndrome effects, which would increase the debris level still further. We could make the most useful orbits in space useless to future generations. The inability to use space-based assets could threaten international security in other ways, as states would be unable to use their satellites to verify arms control agreements (for example the Russian Federation and the United States’ verification of Strategic Arms Reduction agreements).

### Space mill could kill environment space debris and other aspects

Hui 05 (Zhang Hui is a research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government. His research includes nuclear arms control verification techniques, the control of fissile material, nuclear terrorism, nuclear safeguards, nonproliferation and space. An extended version of this paper was produced for the, Space Weaponization And Space Security: A Chinese Perspective, www.wsichina.org/attach/CS2\_3.pdf)

[Weaponizing space would further exacerbate current problems with space debris.17 Even worse, some scientists warn that if a number of satellites are destroyed in the course of a war, the Earth would be encased in a cloud of debris that would prevent future satellite stationing and space access.18 Given concerns over the space debris issue, senior scientists in China have emphasized that preventing environmental pollution should not only apply on Earth, but should also apply in outer space. As Xiangwan recently noted, "prevention of pollution in space should be put on an agenda and as time goes by, this problem will become increasingly obvious." He further states: "In preventing space pollution, the following two issues are worth noticing: space garbage and weaponization of space." "[W]eaponization of space is more dangerous than ordinary space garbage," since "it will seriously pollute space" and "it will threaten peace and stability on the Earth."19 ]

### Space wep bad causes environment and space debris

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

The weaponization of space is an environmental as well as a national security issue. The environmental degradation of space created by spacefaring nations constitutes a danger to space exploration, the space shuttle and other peaceful uses of space. Space litter also poses difficulties for the military uses of space. The weaponization of space, particularly with respect to the flight-testing of ASAT weapons, would greatly compound existing concerns over safe passage. In the event of a resumption of ASAT tests, the Pentagon would attempt to mitigate space debris, as it does with respect to missile defence tests. Other states that test ASATs might not be as conscientious about debris mitigation. The actual use of ASATs would compound these dangers exponentially. Debris fields in the upper reaches of space could be more long lasting than environmental degradation on Earth. Traffic management and debris mitigation efforts are essential components of space assurance.

## **Space Debris 2NC --- Turns Case**

### **Space weaponization creates space debris that stops further exploration**

Johnson 3 – Dr Rebecca Johnson is the Executive Director of the Acronym Institute for Disarmament Diplomacy, based in London, and has written widely on nonproliferation, arms control and space security policy. 2003, "Security Without Weapons in Space: Challenges and Options," www.unidir.org/pdf/articles/pdf-art1990.pdf

As noted by Joel Primack, one of the premier experts on the problems of space debris, “Weaponization of space would make the debris problem much worse, and even one war in space could encase the entire planet in a shell of whizzing debris that would thereafter make space near the Earth highly hazardous for peaceful as well as military purposes”. 23 Such a scenario would cause the Earth to be effectively entombed, jeopardizing the possibility of further space exploration and greatly complicating civilian uses. In addition, Joel Primack speculates that even a small number of “hits” in space could create sufficient debris to cause a cascade of further fragmentation (a kind of chain reaction). This, in turn, could potentially damage the Earth’s environment and, as the sun’s rays reflect off the dust, cause permanent light pollution, condemning us to a “lingering twilight”. 24

### Space weapons bad causes space debris and hurts future space development

Moltz 2- James Moltz, Department of National Security Affairs, Naval Postgraduate School, Monterey, Protecting safe access to space: Lessons from the first 50 years of space security, <http://www.acronym.org.uk/dd/dd63/63op1.htm>

[A major problem in past and current arguments supporting testing and deployment of constellations of weapons in space has been the threat of possible—and indeed predictable—“collateral” damage to other space assets. China's 2007 test is a case in point since the USA has already had to move a NASA satellite to avoid a deadly collision, but there are corollaries in the 1962 US and Soviet nuclear ABM tests in space, in the 1968–1982 Soviet ASAT test program, and in the 1985 US ASAT test. The main risks to date have been EMP radiation from nuclear tests and orbital debris from kinetic weapons. Both of these threats are significant, and there is no currently available means to remediate them artificially. For this reason, any space-faring country considering the deployment of any significant constellation of space weapons faces the dangerous consequence of likely damage to its own space assets and those of others in the testing and deployment stages (as well as in any possible use scenarios). Such concerns clearly affected US and Soviet government plans regarding nuclear testing in space, as they do current global attitudes regarding the testing of debris-producing, kinetic-kill weapons against space-based objects. Unlike other environments of international activity, space competition is affected in unique ways by orbital physics. Compared to the collective “good” of safe access to orbital space, we can consider space radiation and debris as collective “bads.”[9](http://www.sciencedirect.com/science/article/pii/S0265964607000860" \l "fn9) This does not keep states from periodically attempting to overcome these limitations, as seen in China's 2007 test. But it does create significant operational obstacles to continuing such harmful behavior, as well as stimulating widespread international pressure to prevent it. These constraints are increasing over time, not decreasing, as space becomes more crowded. Thus, critics of space arms control miss the point when they discount the possibility of unique military restraint in space as a “fallacy.”[10](http://www.sciencedirect.com/science/article/pii/S0265964607000860" \l "fn10) Instead, it is a far worse “fallacy” to believe that states can overcome the laws of orbital physics. Put simply, orbital warfare on any scale cannot occur without ruining critical regions of space (such as low-Earth orbit) for other purposes. As few as a dozen explosions—capable of releasing some 420,000 fragments of dangerous space debris—could effectively shut down this region for decades. Thus, to expect that countries will act against their own interests by using space in this way is counterintuitive. To date, we have seen a powerful logic of “environmental security” at work in space. When countries have crossed the line in terms of damage to space, they have retreated (or been pushed) backwards by the risk of a loss of access.]

## SMIL Bad – Space Industry 1NC

### Weaponization destroys US space industry and competitiveness

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

In any event, it is clear that U.S. policy-makers must look at the potential strategic and direct military risks, and the costs, of weaponizing space.

Economic Risks in a Globalized Market Besides the potential for undercutting, rather than strengthening, the U.S. military edge, there also is reason to be concerned about the possibility that moves toward weaponizing space could damage the competitiveness of the U.S. space industry, which currently dominates the international marketplace and therefore bolsters U.S. economic and military power.

The commercial space and telecommunications sector is also arguably the most globalized of today's economic sectors. The customer base is international; the industry itself is largely comprised of multinational alliances among companies and consortia, as well as joint government programs. Whereas space used to be available only to the most developed nations, there are more than 1,100 companies in 53 countries now exploiting space.[34](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn34" \o ")  Space is a major worldwide market accounting for many billions in revenue, and U.S. firms are dominant in the sector.

According to a 2000/2001 study (the 2001/2002 version should be released shortly) by the Washington-based Satellite Industry Association, worldwide revenue (including both government and commercial customers) for the satellite industry was $85.1 billion in 2000, and $97.7 billion is estimated for 2001. Over the past five years, the average annual growth has been 17 percent. The industry association was predicting year-end numbers in 2001 to show 15 percent growth. The U.S. satellite industry pulled in $8.9 billion in 2000, and $10.3 billion in 2001 in satellite manufacturing alone, out of worldwide revenue of $17.2 billion and $20.7 billion respectively. Importantly, exports account for half or more of U.S. industry revenue.[35](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn35" \o ") A parallel study, released by the Satellite Industry Association April 5, 2001, and conducted by Henry R. Hertzfeld, senior research scientist at the George Washington University Space Policy Institute, showed worldwide spending on "civilian space programs totaled $20.8 billion in 2000 excluding spending by Russian, Ukrainian and Chinese governments. Government spending on space reached $35.8 billion when adding in military space budgets. The United States accounted for more than three-fourths of all spending on civil space (78 percent), while combined spending by European countries and all other governments (Japan, China, Brazil and others) accounted for the remaining spending."[36](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn36" \o ")

While commercial space was a booming market during most of 1990s, the market for low-earth orbit satellites has collapsed over the past two years. Launch providers are predicting a flat marketplace for a number of years.[37](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn37" \o ")  In addition, the market for large geosynchronous orbit satellites for communications also is at near rock bottom and is expected to remain flat through 2011, according to a recent report by Forecast International/DMS Inc.[38](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn38" \o ") The growth in the market is now being driven by satellite services, such as direct downlinks for Internet (with high hopes pinned on the development of broadband Internet services) or TV.

There further is excess capacity in the commercial space market place, with five major manufacturers (three U.S., two European), according to Christopher E. Kubaski, chief financial officer of Lockheed Martin Corp.[39](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn39" \o ")  Kubaski and other U.S. industry leaders are predicting little growth in the commercial sector in the near term. Corporate chieftains at major defense and space firms already are citing missile defense as a much more lucrative future market than commercial/civil space operations. Such a market assessment by U.S. industry is not without consequences. As one corporate strategist at a major U.S. defense/space firm explained, market assessments drive where corporate research and development dollars go.[40](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn40" \o ")  Considering that it is industry, rather than DoD and NASA, that carries the bulk of R&D spending in the defense and civil space arena, there is some possibility that an emphasis on space weaponization could shift technology investment from the commercial to the defense world. Granted, this would hold only for those firms — such as Lockheed Martin Corp., Boeing Co., Raytheon Co., and TRW — that do large percentages of government businesses, rather than for those companies more vested in the commercial end of space operations (providing telecommunications and Internet services for example.) Nonetheless, the ramifications of shifting R&D on market edge in the commercial arena deserve some consideration. Interestingly, the U.S. industry has not done as well over the past two years as the overall marketplace. Overall, the worldwide market rebounded in 2000 with a 23 percent growth in revenue, according to the Satellite Industry Association. The association data show that while the global market for satellite manufacturing grew by 9 percent in 2000, U.S. revenue declined by 11 percent. Similarly, worldwide revenue in the satellite launch segment grew by 29 percent in 2000, whereas U.S. revenue grew only by 17 percent.[41](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn41" \o ")

(Still, U.S. manufacturers snagged more than half the satellite orders in 2001, according to data from Futron Corp., a consulting firm specializing in the space market.[42](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn42" \o ")  ) U.S. industry officials partially blame the government for their recent poor performance — worried about the effects of U.S. regulatory requirements and export controls on their bottom line. The global marketplace is highly competitive, and U.S. policy and regulations are a major factor in determining U.S. competitiveness. For example, a RAND study of the remote sensing industry states: "Success for these new U.S. commercial remote sensing satellite firms heavily depends on both understanding and overcoming various risks (e.g., technical, market, policy and regulatory) that could diminish their prospects in the highly competitive global marketplace for geospatial information products and services. Within this context, U.S. government policies and regulations exert a major influence on the ability of U.S. remote sensing satellite firms to realize their competitive potential in both the domestic and international marketplace."[43](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn43" \o ")  This is just as true for other segments of the space industry. For example, in 1998 licensing of satellite exports was switched by Congress from the Commerce Department to the State Department and now is handled in a similar manner to weapon export controls because of national security concerns, particularly about technology leakage to China. In an open letter to Congress in June 2001 urging a reversal of the law, the Satellite Industry Association stated that the U.S. market share for geostationary communications satellites dropped from its 10-year average of about 75 percent to 45 percent during 2000, and it largely blamed the regulatory switch to State and the subsequent slowing of the export licensing process for the problem.[44](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn44" \o ") Thus, U.S. industry officials are concerned about Pentagon plans to deny "enemies" access to space assets, including commercial imagery and other services provided by U.S. firms. In his Huntsville address, Cosumano admitted that as "some of these assets belong to U.S. companies and they don't feel too good about the idea that we might shoot them out of the sky."[45](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn45" \o ")  The U.S. Defense Department already has the legal ability to exercise so-called shutter control of U.S. civilian satellites — that is, the ability to shut down a satellite to prevent enemies from using images or data to help them defeat the U.S. military in wartime. In addition, U.S. export policy requires that any foreign government purchasing a U.S.-made imaging satellite must sign a government-to-government agreement to take into account American national security interests. While the Pentagon did not use its shutter control privilege in Afghanistan, as noted earlier, DoD did take commercial imagery off the market by buying exclusive rights to all pictures taken by Space Imaging's Ikonos satellite. This was done despite the fact that Russia's Cosmos satellite network could provide equivalent imagery.[46](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn46" \o ")  The Pentagon move immediately caused a stir overseas. Because the United Arab Emirates, a Space Imaging customer, was directly affected by the Pentagon buy, the six countries of the Gulf Cooperation Council commissioned a joint committee to consider buying their own military imaging satellite rather than rely on U.S. commercial providers.[47](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn47" \o ") Besides the United States, France, Israel and Russia are in the imagery satellite business — and obviously, U.S. industrialists cannot like the idea that defense policy or actions may be rebounding to create stronger competitors for them. The 15-nation European Union already is moving forward on plans to buy a European version of the U.S. Global Positioning System navigation satellite network, called Galileo, in part due to fears that future access might be denied or downgraded by the U.S. military. "Europe cannot accept reliance on a military system which has the possibility of being cut off," Rene Oosterlinck, head of the European Space Agency's navigation department, was quoted by the New York Times.[48](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn48" \o ")  Some international customers also already are questioning the reliability of U.S. suppliers (and government-supplied products). After the 1998 change in export-licensing authority, German-controlled Daimler-Chrysler Aerospace announced it would no longer purchase U.S.-made satellite components. The competitive and cost challenges the U.S. satellite industry faces could be increased if the United States moved to make space a battlefield. Up to now, the threat that commercial satellites could become direct wartime casualties has been negligible. But an aggressive U.S. pursuit of ASATs would likely encourage others to do the same, thus potentially heightening the threat to U.S. satellites. Space industry executives, whose companies often are working at the margins of profitability, are concerned about U.S. commercial satellites and their operations becoming targets, especially because current commercial satellites have little protection (electronic hardening, for example, has been considered too expensive). There would be costs to commercial providers for increasing protection, and it is highly unclear whether the U.S. government would cover all those costs. Another area where Defense Department policy could threaten U.S. industry competitiveness is in access to the radio spectrum. DoD has been resisting calls from the telecommunications industry to free from government-only access a portion of the spectrum that companies believe is essential to providing high-speed Internet access over cellular phones. That portion of the spectrum (1755-1850 megahertz) is now denied to U.S. commercial users because it is the spectrum band of choice for military (and other government) communications, as well as precision targeting. However, that band is being used by many other firms abroad for commercial wireless communications, raising the possibility that a continued U.S. policy of denial, although perhaps making short-term military sense, will inhibit the ability of U.S. firms to compete abroad. Stephen Price, head of the Pentagon's new office for spectrum management, recently said that the greater information demands of the war on terrorism and increased homeland security efforts are making DoD even more leery of freeing the disputed spectrum bands.[49](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn49" \o ")

### Competitiveness prevents great power war --- now is key

Baru 9 – Sanjaya Baru 2009 is a Professor at the Lee Kuan Yew School in Singapore Geopolitical Implications of the Current Global Financial Crisis, Strategic Analysis, Volume 33, Issue 2 March 2009 , pages 163 - 168

Hence, economic policies and performance do have strategic consequences.2 In the modern era, the idea that strong economic performance is the foundation of power was argued most persuasively by historian Paul Kennedy. 'Victory (in war)', Kennedy claimed, 'has repeatedly gone to the side with more flourishing productive base'.3 Drawing attention to the interrelationships between economic wealth, technological innovation, and the ability of states to efficiently mobilize economic and technological resources for power projection and national defence, Kennedy argued that nations that were able to better combine military and economic strength scored over others. 'The fact remains', Kennedy argued, 'that all of the major shifts in the world's military-power balance have followed alterations in the productive balances; and further, that the rising and falling of the various empires and states in the international system has been confirmed by the outcomes of the major Great Power wars, where victory has always gone to the side with the greatest material resources'.4 In Kennedy's view, the geopolitical consequences of an economic crisis, or even decline, would be transmitted through a nation's inability to find adequate financial resources to simultaneously sustain economic growth and military power. The classic 'guns versus butter' dilemma. Apart from such fiscal disempowerment of the State, economic under-performance would also reduce a nation's attraction as a market, as a source of capital and technology, and as a 'knowledge power'. As power shifted from Europe to America, so did the knowledge base of the global economy. As China's power rises, so does its profile as a 'knowledge economy'. Impressed by such arguments, the China Academy of Social Sciences developed the concept of Comprehensive National Power (CNP) to get China's political and military leadership to focus more clearly on economic and technological performance than on military power alone in its quest for Great Power status.5 While China's impressive economic performance, and the consequent rise in China's global profile, has forced strategic analysts to acknowledge this link, the recovery of the US economy in the 1990s had reduced the appeal of the Kennedy thesis in Washington, DC. We must expect a revival of interest in Kennedy's arguments in the current context. A historian of power who took Kennedy seriously, Niall Ferguson, has helped keep the focus on the geopolitical implications of economic performance. In his masterly survey of the role of finance in the projection of state power, Ferguson defines the 'square of power' as the tax bureaucracy, the parliament, the national debt, and the central bank. These four institutions of 'fiscal empowerment' of the state enable nations to project power by mobilizing and deploying financial resources to that end.6 Ferguson shows how vital sound economic management is to strategic policy and national power. More recently, Ferguson has been drawing a parallel between the role of debt and financial crises in the decline of the Ottoman and Soviet Empires and that of the United States. In an early comment on the present financial crisis, Ferguson wrote: We are indeed living through a global shift in the balance of power very similar to that which occurred in the 1870s. This is the story of how an over-extended empire sought to cope with an external debt crisis by selling off revenue streams to foreign investors. The empire that suffered these setbacks in the 1870s was the Ottoman empire. Today it is the US. … It remains to be seen how quickly today's financial shift will be followed by a comparable geopolitical shift in favour of the new export and energy empires of the east. Suffice to say that the historical analogy does not bode well for America's quasi-imperial network of bases and allies across the Middle East and Asia. Debtor empires sooner or later have to do more than just sell shares to satisfy their creditors. … as in the 1870s the balance of financial power is shifting. Then, the move was from the ancient oriental empires (not only the Ottoman but also the Persian and Chinese) to western Europe. Today the shift is from the US - and other western financial centres - to the autocracies of the Middle East and East Asia. …7 An economic or financial crisis may not trigger the decline of an empire. It can certainly speed up a process already underway. In the case of the Soviet Union, the financial crunch caused by the Afghan War came on top of years of economic under-performance and the loss of political legitimacy of the Soviet State. In a democratic society like the United States, the political legitimacy of the state is constantly renewed through periodic elections. Thus, the election of Barack Obama may serve to renew the legitimacy of the state and by doing so enable the state to undertake measures that restore health to the economy. This the Soviet State was unable to do under Gorbachev even though he repudiated the Brezhnev legacy and distanced himself from it. Hence, one must not become an economic determinist, and historic parallels need not always be relevant. Politics can intervene and offer solutions. Political economy and politics, in the form of Keynesian economics and the 'New Deal' did intervene to influence the geopolitical implications of the Great Depression. Whether they will do so once again in today's America remains to be seen.

## Space Industry 2NC --- Link Extension

### Space weapons cause an arms race and destroy the US space industry

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

As noted, there is also the question of intent. It is not obvious that any nation has any intention, or even incentive, to launch a war in space. Instead, most countries, including China and Russia, have been urging a global ban on weapons in space. Many experts, including a number of Air Force strategists, persuasively argue a U.S. move to put offensive weapons in space could have the perverse effect of creating a new threat because other countries would feel compelled to follow suit.[26](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn26" \o ")  Nonetheless, it is impossible to completely assess any threat to U.S. national security without the benefit of classified information. That said, it also must be recognized that threat assessment is not the only necessary input to the creation of national security policy. Even assuming an urgent threat to U.S. space operations, an assessment of how best to counter those threats — including the pros and cons of the United States responding by becoming the first country to put weapons in space — would still be necessary.In particular, it is imperative to look at risks emanating from such a decision. These include: the potential for starting an arms race in space that does both military and political damage to the United States; and the possibility that the advent of space warfare might negatively impact the U.S. commercial space and telecommunications industry, which now dominates the world marketplace.

### **Space dominance and weaponization destroys the industry – deters investors**

Kaufman et al. 8 – Richard Kaufman is a member of the board of directors and a vice chair of Economists for Peace and Security, and Director of Bethesda Research Institute, which he founded. He was formerly a staff economist and general counsel of the Joint Economic Committee of the US Congress. \*\*AND Dr. Henry Hertzfeld is a Senior Research Scientist at the Space Policy Institute of the Elliott School of International Affairs, George Washington University. He holds both a doctorate in economics and a law degree. Before joining the Institute, Dr. Hertzfeld was Senior Economist at NASA from1976-1983. \*\*AND Jeffrey G. Lewis is Director of the Nuclear Strategy and Nonproliferation Initiative at the New America Foundation. Dr. Lewis is also a research affiliate with the Center for International and Security Studies at the University of Maryland School of Public Policy (CISSM) and a member of the Editorial Advisory Board of the Bulletin of the Atomic Scientists. September 2008, "Space, Security, and the Economy," [www.epsusa.org/publications/papers/spacesecurity.pdf](http://www.epsusa.org/publications/papers/spacesecurity.pdf)

However, continued growth and dynamism, especially in the commercial space sector is dependent on a space environment that is free of conflict. The policy of space dominance threatens that precondition. If there are more anti-satellite tests, or if space-based missile defenses are deployed, it will be difficult to prevent the proliferation of weapons in space. The next step could be the transformation of space from an area of peaceful use into an area of conflict. Once the process of weaponization gets under way, the ability to use the space environment for peaceful purposes will be put at risk, as a number of experts have warned.13 At some point commercial investors in space will have to consider the security of their investments. It is hard to believe they would place additional resources at risk in a vulnerable area of military conflict.

### Space weaponization prevents commercial use of space – threatens the industry

Kaufman, Hertzfeld, and Lewis 8 – Richard Kaufman, member of the board of directors and a vice chair of Economists for Peace and Security and Director of Bethesda Research Institute, Henry Hertzfeld, Senior Research Scientist at the Space Policy Institute of the Elliott School of International Affairs at George Washington University, Jeffrey Lewis, Director of the Nuclear Strategy and Nonproliferation Initiative at the New America Foundation, September 2008, “Space, Security and the Economy,” http://www.epsusa.org/publications/papers/spacesecurity.pdf

There has been rapid growth over the past few decades in commercial activities in space and in the economic applications of space technology. Continued growth and dynamism, especially in the commercial space sector, is dependent on a space environment that is free of military threat or conflict. The policy of space dominance threatens that precondition. If there are more anti-satellite tests, or if space-based missile defenses are deployed, it will be difficult to prevent the proliferation of weapons in space, or terrestrial weapons that can target space assets. One possible scenario could be the transformation of space into a battleground. Once the process of weaponization gets under way, the ability to use the space environment for peaceful purposes is threatened. At some point commercial investors in space will have to consider the security of their investments. It is unlikely that they would place additional resources at risk in a vulnerable area of military conflict.

### US weaponization prevents commercial space use – threatens the industry

Lowery 7 – Scott Lowery, systems engineer at Lockheed Martin, 2007, “Why the Weaponization of Space Should Not Be Pursued,” http://www.colorado.edu/pwr/occasions/articles/Lowery\_Why%20the%20Weaponization%20of%20Space%20Should%20Not%20Be%20Pursued.pdf

Another reason to avoid weaponizing space is that to do so would threaten the burgeoning space industry. Presently, there are several companies developing launch vehicles to lift payloads to space at far lower costs than any government agency. Also, there is the space tourism and travel industry to consider. No longer in an embryonic state, commercial flights will be available as early as 2009 (Overview). In the near future, suborbital flights will become as common as trans-Atlantic flights are today. They are the first step towards a general private use of space. There is a great deal of potential economic growth tied up in these ventures, but none of it will mature if people feel that they would be flying through enemy territory, so to speak, or that their investments are at too great a risk. Since there is no orbital analogue to airspace, future spaceflights could be endangered by weapons from any country regardless of their trajectory. It is even possible that weapons could be deployed against civilian space targets without detection. There would not be any evidence to assign blame to a particular nation, making spaceflights a tempting target. Even if they were not targeted directly, spaceflights would still be at a significant risk from the debris resulting from the use of space weapons. Much like chemical weapons, space weapons create a hazardous environment. Simple physics insists that even a tiny piece of shrapnel from a destroyed satellite can cause major damage when it is travelling at orbital velocities. In light of these concerns, the weaponization of space would not benefit the United States and could potentially cause great damage, both politically and economically.

## Space Industry 2NC --- Key to Economy

### Commercial space is key to the economy

Gydesen 6 – Paul W. Gydesen, Lieutenant Colonel of USAF, February 2006, “What Is The Impact To National Security Without Commercial Space Applications?” http://www.au.af.mil/au/awc/awcgate/awc/gydesen.pdf

The United States is growing more and more economically dependent upon commercial space assets. Commercial space applications are vitally important to the prosperity, economic well-being, and overall confidence of the business climate. Space applications enhance such things as: television broadcast, telecommunications, navigation, and computer network timing. Revenue from space commerce was $97 billion in 2003 and is projected to top $137 billion by 2009. The availability of space systems, especially Global Positioning System (GPS) navigation and timing data, continues to find new uses within industry. This includes: power generation, mapping services, agriculture, and public utilities. Without the use of satellite systems by commercial companies, the impact to the United States economy could be severe in the short term. Over the long term, the national security of the United States can be maintained. A sudden loss of satellite services could cause economic chaos. The greatest risk to the economy is in overall consumer confidence. When American consumers cannot receive cable TV, satellite TV, cash from ATMs, they may lose confidence and stop spending money; pushing the economy into a recession. The extent of the chaos is dependent upon how quickly critical services such as financial transactions, network timing, and stock market services can be switched to fiber-optic networks. Currently, the fiber-optic network has many terabits of excess capacity. Strong leadership from government officials and a quick conversion to fiber-optic is critical.

### Commercial space is key to the economy

Krepon 4 – Michael Krepon, president and CEO of the Henry L. Stimson Center, November 2004, “Weapons in the Heavens: A Radical and Reckless Option,” Arms Control Association, http://www.armscontrol.org/act/2004\_11/Krepon#Lewis2

Space warfare would have far-reaching adverse effects for global commerce, especially commercial transactions and telecommunication services that use satellites. Worldwide space industry revenues now total almost $110 billion a year, $40 billion of which go to U.S. companies.[[4]](http://www.armscontrol.org/act/2004_11/Krepon#notes4) These numbers do not begin to illuminate how much disruption would occur in the event of space warfare. For a glimpse of what could transpire, the failure of a Galaxy IV satellite in May 1998 is instructive. Eighty-nine percent of all U.S. pagers used by 45 million customers became inoperative, and direct broadcast transmissions, financial transactions, and gas station pumps were also affected.[[5]](http://www.armscontrol.org/act/2004_11/Krepon#notes5)

### Loss of commercial assets kills global economy

Gydesen 6 – Paul W. Gydesen, Lieutenant Colonel of USAF, February 2006, “What Is The Impact To National Security Without Commercial Space Applications?” http://www.au.af.mil/au/awc/awcgate/awc/gydesen.pdf

A loss of commercial space assets could also impact world globalization. The United States is providing world leadership in globalization. Without our space assets, this endeavor would face a serious setback, thus compromising many economic initiatives around the globe. The result could be an economic recession on a global level.

### The space industry is key to the US economy and military

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

The health of the U.S. commercial space and telecommunications industry is critically important to the computerized, globalized U.S. economy, but also directly to the U.S. military. The Department of Defense now uses commercial satellite systems to cover about 60 percent of its satellite communications needs, and that dependence is growing.[50](http://www.cdi.org/missile-defense/spaceweapons.cfm" \l "_ftn50" \o ") Military use of commercial assets is unlikely to significantly decline, in part due to the high costs of building and operating military-dedicated satellites.

Of course, it must be pointed out that some U.S. firms will no doubt benefit from any new U.S. programs to develop space-based weaponry — particularly the large defense contractors already involved in military space programs. Nonetheless, there remains reason to be concerned about the affect on other companies more involved in the commercial use of space. And since there are, and will remain, direct benefits to the military of maintaining a strong and competitive commercial space and telecommunications industry, the possibility that the deployment of weapons in space or a policy of aggressive targeting of satellites (and subsequent government regulatory restraints) may have negative industrial implications must be more fully explored.

## SMIL Bad --- Terrorism

### Space mill would cause use of terrorism chem and bio wepons and could undercut the US power internationally

Theresa Hitchens 2002(CDI Vice President, Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons)

[Many experts also argue there would be costs, both economic and strategic, stemming from the need to counter other asymmetric challenges from those who could not afford to be participants in the race itself. Threatened nations or non-state actors might well look to terrorism using chemical or biological agents as one alternative.

Karl Mueller, now at RAND, in an analysis for the School of Advanced Airpower Studies at Maxwell Air Force Base, wrote, "The United States would not be able to maintain unchallenged hegemony in the weaponization of space, and while a space-weapons race would threaten international stability, it would be even more dangerous to U.S. security and relative power projection capability, due to other states' significant ability and probably inclination to balance symmetrically and asymmetrically against ascendant U.S. power."31 ]

## Link --- H-3

### Mining H-3 leads to weaponization of space to control resources

Gagnon 6 – Bruce K. Gagnon, Coordinator Global Network Against Weapons And Nuclear Power in Space, December 17 2006, “NASA Plans Moon Base To Control Path To Space,” http://www.rense.com/general74/path.htm

Some scientists predict that one metric ton of helium-3 could be worth over $3 billion. Researchers at the Princeton University Plasma Physics Laboratory have estimated that some one million tons of helium-3 could be obtained from the top layer of the Moon. If all this turns out to be true and scientifically possible, imagine the gold rush to the Moon and the conflict that could follow in years to come. Who would police the Moon, especially when countries like the U.S. refuse to sign the Moon Treaty that restricts "ownership claims"? The U.S. Space Command's plan, Vision for 2020, says, "Historically, military forces have evolved to protect national interests and investments - both military and economic. During the rise of sea commerce, nations built navies to protect and enhance their commercial interests....Likewise, space forces will emerge to protect military and commercial national interests and investment in the space medium due to their increasing importance." I have always been convinced that, by creating offensive space weapons systems, one of the major jobs of the Space Command would be to control who can get on and off planet Earth, thus controlling the "shipping lanes" to the Moon and beyond. There has long been a military connection to NASA's Moon missions. In early 1994, NASA launched the Deep Space Program Science Experiment, the first of a series of Clementine technology demonstrations jointly sponsored with the Ballistic Missile Defense Organization (BMDO). The Pentagon announced that data acquired by the spacecraft indicated that there is ice in the bottom of a crater on the Moon, located on the Moon's south pole - the same venue NASA now envisions as the site for the 2024 permanent base. According to a Pentagon website, "The principal objective of the lunar observatory mission though was to space qualify lightweight sensors and component technologies for the next generation of Department of Defense spacecraft [Star Wars]. The mission used the Moon, a near-Earth asteroid, and the spacecraft's Interstage Adapter (ISA) as targets to demonstrate sensor performance. As a secondary mission, Clementine returns valuable data of interest to the international civilian scientific sector." In the end, the NASA plan to establish permanent bases on the Moon will help the military "control and dominate" access on and off our planet Earth and determine who will extract valuable resources from the Moon in the years ahead.

### Countries would weaponized to control H-3

Beljac 8 – Marko Beljac, Foreign Policy in Focus contributor, teaches at the University of Melbourne, March 31 2008, “Arms Race in Space,” Foreign Policy in Focus, http://www.fpif.org/articles/arms\_race\_in\_space

As noted, China has tested an anti satellite weapon and Russia has stated that it would not allow other states to control space and threaten its own space assets. In Asia a nascent space race seems to be developing between China, Japan and India. In the far future the large deposits of Helium-3 on the moon's surface could lead to a militarized race to colonize the moon to secure Helium-3 for nuclear fusion energy technologies based on anuetronic fusion reactions in the context of depleting hydro-carbons.

## Link --- Missile Defense

### EAGLE missile defense is ineffective and causes proliferation

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

A deployed EAGLE missile defense system by the United States would hold at risk the ballistic missile assets of every other state. Even states with enough missiles to overwhelm EAGLE if launched simultaneously would feel increased risk, since a first strike might reduce their inventory below the size required to saturate defenses. In that light, opponents might: • Develop faster-burning missiles to reduce their period of vulnerability, or harden the missiles to reduce the laser’s capacity • Proliferate the missiles and their launchers to saturate the lasers • Develop antisatellite capabilities against the lasers • Shift force structure toward cruise missiles. 14 The space-based segment of EAGLE would be highly predictable in its movements. An attacker would know how large a salvo of ballistic missiles would have to be to overwhelm the defenses and when coverage would be at a minimum. Furthermore, the one or two EAGLE laser-defense platforms that would have engagement opportunities during the boost phase of the missile salvo could be attacked just before it was launched. Defensive sensors could be degraded using relatively low-powered lasers or decoys, while space-based weapons platforms were attacked by ground-based lasers, orbiting space mines, or fast-burning, hardened, direct-ascent antisatellite (ASAT) weapons. In this way, with relatively modest resources an enemy might overwhelm the extremely expensive EAGLE boost-phase capability. A more sophisticated foe might deploy clusters of space-based mirrors to use in conjunction with mobile or hardened ground-based lasers. The mirror clusters could attack large segments of the U.S. defensive system whenever they came over their targets’ horizon. Given these vulnerabilities and initiative possessed by the attacker in a missile attack, it seems unlikely that EAGLE could provide anything like assured boostphase intercept.

### Even a missile defense test causes weaponization and provokes Russia and China

Graham 5 – Ambassador Thomas Graham Jr. is a former senior-level diplomat and a world-renowned authority on nuclear nonproliferation. As a U.S. diplomat, Ambassador Graham was involved in the negotiation of every major arms control and nonproliferation agreement from 1970 to 1997. He participated in nuclear talks with more than 100 countries. Graham was general counsel for the Arms Control and Disarmament Agency. He has advised five U.S. presidents. He earned his J.D. from Harvard Law School and his bachelor’s degree from Princeton. December 2005, "Space weapons and the risk of accidental nuclear war," Arms Control Today, 35.10, p. 12

Obviously, nothing should be done in any way further to diminish the reliability of the space-based components of U.S. and Russian ballistic missile early warning systems. A decline in confidence in such early warning systems caused by the deployment of weapons in space would enhance the risk of an accidental nuclear weapons attack. Yet, as part of its plans for missile defense, the Pentagon is calling for the development of a test bed for space-based interceptors as well as examining a number of other exotic space weapons. In an interview published in Arms Control Today, Lt. Gen. Henry Obering, director of the Missile Defense Agency, touted what he said was "a very modest and moderate test-bed approach to launch some experiments." Obering said the Pentagon would only deploy a handful of interceptors: "We are talking about onesies, twosies in terms of experimentation." (2)

Despite Obering's claims, however, establishing a test bed for missile defense in space, as opposed to current preliminary research, would be a long step toward space weaponization. Once space-based missile defenses are tested, they are likely to be deployed, and in significant numbers, no matter if the tests are successful. To see the path that a space test bed is likely to follow, one need only look at the present ground-based program: the Pentagon claims there is little true difference between a test bed and an operational deployment. Moreover, in space the deployment could be more dramatic. Although the current ground-based configuration envisions a few dozen interceptors, continuous space coverage over a few countries of concern would likely require a very large number of interceptors because a particular interceptor will be above a particular target for only a few minutes a day. Today's missile defenses provide very little real protection as the United States currently faces no realistic threat of deliberate attack by nuclear-armed long-range missiles. But space weapons could actually be detrimental to U.S. national security. They would increase the perceived vulnerability of early warning systems to attack and cause Russia and perhaps other countries such as China to pursue potentially destabilizing countermeasures, such as advanced anti-satellite weapons. These dangers would be particularly worrisome for those components that are placed in geosynchronous orbits (GEO). Space objects in GEO are sufficiently far from the Earth (about 36,000 kilometers) so that their speed roughly matches the rotational speed of the Earth and they remain "stationary" above one location. To be sure, any country that can place a satellite in these farther orbits--and there are several--could potentially threaten another country's satellites there. Yet, it would be easier to do so, and perhaps more importantly, the threat perception would be greater with weapons based in space than with existing ground-based technology. The 15 U.S. early warning satellites are almost entirely in GEO. The three functioning Russian early warning satellites utilize two different orbits. Two of the satellites use a highly elliptical orbit, which ranges from low-Earth orbit (LEO)--100 to 2,000 kilometers above the Earth where space objects travel at about 8 kilometers per second--out to GEO. The other satellite is permanently stationed in GEO.

### BMD functionally neutralizing deterrence of countries forces them to pursue space weapons

Gilbert 10 – Jo-Anne Gilbert, PhD candidate and research assistant at the Griffith Asia Institute, September 2010, “A Spoon Full of Sugar Makes the Medicine Go Down? An Analysis of the Obama Administration’s ‘New’ National Space Policy,” <http://sustainablesecurity.org/article/spoon-full-sugar-makes-medicine-go-down-analysis-obama-administration%E2%80%99s-%E2%80%98new%E2%80%99-national-space>

BMD, nuclear issues, and space weaponisation are intrinsically linked. The paradox of the push towards BMD capacity is that it deepens the US military’s already acute dependence on space systems for their operational requirements, subsequently increasing their sense of vulnerability. And, while the nuclear taboo has resulted in the ever-increasing lethality of conventional weapons, it is also spurring the development of near-space and space-enabled programs. An example is the Advanced Hypersonic Weapon, an integral component of the ‘Prompt Global Strike’ capacity - which envisages the US being able to strike a target anywhere on Earth within sixty minutes. Additionally, although he has not explicitly linked his disarmament agenda to BMD, Obama’s push for a nuclear-free world has the same motivation and justification as Reagan’s Strategic Defense Initiative. On the other hand, US BMD systems potentially neutralise the nuclear deterrence of states such as China, thereby providing an incentive for them to pursue weaponisation. Tied to these developments is the fact that Obama is the first Democrat to take up a Presidency where the narrative of BMD is well entrenched; that is, the discourse about BMD is no longer about whether or not to support the program, but rather, what form of BMD to support.(8) The change in the base level of narrative becomes more important considering the linkage between space weapons and BMD; progression in BMD technology, and its acceptability in political and public discourse increases the chance that space weapons may become a solution.

### BMD triggers space arms race

Lister 11 – Charles R. Lister, Terrorism & Insurgency Research Analyst at IHS Jane's, March 18 2011, “US Missile Defence and Space Security: a Security Dilemma for China?” <http://www.e-ir.info/?p=7712>

China has long been an opponent of weaponizing outer space and is a leading member of the Prevention of an Arms Race in Outer Space (PAROS) initiative. Conversely, the U.S. has staunchly refused to discuss a PAROS-like treaty under the existing terms laid out by China and Russia. Crucially for this paper, space weaponization and BMD are inherently connected in that ballistic missiles travel through space and defending against them requires some extent of space assets. Furthermore, control of space would necessarily result in a comprehensive ‘layered’ BMD system with global scope[[44]](http://www.e-ir.info/?p=7712#_ftn44) – something that China is adamantly trying to prevent. This explains why Chinese analysts like Feng Shaolei reacted to the U.S. withdrawal from the ABM Treaty in December 2001 by claiming it proved a “U.S. pursuit [for] international primacy in a world of uncertainty.”[[45]](http://www.e-ir.info/?p=7712#_ftn45) Space is the last domain free of total human control and any state that acted preemptively to establish absolute space control would undoubtedly acquire bona fide global hegemony. Unfortunately for the arms control establishment, the Outer Space Treaty does not prevent the deployment of orbital ‘defensive’ weapons. In many respects, the ABM Treaty was the last barrier to weaponizing space – now that it has ceased to exist, U.S. BMD development represents a destabilizing power shift that does threaten to initiate a great power arms race in space. Before 2000, there was a widely held Chinese perception that the U.S. was constructing a post-Cold War arms control environment that suited its own interests[[46]](http://www.e-ir.info/?p=7712#_ftn46) – the withdrawal from the ABM Treaty proved this to China and encouraged a Waltian ‘balance of threat’ outlook on international relations.

### China will freak out if US goes at it alone and developes space based missile defense

Hui 05 (Zhang Hui is a research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government. His research includes nuclear arms control verification techniques, the control of fissile material, nuclear terrorism, nuclear safeguards, nonproliferation and space. An extended version of this paper was produced for the, Space Weaponization And Space Security: A Chinese Perspective, www.wsichina.org/attach/CS2\_3.pdf)

[The United States does have legitimate concerns about its space assets, given that U.S. military operations, economy and society are increasingly dependent on space assets and such assets are inherently vulnerable to attacks from many different sources. However, it does not mean that the United States currently faces credible threats from states that might exploit those vulnerabilities.6 Further, space-based weapons cannot protect satellites, since these weapons are also vulnerable to many types of attack, similar to the satellites requiring protection. The true aim of U.S. space plans is not to protect U.S. assets but rather to further enhance American military dominance. Prof. Du Xiangwan, vice president of the Chinese Academy of Engineering, recently presented his view that the Transformation Flight Plan indicated that "many types of space-based weapons will be developed," and "the tendency toward space weaponization is obvious and serious." He further noted that military dominance on Earth is not enough, "the U.S. also seeks to dominate space."7 Beijing fears that by unilaterally developing missile defense systems and pursuing space weaponization, the United States is seeking to establish a global military superiority using both offensive and defensive means.8 Moreover, China's fears about U.S. hegemonic tendencies are exacerbated by the fact that space weapons, due to their vulnerability to other less expensive, asymmetric measures, are inherently first-strike weapons. 9 ]

## **Link --- Privatization**

### Privatization of space leads to militarization – causes protection issues

Salin 1 – Patrick A. Salin, McGill University, Canada, 2001, "Privatization and militarization in the space business environment," www.sciencedirect.com/science/article/pii/S0265964600000503

2.3. Protectionism Outer Space only knows national flags, so that the increasing presence of private entities will inevitably lead to raising protection issues, diplomatic and military, paving the way for the militarization issue. Private corporations also act as de facto ambassadors of spacefaring nations, and private assets in space do not exist in their capacity as international objects (which they are, just like astronauts are to be regarded “as envoys of mankind” as per Art. V of the 1967 Outer Space Treaty). This means that private satellites are objects moving freely in an open domain that forms part of the common heritage of mankind, a res communis environment, with voices advocating the discarding of a bygone vision of Outer Space [[16](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib16) and [17](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib17)]. [11](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn11) This is a reminder of the dreadnought theory of the early twentieth century, with its right of passage. However, in our case, the right of passage is being transformed into a right of stay, including new practices that could be revealed as pernicious in the long run [[18](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib18)]. [12](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn12) This is why some nations may abruptly intervene at any time if they consider their national interest, as vested in these flying birds, to be in jeopardy. Since we are in both a highly competitive and a strategically important environment, watchful nations may also intervene in advance, in order to foster their own national interest and secure strongholds regarding other nations they consider to be foes, or simply rivals. Very seldom do nations intervene in order to impose sanctions on those of their nationals active in space. The most recent (and rare) example confirming this observation is the cancellation last June by the FCC of the licenses it had granted to three US satellite operators.[13](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn13) These were participants in the first round of 14 Ka-band systems, licensed in May 1997. These cancellations have raised protests, especially from PanAmSat, even though the FCC order clearly explained how each of the three operators did not abide by the construction deadlines and jeopardized the conditional license they had been granted. So, were there grounds for a protest? Although the FCC's action had one precedent in the recent past, it is not a practice and we welcome seeing the FCC take a firm stance, in tune with the USA's obligations under ITU regulations [[19](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib19)].

### **Privatization leads to militarization – not answerable to international community**

Salin 1 – Patrick A. Salin, McGill University, Canada, 2001, "Privatization and militarization in the space business environment," www.sciencedirect.com/science/article/pii/S0265964600000503

1. Introduction We may consider that outer space should no longer be considered as a sanctuary safe from military operations as of 19 June 1999. On that day, a US Theater High-Altitude Area Defense (THAAD) rocket hit a target missile outside the Earth's atmosphere. Outer space is now undergoing a militarization process that is developing within a totally new framework, that of the privatization of space ventures and projects. The bipolar Cold War stage has been removed and gone is the threatening vision of nuclear warfare via all sorts of Earth-based and spaceborne weapons. Yet the big industrial concerns that manufactured the weapons of the Cold War have simply converted themselves and regrouped into mammoth civilian manufacturers, deploying constellations of civilian assets in outer space.[2](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn2) Instead of procuring the much-criticized US Strategic Defense Initiative (SDI), they now produce dual-use goods that can be used in an undifferentiated manner for both civilian and military objectives [[3](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib3)and [4](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib4)] [3](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn3). The borderlines between civilian and military high technology goods that prevailed only a few years ago have become meaningless and technical parameters that qualified equipment as being military, less than five years ago, are now useless, commercial entities being able to sell these, once forbidden tools, as plain commercial gadgets.[4](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn4) The confusion between the US Department of Commerce and the US Department of State over determining what is (or should be) subject to authorization and what is not is illustrative of this situation. Yet, thanks to the loopholes and inconsistencies of the international treaties on outer space, we may soon end up with exactly the same result as during the Cold War — Hollywood's Star Wars, live!

And, as privatization has accelerated during the last decade, we can clearly see an acceleration of the militarization process of outer space. This has become apparent through two main observations: (1) private space corporations are, more than ever, vanguards of national interests; and (2) commercial competition is another way for nations to impose their influence in space (and world) affairs. In the end, what is at stake here is the fragile equilibrium between world peace and tensions, now transported into outer space. 2.

Growth of private space corporations Private corporations have grown in number as a consequence of the privatization of space activities and act in outer space like citizens that are not answerable to the international community.

### Privatization leads to space militarization – commercial competition lacks regulation

Salin 1 – Patrick A. Salin, McGill University, Canada, 2001, "Privatization and militarization in the space business environment," www.sciencedirect.com/science/article/pii/S0265964600000503

4. Conclusion We have tried to underline the close connection that exists between privatization and militarization, which is completed by a connection between militarization and exacerbated commercial competition. Intentionally, we did not touch on cooperation programs in order to underline the very real risks that naked competition can entail. We believe that many commercial space developments could be a lead to further military deployment by the nation fostering such commercial development. How can the proposition that one nation can have a greater interest in outer space than any other nation be sustained? It is still possible to slow down — or redirect — the irrepressible rush towards a substantial militarization and weaponization of outer space, especially in low-Earth orbits, in total contradiction of the words and spirit of the Outer Space treaties. Is cooperation the answer? Certainly, but cooperation as the result of forced political or industrial partnership is not an objective. The illustration provided by the ISS venture remains incomplete, with its spots of national sovereignty within the station itself, its complex patent dispositions and its features as an industrial partnership [[44](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib44), [45](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib45) and [46](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib46)]. Beyond the whole ISS venture, one should really question the ‘need’ to rush into deep space projects, while ongoing and urgent development issues still plague three-quarters of humanity on Earth. Cooperation works if it is accompanied by some dose of devolution of power to a central ‘a-national’ authority and is geared towards ‘real’ needs [[47](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib47)]. For example, in the wake of Unispace III, proposals to consider Earth observation as a public good vs. Earth observation as a commercial venture should be explored further and given much more attention than they are now [[48](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib48)]. Cut-throat commercial competition in outer space must be regulated and not left unattended because of short-term economic and political imperatives, in order to lead towards an authentic multilateral cooperation that effectively serves mankind's interest. This is not the job of the WTO, whose task is to increase trade exchanges on Earth via improved competition conditions, and which has no competence to regulate outer space matters where cooperation should prevail. This is the job of a dedicated non-political international body that we do not yet have, a ‘World Space Cooperation Organization’ (WSCO).[27](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn27)

### Privatization leads to space militarization – creates a spiral effect

Salin 1 – Patrick A. Salin, McGill University, Canada, 2001, "Privatization and militarization in the space business environment," www.sciencedirect.com/science/article/pii/S0265964600000503

3. Cloaking of national interests in commercial competition Commercial competition is actually substituted to standard diplomacy and hides huge national interests that cannot be sponsored in the open but that are still pursued with different means. This is the other side of the coin tossed by the large spacefaring nations that intend to make their presence in outer space impregnable. 3.1. National interests and non-national customers Huge strategic ‘national’ interests are increasingly funded by ‘non-national’ customers worldwide. The only motive for privatizing space projects came from the shrinking of public budgets. Is this a decaying business? No, it is estimated that “satellite communications is a global business with sales and services of $45 billion a year and is growing strongly” [[23](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "bib23)]. Indeed, some analysts even estimate that it is growing at an annual rate of 20%. Therefore, we may say that the privatization of space ventures is fueling unbridled competition in a domain that is only lightly regulated. Private operators must find the money where it is, and quickly. Officially, the lack of public money has been the leitmotiv of the past decade in order to transfer to the private sector the operating and financing of space ventures. In the end, many space activities may be performed by private ventures, provided governments maintain minimal control.[16](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn16) But the private sector must find the funds for itself, and ‘‘create’’ new needs in order to put into use technologies developed by public funds, via ad hoc civilian applications [[23](http://www.sciencedirect.com/science/article/pii/S0265964600000503#bib23)]. [17](http://www.sciencedirect.com/science/article/pii/S0265964600000503" \l "fn17) Indeed, there is a double mismatch here in the refunding process of national public (and quasi-military) sources of funds by global civilian customers that creates a vicious spiraling and legitimizing effect in favour of the militarization of outer space.

## Link --- Satellites

### Satellites would be perceived as weapons

Mineiro 8 – Michael C. Mineiro, member of the North Carolina bar, the International Law Association, and the ABA forum on Air and Space Law, January 1 2008, “The United States and the Legality of Outer Space Weaponization: A Proposal for Greater Transparency and a Dispute Resolution Mechanism,” Annals of Air and Space Law, <http://ssrn.com/abstract=1268022>

One of the major difficulties in defining "space weapon" is that many space systems designed for peaceful purposes have the capacity to destroy or interfere with another object or being in space or in the Earth environment.26 For example, NASA recently launched their first autonomous robotic spacecraft, a repair robot called DART.27 DART is laying the groundwork for future projects like robotic delivery of cargo to space shuttles and automated docking and repair between spacecraft in orbit. DART is capable of maneuvering to satellites and physically interacting with satellites. DART's ability to maneuver and interact with other satellites gives it the potential to be used as an anti-satellite weapon (ASAT). A DART-like space system could target a satellite and force it out of its orbit, either destroying it or effectively negating its usefulness. Is a space robot like DART a "space weapon?" Is it a dual-use system? Or is it strictly a peaceful non-weaponized system? Lawyers and policy makers debating the issue of weaponization must consider the overlapping capabilities inherent in space systems. Most space systems, due to their very nature, will exhibit some weapon-like capabilities.

## Link --- SSA

### SSA would be perceived as the first step towards weaponizing space

Gasparini and Miranda 10 – Giovanni Gasparini space expert at Istituto Affari Internazionali, Italy, Valerie Miranda, assistant researcher at the Security and Defense Institute, 2010, “Space Situational Awareness: an Overview,” <http://www.springerlink.com/content/n480x67nj5m0w92m/fulltext.pdf>

The debate over the best way to protect American space capabilities and ensure U.S. control of space is thus part of a wider and heated discussion over space weaponisation in which SSA initiatives play a key role. Indeed, some argue that these latter are the first step towards the acquisition of space-based weaponry. Laurence Nardon, for instance, claims that while the Eisenhower Administration formally excluded the weaponisation of space in 1958, deeming it to be too destabilising, the 2001 Rumsfeld report and the three-phase-USAF plan represent a change in attitude. The 2006 National Space Policy seems to go in the same direction. Despite the denials of the Bush Administration, the principle that “the United States will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space”72 has been interpreted by many experts as a thinly veiled authorisation of space weaponisation. For instance, Michael Krepon, co-founder of the Henry L. Stimson Center, said this new policy would reinforce international suspicions that the United States may seek to develop, test and deploy space weapons.73

### Countries would feel threatened by US unilateral SSA and weaponize space

Gasparini and Miranda 10 – Giovanni Gasparini space expert at Istituto Affari Internazionali, Italy, Valerie Miranda, assistant researcher at the Security and Defense Institute, 2010, “Space Situational Awareness: an Overview,” http://www.springerlink.com/content/n480x67nj5m0w92m/fulltext.pdf

A Space Awareness system that does not work as a confidence-building measure between potentially competing space actors will inevitably increase the likelihood of a conflictual posture in space that exploits the asymmetrical vulnerability of U.S. military space assets. This could also create an environment in which non-military security and commercial satellites would not be adequately protected. A commonly agreed governance and data policy system that resolves the tradeoff between the effectiveness of the transparency approach and the secrecy requirements of the military and intelligence community could bridge the current gap between the European and U.S. positions. The key to this approach is to allow differentiated access to data according to the real “need to know” of the potential users. In the case of commercial operators and the wider public, this would exclude knowledge of the characterisation of satellites unless specifically requested when an event requiring the assessment of legal liability occurs. U.S. authorities need to take more account of the dual character of space. At the same time, European institutions need to think more strategically. This discussion should take place between all U.S. Space Agencies on the one side and the European Council, the European Commission and ESA on the other. The problem with other space nations that are not bound by the Transatlantic Alliance is however much more complicated. China and to a lesser extent Russia, as well as other minor space-capable countries such as Iran, would feel potentially threatened by a non-inclusive American or even transatlantic approach to space awareness. As it is unlikely that they will field a national SSA system, the incentive for them to develop ASAT capabilities would be high. This is particularly true due to the complexity and high cost of defending a space asset compared to the relative small cost of attacking it.

## Link --- SSP

### SSP is actually a death machine

Rako 8 – Paul Rako, technical editor of Electronics Design, Strategy, and News, July 25 2008, “Solar power in space, a really stupid idea,” Electronics Design, Strategy, News, http://www.edn.com/blog/Anablog/38434-Solar\_power\_in\_space\_a\_really\_stupid\_idea.php

This is a flat-out lie. It’s a lie in so many places it hurts my teeth. Sweeping all the alternative energy sources under the rug, without looking at the complex analog tradeoffs involved is an affront to reason and decency. That is a bad enough lie. But to then follow that absurdity with the assertion that space solar power is somehow economically possible and environmentally friendly is complete madness. Now I am going to give some sources you can read that prove beyond a shadow of a doubt that this proposal is clinically insane, but first I wanted to share an epiphany I had. Paul’s epiphany came about 5 hours into a wasted Thursday night where I should have been in downtown San Jose having fun at the free concert. Instead I spent all night reading all the sources I could find regarding SPS. I am embarrassed because it took five hours to realize something that was plainly stated in the comments to the article that I read five hours before. Someone pointed out that the technology of this proposal did not matter. This space-panel microwave gizmo was also a weapon and it would be politically impossible to deploy it. Wow, hours of my personal time down the drain before the epiphany. The epiphany was that this thing was exactly that, a weapon. That is why NASA researched it in the 1980s, that is what all the feasibility studies were about and that is why it is being floated out there right now. The military industrial complex wants to test how stupid we are. If the American people are dumb enough to believe that solar panels in space is even the slightest bit possible then they can use that cover as they do what they really want to do, make a death machine. The images of the Terminator movies and [SkyNet](http://en.wikipedia.org/wiki/Skynet_%28fictional%29) are too chilling to even contemplate. Now there may be some [Pollyanna types](http://www.urbandictionary.com/define.php?term=Pollyannaish) that think our wonderful government is way too nice to ever try and develop a death machine. Sorry, for those of you that think the United States Government is more like a fluffy little fabric softener sheet tumbling around the dryer, making everything silky smooth and smelling fresh, well, news flash: Governments are about coercion. Force, killing, jails, waterboards, and the rest are the essential nature and job of the government. Sure they hand out a bunch of middle class entitlements to stay in power and keep the sheep bleating happy sounds, but the core nature and purpose of governments is forcing people to do things. Most of the less naive among us are OK with that. After all, I am sitting on a lovely little parcel of land that was stolen from the Mexicans, who stole it from the Spanish priests, who stole it from the Portuguese priests, who stole it from the Indians, who stole it from each other for 10,000 years. Works for me, I just planted some cactus in the front yard. Of course I will be complaining about the effective 45% tax rate we engineers have to suffer till the day I die, I hate the government forcing me to do that. But I will just kind of skirt around the benefits all the killing and mayhem provided me. After all, I deserve a happy little Domicile of the Future here in sunny Sunnyvale. I have a title to prove it is all mine. I am glad my government stole the land for me, just like I am glad Burger King shoots a rod into a cow’s head so I can have a tasty burger with none of the emotional baggage. Who wants to drive a nail into [Elsie’s](http://en.wikipedia.org/wiki/Elsie_the_Cow) skull? OK, still doubtful that NASA, our beloved space program would try to fund a death machine under the cover of alternative energy? Well, you didn’t have the benefit of working at several military contractors, like I did. When you work at those places you invariable meet people who think in military terms. One of them told me twenty years ago that the entire space program was a military operation. I was incredulous. He patiently explained. See, warfare has always been about controlling the high ground. If you could control the plains while the enemy was in the ditch, you won. If you controlled the hill while the enemy was on the plain, you won. If you control the mountain while the enemy is on the hill, you won. If you controlled the airplanes while the enemy was on the mountain, you won. OK, news flash, live at five, film at eleven: If you control space while the enemy is in an airplane, you win. The military types at those military contractors told me what was already pretty apparent—that there is no sensible scientific reason to put people in space. All the science is much much much cheaper if you don’t need to launch life support. Sure astronauts do maintenance on the Hubble telescope, but for what we spent developing the shuttle, especially when you count the dead astronauts, we could have sent up a dozen Hubble telescope and just let the broken ones fall out of orbit. The space station is a prototype [AWAC](http://en.wikipedia.org/wiki/AWAC) and this solar-power death-machine is a prototype [AC-130](http://en.wikipedia.org/wiki/Lockheed_AC-130). And remember, for the $100 billion we spent on the space station, every American household could get 952 dollars for gasoline. Trust me on this one; this solar power in space stuff is a military research project to make a death machine. Then things start to makes sense technologically and sociologically. Some of the most severe limitations of the system go away when it is a weapon. There is no need for constant maintenance since it is used intermittently. There is no need for a geostationary orbit, you want to be able to kill people anywhere, including and maybe especially inside the US borders. Keeping us in control is just as important as killing foreigners. Heck you don’t even need a geosynchronous orbit. You can put the death machine in low earth orbit. That saves a huge amount of cost and dispenses with fantasy proposals like the NASA guy that said we should build them on the moon and then bring them down. I started to ask myself if these idiots have even been in a semiconductor fab, much less one on the moon, but see, then I realized, Doctorates are not stupid. The government needed some fantasy cover story to keep the research going in the face of the fact that the power would cost not 10, not 100 not 1000 but about 10,000 times more than terrestrial based power of any form. Ok, sorry to all you hard-core technical types for that diatribe, but I did not want you spending 5 hours researching this like I did without understanding this is death machine proposal, not an alternative energy proposal. Here are the sources. The [URSI (Union Radio-Scientifique Internationale)](http://www.ursi.org/) has [a nice web page](http://www.ursi.org/WP/WP-SPS%20final.htm) as well as [an identical pdf](http://ursi.ca/SPS-2006sept.pdf) that debunks most of the SPS proposals. They seem to make an error when they say you need 10,000m2 to receive 14GW solar flux. With 1.37 kW/m2 solar flux I see it as a million square meters, a solar panel 1 km on a side. The 14 GW is reduced to 1 GW by the 7% system efficiency they describe. The paper is very neutral, unlike some of my ham buddies that would just say; “You want to beam a gigawatt of RF energy into the atmosphere, and then build a whole bunch of them? Are you out of your f\*(&^ing mind?” This paper has references, both pro and con and it is the con ones that have the good reading. One good resource is [S. Fetter, “Space Solar Power: An Idea Whose Time Will Never Come?,” (pdf)](http://www.publicpolicy.umd.edu/Fetter/2004-P&S-SSP.pdf). Where you might want to start is just read all the [comments in the NY Times article](http://community.nytimes.com/article/comments/2008/07/23/opinion/23smith.html?permid=73#comment73). Read all 6 pages.

### SSP dual-use would be perceived as a weapon

Fan et al 11 – William Fan, distinction MBA holder having strong background in telecommunication, Harold Martin, freelance software developer and author, James Wu, Communications Associate at Acumen Fund, Brian Mok, author, June 2 2011, “Space Based Solar Power,” Industry and Technology Assessment, <http://www.pickar.caltech.edu/e103/Final%20Exams/Space%20Based%20Solar%20Power.pdf>

Due to the high energy transmitter that it will utilize, space based solar power could potentially be in violation of international space treaties. In 1967, the Outer Space Treaty was signed by the United States and other world powers. One of the key issues addressed by this treaty is space based weapons. The Outer Space Treaty bans the placement of nuclear weapons and other weapons of mass destruction in space or on any celestial body. This could become a serious issue for space based solar power because of the potential for the transmitter to become a dual use weapon. Additionally, the newly proposed Space Preservation Treaty could severely hinder the implementation of space based solar power, as it would ban the any kind of weapon from being placed in space. In addition to political issues, there may be social disapproval of having a potential weapons system in space

## Alternatives to Space Weapons

### **Diversification solves better than weaponization – ground weapons are more important**

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

The argument for military necessity states that the military advantages of space weapons to the United States and potential adversaries will soon be so great that it is in the national security interest to pursue them. 39 Space weapons will “defend friendly satellites… attack enemy space weapons and other satellites that perform important military functions, shoot down long-range ballistic missiles, and conduct attacks against enemy air and surface forces.” 40 The basis of this argument is that regardless of what the United States chooses to do, other nations will certainly develop space weapons over time. The United States relies heavily on the force enhancement aspect of military space systems including communications, navigation, warning and reconnaissance. We cannot afford to allow another space power to cripple the advantage these systems offer. This is similar to the economic argument above, but recognizes that our military space systems are far more indispensable. 41 The counter to this argument is that it is not the development and deployment of space weapons that is the best solution to this vulnerability. Diversification of capabilities to reduce reliance on space assets is a less costly, more achievable solution. Examples include the use of many more, but much smaller, satellites, cheaper and less complex launch vehicles, near-space balloons to provide communications over a theater, improved inertial navigation systems to reduce or eliminate reliance on space navigation aids and the proliferation of small-unmanned aerial vehicles for reconnaissance. As for space-to-earth weapons, the United States already possesses considerable ability to project force around the world. 42 Space-to-earth weapons might offer some advantage in quick strike capability over capabilities we have today, but is the expense worth it? Quick “target of opportunity” strikes in the Iraq war were unable to take out Saddam Hussein. Attacks against terrorist leaders in Pakistan were equally unsuccessful. Even strikes from space will require accurate intelligence support on the ground. In other words, a sniper on the ground with a $500 rifle could perform the same mission as a $500 million satellite in space that would still require the person on the ground to provide the target information. Any weapon is only as good as the targeting intelligence and our record in that area is somewhat suspect.

### **Conventional weapons solve and are key to space power**

Wilkerson 8 – Don L. Wilkerson, Lieutenant Colonel of the United States Army, US Army War College, Master of Strategic Studies Degree, 2008, "Space Power Theory, Controlling the Medium Without Weapons in Space," [www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300)

Conventional Weapons in Support of Controlling Space A more definitive alternative for OCS would be the destruction of satellite communication ground stations or an ASAT threat on the launch pad. There are a considerable number of conventional weapons raging from long-range artillery, strategic bombers, ICBMs, cruise missiles, navy sea-based ballistic missile systems or even special operations forces that can be used as offensive space control capabilities to destroy enemy targets that make-up the critical components of an adversary’s space network. When intelligence provides the prerequisite I&W that a potential enemy ASAT20 threat exists, U.S. military services under the control of U.S. Strategic Command (USSTRATCOM) or the appropriate Geographical Combatant Command (GCC) could initiate time sensitive planning options to conduct a conventional strike against the threat. The simple fact is that enemy launch sites, satellite control stations and potential mobile ground space weapon systems remain vulnerable to a myriad of current and enhanced conventional weapons. These existing “means” in the U.S. military arsenal remain more cost effective in lieu of developing and fielding space-based weapons. Current conventional weapons in support of space control are sufficient and essential to integrating space power theory into the mainstream of the joint military community. The recent military intercept of an inoperable National Reconnaissance Office (NRO) satellite by a U.S. Navy AEGIS cruiser warship is a great example of employing a conventional weapon platform to control the space medium at the LEO altitude. The SM-3 missile system was originally designed to track and destroy short and medium range inbound ballistic missiles in their terminal phase of flight. 45 General James Cartwright, the Vice Chairman to the Joint Chiefs of Staff and former USSTRATCOM Commander, acknowledged that the AEGIS platform and SM-3 missile system required only minor software modifications in order to engage the malfunctioning satellite at approximately 153 miles in space. 4

## SMIL Bad --- No Solvency

### **Space weapons fail – even if technology is available now, other countries will overwhelm them, and the periodic nature of orbiting causes gaps in coverage**

Ruhm 3 – Brian C. Ruhm is a major in the U.S. Air Force, April 2003, "Finding the Middle Ground: The U.S. Air Force, Space Weaponization, and Arms Control," http://www.au.af.mil/au/awc/awcgate/acsc/03-1394.pdf

Clearly, space weapons or space-based weapons are not a panacea. Development and deployment costs would be extraordinary and would compete with funding for proven, terrestrial systems.27 With the exception of ground based kinetic energy systems for missile defense or LEO ASAT, most of the capabilities depicted above require quantum leaps in technology before they become operationally viable. Even if the requisite technologies were available now, there are solid reasons to question the military utility of some of these systems. Space-based directed energy weapons, for instance, would be limited by fuel consumption rates, and would thus be susceptible to adversary strategies aimed at overwhelming their defensive capability. Because of the periodic nature of orbiting systems, gaps inevitably occur in weapon system coverage that detract from system effectiveness.28 For example, based on a constellation with five times as many satellites as planned and allowing for capabilities well beyond current technology, Barry Watt concludes that an SBL-like system would destroy fewer than 20 ICBMs salvoed against the US from Korea.29 Watt allows that these numbers fluctuate according to specific assumptions, but the larger point he emphasizes is that “opportunities for the attacker to maximize the chances of overwhelming SBL defenses are frequent and, because the SBL satellites move in accordance with orbital mechanics, predictable. Like any static defense, an SBL constellation can be saturated in space and time, and a determined opponent can be expected to evolve the weapons and tactics to do so.”30

### **Space weapons are useless if the ground is unprotected**

Wilkerson 8 – Don L. Wilkerson, Lieutenant Colonel of the United States Army, US Army War College, Master of Strategic Studies Degree, 2008, "Space Power Theory, Controlling the Medium Without Weapons in Space," [www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300)

The most vulnerable segment of any space system is the ground node or ground stations that control the on-orbit assets or receive the data downlinks from the satellites. Since ground stations are typically considered “soft” targets and many locations can be easily identified through good intelligence, they are probably the most susceptible to attack from conventional weapons. Equally vulnerable would be the launch facilities used to place satellites into orbit. Therefore, substantial investments to place weapons in space would be counter-intuitive if ground stations are more susceptible to attack and can be easily neutralized. Perhaps discretionary funding should be allocated to hardening critical space nodes, ground nodes and communication links making them less susceptible to intentional electronic jamming, blinding, spoofing and conventional strikes. The author contends that these passive and active defense measures help make on-orbit and ground space systems more resistant to attack and are more economically feasible than placing weapons in space. Another critical component of DCS is a rapid reconstitution or responsive spacelift capability. Launching cheaper and smaller satellites to replace aging legacy platforms or replacing satellites that have been neutralized by enemy attack, one can surmise that more on-orbit capabilities for a “strategic surge” will preserve space superiority and is much more feasible and achievable today than in recent history. Since strategic satellites are expensive, limited in number, and currently designed to meet strategic requirements more so than tactical needs, Tactical Satellites (TacSats)18 also known as microsatellites can be built for under $20 million dollars providing ISR and communications capability in support of military contingencies offsetting operational requirements placed on national systems. 40 More importantly, it provides on-orbit space systems redundancy as an element of DCS that would deter adversaries from attacking U.S. space-based assets. In other words, it is not plausible that a nation state would expend the effort and resources to compete in space with a space hegemony that already has a numerical advantage and the ability to reconstitute assets on demand. Therefore, the ground segment of the space systems is more likely to suffer attacks from nation states and non-state actors than U.S. satellites orbiting in space.

### Space weapons are ineffective at protecting assets – there are multiple alternate causes to space vulnerability

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

Currently, the simplest ways to attack satellites and satellite-based systems involve ground-based operations against ground facilities, and disruption of computerized downlinks. Hacking and jamming also are the least expensive options for anyone interested in disrupting space-based networks, because they do not require putting anything into orbit. The high cost of space launch (ranging between $5,000 and $10,000 per pound) is not a trivial matter, even for space-faring nations such as Russia and China, much less for 'rogue' states such as North Korea or non-state actors. Indeed, the Space Commission report acknowledges that: "Attacking or sabotaging the supporting ground facilities has long been considered one of the easiest methods for a U.S. adversary to conduct offensive counter-space operations. Most of these facilities are relatively easy to get in close physical proximity to or access by way of a computer network, making them a prime target." It is true that the incidences of computer hacking against U.S. military, financial and industrial networks continues to rise and that several countries including China are known to be exploring information warfare capabilities. Many countries already have developed military electronic jamming systems, and that technology is becoming widely available even on the commercial market. It is obvious that the United States must ensure the integrity of its increasingly important space networks, and find ways to defense against threats to space assets. Still, there is little reason to believe that it is necessary for the U.S. to put weapons in space to do so. Space warfare proponents are making a suspect leap in logic in arguing that space-based weapons are, or will soon be, required to protect the ability of the United States to operate freely in space. One could argue much more rationally that what is needed most urgently is to find ways to prevent computer network intrusion; to ensure redundant capabilities both at the system and subsystem level, including the ability to rapidly replace satellites on orbit; to improve security of ground facilities (perhaps moving to underground facilities); and to harden electronic components on particularly important satellites.

### Space weapons fail – not technically feasible

Hitchens 2 – Theresa Hitchens is Director of the Center for Defense Information, and leads its Space Security Project, in cooperation with the SecureWorld Foundation. Editor of Defense News from 1998 to 2000, Hitchens has had a long career in journalism, with a focus on military, defense industry and NATO affairs. She also was director of research at the British American Security Information Council. Hitchens serves on the editorial board of The Bulletin of the Atomic Scientists, and is a member of Women in International Security and the International Institute for Strategic Studies. April 18th, 2002, "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," [www.cdi.org/missile-defense/spaceweapons.cfm](http://www.cdi.org/missile-defense/spaceweapons.cfm)

Indeed, the technical barriers to development and deployment of space-based weapons cannot be overestimated, even for the U.S. military. There are serious, fundamental obstacles to the development of both kinetic kill weapons and lasers both for use against targets in space and terrestrial targets — not to mention the question of the staggering costs associated with launch and maintaining systems on orbit. Problems with lasers include power generation requirements adding to size, the need for large quantities of chemical fuel and refueling requirements, and the physics of propagating and stabilizing beams across long distances or through the atmosphere. Space-based kinetic energy weapons have their own issues, including achieving proper orbital trajectories and velocities, the need to carry massive amounts of propellant, and concern about damage to own-forces from debris resulting from killing an enemy satellite. Space-based weapons also have the problem of vulnerability, for example, predictable orbits and the difficulty of regeneration. A detailed discussion of technology challenges is beyond the scope of this paper, but a comprehensive primer on the myriad problems with developing space-based weapons is a September 1999 paper by Maj. William L. Spacy II, "Does the United States Need Space-Based Weapons?" written for the College of Aerospace Doctrine, Research and Education at Air University, Maxwell Air Force Base, Ala.

### **Space weapons are too costly and ineffective – proven by Iraq**

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

Capability, Affordability and Vulnerability Are space weapons the best way for the United States to spend limited human, fiscal and intellectual national resources? To analyze this question we must examine three areas of concern. Would space weapons improve global strike and global reach capabilities? Are space weapons reasonably affordable? What are the vulnerabilities of space weapons? For space weapons to be of national security value they must offer the prospect of enhancing the ability to engage targets quickly, anywhere on the globe. However, as we have seen in recent years, the ability to strike targets is only part of the equation. We must also be able to project forces to achieve national objectives (i.e., boots on the ground). As with Air Power, Space Power has no ability to take ground and hold it. Precision strikes, whether from aircraft or from space, are only as reliable as the intelligence on the target. With freedom of action in the skies over Iraq in the opening act of Operation IRAQI FREEDOM, the USAF was quickly able to guide bombs onto targets suspected of harboring Saddam Hussein. The strikes failed to kill the Iraqi leader and served only to highlight the ineffectiveness of this type of surgical strike from the air while creating international outrage over using 2,000 lb bombs to kill one man regardless of the collateral damage inflicted. It took months and thousands of troops in Iraq to find Saddam Hussein hiding in a hole underground. Space weapons would not likely enhance the effort to hunt down and kill rogue state leaders or terrorists. Conceivably, space to ground kinetic weapons could provide a more agile global strike capability than Air Power alone, especially in areas of the world where forces are not pre-positioned. 43 A full constellation of space weapons would be necessary to achieve this goal. A typical low earth polar-orbiting satellite only passes over the same location on the earth’s surface once every 12 hours. To ensure agile global strike capability, many satellites would be necessary. The Global Positioning System requires a minimum of 24 satellites at medium earth orbit (11,000 nautical miles) to achieve global navigational coverage. To achieve global communication coverage at a low earth orbit, the Iridium satellite constellation employs 66 satellites. How many satellites (and at what cost) would be necessary to achieve a truly agile global strike capability? Assuming good intelligence on the target and satellites overhead, there would still be delays for the command and control apparatus to obtain approval to strike a target. Would the president grant a combatant commander authority to strike a target in any nation without taking time to consider political ramifications? Time is another enemy of a quick strike success. Space weapons could end up an expensive scheme to kill “targets of opportunities” with results no more effective than an aircraft armed with guided weapons. Given the likely cost of space weapons, they are a poor replacement for existing conventional strike capability to engaging targets in a nation with which the United States was engaged in hostilities. “Shock and Awe” from space would be a far more expensive tactic than using existing conventional capabilities and much harder to sustain. That leaves missile defense and counter space as the other possible national security enhancement for space weapons. As previously discussed, space based missile defense requires a careful calculation of the effects it has on the balance of deterrence across the spectrum of potential adversaries.

### **Space weaponization fails – huge cost, lack of mobility, and vulnerability to attack**

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

Space systems are extremely expensive and, often, contractors overestimate capabilities and underestimate cost. One needs to look no further than the Space Based Infrared System (SBIRS) and the Evolved Expendable Launch Vehicle (EELV) to see where we would be headed with the prospect of developing robust space weapon capabilities. Originally conceived, SBIRs was to be a vastly more capable replacement of the Defense Support Program (DSP) early warning satellite system providing missile warning and battlespace characterization. 45 It would include constellations of space-based assets in various orbits along with a common ground segment for operations. The development was broken into two phases named SBIRshigh and SBIRS-low. 46 SBIRS-high was for the high earth orbit portion of the program and in 1996 the Air Force awarded the original contract for $2.16 Billion. 47 In March 2005, Acting Air Force Secretary Peter Teets estimated the current cost at $12 Billion. 48 The program has repeatedly breached the “Nunn-McCurdy” 25 percent program acquisition unit cost growth limit requiring the Air Force to meet certain recertification criteria for the program to continue. 49 Costs aside, the original launch date of the first SBIRS-high satellites has repeatedly been delayed. The EELV has seen a similar explosion in costs. Originally billed as the follow-on to existing satellite launch boosters with the goal of reducing the government’s total launch cost by half, it was targeted to cost $18.8 billion. 50 Today, Congressional reports peg the projected cost just shy of $32 billion. 51 This is not intended to question the need for either SBIRS or EELV, but only to point out that projected costs and capabilities of space systems present a real and significant budgetary risk. At a time when the Air Force is proposing early retirement for all F- 117 fighters, half its B-52 fleet and elimination of U-2 reconnaissance assets in an effort to boost spending for the new F-22 fighter jets, it is hard to imagine one can find value in the need for exotic space weapons. 52 Space is a fragile weapons platform. For defense, space is as static as an earth bound fortification. 53 It takes a great amount of energy to achieve a particular orbit and it is both time and energy consuming to change an orbit. 54 As a result, satellite systems are typically deployed in constellations requiring large numbers and increased expense to achieve global coverage. Like a weakness in a fortification, this allows an adversary to concentrate on one point and potentially overwhelm the system. 55 Space systems reside in stable, observable and predictable orbits. The laws of orbital mechanics govern their motion. A satellite’s presence is observable through the electro-optical spectrum. Therefore, an adversary will likely know the precise current and future location of any satellite system. Command, control and logistics are expensive and complex. Command and control nodes provide terrestrial targets as necessary to the overall systems function as the space based segment. The cost per pound to place objects in orbit is very high and launches occur from a few static terrestrial locations. Command and control relies on terrestrial networks subject to jamming or destruction. Maintenance, refueling and rearming (if necessary) are impractical or, at best, orders of magnitude more difficult than for aircraft.

### Space weapons cannot protect from ballistic missiles or terrorism

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

So-called rogue states such as Iran and North Korea present perhaps the most compelling reason to develop a space based missile defense. The problem here is that if we assume a future Iran or North Korea with nuclear-armed ballistic missiles, then conclude we need space-based defensive capabilities to counter that threat, we must also assume that our existing deterrence capability is ineffective (as discussed previously). If this is the case, then we are dealing with irrational state actors. It is difficult to conceive of a state so intent on striking a blow against the United States or its allies that it is willing to launch ballistic missiles from its territory for that purpose. The response would be swift and total retaliation. A more plausible scenario for the irrational state actor to strike at the United States is concealing their strike to the maximum extent possibly including possibly transferring WMD to terrorist organizations. Space weapons provide no added security in this scenario. The last category to examine is the impact space weapons could have in the Global War on Terrorism. The most likely use for space weapons to contribute to the war on terror is by expanding and improving global strike and global reach capabilities. As previously discussed, however, there is minimal, if any, benefit in this area. There are numerous cases (one previously cited) where we have missed high value targets despite having quick strike capabilities readily available. The United States has proved quite adept at gaining the necessary access around the globe to combat terrorism. The funding necessary to develop and deploy space to ground weapons would be better-used improving effectiveness in other areas of the fight and reducing the vulnerability of existing space based enablers.

### Space weapons are ineffective – conventional weapons solve

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

The second part of the policy deals with reducing the vulnerabilities of current space systems and our sole reliance on them for some aspects of force enhancement. There are many examples. Alternate platforms such as near space balloons or unmanned aerial vehicles positioned over a theater of operations can provide battlespace characterization, communication, reconnaissance and other capabilities currently provided by space systems. Innovative and advanced technologies can improved the capabilities of inertial navigation systems for vehicles and munitions, thus reducing reliance on the Global Positioning System. Smaller satellites, with redundant capabilities deployed in larger more distributed constellations, can reduce the vulnerability of single point failures. The specific examples are less important than the goal of finding ways to diversify the overall force enhancement capabilities currently provided by space systems. Conclusion Military use of space is necessary, and protecting the peaceful use of space is vital to the United States’ national security. The argument that the military uses space assets to enhance its capabilities on the land, air and sea and the fact that those assets are vulnerable does not make a compelling case for weaponization of space. Space systems are too fragile to serve as an effective weapons platform. Offensive counter-space is less complex than defensive counter-space and the United States has the most to lose from a shooting war in earth orbit. Deterrence, not space-base missile defense, is the best approach to counter the threat of strategic ballistic missiles across the spectrum of potential adversaries. Security gained by these systems against less capable adversaries, which would be limited at best, is less than the adverse affects they would have on the balance of deterrence elsewhere. Finally, the United States is unlikely to enhance its global strike and global reach capabilities at a reasonably affordable cost or with results more effective than current conventional capabilities provide. The best course of action for a new space policy is reducing our vulnerability by decreasing our reliance on space assets and preserving space as a weapons free sanctuary .

### US cannot respond fast enough to space weapons – there are no assets ready to deploy

Kueter and Plieninger 5 – Jeff Kueter, president at the George C. Marshall Institute, M.A. in political science and security policy studies from George Washington University, \*\*AND Andrew Plieninger, analyst at the George C. Marshall Institute, July 2005, "Saving space: securing our space assets," [www.marshall.org/pdf/materials/297.pdf](http://www.marshall.org/pdf/materials/297.pdf)

Treaty proponents and arms controllers contend that the technological sophistication of the U.S. would allow for quick reaction against any other nation deploying weapons to space. While the U.S. has few peers today in space operations, the ease of putting systems into space is greatly overestimated by this view. Space is a challenging environment and the design and production of new systems is complicated, expensive, and subject to frequent reversals. To think that we can simply have assets ready to deploy quicker and better is a gross simplification. And even if it were true, this course still leaves U.S. assets in space completely vulnerable, opening the possibility of blackmail, coercion, or worse.

### **Space lasers are bad – not technically feasible, require chemicals, too costly**

Wilkerson 8 – Don L. Wilkerson, Lieutenant Colonel of the United States Army, US Army War College, Master of Strategic Studies Degree, 2008, "Space Power Theory, Controlling the Medium Without Weapons in Space," [www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300)

Most lasers have various degrees of limitations based on power levels associated with multiple pulse wave lasers versus continuous pulse wave lasers. The primary limitation to overcome with developing lasers as weapons would be the ability to generate a high power beam lethal enough to degrade or destroy on-orbit space systems and especially potential terrestrial targets. 31 Since the most efficient lasers are chemical lasers, the large quantity of chemicals necessary to employ a space-based laser would not be feasible or suitable with a current launch cost of $10,000 per pound to place the system in orbit. 32 Employing space-based lasers as a force application method to attack terrestrial targets from space could be another illustration of space weaponization. Assuming that a space laser weapon was powerful enough to destroy airborne or ground targets, the limiting factor would be developing optical or IR tracking sensors capable to detect a small target with a relatively cool signature compared to ballistic missiles in flight against the background of the earth. Furthermore, the ability to engage stationary or moving ground targets with an orbital laser would be even more of a challenge. Therefore, the practicality of space-based weapons in the form of lasers requires high efficiency in terms of targeting and tracking, high power, and a robust space vehicle constellation. It would also require considerable funding and the ability to withstand the harsh space14 environment making orbital laser platforms unfeasible and cost prohibitive in the near term. 3

### **“Rods of God” are ineffective and cannot be developed within the next decade**

Wilkerson 8 – Don L. Wilkerson, Lieutenant Colonel of the United States Army, US Army War College, Master of Strategic Studies Degree, 2008, "Space Power Theory, Controlling the Medium Without Weapons in Space," [www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300)

Additionally, problems with orbital timing and responsiveness as well as the ability to precisely hit stationary terrestrial targets, let alone surface moving targets, make this a difficult task. Furthermore, scientists argue that the rods’ velocity would be so high that they could vaporize on impact, before they could penetrate the surface. 38 Again, the size, altitude, timing and responsiveness of this weapon as a concept as illustrated in Table 1, are currently not feasible or cost effective as a method for force application in support of the space control mission area. Many of these space weapons concepts and the low probability that they can be fielded within the next decade provide no strategic value to the argument that weapons in space are essential to a space power theory. Modern theorists, space professionals and U.S. military services should appreciate that there exists alternatives and weapons that provide offensive and defensive capabilities suitable and feasible enough to effectively control and exploit the medium of space, such as ground-based space weapons or active defense and passive defense measures.

## SMIL Bad --- Space Weapons Vulnerable

### Space is not a high ground – it’s actually more vulnerable

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

HIGH GROUND OR SITTING DUCK? Space is frequently referred to as the “ultimate high ground.” While few would dispute that space provides an excellent vantage point, “high ground” implies a great deal more, and in fact space is far from being the “ultimate high ground.” On earth, high ground has physical resources near at hand for shielding and hiding behind. In space, the “high ground” has nothing: it’s a vacuum and there is nothing there that you don’t bring with you. On earth, high ground is often a peak with a castle on it like the Krak des Chevaliers, a choke point, a symbol of power. In the “high ground” of space, you’re a thin-skinned sitting duck with a bull’s-eye painted on your side. Anybody has a chance to shoot at you whenever they feel like it. High ground on earth provides you with a view of everything below you, while the people down below can’t see you, because you’re up over the edge of the fortification. In space, everybody can see you and people on the ground can hide from you, so all those advantages are gone. On earth, from high ground you can strike anywhere around you while those below are limited in reaching you. In space, the attacks that you might make, the trajectories that your vehicles might follow, follow paths that are predictable in advance, predictable in both space and time. Ground attacks, meanwhile, on a point in space can be almost random; they are highly variable in time and space and are unpredictable. On earth, on the high ground, you have weapons that are more effective when you aim downward, but the “high ground” in space is the easier target, being unprotected. Attacking uphill involves difficulty and delay on the ground but in space, uphill and downhill attacks take about the same amount of time and your “high ground” is very much harder to resupply and rearm. Lastly, on earth, high ground allows a permanent control over some strategic road or territory, a choke point that interdicts all hostile traffic around it. In space, the so-called high ground is a shifting Maginot line that is easily avoided, outwaited and circumvented. 7

### Spacecraft are not the same as aircraft – they are predictable and ineffective

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

Aircraft have long performed elevated observation as well as air control and ground strike missions. It is thus tempting to equate their demonstrated ability to overcome ground defenses with that of spacecraft to do the same. However, for missions in high-threat environments, various types of aircraft are grouped in “packages” combining offensive and defensive capabilities as specifically required. Route selection, timing, and deception are keys to success, as are deliberate unpredictability and maintenance of the initiative. Spacecraft, on the other hand, are inherently predictable, and combinations of satellites are “new” to the enemy only on the first orbit, after which they can be planned against and lose the initiative. Again, few similarities seem to exist between air and space vulnerabilities.

### Space assets are easily attacked by ground and air forces

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

The multiplicity of potential threats posed to U.S. space-based systems is highlighted in the Transformation Flight Plan itself. In addition to the space-based weapons already described that have space control missions, several terrestrial systems are also pertinent—such as the Ground Based Laser, which would “propagate laser beams through the atmosphere to Low-Earth Orbit satellites to provide robust defensive and offensive space control capability.” 8 Opponents with mobile or hardened lasers could conduct speed-of-light attacks on space-based systems at times of their choosing. The Air-Launched Anti-Satellite Missile would “be a small air-launched missile capable of intercepting satellites in low earth orbit.” 9 Launching antisatellite weapons from aircraft could increase the unpredictability of attack and provide additional kill mechanisms against our space-based systems. Opponents desiring to attack our space-based capabilities in the future would seem to have plenty of options.

### Satellites are vulnerable – they cannot move easily and are predictable

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

THE SPACE CONTEXT Objects in space are governed by astrodynamics: “The speed and direction of a satellite cannot be changed as easily as an aircraft’s, and enormous amounts of energy are required to accomplish seemingly trivial changes in a satellite’s altitude or orbital inclination” (Howard). The movement of objects in orbit is highly predictable—the overwhelming majority of satellites carry fuel only for minor maneuvers at slow accelerations. Orbits, once chosen as best suited to the satellite’s missions, are rarely changed.Low earth orbit (LEO) (150–800 km, or 90–500 miles) gives the best imagery resolution but limits time above the horizon with respect to any given point on earth and renders satellites vulnerable to attack or interference. Geosynchronous orbits (GEO) (approximately 35,000 km/20,000 miles) have periods equal to the earth’s rotation; a satellite observed from the earth appears to stay at or near the same longitude. GEO is excellent for weather observation, communications relay, and other tasks requiring continuous hemispheric coverage from a single satellite. Beyond GEO lie high earth orbits (HEO). Between GEO and LEO is the medium earth orbit (MEO) range. Highly elliptical orbits can extend the time over a particular latitude.

### Space assets are vulnerable – they are easy to detect and fragile

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

The “clean,” clutter-free background makes objects in space easier to detect. Attempts to hide from passive or active sensors operating at one frequency can make detection by other sensors easier; as an example, painting a satellite black to reduce reflections detectable to visible-light sensors would cause it to become hotter and therefore emit long-wave infrared radiation detectable by infrared sensors at even greater range. However, the transparency of space is somewhat offset by its vastness; above the lowest earth orbits, tremendous volumes must be searched to find satellites, let alone stealthy vehicles deployed from satellites. “Space situational awareness,” as a result, may be, in practical terms, a relative concept. All elements of space systems—in space, on the earth, and in the link between them—have vulnerabilities. Ground sites are vulnerable to threats ranging from mortar attack to software viruses; communications links are susceptible in varying degrees to jamming. The space segment suffers not only from predictable movement but from fragility imposed by launch weight restrictions; “armor is heavy,” and a simple device “exploded in close [would send] shrapnel through solar arrays, battery systems, onboard computers, guidance systems, and sensors alike” [Kennedy et al.]. If timed correctly, direct-ascent antisatellite weapons (ASATs) fired from earth “could disperse something as simple as sand in LEO, leaving anything passing through it . . . severely damaged or destroyed.” Space, ground, or air-based directed-energy weapons could conduct attacks on fragile satellite components without warning. Electromagnetic pulse (EMP) and radiation generated by the high-altitude detonation of nuclear weapons is perhaps the most devastating threat, since “lingering effects of radiation could make satellite operations futile for many months” [Space Commission].

## International Community Hates Weapons

### **Space weapons are ineffective and cause international and domestic opposition**

Wilkerson 8 – Don L. Wilkerson, Lieutenant Colonel of the United States Army, US Army War College, Master of Strategic Studies Degree, 2008, "Space Power Theory, Controlling the Medium Without Weapons in Space," [www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300](http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA482300)

The international political implications of placing weapons in space would generate opposition internationally and domestically. It is intuitive that once a nation state deploys weapons into space, other space-faring countries will attempt to do the same undoubtedly creating the next arms race in space. David Zeigler, a former mission21 specialist with NASA, (the author of the article “Safe Havens: Military Strategy and Space Sanctuary”) argues that placing weapons in space actually detracts from the security of states that pursue protection of space based assets. He also asserts that the weaponization of space may be more consistent with Cold War strategies but not necessarily appropriate for a post Cold War environment. Zeigler contends that the need for space sanctuary is greater now than ever with space weapons being economically unfeasible based on limited military funding and the fact that their operational need and capability concepts are grossly overrated. 47

### There’s international support for banning weapons

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

On August 12th 2003, 174 nations voted “Yes” on a UN resolution to prevent an arms race in outer space. Only four countries abstained: the Federated States of Micronesia, the Marshall Islands, Israel, and the United States.

## Impact Calc --- Probability

### Risk of conflict in space is very high – uncertainty leads to a use it or lose it mentality

Hardesty 5 – Captain David C. Hardesty, U.S. Navy, member of the faculty of theNaval War College’s Strategy and Policy Department, "Space-Based Weapons: Long-Term Strategic Implications and Alternatives," 2005, www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521114&Location=U2&doc=GetTRDoc.pdf

Space-based weapons, like all space systems, are predictable and fragile, but they represent significant combat power if used before they are destroyed— leading to a strong incentive to use these weapons preemptively, to “use them or lose them.” The problem is further complicated by the difficulty in knowing what is occurring in space. As the Commission to Assess United States National Security Space Management and Organization pointed out: Hostile actions against space systems can reasonably be confused with natural phenomena. Space debris or solar activity can “explain” the loss of a space system and mask unfriendly actions or the potential thereof. Such ambiguity and uncertainty could be fatal to the successful management of a crisis or resolution of a conflict. They could lead to forbearance when action is needed or to hasty action when more or better information would have given rise to a broader and more effective set of responsive options. 10 This lag in situational awareness can increase the effectiveness of attacks. That is, striking first is likely to mean inflicting disproportionate losses on the enemy; waiting increases the chances of suffering disproportionate losses oneself.

## Commercialization Checks Weaponization

### Space commercialization actually discourages weaponization

Krepon 4 – Michael Krepon, president and CEO of the Henry L. Stimson Center, November 2004, “Weapons in the Heavens: A Radical and Reckless Option,” Arms Control Association, http://www.armscontrol.org/act/2004\_11/Krepon#Lewis2

The prediction that warfare follows commerce and that the burgeoning of space-aided commerce will produce hostilities is also suspect.[[7]](http://www.armscontrol.org/act/2004_11/Krepon#notes7) To the contrary, most of the world’s strife takes place in poor regions. Space-aided commerce occurs primarily between nations with advanced commercial sectors, which generally have peaceful relations. Moreover, commercial space activities are often collaborative undertakings where risks and costs are shared. No nation that has invested heavily in space-aided commerce stands to gain if these orbital planes are endangered by space weapons debris or space mines. Any country that flight-tests, deploys, or uses space weapons threatens the activities of all other space-faring nations.

## A2 Space Weapons Illegal

**We can freely militarize – there is no governing body**

**Salin 1** - Patrick A., member of International Institute of Space Law, Internet Society, European Centre for Space Law, and ORBICOM, February “Privatization and militarization in the space business environment,” Space Policy, Volume 17, Issue 1, Page 19-26, http://www.sciencedirect.com/science?\_ob=MImg&\_imagekey=B6V52-42D2B34-6-1&\_cdi=5774&\_user=1458830&\_pii=S0265964600000503&\_origin=&\_coverDate=02%2F28%2F2001&\_sk=999829998&view=c&wchp=dGLbVzz-zSkWz&md5=15c519511820dd3536651fcf6e84a033&ie=/sdarticle.pdf

The administrative status of global space operators, whether public or private, has no impact on their final liability (if any), but their actions may (and will) heavily impact on the global international community. Private corporations have a de facto equal status to that of public space agencies. The worrying factor in the development of outer space exploitation is that — so far — there has been little in the way of an effective international responsibility (or liability) for wrongful acts that are committed or that bear consequences in outer space. This is the consequence of the fact that no litigation has ever been pursued on the basis of the 1972 Liability Convention or of the 1967 Outer Space Treaty, neither of which has yet been tested in terms of benefit sharing [[10](http://www.sciencedirect.com/science/article/pii/S0265964600000503#bib10)]. This means that, for practical purposes, the Liability Convention is unworkable. Large private corporations are on an equal footing with public bodies and behave as if they were enjoying a kind of ‘national’ immunity that is commensurate with the size of their project. A good illustration of that observation was provided in March 1997 with the licensing of Teledesic Corp. by the US Federal Communications Commission (FCC), after intense diplomatic pressure had been exercised by the US delegation during WARC-95.[8](http://www.sciencedirect.com/science/article/pii/S0265964600000503#fn8) Contrary to its actions over much smaller projects, the FCC did not check any of Teledesic's technical or financial parameters, nor did it even impose an agenda for a project of the magnitude of close to 1000 satellites, according to its original plan, i.e. more than three times the total number of US civilian satellites that were in outer space at that time. Since then, this project has been scaled down two or three times and we are not even sure that it will ever be launched. So far, the fully licensed Teledesic project is nothing more than a huge ‘paper satellite’ system, while the competing SkyBridge project still awaits FCC authorization in order to be operated over North America as part of its global coverage of the Earth. That shows there is always a national state that backs up a satellite operator — public or private — that is active in Outer Space at a global scale. Here we have a paradox consisting in having ‘national’ regulators that license ‘global’ operators, thanks to technology. This paradox fully explains the difficulties that global operators are facing in their relationship with other national authorities [[11](http://www.sciencedirect.com/science/article/pii/S0265964600000503#bib11)]. This is inevitable as long as there is no such thing as a World Space Organization under which global satellite operators must be registered and to which they must be liable. The ITU does not provide such a commitment because it is only a technical organization; we may say that global satellite systems have no accountability towards the international community and, even worse, behave by taking into account the ITU's own weaknesses. [9](http://www.sciencedirect.com/science/article/pii/S0265964600000503#fn9) Reforms have been proposed in order to restructure the ITU organization [[12](http://www.sciencedirect.com/science/article/pii/S0265964600000503#bib12), [13](http://www.sciencedirect.com/science/article/pii/S0265964600000503#bib13) and [14](http://www.sciencedirect.com/science/article/pii/S0265964600000503#bib14)]. But others think it is better to keep things as they are, with outer space being exploited almost like a lawless ‘wild outer space’, with minimal supervision, under benevolent home state licensing and passive ITU registration. If this situation remains unchanged, no doubt such private operators will inevitably drag their licensing state to the forefront. Unfortunately, in outer space we won’t talk about oil spills, but we may in the future see satellite explosions, or satellites colliding with one another, or we may simply notice malfunctions causing a satellite to cease functioning properly, sometimes without being able to really identify the cause of the malfunction or of the incident [[15](http://www.sciencedirect.com/science/article/pii/S0265964600000503#bib15)]. [10](http://www.sciencedirect.com/science/article/pii/S0265964600000503#fn10) And what about a nuclear accident in outer space?

### Space wep doesn’t violate I law

O'Hanlon 11(senior fellow in Foreign Policy Studies at the [Brookings Institution](http://www.sourcewatch.org/index.php?title=Brookings_Institution), where he specializes in U.S. defense strategy and budgeting, [homeland security](http://www.sourcewatch.org/index.php?title=Homeland_security), Northeast Asian security, and humanitarian intervention. He is also adjunct professor at the public policy school of Columbia University, a visiting lecturer at Princeton University, and a member of the [International Institute for Strategic Studies](http://www.sourcewatch.org/index.php?title=International_Institute_for_Strategic_Studies) and the [Council on Foreign Relations](http://www.sourcewatch.org/index.php?title=Council_on_Foreign_Relations)."[[1]](http://www.sourcewatch.org/index.php?title=Michael_E._O%27Hanlon#cite_note-MEHan-0), Balancing U.S. Security Interests in Space)

No space-based missile defense or antisatellite weapons (with the possible exception of an isolated experimental launcher or two) were deployed during the Cold War. That did not, however, reflect any decision to keep space forever free from weaponry. Nor do existing arms control treaties ban such weapons. Instead, they ban the deployment or use of nuclear weapons in outer space, prevent colonization of heavenly bodies for military purposes, and protect the rights of countries to use space to verify arms control accords and to conduct peaceful activities.8 In addition, in 2000, the United States and Russia agreed to notify each other of most space launches and ballistic missile tests in advance.9 Most other matters are still unresolved. And the concept of space as a sanctuary will be more difficult to defend or justify as the advanced targeting and communications capabilities of space systems are increasingly used to help deliver lethal ordnance on target.10

## US conventional military checks space race

### US conventional military would prevent global space race

Krepon and Clary 3 – Michael Krepon, served as the president and CEO of the Henry L. Stimson Center, Christopher Clary, Research Assistant for the Weaponization of Space Project at the Stimson Center, April 2, 2003, “Space Assurance or Space Dominance? The Case Against Weaponizing Space,” Henry L. Stimson Center, http://www.stimson.org/images/uploads/research-pdfs/spacebook.pdf

The exercise of restraint by the United States in the flight-testing and deployment of space warfare capabilities is critical for space assurance. With U.S. restraint, prospects for avoiding the elevation of a hair trigger into space grow appreciably. Conversely, by initiating the flight-testing and deployment of space warfare capabilities, or by testing military capabilities designed for other purposes in an “ASAT mode,” the United States would do much to make the weaponization of space an accomplished fact. Prospects for restraint are enhanced because the United States does not require preemptive strike options in space alongside similar terrestrial capabilities. To argue otherwise, one must believe that considerable added benefits derive from first strike options in space, and that these benefits override downside risks. Advocates of space strike capabilities must explain why such options are required atop U.S. conventional and nuclear superiority, as well as why they have confidence in the U.S. ability to control escalation and prevent significant damage to the U.S. homeland after engaging in space warfare. In the case of the Taiwan Strait scenario discussed above, advocates must explain how prospective escalation is to be controlled, and why the alternative U.S. means to negate Chinese satellite capabilities—such as by destroying satellite ground stations or by disrupting satellite transmissions—are insufficient. And if the China threat does not constitute a sound basis for taking the lead in testing and deploying space weapons, why would lesser regional contingencies constitute a more compelling rationale for “seizing” the high ground of space? American restraint in the flight-testing and deployment of space warfare capabilities is possible because of unchallenged U.S. military dominance. While superior U.S. conventional military capabilities provide ample grounds for weaker states to hedge their bets by conducting research and development on space warfare capabilities, the U.S. ability to compete effectively in space makes it most unwise for weaker states to trigger a competition. The distinction between hedging one’s bets and demonstrating capabilities through flight-testing and deployments remains crucial and maintainable with wise U.S. leadership. Put another way, the dominant position of the United States provides agenda-setting powers in space. The flight-testing and deployment of space warfare capabilities is surely inevitable if the United States takes the lead in this pursuit, but not if Washington maintains prudent hedges against unwelcome developments in the form of a readiness to respond in kind to any flight tests or deployments of space weapons by weaker states. These hedges, as discussed in Chapter 3, should be sufficiently persuasive to foreclose such a competition, unless weaker space-faring nations make very unwise choices.

# \*\*\*UNIQUENESS COUNTERPLAN\*\*\*

## UQ CP 1NC

### The United States federal government should offer to negotiate a Code of Conduct for acceptable space practices with any other interested space faring nation. This should include the extension of a conditional offer to the People’s Republic of China and the United States should refuse to engage in practices that contribute to the weaponization of space, including the deployment of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and offer reciprocal verification of United States’ adherence to the Code of Conduct. The president should authorize transparency measures to allow international monitors from any country that agrees to a Code of Conduct to verify adherence. This should include a declaration that guarantees all space-faring nations who adhere to the Code of Conduct will continue the flow of satellite information to any nation whose satellites or space assets are attacked. The United States should cede to the Russia-China Treaty to Ban Arms in Space and should offer China participation in the International Space Station in exchange for adherence. The United States federal government should implement a top secret no first military strike for the People’s Republic of China.

### This solves international space race

Krepon 8 [Michael, “SPACE AS A STRATEGIC ASSET TWILIGHT WAR: THE FOLLY OF U.S. SPACE DOMINANCE, AND THE POLITICS OF SPACE SECURITY: STRATEGIC RESTRAINT AND THE PURSUIT OF NATIONAL INTERESTS,” The Non-proliferation Review, November 1, 2008, Vol. 15, No. 3, 549-554]

Johnson-Freese makes the case for a comprehensive U.S. space strategy that fosters cooperation with major space powers; this in turn requires moving away from a U.S. military doctrine of space control and reinforcing the peaceful uses of outer space. She acknowledges the possibility that the United States might need space weapons one day but concludes that the case for such weapons is not now compelling**.**

This argument assumes, as Johnson-Freese believes, that China is willing to accept her vision of a cooperative future in space. The one scenario that stands most prominently in the way of this vision is a potential

confrontation between Washington and Beijing over Taiwan. Johnson-Freese argues persuasively that national security is not the only driver for China’s space policy; other drivers are economic development and national pride. The United States and Soviet Union managed to carve out a zone of cooperation in space, but this was possible only during upswings in bilateral relations. U.S. space cooperation with China may well be possible under similar circumstances. Johnson-Freese advocates legally binding agreements to manage the security dilemma in space.

In the interim, Johnson-Freese does not envision an arms race in space between the United States and China, since Beijing will pursue asymmetric responses to U.S. military plans. Consequently, if the Bush administration’s policies continue unabated, the United States will be ‘‘racing against itself**.**’’ But Beijing will be ‘‘hedging its bets’’ against the development of space weapons by the Pentagon. Johnson-Freese did not predict ASAT testing as part of this hedging strategy; neither did she rule this out. She resorts to occasional overstatement, as when referring to space weapons as ‘‘bright, shiny objects that the Bush administration seems fixated upon.’’ But overall, her book makes an informed and well-defended case that the Bush administration’s space policies could benefit from course corrections**.**

Mike Moore’s book, Twilight War: The Folly of U.S. Space Dominance, is also written with lay readers in mind. Moore, a former editor of the Bulletin of the Atomic Scientists, writes with clarity and passion against the policy preferences of U.S. ‘‘space warriors.’’ Moore is interested primarily in the military uses of space, a narrower focus than Space as a Strategic Asset, but one that leaves room for many digressions about the history of airpower and U.S. exceptionalism, which he believes is one of the root causes of unwise U.S. military space policy. Some readers may take issue with the extent of these digressions; this reviewer learned from them.

Moore doesn’t mince words. His central thesis is that the Bush administration’s space policy is not only ‘‘headed in the wrong direction,’’ but that the pursuit of space dominance is ‘‘a lulu of a mistake,’’ and that the initiation of military strikes in space by the United States ‘‘will guarantee conflict and, possibly, a new cold war.’’ He argues for ‘‘a new and unrelentingly tough space treaty’’ to ensure that no nation could dominate space.

Moore contends that such a treaty, ‘‘if it is hardheaded enough’’ and if it is negotiated by ‘‘the most skeptical realists,’’ can be fully verifiable. It must also, in his view, contain ‘‘tough and certain’’ sanctions against violators. To enforce the treaty, he argues that signatories must be ‘‘unfailingly willing’’ to destroy the spaceports of states that violate treaty provisions.

### Code of conduct would prevent military activities in space

Lele 9-10-08 [Ajey, IDSA Research Fellow, "Militarization of Space," Indian Defense Review Vol. 23.2, http://www.indiandefencereview.com/?p=351]

All recent US policies relating to space issues indicates that the US believes that freedom of action in space is important and reject proposals to ban space weapons. Under the United Nations banner they would support discussions on space and disarmament issues, but they will not enter into any negotiations on space weaponry.

On the other hand, this Chinese act of destroying a satellite should not be considered as an one-off event. On 11 January 2007, they successfully carried out an anti-satellite (ASAT) test, but this was preceded by three earlier unsuccessful attempts. Their interests in the weaponisation of space has been known for some time. However, China had continuously talked about establishing an international structure for stopping the weaponisation of space over the last few years while assiduously working towards developing space weapons.

According to a 2001 report, China had also ground tested an advanced anti-satellite weapon called ‘Parasitic Satellite’. It could be deployed on an experimental basis and enter the phase of space tests in the near future. This ASAT system can be used against many types of satellites in different orbits like communication satellites, navigational satellites, reconnaissance satellites and early warning satellites. According to a ‘Space Daily’ report this nanometer-sized “parasitic satellite” is designed to be deployed and attached to the enemy’s satellite. There are three components to the ASAT “parasitic” satellites system: a carrier (”mother”) satellite and launcher, and a ground control system. During conflict, commands are sent to this satellite to interfere or destroy the host satellite. The cost of building these satellites is 0.1 percent to 1 percent of any typical satellite.

It was reported by the media that in September 2006 Beijing had secretly used lasers to “paint” US spy satellites with the aim of “blinding” their sensitive surveillance devices to prevent spy photography as they pass over China. The Chinese aim was not to destroy the US satellites but to make them useless over Chinese territory. It has also been reported that the US military was so alarmed by this Chinese activity that it has begun to carry out test attacks against its own satellites to determine the dimensions of this threat.

The global powers cannot do much about the Chinese ASAT test, apart from condemning it. **This is mainly due to the absence of a space treaty regime**. For the last few years many players in the global space arena are trying to work out an international regime under the aegis of the United Nations. Although an informal international understanding obtains to desist from sending weapons into space, no mechanism is available to punish infractions.

The United Nations in 1958, shortly after launching its first artificial satellite, started to crystallise its policies on space. The Committee on the Peaceful Uses of Outer Space was set up by the General Assembly in 1959. The mandate for the committee was to review the scope of international cooperation in peaceful uses of outer space. The committee is also expected to study the legal problems arising from the exploration of outer space. This Committee on the Peaceful Uses of Outer Space (COPUOS) has 67 member states and makes recommendations to the General Assembly from time to time.

The important disarmament agreement to provide the basic framework on international space law is the Outer Space Treaty, which entered into force in October 1967. This is the second of the so-called “non-armament” treaties (first being the Antarctic Treaty). It guarantees cooperation between states in all peaceful uses of outer space. Unfortunately the treaty only prohibits the presence of nuclear weapons in space and it cannot therefore address the issue of weaponisation of space. Another important space treaty called the Moon Treaty came into being in the year 1979. This treaty declares that the moon (including all celestial bodies) should be used for the benefit of all states and the international community. It also expresses the desire to prevent the moon from becoming a source of international conflict. Unfortunately, the treaty has not been ratified by any nations engaged in manned space missions, so it is a non-starter.

The negotiations on space arena in various international forums have remained un-productive over the last few years. The Conference on Disarmament (CD) has not been able to agree on the formation of an Ad Hoc Committee since 1994 to negotiate a convention for the non-weaponisation of outer space. The prevention of an Arms Race in Outer Space (PAROS) initiative is also on the UN agenda since 1982. However, the US and Israel are unwilling to cooperate with the international community on the issue of PAROS. The US has even argued that the existing multilateral arms control regime is sufficient, and that there is no need to address a non-existent threat.

Apart from the hostile attitude adopted by countries like the US towards the establishment of any space treaty, the proposed regime also suffers from the problem of defining weapons in outer space. This is mainly because almost anything can be used as a weapon in space to obstruct satellites. There would also be technical and financial constraints for verifying any irregularities, because of the complex problems involved in the verification of outer space activities.

As a fresh approach to the disarmament discourse on weaponisation of space, analysts like Michael Krepon and Michael Heller have suggested the negotiation of a code of conduct between space-faring nations to prevent incidents and dangerous military activities in space. Also, global cooperation is possible in various other areas of space activities. The international space station (ISS) is one of the finest examples of such collaboration where 16 countries have come together to undertake scientific experiments in outer space on a made-to-order platform. Similar collaborations are possible (in few cases they already exist) in areas like Navigation, Reusable Launch Vehicles (RLV), Space Commerce (Launch Business), exploring outer space to study the cosmos and use space assets over problematic border areas (like Kashmir) for strengthening confidence building measures (CBMs).

There now is a need to convert China’s ASAT test into an opportunity to evolve long-term and short-term space policies. There is a need to establish a strategic balance among the larger nations, and break the monopoly on the utilisation of space by a few. In general, it needs to be understood that while the peaceful uses of space and satellites are developing at a dizzying pace, facilitating global information and communication, the most advanced military powers are calculating how they can pursue war in this environment. The challenge for sensible space powers is to continue doing ‘defence’ from space without weaponising it.

### And verification measures would prevent cheating in the code of conduct

Krepon 7 (Michael, Co-founder and contributor to the Stimson Center. “Will the Bush Administration Endorse a Space Code of Conduct?” Space News. March 5. http:www.stimson.org/pub.cfm?id=402)

Support is growing for a specific kind of multilateral space agreement that borrows heavily from the Bush administration’s own preferences. The mechanism in question is a Code of Conduct for responsible spacefaring nations that could either take the form of political compacts or executive agreements among like-minded states that wish to continue to enjoy the national security and economic benefits that satellites provide. Like the Bush administration’s Proliferation Security Initiative, a Code of Conduct for space could be designed by a core group of states to clarify responsible and irresponsible behavior. The core group might then invite any other spacefaring nation that wishes to abide by these high standards to join the group.

 The European Union has now joined Canada in endorsing a Code of Conduct for responsible spacefaring nations. The commercial satellite industry also has expressed a strong interest in “rules of the road” for space.

The Bush administration has further distanced itself from America’s friends and allies by continuing to insist that new multilateral agreements related to space are “unnecessary and counterproductive.” No other nation in the world has adopted such a negative stance. Saying “hell no” to new multilateral agreements for space seems particularly questionable after China’s irresponsible test of an anti-satellite (A-Sat) weapon that endangers spaceflight in low Earth orbit for decades to come. George Washington’s farewell address warned against indulging in “habitual hatred” resulting in a slavish animosity that leads the United States to “stray from its duty and interest.” Rejecting a Code of Conduct for space because it smacks of arms control would seem to violate Washington’s sound admonition. The Bush administration has not yet taken a position towards a Code of Conduct for responsible spacefaring nations. Because rules of the road for space make so much sense, and because the Bush administration has championed other codes of conduct to prevent proliferation, it might still join in the emerging consensus on this issue. The administration’s reasoning against new multilateral agreements for space boils down to five arguments, none of which applies to the Code of Conduct.  First, administration officials argue that there is no likelihood of an arms race in space, therefore, there is no need for new multilateral arrangements. It is true that an arms race is unlikely, since arms racing has now been replaced by asymmetric warfare. But an arms race is not needed to do lasting damage to space, as the Chinese A-Sat test demonstrated. We can now see clearly that it takes very few kinetic energy kill tests and A-Sat  weapons to result in significant damage to low Earth orbit. New diplomatic initiatives are needed precisely because an arms race isn’t needed to prevent the peaceful uses of outer space. The second argument advanced by the Bush administration is that arms control is a vestige of the Cold War and not terribly relevant to contemporary security concerns. Again, there is partial truth in this argument, because classic arms control arrangements dealt with a superpower competition that ended with the demise of the Soviet Union.  What used to be known as arms control has now morphed into cooperative threat reduction agreements, including rules of the road clarifying responsible behavior. Semantic arguments aside, the administration has itself championed multilateral agreements in the form of codes of conduct to prevent proliferation, such as The Hague Code of Conduct, as well as the Proliferation Security Initiative. We do not have to argue over whether these codes of conduct constitute arms control to conclude that these creative arrangements were sensible initiatives.  A Code of Conduct for space also would be quite useful in making the Chinese kinetic-kill A-Sat test the very last of its kind. If codes of conduct relating to missiles and exports make sense for preventing proliferation – and do not, in the Bush administration’s vocabulary, constitute arms control – then surely a code of conduct also makes sense for activities in space. After all, troubling activities in space also could prompt vertical and horizontal proliferation on the ground.  The third argument that the Bush administration advances against new diplomatic initiatives for space activity is that there can be no agreed to definition of what constitutes “space weapons.” Moreover, verification is extremely problematic. Consequently, no multilateral agreement can be negotiated barring such weapons.  The administration is correct in pointing to the difficulties in defining and verifying space weapons. A code of conduct, however, focuses on activities, not on definitions of what constitutes a space weapon. For example, one key element of a Code of Conduct would surely be that responsible spacefaring nations do not engage in activities that deliberately produce persistent space debris, such as the Chinese A-Sat test.  This key element makes it unnecessary to define space weapons, since actions, not definitions, lie at the core of a rules of the road approach. Verification of noncompliance with this key element is quite straightforward, since it is very hard to hide the deliberate generation of persistent space debris.  The fourth argument advanced by the Bush administration to oppose new diplomatic initiatives for space is that the United States must preserve its right to self-defense – including the right to defend space assets. This argument is certainly valid, but it doesn’t justify rejecting a Code of Conduct. With such a code, the United States still would possess more capabilities than ever before to deter and, if necessary, punish states that take actions against U.S. satellites. The right of self-defense, however, is more likely to be invoked, and will be more difficult to execute, if there are no agreed rules of the road for outer space.  Lastly, the Bush administration contends that new diplomatic initiatives are unwise because U.S. freedom of action in space must not be constrained. By this standard, the Nonproliferation Treaty, the Outer Space Treaty, President Ronald Reagan’s Intermediate Nuclear Forces Treaty and President George H. W. Bush’s Strategic Arms Reduction treaties were all dreadful errors in judgment, since every one of these agreements limit the U.S. military’s freedom of action in some key respects. Using the Bush administration’s reasoning, the Geneva Conventions for U.S. armed forces also are unwise, as are codes of conduct long in place for the U.S. Army, Navy, Marines and gravity-bound Air Force. If freedom of action were the topmost U.S. national security objective, we would ditch all of these treaties and codes of conduct. Of course, no responsible political leader or public official would consider doing this. So why should we use this standard to oppose new diplomatic initiatives in space?

### Information sharing solves

Shachtman 8 [Noah, Editor of Wired Magazine, "How China Loses the Coming Space War (Pt. 3)" 1-10-08, accessed from Danger Room Blog, http://blog.wired.com/defense/2008/01/inside-the-ch-2.html]

The first step the United States should take is a simple declaration that we guarantee the continued flow of information to any country whose satellite is destroyed by an ASAT. We could do this using either our military or civilian-owned satellites. After all, if the space assets of the United States are not vulnerable to attacks because of the inherent redundancy, the same cannot be said of China’s other potential regional competitors such as Australia, India, or Japan. Each of these countries has only a handful of satellites that could be quickly destroyed if China chooses to attack them. This declaration would effectively eliminate any military advantage that a country might get from attacking its neighbors limited fleet of satellites. After that, we should adopt the code of conduct that is being developed by the Stimson Center that establishes “rules of the road” for responsible space-faring nations. Finally, we should work toward a treaty banning the future testing of these most dangerous of anti-satellite weapons: the so-called "kinetic kill interceptors" that create such large amounts of debris. It'd be a first step towards containing the worst effects on war in space.

## AT: current treaties solve space weaponization

### Current agreements fail- anti missile defense has expired and others are just too old and have loopholes that can be exploited

Jingye 2- Cheng Jingye, is deputy director of the Arms Control Department in the Chinese Ministry of Foreign Affairs., Treaties as an Approach to Reducing Space Vulnerabilities, Mountbatten Centre for International Studies

[It is true that there have been already several treaties on regulating outer space activities. These treaties have played a positive role in promoting the exploration and peaceful utilization of outer space. However, as they were concluded decades ago, some of them have inherent flaws or loopholes. For example, the 1967 Outer Space Treaty only prohibits deployment of weapons of mass destruction in outer space, but not other weapons. Furthermore, the 1972 Anti-Ballistic Missile Treaty, which prohibited space-based antimissile systems, recently ceased to be in effect. Beginning with the 1980s, having realized the need for strengthening existing treaties, the international community has made unremitting efforts to this end. In 1981, the UN General]

### Status quo treaties on space weponization fail- china not involved in current treaties

O'Hanlon 11(senior fellow in Foreign Policy Studies at the [Brookings Institution](http://www.sourcewatch.org/index.php?title=Brookings_Institution), where he specializes in U.S. defense strategy and budgeting, [homeland security](http://www.sourcewatch.org/index.php?title=Homeland_security), Northeast Asian security, and humanitarian intervention. He is also adjunct professor at the public policy school of Columbia University, a visiting lecturer at Princeton University, and a member of the [International Institute for Strategic Studies](http://www.sourcewatch.org/index.php?title=International_Institute_for_Strategic_Studies) and the [Council on Foreign Relations](http://www.sourcewatch.org/index.php?title=Council_on_Foreign_Relations)."[[1]](http://www.sourcewatch.org/index.php?title=Michael_E._O%27Hanlon#cite_note-MEHan-0), Balancing U.S. Security Interests in Space)

Some scholars do argue that the Strategic Arms Reduction, Interme-diate-Range Nuclear Forces, and Conventional Armed Forces in Europe treaties effectively ban the use of ASATs by one signatory of these treaties against any and all others, given the protection provided to satellite verification missions in the accords. But these treaties were signed before imaging satellites came into their own as targeting devices for tactical warfighting purposes, raising the legal and political question of whether a satellite originally protected for one generally nonprovocative and stabilizing purpose can be guaranteed protection when used in a more competitive fashion. Moreover, no one argues that these treaties ban the development, testing, production, or deployment of ASATs.11 Nor do any involve China.

### Status quo agreements fail explicit initiatives are key to effectively solve

Buxbaum 11- Peter A Buxbaum, writing about defense, security, business, and technology for over 15 years.  Over 2,000 of his articles have appeared in leading publications such as Fortune, Forbes, Chief Executive, Information Week, Defense Technology International, Jane's Defence Weekly, Military Information Technology, Homeland Security magazine, Computerworld, and dozens of others.  He has also developed and taught seminars on international business at Penn State University. Buxbaum earned a JD from Temple University and a BA in political science and economics from Columbia University., Taming the Heavens: The New Space Diplomacy, june 27 2011, <http://www.isn.ethz.ch/isn/Current-Affairs/ISN-Insights/Detail?lng=en&id=130360&contextid734=130360&contextid735=130103&tabid=130103&dynrel=4888caa0-b3db-1461-98b9-e20e7b9c13d4,0c54e3b3-1e9c-be1e-2c24-a6a8c7060233>

[Laura Grego, a scientist in the Union of Concerned Scientists' Global Security Program told ISN Insights that the "Code does not mention space weapons of any kind, nor would it meaningfully limit their development." The senators' attempt at "inhibiting these initial efforts to establish norms is shortsighted and counterproductive," she said. "Norms are a modest step in the right direction," Grego added, "but leave many of the serious problems of space security unaddressed. Without robust constraints on anti-satellite weapons, threats to satellites will continue to proliferate and mature, requiring the United States to expend more effort securing satellites and leading to less predictability and stability in crises."]

### CP solvo- current efforts didn’t go far enough specific bans are key- us involvement must be substantial in order for it to be effective and avoid negative consequences

Buxbaum 11- Peter A Buxbaum, writing about defense, security, business, and technology for over 15 years.  Over 2,000 of his articles have appeared in leading publications such as Fortune, Forbes, Chief Executive, Information Week, Defense Technology International, Jane's Defence Weekly, Military Information Technology, Homeland Security magazine, Computerworld, and dozens of others.  He has also developed and taught seminars on international business at Penn State University. Buxbaum earned a JD from Temple University and a BA in political science and economics from Columbia University., Taming the Heavens: The New Space Diplomacy, june 27 2011, <http://www.isn.ethz.ch/isn/Current-Affairs/ISN-Insights/Detail?lng=en&id=130360&contextid734=130360&contextid735=130103&tabid=130103&dynrel=4888caa0-b3db-1461-98b9-e20e7b9c13d4,0c54e3b3-1e9c-be1e-2c24-a6a8c7060233>

[The NSSS does not go far enough, in Grego's opinion. She criticized the document for failing to emphasize arms control agreements "as part of a larger scheme for keeping space secure" and for failing to recommend that the United States take the lead on space diplomacy. Well-crafted arms control proposals could lower the risk of arms races or conflicts in space or on the ground, Grego said, and protect the space environment from the harmful debris caused when countries deliberately destroy satellites. "A more robust diplomatic initiative that includes the major space-faring countries would have the potential to increase cooperation with countries that are not traditional US military allies," she added, "and spur other countries to develop realistic proposals that could ensure a safe and sustainable future in space. Diplomatic engagement could help relieve suspicions among countries, reduce incentives for building anti-satellite systems and other space weapons by establishing negotiated limits, and avert space disputes." The UCS released a report last year which called for the US government to "declare that the United States will not intentionally damage or disable satellites" and "press other space powers to make the same pledge." The report recommended that the US make satellites "more resistant to interference and develop ways to quickly replace them or compensate with other measures if they are disabled." The report also called for the US to assemble an expert negotiating team and to "engage in international discussions on space." "The United States should play an active and leading role in engaging the international community to further develop space laws and norms and to keep space free of weapons," said Grego. "A Code of Conduct provides a useful but preliminary standard for responsible space conduct. It should be a first step, but not the last."]

## Extensions china co op solvency

### CP solvo- things China and US should do to avoid space conflict and destruction

Hays and Danielson 9- Peter Hays, Senior Scientist, Policy and Strategy Division Science Applications International Corporation National Security Space Office, Mr. Dennis L. Danielson Senior Engineering and Technical Manager Jacobs Technology, National Security Space Office Pentagon, Washington DC, Improving Space Security through Enhanced

[Bruce MacDonald’s report on China, Space Weapons, and US Security for the Council on Foreign Relations offers a number of noteworthy additional specific recommendations for both the US and China including: For the US—assessing the impact of different US and Chinese offensive space postures and policies through intensified analysis and “crisis games,” in addition to wargames; evaluating the desirability of a “no first use” pledge for offensive counterspace weapons that have irreversible effects; pursuing selected offensive capabilities meeting important criteria—including effectiveness, reversible effects, and survivability— in a deterrence context to be able to negate adversary space capabilities on a temporary and reversible basis; refraining from further direct ascent ASAT tests and demonstrations as long as China does, unless there is a substantial risk to human health and safety from uncontrolled space object reentry; and entering negotiations on a [kinetic energy] KE-ASAT testing ban. MacDonald’s recommendations for China include: providing more transparency into its military space programs; refraining from further direct ascent ASAT tests as long as the US does; establishing a senior national security coordinating body, equivalent to a Chinese National Security Council; strengthening its leadership’s foreign policy understanding by increasing the international affairs training of senior officer candidates and establishing an international security affairs office within the PLA; providing a clear and credible policy and doctrinal context for its 2007 ASAT test and counterspace programs more generally and addressing foreign concerns over China’s ASAT test; and offering to engage in dialogue with the US on mutual space concerns and becoming actively involved in discussions on establishing international space codes of conduct and confidence-building measures.21 Finally, Beijing and Washington should pursue specific initiatives to follow-up on the cooperative dialogue during the visits of General Xu Caihou and President Obama, as well as initiating discussions about recent statements by General Xu Qiliang, commander of the PLA Air Force (PLAAF), that a space arms race is inevitable and the PLAAF must develop offensive space operations.22 President Hu quickly repudiated these statements but the two sides need to find a way to initiate and sustain focused discussions about the difficult space security issues raised by the general’s statements since they represent an unprecedented level of public transparency on the part of the PLA, undoubtedly reflect the position of the PLA and other important stakeholders within the Chinese government, and represent an inherent part of the context for space security about which the US and China must develop better shared understanding. Counterintuitively, Beijing and Washington can lay a stronger foundation for sustainable space security through transparent dialogue over these most difficult issues rather than by trying to avoid them since more diplomatic approaches may assuage but cannot eliminate the growing strategic and military potential of space capabilities.]

### China will freak out if US develops space weapons-the cp prevents the arms race and china freak out

Hui 05 (Zhang Hui is a research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government. His research includes nuclear arms control verification techniques, the control of fissile material, nuclear terrorism, nuclear safeguards, nonproliferation and space. An extended version of this paper was produced for the, Space Weaponization And Space Security: A Chinese Perspective, www.wsichina.org/attach/CS2\_3.pdf)

[The United States does have legitimate concerns about its space assets, given that U.S. military operations, economy and society are increasingly dependent on space assets and such assets are inherently vulnerable to attacks from many different sources. However, it does not mean that the United States currently faces credible threats from states that might exploit those vulnerabilities.6 Further, space-based weapons cannot protect satellites, since these weapons are also vulnerable to many types of attack, similar to the satellites requiring protection. The true aim of U.S. space plans is not to protect U.S. assets but rather to further enhance American military dominance. Prof. Du Xiangwan, vice president of the Chinese Academy of Engineering, recently presented his view that the Transformation Flight Plan indicated that "many types of space-based weapons will be developed," and "the tendency toward space weaponization is obvious and serious." He further noted that military dominance on Earth is not enough, "the U.S. also seeks to dominate space."7 Beijing fears that by unilaterally developing missile defense systems and pursuing space weaponization, the United States is seeking to establish a global military superiority using both offensive and defensive means.8 Moreover, China's fears about U.S. hegemonic tendencies are exacerbated by the fact that space weapons, due to their vulnerability to other less expensive, asymmetric measures, are inherently first-strike weapons. 9 ]

### CP solvo- Sino-US co op on space issues- agreements help avoid china misperception, and improve US China relations as well as have economic benefits- trade and exchange of tech and info would also be good

Hays 11- Peter L. Hays, Dr. Peter L. Hays is a senior policy analyst supporting the plans and programs division of the National Security Space Office. A retired Lieutenant Colonel with 25 years of service in the Air Force, he has focused his studies and research on U.S. national security space., Chapter 28: Space Law and the Advancement of Spacepower

[Since Sino-American relations in general and space relations in particular are likely to play a dominant role in shaping the quest for space-power and sustainable security during this century, other proposed Sino-American cooperative space ventures or TCBMs are worthy of further consideration, including inviting a taikonaut to fly on one of the remaining space shuttle missions and making specific, repeated, and public invitations for the Chinese to join the International Space Station program and other major cooperative international space efforts. The United States and China could also work toward developing nonoffensive defenses of the type advocated by Philip Baines.14 Kevin Pollpeter explains how China and the United States could cooperate in promoting the safety of human spaceflight and "coordinate space science missions to derive scientific benefits and to share costs. Coordinating space science missions with separately developed, but complementary space assets, removes the chance of sensitive technology transfer and allows the two countries to combine their resources to achieve the same effects as jointly developed missions."15 Michael Pillsbury outlined six other areas where U.S. experts could profitably exchange views with Chinese specialists in a dialogue about space weapons issues: "reducing Chinese misperceptions of U.S. Space Policy, increasing Chinese transparency on space weapons, probing Chinese interest in verifiable agreements, multilateral versus bilateral approaches, economic consequences of use of space weapons, and reconsideration of U.S. high-tech exports to China."16 Finally, Bruce MacDonald's report for the Council on Foreign Relations, "China, Space Weapons, and U.S. Security," offers a number of noteworthy additional specific recommendations for both the United States and China. For the United States, MacDonald recommends assessing the impact of different U.S. and Chinese offensive space postures and policies through intensified analysis and "crisis games" in addition to wargames; evaluating the desirability of a "no first use" pledge for offensive counterspace weapons that have irreversible effects; pursuing selected offensive capabilities meeting important criteria— including effectiveness, reversible effects, and survivability—in a deterrence context to be able to negate adversary space capabilities on a temporary and reversible basis; refraining from further direct ascent ASAT tests and demonstrations as long as China does, unless there is a substantial risk to human health and safety from uncontrolled space object reentry; and entering negotiations on a kinetic energy ASAT testing ban. MacDonald's recommendations for China include providing more transparency into its military space programs; refraining from further direct ascent ASAT tests as long as the United States does; establishing a senior national security coordinating body, equivalent to a Chinese National Security Council; strengthening its leadership's foreign policy understanding by increasing the international affairs training of senior officer candidates and establishing an international security affairs office within the People's Liberation Army; providing a clear and credible policy and doctrinal context for its 2007 ASAT test and counterspace programs more generally, and addressing foreign concerns over China's ASAT test; and offering to engage in dialogue with the United States on mutual space concerns and become actively involved in discussions on establishing international space codes of conduct and confidence-building measures.17]

### US china co op good key to solve relations- violent china rise and cost savings

Logan 7- Jeffery Logan, M.S. in environmental science and Master in Public Administration,1995, Indiana University, School of Public and Environmental Affairs B.S. in aerospace engineering and B.A. in general arts and sciences, 1985, Pennsylvania State University Prior work experience Specialist in energy policy, Congressional Research Service, Washington, DC (2007-2008) Senior energy analyst, World Resources Institute, Washington, DC (2005-2007) Senior energy analyst, International Energy Agency, Paris (2003-2005) Scientist, Advanced International Studies Unit, Pacific Northwest National Laboratory, Washington, DC (1997-2003), China’s Space Program: Options for U.S.-China Cooperation, December 07

Benefits of Cooperating with China. The potential benefits of expanded cooperation and dialogue with China include: ! Improved transparency. Regular meetings could help the two nations understand each others’ intentions more clearly. Currently, there is mutual uncertainty and mistrust over space goals, resulting in the need for worst-case planning. Regular dialogue would need high-level political support to succeed, but could help address national security concerns. ! Offsetting the need for China’s unilateral development. Collaborating with China — instead of isolating it — may keep the country dependent on U.S. technology rather than forcing it to develop technologies alone. This can give the United States leverage in other areas of the relationship. ! Cost savings. China now has the economic standing to support joint space cooperation. Cost-sharing of joint projects could help NASA achieve its challenging work load in the near future. Some have argued that U.S. space commerce has suffered from the attempt to isolate China while doing little to keep sensitive technology out of China.

### US China co op good- key to R and D

Hays and Danielson 9- Peter Hays, Senior Scientist, Policy and Strategy Division Science Applications International Corporation National Security Space Office, Mr. Dennis L. Danielson Senior Engineering and Technical Manager Jacobs Technology, National Security Space Office Pentagon, Washington DC, Improving Space Security through Enhanced

[Other specific Sino-American cooperative space ventures or TCBMs that have been proposed and are worthy of further consideration include: inviting a taikonaut to fly on one of the remaining space shuttle missions and making repeated, specific, and public invitations for the Chinese to join the ISS program and other major cooperative international space efforts. The US and China could also work towards developing non-offensive defenses of the type advocated by Philip Baines.18 Kevin Pollpeter explains how China and the US could cooperate in promoting the safety of human spaceflight and “coordinate space science missions to derive scientific benefits and to share costs. Coordinating space science missions with separately developed, but complementary space assets, removes the chance of sensitive technology transfer and allows the two countries to combine their resources to achieve the same effects as jointly developed missions.”19 Michael Pillsbury outlined six other areas where US experts could profitably exchange views with Chinese specialists in a dialogue about space weapons issues: “reducing Chinese misperceptions of US space policy, increasing Chinese transparency on space weapons, probing Chinese interest in verifiable agreements, multilateral versus bilateral approaches, economic consequences of use of space weapons, and reconsideration of US high-tech exports to China.”20]

### US co op with china to ban space weaponization prevents arms race and instability

Zhang 11 – Baohui Zhang is Associate Professor of Political Science and Director of the Center for Asia Pacific Studies at Lingnan University, Hong Kong, March/April 2011, "The Security Dilemma in the U.S.-China Military Space Relationship: The Prospects for Arms Control,” Asian Survey, Volume 51, No. 2, pp. 331-332

Once the above measures begin to relax the security dilemma, China, the U.S., and other major powers can work toward a multilateral agreement governing the military use of space. Although China’s military space programs, especially its January 2007 ASAT test, contradict its official policy of seeking to ban weapons in space, they can be interpreted as a hedging strategy in response to the security dilemma. When the U.S. opposed efforts to ban the weaponization of space, the PLA felt compelled to initiate its own military space programs. Now that the Obama administration is willing to ban weapons in space, this could bring both China and Russia to the negotiating table for a multilateral agreement. Indeed, in February 2008 China and Russia jointly proposed such a treaty at the U.N. Conference on Disarmament in Geneva. Chinese experts have repeatedly emphasized that arms control for outer space remains China’s top priority, though it is prepared for an arms race if necessary. President Hu’s statement on the issue in November 2009 effectively reaffirmed this position. Therefore, the current strategic adjustment by the U.S. and President Obama’s new space policy could make a multilateral approach feasible. According to a PLA strategist assessing the new directions in U.S. space policy: If Obama, who champions the theme of change, forsakes the longtime U.S. strategy for space hegemony and is willing to pursue arms control in outer space through an international treaty, then, with effective mechanisms for monitoring and verification, the world community will be able to walk on the right track toward peaceful use of space, eradication of [the] arms race, and realization of permanent peace. 58

### Broad consensus that US must discuss weaponization – Chinese uncertainty, stops international treaties,

Blazejewski 8 – Kenneth S. Blazejewski, master's degree in public affairs from Princeton, JD degree from the New York University School of Law, Spring 2008, "Space Weaponization and US-China Relation" [www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf](http://www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf)

The US refusal to engage in discussions on the weaponization of outer space imposes two significant costs. First, it increases Chinese uncertainty and suspicion, leading China to assume its worst-case scenario about US space weaponization. Second, it prevents the international community from developing new rules and norms in areas such as advancing situational awareness, coordinating launches, and deterring the further development and proliferation of ASAT weapons that could benefit US space assets. There is broad consensus that the United States can no longer afford to remain silent in the international debate on the weaponization of outer space. The Rumsfeld Commission, the US-China Commission, 51 and many spacearms-control advocates all recommend greater US participation in setting rules for the use of outer space beyond the existing legal framework.

## Extentions for china co op solvency specific for SBMD

### Multilateral ban involving china key- US China co-op key to avoid decline in relations- or SBMD bad hurts Sino-US relations

Hui 05 (Zhang Hui is a research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government. His research includes nuclear arms control verification techniques, the control of fissile material, nuclear terrorism, nuclear safeguards, nonproliferation and space. An extended version of this paper was produced for the, Space Weaponization And Space Security: A Chinese Perspective, www.wsichina.org/attach/CS2\_3.pdf)

A set of measures to limit space arms proliferation have been proposed, including a ban on the testing or use of any ASAT weapons and a declaration not to be the first to deploy weapons in space or to further test destructive ASATs. 22 It should be noted that, even if the compromise route is taken, any multilateral attempt to address space security should consider all countries' interests. One of China's major motivations for a ban on space weaponization is to reduce its concerns regarding U.S. missile defense plans. Thus, any partial arms control measure involving China should emphasize this concern. For example, a proposal that restricted ASATs while allowing the deployment of a U.S. missile defense system would be perceived by China as discriminatory for two reasons. First, ASATs would be an effective way for China to counter the U.S. missile defense threat. Second, it is difficult to distinguish between anti-ballistic missile systems and ASATs, which would create a probable source of tension.

## Ban on Space Weapons Good

### Ban on space weapons solves – no secret development of space weapons and US can still develop R&D without space weapons

Blazejewski 8 – Kenneth S. Blazejewski, master's degree in public affairs from Princeton, JD degree from the New York University School of Law, Spring 2008, "Space Weaponization and US-China Relation" [www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf](http://www.au.af.mil/au/ssq/2008/Spring/blazejewski.pdf)

A third reason for the United States to agree not to launch weapons into outer space is that such an agreement need not threaten two stated US interests— protection of satellites and the development of a limited BMD system. Before turning to each of these issues, it is necessary to note two potential problems with a decision to forgo space weaponization. First, as stated above, there is no guarantee that China does not plan to develop its own robust ASAT and space weapons programs regardless of US activity in this area. “Space racers” doubt that a US commitment not to place weapons in space will influence China’s policy on space weaponization. Ultimately, cheating is a risk that countries run whenever they agree to be bound by a shared international agreement. However, certain factors significantly reduce this risk. First, while the secret development of space weapons technology might be possible, any effort to deploy or test space weapons will be clearly visible to the international community. 57 Without the capacity to test, any space weapons program will be stifled at an early stage of development. Second, there is little reason to think that in the foreseeable future the technological capacity of the United States would fall far behind that of any state planning to launch space weapons. A commitment not to deploy weapons does not mean that all research and development must cease immediately. Once it becomes clear that a state is preparing to launch space weapons, the United States could respond by executing its own space weapons contingency plan. Third, as stated above, space weapons are relatively easy targets for ASAT attack, a feature that can work in the interests of the United States if others deploy first. Fourth, a universal ban on space weapons would engender a normative framework that would justify a swift reaction by the United States, such as the deployment of its own space weapons or ASAT attack if another country violated the ban first. Finally, if the United States is able to negotiate for greater transparency in Chinese military planning, as suggested above, it would reduce the possibility of a surprise Chinese launch.

## AT: Cheating

### Co op and transparency efforts would help prevent cheating through effective information gathering of space deployments

Moltz 2- James Moltz, Department of National Security Affairs, Naval Postgraduate School, Monterey, Protecting safe access to space: Lessons from the first 50 years of space security, <http://www.acronym.org.uk/dd/dd63/63op1.htm>

[Finally, another factor that transcends the three historical cases has been the role of transparency in promoting cooperation. In dealing with space nuclear testing and in assessing debris from kinetic-kill weapons tests, national decision makers have been able to act with confidence that they will know if their adversary attempts to achieve any “breakout” capability. Unlike in other environments, where the development of new destructive capabilities can often be hidden, the fact that space weapons need to be launched and tested in an internationally governed and highly transparent region allows any other country with a reasonable space surveillance system—such as the type possessed by both the USA and the USSR/Russia since the late 1960s and by at least also members of the European Space Agency and China today—can be confident that they will detect the development of any major weapons systems. This factor should play a positive role in weakening the credibility of claims that “secret” programs by potential enemies might create a “catastrophe” some day in space. Looking ahead, however, it must be noted that there may be limitations on this factor. Specifically, when speaking about non-kinetic weapons (such as lasers) and the activities of small satellites, it will be more difficult to detect the acquisition of potentially harmful capabilities by opponents in space. On the other hand, just as stealth technologies are moving forward, technologies for detection—including through on-board sensors—are advancing as well. Thus, there is likely be a continuing ability to track most capabilities and to continue to have confidence that any *significant* military advantages are not being acquired by other players in space.]

### Arms control treaty solvo- answers to the arg that agreements would be cheated and US would be fools

Elhefnawy 6- Nader Elhefnawy, written on space policy and international security for several years. He is currently teaching at the University of Miami., The National Space Policy and space arms control, November 6 06, <http://www.thespacereview.com/article/755/1>

[Arms control skeptics typically reply that even if an agreement could be useful, the compliance of other nations would be difficult to verify, and at any rate an agreement may be just a tactic to hamper American efforts while they secretly develop their own capabilities. (See “Space weapons: hardware, paperware, beware?”, The Space Review, November 13, 2006) It is considerably more difficult to inspect for biological and chemical weapons than monitor a space weapons program, however, and as the United Nations’ inspections in Iraq proved, even these can be effective. Additionally, given the inability of any likely rival to compete with the United States in this realm, it seems very unlikely that an arms control proposal would be a realistic way of secretly gaining an advantage. Rather than trying to cheat at the game to secure an advantage, they may be trying to minimize their disadvantage by avoiding the game as much as possible.]

### No risk of cheating—international pressure will result in compliance

Krepon et al, 07 – President of the Stimson Center (Michael, PRESERVING FREEDOM OF ACTION IN SPACE: REALIZING THE POTENTIAL AND LIMITS OF U.S. SPACEPOWER, http://stimson.org/space/pdf/SpacePower-051007.pdf)

We view a Code of Conduct for Responsible Space-Faring Nations **as a necessary complement** to a hedging strategy, and as an essential element of a space posture that provides for the preservation and growth of U.S. space capabilities. We argue that a code of conduct makes sense for several reasons. With the increased utilization and importance of space for national and economic security, there is increased need for space operators and space-faring nations to act responsibly. While some rules and treaty obligations exist, there are many gaps in coverage, including how best to avoid collisions and interference, appropriate uses of lasers, and notifications related to potentially dangerous maneuvers. Because the increased utilization of space for security and economic purposes could lead to friction and diminished space assurance, it serves the interests of all responsible space-faring nations to establish rules of the road to help prevent misunderstandings and grievances.

Another reason for pursuing rules of the road is that interactive hedging strategies could generate unwanted actions in space by nations concerned about the import of technology demonstrations and flight tests. We have therefore argued that hedging strategies need to be accompanied by diplomatic initiatives to set norms that increase the safety and security of satellites vital to U.S. national and economic security. A code of conduct would serve these purposes.

No codes of conduct or rules of the road are self-enforcing. Despite traffic laws, some drivers still speed. But **having rules of the road reduces the incidence of misbehavior**, and facilitates actions against reckless drivers. We acknowledge that there are no traffic courts for misbehavior in space, but we nonetheless argue that having agreed rules of the road in this domain will also reduce the incidence of misbehavior, while facilitating the isolation of the miscreant as well as necessary remedies.

### Cooperation solves any risk of miscalculation or cheating

Manzo, 8-28-08 [Vince, CDI Research Assistant, “U.S. Policy Brief: The Need for a Strategic Dialogue with China,” http://www.cdi.org/pdfs/StrategicDialoguePolicy.pdf]

A strategic dialogue between the United States and China is a necessary component of any effort to prevent the scenario described in the previous section. It will also reduce the risks of miscalculation and escalation if the U.S.-Chinese strategic balance does evolve along those lines, or along a different, less-predictable route. Therefore, prudence requires that the United States and China engage in serious discussions about their strategic capabilities now, before relations deteriorate or a crisis situation emerges.

The Strategic Arms Limitation Treaty (SALT) negotiations between the United States and the Soviet Union are a useful example. It demonstrates that a sustained dialogue can help rival countries mitigate the inherent risks posed by the convergence of new weapon systems and uncertain bilateral relations. As Aaron Friedberg points out, “What the SALT process can do is help the competing superpowers mark some channels of cooperation in what must for the foreseeable future remain a sea of conflict. These channel markers can serve to restrain the flow of the strategic arms competition, deflecting its path periodically and warning the participants away from especially hazardous waters.”31 Career U.S. Foreign Service Officer Avis Bohlen offers a similar assessment of SALT. After acknowledging that SALT failed to resolve U.S.-Soviet political differences and dampen the arms race, she explains why SALT was still worthwhile:

“[I]t nonetheless produced modest gains in transparency and predictability valued by military planners. Over time, the frontiers of the dialogue expanded, as the Soviets became more open to exchanging data and discussing their strategic systems. To this extent, it made a modest contribution to regulating the arms race, while the institutionalization of the dialogue served to reinforce the reality of deterrence.”32

The United States and China have yet to participate in a similar process, and face a risk of miscalculation and escalation as a result. For instance, Roberts observes that United States and Chinese national security officials lack a shared conceptual framework: “American and Chinese experts do not have the common vocabulary or experience...akin to that which evolved in the U.S.-Soviet/Russian relationship.”33 China experts at NDU’s post-ASAT roundtable discussion made similar comments: “China does not share the U.S.-Soviet experience with arms control, deterrence, mutual satellite reconnaissance, or dealing with incidents at sea. The U.S. military has internalized these norms into its doctrine and operations, but China does not necessarily accept or share them.”34

### Yes compliance

Hitchens & Chen 8 [\*Theresa, president of the Center for Defense Information in Washington, \*\*David, Director of the Center for Defense Information, “Forging a Sino-US ‘grand bargain’ in space,” Science Direct, June 2008, www.elsevier.com/locate/spacepol]

First, in the matter of dissuasion, many analysts have pointed out that anti-satellite weapons provide very little in terms of added security for US space assets. Rather, the best way to preserve US conventional force lethality and information dominance is through implementation of defensive measures for on-orbit assets, transition to more ﬂexible networks of satellite constellations, and diversiﬁcation to alternative service delivery platforms. These measures would spread the risk of losing any one segment of the network, reducing the potential strategic or tactical payoff in targeting the space segment in the ﬁrst place [9]. Such measures require no bilateral negotiation, and can in effect enhance the bargaining position of the USA. Given very real resource constraints, the Chinese military may elect to divert to other projects the investment needed for research, development, and procurement of an effective and reliable anti-satellite capability. Therefore, an early and decisive policy of dissuasion on the part of the USA, and allies, could effectively dampen enthusiasm in China for destructive technologies and behaviors. Nevertheless, without an agreed upon understanding, the incentive to strike at what many Chinese strategists consider the Achilles’ heel of the US military machine is likely to remain a dominant consideration in China’s space strategy. Clearly, China’s leaders are driven by the strategic imperative to protect and project national sovereignty.

This motivation has resulted in the Shenzhou manned spaceﬂight program and the Chang-e lunar probe mission, as well as the formation of cooperative associations such as the Asia–Paciﬁc Space Cooperation Organization. An important dividend of these programs is the promotion of China’s national prestige, both domestically and abroad.

As the defenders of China’s sovereignty and international image, the Chinese Communist Party (CCP) relies on such programs as a bulwark for the regime’s claim to legitimacy. Yet, even as the CCP stokes nationalistic zeal, it fears losing control of its citizens, making constructive outlets for nationalism, such as can be offered through international space cooperation, of vital importance. The next US president must recognize these incentives in the regime’s calculus, and leverage them as key points for agreeing on limits to the nascent space arms race.

Considering Chinese investment in its space program as a centerpiece of national prestige and as a lever for economic development, the USA has the opportunity to link a variety of related economic incentives with opening, and concluding, negotiations on a code of conduct in space, including Chinese abandonment of destructive anti- satellite weapons programs. These potential bargaining chips include such options as participation in the International Space Station (ISS), joint exploration missions, reform in US policies restricting sales of commercial satellite hardware, and licensing of Chinese launch services.

In exchange, China might willingly restrict behaviors that could lead to strategic miscalculation in space, as well as certain forms of counter-space capabilities.

Providing what the Chinese want in civil and commercial space arguably would cost the USA little, and in this value–cost differential exists the potential of a mutually beneﬁcial agreement. In international prestige, no greater prize currently exists for China than to be recognized and be admitted as a partner in the ISS. While the ISS program would beneﬁt from Chinese investment and the potential use of Shenzhou modules for crew or cargo transport, the reality is that China needs ISS more than ISS needs the Chinese, even with the imminent retirement of the Shuttle ﬂeet. With the successful docking and cargo transfer of the European Space Agency’s Automatic Transfer Vehicle in March 2008, the need for a backup to Soyuz is not yet a dire urgency [10]. The approach can be gradual, with perhaps the visit of a Chinese space tourist to the station, before the docking of a Shenzhou cargo vehicle, then perhaps the inclusion of a Chinese module to the station, culminating in a routine rotation of Chinese personnel on the station. Indeed, ISS participation offers a stepwise schedule of incentives in negotiations with the Chinese.

After the 1998 Strom Thurmond Defense Authorization Act imposed restrictions on the export of commercial satellites and related technologies under the State Department’s Munitions List and the International Trafﬁc in Arms Regulations (ITAR), Beijing considered such policies as primarily an effort to contain China’s rise as a space power and to prevent its space industry from competing with US industry on the international market. The congressional rationale for the move was, and remains, concern about the transfer of space technology that could be used by the Chinese to improve their intercontinental ballistic missiles, even though technology migration has traditionally gone the other way around, from ballistic missiles to space launch vehicles. Whatever the motivation, the immediate effect of the export control shift was to all but close the Western satellite and launch market to China and vice versa, since US export law extends to all space systems that use US parts.

### Multiple factors that China is pushing for make cheating impossible

DFAIT 5-24-08 [Department of Foreign Affiars and International Trade: Canada, “The Non-Weaponization of Outer-Space,” http://www.international.gc.ca/arms-armes/isrop-prisi/research-recherche/space-espace/stojak2002/section4.aspx?lang=enlang=en]

The most recent proposal for a new agreement on preventing an arms race in outer space was made by the delegate of China to the Conference on Disarmament.54

The primary goal is to prevent the weaponization of outer space by banning the testing, deployment and use of weapons, weapon systems and components in outer space. Countries with the greatest space capabilities would bear a special responsibility for preventing the weaponization of an arms race in outer space and ensuring that space be used for peaceful purposes.

The proposal does not contain any specific treaty provisions but rather highlights several issues which would need to be addressed by such a Treaty. States Parties to the treaty would commit themselves not to test, deploy or use weapons, weapons systems or components of weapons systems in outer space. Consideration should also be given to a provision providing for permissible activities, thus helping to distinguish between activities that are prohibited and those that are not.

Definitions of terms such as “outer space”, “space weapons”, “weapon systems” and “components of weapon systems” should also be included.

Appropriate verification measures as necessary and appropriate are a key component of any future agreement.

Mechanisms for consultations, clarification and possible dispute resolution in order to increase transparency and address suspicions should also be included.

The Chinese proposal certainly contains many similar suggestions to those advanced by countries such as Canada, Russia, Sweden and France. It is broader in terms of its application than the Canadian proposal in that it seeks to prohibit testing, deployment or use not only of weapons and their components but of weapon systems55. The term "weapon systems" would encompass space technologies such as boosters, satellites and their components, and Earth-based control and tracking systems. Clearly, attempts to prohibit these latter technologies would meet with much resistance, and is not a realistic goal.

The idea of selecting “permissible activities” also echoes past suggestions made by Canada and France. Verification is highlighted as a key element to the successful negotiation for an arms control treaty in outer space.

Building in CBMs to enhance mutual trust is also likely to gain support.

Vis-à-vis all of these proposals for new agreements, the US continues to say that a broad regime of regulation already exists and this regime is quite effective and sufficiently rigorous.56

III. Confidence-Building Measures (CBMs)

Confidence-building measures (CBMs) are viewed by many as practical initial steps towards more ambitious arms-control approaches. They are increasingly accepted as an important element in reducing suspicions and increasing trust amongst nations. CBMs are primarily of a political nature and can not substitute for concrete steps to reduce or limit arms. Given the potential difficulties in negotiating multilateral treaties dealing with arms control and outer space activities, CBMs have received greater attention in the CD. Proposals put forward generally fall under three broad headings:

measures to increase the transparency of space operations;

measures to increase the type of information concerning satellites;

measures establishing rules of behavior governing space operations.57

IV. Code of Conduct and Rules of the Road

There is a widely shared view within the CD for the need to elaborate rules of the road as a way to reduce the threat of possible incidents in space and lower the risk of misinterpretation of the activities of space objects launched by States. Such rules would not only provide better information concerning potential threats to satellites, but also discourage aggression by ensuring that the source of a potential attack would be identified.

Suggestions for the elements of such a code of conduct have included: mutual renunciation of measures that would interfere with the operations of space objects of other States;58 restrictions on very low overflight by manned and unmanned spacecraft; definition of the altitude which constitutes the boundary between the upper limits of national airspace and the lower limit of outer space: specific rules for defended “keep-out” zones; and limitations on high velocity fly-bys or trailing for foreign satellites.59

Keep-out zones refer to zones of space through which only designated spacecraft may fly. This concept, which is designed to regulate the distance between satellites, would make it difficult or even Impossible to conceal an attack by any space object on another.

### Code of conduct avoids loopholes—international pressure would deter

Krepon 4-12-07 [Michael, Co-founder of the Henry L. Stimson Center, “A Code of Conduct for Outer Space,” UN Office for Disarmament Affairs, http://disarm.igc.org/april12krepon\_\_untalk.pdf]

A Code of Conduct for space is needed because “rules of the road” for space are no less important than rules of the road on the ground, at sea, or in the air. Rules of the road make driving safer; without rules, there would be chaos, and chaos in space is not in the interest of military, business, and scientific establishments. Rules become norms, and norms can become treaties. While rules during peacetime and rules during warfare can be quite different, even warfare has rules. If the analysis presented here is sound, then protections for satellites should also be respected even in the event of warfare. Rule breakers can still be expected, but their presence doesn’t negate the need for rules. Indeed, without rules, there are no rule breakers. Having rules helps to isolate and penalize rule breakers.

A Code of Conduct is needed for space because, while some rules already exist, there are many loopholes. The use of space is expanding, and the potential for friction is growing. The absence of a Code of Conduct and growing concerns over military doctrines for space warfare encourage hedging strategies. These strategies are reflected in the flight testing of multipurpose technologies by the United States and China – technologies that could be used for peaceful as well as offensive purposes in space – as well as by the Chinese “hit-to-kill” anti-satellite test in January, 2007. Hedging strategies are reinforced by the absence of regular discussions or negotiations on space security. This equation means more hedging, less security, and a growing interest in devices that can interfere with or otherwise harm space objects.

A Code of Conduct would serve to increase space security and promote the peaceful uses of outer space – the same general purposes served by a treaty to ban space weapons. A treaty negotiation – especially one carried out in the Conference on Disarmament, which operates by consensus, and which has been tied to a very challenging negotiation for a fissile material “cutoff” treaty – would take a very long time to complete and could result in a lowest common denominator outcome. Even then, the treaty might take many years to enter into force. A Code of Conduct could be produced much sooner, and could be undertaken in many different forms. A small group of stakeholders could work together to produce a higher common denominator result, which might then be considered by a wider group of countries.

The outlook for a treaty banning space weapons is poor. The outlook for a Code of Conduct is much brighter. The European Union has, in principle, endorsed this idea. The governments of Canada and Switzerland have, as well. The Chief Executive Officer of Intelsat, the largest multinational satellite service provider, has endorsed this idea. Two key publications of the trade press in the United States, Aviation Week and Space Technology and Space News, have endorsed a Code of Conduct, as well.

## AT: countries wouldn’t support the bans/ treaties would fail

### CP solvo- US support would help passage- would also solve multiple issues

Krepon 4- Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt.,“Weapons in the Heavens: A Radical and Reckless Option”

[A wide range of military-support, commercial, and civilian space activities could damage or destroy space assets even if that was not their primary purpose or their intent. It would, therefore, be necessary to devise behavioral rules to facilitate the continued growth of international space operations while minimizing inadvertent problems, unwarranted suspicions, and deliberate misuse. There are numerous proposals to be evaluated here, including measures to prevent orbital overcrowding and debris generation, to increase missile launch transparency, and to avoid maneuvers that might be mistaken as aggressive or used to hide hostile intent until it was too late for defensive maneuvers. The likelihood of agreement on any of these measures would be significantly greater in the context of US support for a space security system based on mutual cooperation and restraint rather than national dominance. The prospects for successful implementation and high levels of confidence in compliance over time would also be vastly improved if the United States returned to its traditional role as champion of transparency in space activities and helped to create a climate in which states could exchange sensitive information about their space programs without fear that it would be misused.]

### CP solvo- international agreement would help solve US involvement is key in order to get success

Krepon 4- Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt.,“Weapons in the Heavens: A Radical and Reckless Option”

The Outer Space Treaty should remain as the foundational legal document because its fundamental principles — freedom of access, non-appropriation, equitable benefits, transparency, and peaceful use — make even more sense now that numerous countries can affect each other’s use of space positively or negatively, deliberately or inadvertently, and when even countries without their own programs see space-based information and communication systems as increasingly important for security and economic growth. It would be counter-productive to try replacing the Outer Space Treaty and the various other international space agreements with a single Comprehensive Space Treaty, or to attempt renegotiating specific provisions of the Outer Space Treaty (which would be extraordinarily difficult and would require re-ratification by all member states). Instead, the focus should be on international discussions leading to agreement on one or more supplemental accords, with the understanding that more effective and equitable rules, higher rates of participation, more widespread compliance, and more vigorous international responses to non-compliance are likely to require formal negotiations, legally binding agreements, and implementing organizations that have both resources and political clout. Since the Conference on Disarmament remains the international community’s sole standing body for negotiating multilateral arms control agreements, the United States should cease using procedural maneuvers to preclude even a preliminary discussion about cooperative measures to enhance space security — especially if it wants to continue keeping military matters off the COPUOS agenda. One new rule that follows logically from the OST principles and that could, with US support, gain widespread assent, would be a categorical prohibition on the destruction of peaceful space assets or direct interference with their legitimate purposes. This would begin with a ban on testing and deployment of weapons based in space or targeted at space assets. It should prohibit further development of space-based anti-missile systems because their very limited defensive benefits are dwarfed by the new level of vulnerability they would create for satellites in geostationary orbit.

### CP solvo- US key to ensure that international constraints are created the failure before was due to a weak US involvement in the efforts

Gallagher 5– Nancy Gallagher, Nancy Gallagher is the Associate Director for Research at the Center for International and Security Studies at Maryland (CISSM) and a Senior Research Scholar at the University of Maryland's School of Public Policy. he has been an arms control specialist in the State Department, a Foster Fellow in the Arms Control and Disarmament Agency, and a faculty member at Wesleyan University. , Towards a Reconsideration of the Rules for Space Security,

Any consideration of new rules for space security immediately encounters a basic problem: the current leadership of the United States is intensely skeptical about international constraints on US freedom of action, yet it is hard to imagine international initiatives that could significantly strengthen space security despite the opposition of the United States.65 Some analysts, therefore, try to position themselves as offering a “realistic” middle ground between space warriors and space sanctuary “purists.” They argue that the United States should unilaterally shape how and when space is weaponized by using more passive and defensive measures for satellite protection while neither being the first to deploy dedicated ASATs, space-to-Earth weapons, or space-based missile defense, nor ruling out these options except, perhaps, through carefully tailored constraints such as a ban on missile or ASAT tests that generate debris above 300 miles.66 Such a treaty would appeal to many, but not all, US military space users who want to minimize the proliferation of debris that could damage their satellites, but it is hard to imagine why countries without the non-destructive anti-satellite capabilities being developed by the United States would accept this as an isolated measure.

### CP solvo- US should lead the effort to develop space laws- space weaponization would fail in providing security

Gallagher 5– Nancy Gallagher, Nancy Gallagher is the Associate Director for Research at the Center for International and Security Studies at Maryland (CISSM) and a Senior Research Scholar at the University of Maryland's School of Public Policy. he has been an arms control specialist in the State Department, a Foster Fellow in the Arms Control and Disarmament Agency, and a faculty member at Wesleyan University. , Towards a Reconsideration of the Rules for Space Security,

Rather than assuming that conflict in space is inevitable and then taking unilateral actions that turn that dire assumption into a self-fulfilling prophecy, the United States could lead international efforts to update the rules for space so that they fit the changing circumstances of global security. As the dominant power in space and in world politics, the United States could be confident that an expanded and elaborated set of formal and informal rules would reflect its preferences and could be widely accepted as long as the rules also enhanced the security and prosperity of others. Of course, the United States could only return to its traditional position as champion of an approach to space security based on peaceful cooperation, freedom of access, equitable benefits, and transparency if its political leaders accepted something that a majority of the public already knows: competing for national advantage by deploying anti-satellites weapons, space-based missile defense interceptors, and other expanded military uses of space is no more likely to bring lasting security now than during the Cold War.60 Key trends associated with globalization and the information revolution strengthen, rather than undermine, the logic of restraint that shaped US space security preferences in the 1950s and 1960s. They also pose new challenges that are best addressed through a comprehensive effort to formalize, operationalize, and institutionalize new rules for space within the broader strategic context of global security.

### CP solvo- combination of COC no sim attacks,- US key to development of it agenda setting power for international system

Krepon 4- Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt., Avoiding the Weaponization of Space

[Space also deserves “rules of the road” to help prevent incidents and dangerous military activities. Such a code of conduct would include provisions against simulated attacks; the flight-testing and deployment of space weapons; dangerous maneuvers in space, except those for rescue, repair, and other peaceful purposes; and commercial interference, as well as requirements to mitigate space debris.10 The definitions of space warfare, the scope of agreed constraints, and the ability to monitor them have plagued every prior initiative in this field. They will also bedevil efforts to craft a code of conduct. Nonetheless, this Avoiding the Weaponization of Space effort is worth pursuing. The risks associated with pursuing a code of conduct for responsible space-faring nations are minimal compared to the risks of flight-testing and deploying space weapons. The weaponization of space was avoided during the Cold War, even though both superpowers jockeyed for military advantage on virtually every other front. Space weaponry can also be avoided now, when the United States enjoys unparalleled agenda-setting powers. Existing norms against weaponizing space can be strengthened if Washington exercises restraint, adopts prudent hedges, and joins others in diplomatic efforts to pursue space assurance. The time is ripe to reinforce existing norms in space that have greatly benefited space-aided commerce, scientific exploration, and the US armed forces. 20 | A Code of Conduct for Responsible Space-Faring Nations ]

### Cp solvo- US involvement is key in order ensure effectiveness of the negotiations

Moltz 2-James Moltz, A longtime securities analyst and respected mentor cites the importance of geopolitics, Breaking the Deadlock on Space Arms Control

[But a new forum is needed to allow the issues to be presented openly and discussed in the presence of all international parties interested in space. Such a process should begin whether or not all governments choose to participate at the present time. This forum could craft possible compromise proposals for later discussion at the inter-governmental level, when conditions are more favorable.

One analyst, Rebecca Johnson, suggests an “Ottawa process” approach for space, referring to the successful negotiation of the Land Mines Convention by a group of organizations and concerned states working outside typical intergovernmental channels.[12](http://www.armscontrol.org/act/2002_04/print/1031#notes) Such an avenue might be fruitful, but it must include key U.S. constituencies—such as commercial space users and representatives from both parties in Congress. It must also not be held hostage to “purist” approaches that rule out all forms of missile defense. Media representatives should be included in order to communicate the importance of these questions to the U.S. and international publics, which are currently virtually unaware of the security debates going on behind the scenes that will affect their futures. An alternative approach might be to let the commercial space community lead the negotiations,[13](http://www.armscontrol.org/act/2002_04/print/1031#notes) which could have the advantage of placing greater credibility and clout behind any eventual agreement in the eyes of national legislatures.]

### transparency effort- if US gets involved it would work well

Johnson 02- Rebecca Johnson, Dr. Johnson is an Assistant Professor of National Security Affairs at the Command and Staff College at Marine Corps University. In addition, she is currently completing a Masters in Divinity at Wesley Theological Seminary with concentrations in ethics and world religions., CHAPTER 3 SECURITY WITHOUT WEAPONS IN SPACE: CHALLENGES AND OPTIONS1

[Space security has been the subject of United Nations resolutions for more than 40 years. General Assembly resolution 172125 of 20 December 1961 established many of the foundational principles of space arms control that were later to be enshrined in the 1967 Outer Space Streaty (OST). It stressed that exploration and peaceful uses should be open to all, and that international law should apply to space and celestial bodies. It advocated the registration of space launches and international cooperation on issues such as communication and meteorology.26 The United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), attached to the General Assembly’s Fourth Committee, has long been able to discuss the problems associated with space traffic control and debris, but is hampered by an interpretation of its mandate that precludes any addressing of arms control or disarmament questions. Employing the well-known “ping-pong” tactic, the United States and others insisted that any disarmament-related issues were the purview of the Conference on Disarmament (CD), where they could then be blocked. Transparency measures under consideration, in conjunction with wider efforts to control ballistic missile proliferation, include notification of launches, providing pre- and post-launch information, and the licensing of activities. The idea of starting the process of addressing space security by looking at transparency, confidence-building measures and international cooperation to track and mitigate debris and overcrowding in space appears attractive because it is thought possible to bypass the space hawks’ objections and draw the United States into such discussions. If the United States were prepared to engage and if (a bigger if, this) the talks could be effectively managed, they would be intrinsically valuable. However, as long as the CD and COPUOS maintain a rigid division of labour, it will be difficult—if not impossible—to move from such confidence-building measures into the kind of cooperative arms control that is urgently required. There would be a danger that under such circumstances substantive talks on space debris and traffic control would be time-consuming and could be manipulated to divert attention from measures to prevent the first testing and deployment of space weapons.]

### United States key to preventing space weaponization – set precedent, leads to international cooperation

Christy 6 – Donald P. Christy, Lieutenant Colonel, United States Air Force, U.S. Army War College, March 15th, 2006, "UNITED STATES POLICY ON WEAPONS IN SPACE," www.strategicstudiesinstitute.army.mil/pdffiles/ksil307.pdf

Recommendation The Bush Administration’s new space policy, when published, may do nothing to change the current “wait and see” approach on weaponization of space or it may provide the direction previously lacking to proceed down that path. There is a third and better alternative. I believe the United States government should implement space policy with the goal of actively preventing the weaponization of space while aggressively funding programs that reduce the vulnerabilities of existing commercial and military space systems. First, the United States should take a leadership role on the issue and actively move to prevent the deployment and use of space weapons. Second, we must reduce our military’s reliance on space based force enhancement through diversification of systems, capabilities and technologies aimed at decreasing the threat posed by a “space Pearl Harbor.”

The first step is leadership in setting the intended standard. As the world’s only superpower, and the one nation in the best position to weaponize space, by not doing so we may pave the way to ensure it never happens. 60 Our current relative dominance in space gives the United States unique credibility in leading an international effort to limit space weapons, as the nation with presumably the most to give up. It would be easy for Peru to give up space weapons. Since they have no near-term prospects for a space program, they really are not giving up anything tangible. By renouncing space weapons, the United States is giving up something real and tangible. This can have the effect of setting a very high international value on preserving space as a weapons free sanctuary. Initially, the United States should announce a policy of unilateral constraint in the development and deployment of weapons in space. 61 From this position of strength, we should pursue and shape comprehensive and verifiable international conventions that limit weapons in space. The strength comes from a combination of our technological dominance in space and our leadership position in the world. As discussed, space weapons are a choice. If the United States, through international leadership, places great value on a space sanctuary, it increases the international pressure for others to follow suit. It also raises the political ramifications of any nation’s violation of the sanctuary or unwillingness to participate in the conventions. If, on the other hand, the United States acts as the pioneer for space weapons, not only do we pay the political cost of breaking the sanctuary of space, but we also reduce the cost (political and economic) of entry to those who follow. 62 Restraint increases the pressure for others to restrain as well. Failing restraint, should another space capable country be unwilling to sign and comply with the conventions and later develop space weapons, it would greatly enhance the political environment for the United States to counter any threat including a greater likelihood of having partners, political and otherwise, in the process. 6314

### US efforts to go at it alone will not work to prevent space arms race- only if US takes the lead in wep development

Krepon and Clary 03- Michael Krepon with Christopher Clary, Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College., Clary is currently a PhD student in the Department of Political Science of the Massachusetts Institute of Technology., Space Assurance or Space Dominance?

Put another way, the dominant position of the United States provides agenda-setting powers in space. The flight-testing and deployment of space warfare capabilities is surely inevitable if the United States takes the lead in this pursuit, but not if Washington maintains prudent hedges against unwelcome developments in the form of a readiness to respond in kind to any flight tests or deployments of space weapons by weaker states. These hedges, as discussed in Chapter 3, should be sufficiently persuasive to foreclose such a competition, unless weaker space-faring nations make very unwise choices. While a hedging strategy is necessary, it is also insufficient. Hedges against the flight-testing and deployment of space warfare capabilities need to be accompanied by initiatives that underscore the positive and affirming uses of space for the benefit of humankind. Space assurance, broadly defined, also requires the reaffirmation of existing norms against the weaponization of space

## CP solves conventional heg

### Co op is the only way to ensure US leadership effectively and preserve US alliances- other actors can soft balance and also other nations could engage in just an arms race

Elhefnawy 6- Nader Elhefnawy, written on space policy and international security for several years. He is currently teaching at the University of Miami., The National Space Policy and space arms control, November 6 06, <http://www.thespacereview.com/article/755/1>

[Over time soft balancing can turn into hard balancing. While, as stated before, other countries may not be able to engage the US in an arms race, their response need not be an attempt to match the US satellite for satellite, missile for missile, and laser for laser. Regional powers simply do not have to counter global ones on a one-to-one basis, and a “risk fleet” approach, like the one Germany pursued against Britain in World War 1, can tie down larger forces. Other countries can also invest in approaches that circumvent or overwhelm the space power the US is seeking to build. Both China and Russia are expanding their missile and nuclear capabilities, with the perceived need to be able to overwhelm American missile defenses a likely motive. China’s expansion is particularly problematic because it may encourage neighbors like India to bulk up their own forces. Submarine forces, special-operations forces, and computer warfare afford just a few non-nuclear ways of striking at an opponent about which overwhelming space power can do little.]

### An agreement would be more effective at protecting US space assects and avoid negative effects of the use of

Elhefnawy 6- Nader Elhefnawy, written on space policy and international security for several years. He is currently teaching at the University of Miami., The National Space Policy and space arms control, November 6 06, <http://www.thespacereview.com/article/755/1>

[In short, the opinions of other countries do matter—and the vision espoused by the hawks is a chimera. A case can be made that the current US lead in resources and technology would be best employed to slow down any further weaponization of space, and that there is a great deal of room for negotiation between the US and Chinese-Russian positions. Indeed, experts have already suggested numerous compromise positions, such as a ban on attacks on unarmed satellites or space-to-Earth weaponry, or a no-first-deployment agreement, all of which would allow missile defense and the use of active measures to protect US satellites. An agreement on space weapons could also be linked to strategic weaponry or other security concerns more generally.]

### CP ev not nessisarly sovlo but it argues that space weaponization can only hurt us heg- due to the idea that us has best conventional military advantages

Gallagher 5– Nancy Gallagher, Nancy Gallagher is the Associate Director for Research at the Center for International and Security Studies at Maryland (CISSM) and a Senior Research Scholar at the University of Maryland's School of Public Policy. he has been an arms control specialist in the State Department, a Foster Fellow in the Arms Control and Disarmament Agency, and a faculty member at Wesleyan University. , Towards a Reconsideration of the Rules for Space Security,

For proponents of the SPACECOM vision, technological change and diffusion strengthen the case for space weapons by increasing American dependence on military and commercial satellites and by expanding potential threats to them. Their selective analysis ignores other countervailing effects of technological change and diffusion that strengthen traditional arguments for space weapons restraint:

- Technological advances are also occurring in non-space-based weapons systems, so it remains true that space weapons offer the United States few, if any, advantages for most military missions. For example, a combination of cruise missiles and intercontinental ballistic missiles retrofitted with conventional warheads could provide access, reach, accuracy, and short response time comparable to space-based “global engagement” weapons at a fraction of the cost and no more international opprobrium than should be expected with a “bolt from the blue” space weapons attack. 61

### More CP only option ev- Space Weaponization leads to prolif of space weap tech and would cause balancing

Gallagher 5– Nancy Gallagher, Nancy Gallagher is the Associate Director for Research at the Center for International and Security Studies at Maryland (CISSM) and a Senior Research Scholar at the University of Maryland's School of Public Policy. he has been an arms control specialist in the State Department, a Foster Fellow in the Arms Control and Disarmament Agency, and a faculty member at Wesleyan University. , Towards a Reconsideration of the Rules for Space Security,

- Technological diffusion means that if the United States deploys space weapons, a number of other countries have the ability to emulate or offset them, so the advantage to the United States would be short-lived. Now and for the foreseeable future, no country or combination of countries could match the United States in terms of total military space spending or technological sophistication of military space systems. This means that the United States can afford to exercise restraint knowing that other countries have even less incentive or ability to suddenly surge ahead of the US than the Soviets did during the Cold War. If, however, the United States continues to forge ahead toward highly threatening space weapons, plenty of countries have enough knowledge, resources, and capabilities to expand their military space operations in ways that would increase the net uncertainty, expense, and insecurity of US space activities. In a global economy, secrecy and export controls cannot protect the American technological advantage in space; instead, they sabotage the US satellite industry and motivate other countries to develop indigenous capabilities and cooperative arrangements that exclude the United States.62

### CP solvo- US international co op would sustain us heg and would also solve other negative impacts and risks about space- economy- improved relations-

Krepon 4- Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt.,“Weapons in the Heavens: A Radical and Reckless Option”

Rebuilding the political foundations for a more constructive space policy requires reevaluating the strategic circumstances associated with globalization. Space policy is but one of many security problems that illustrate the fallacies of assuming that the ascendance of the United States as the sole information-age superpower offers perpetual military dominance that can be used to achieve a wide range of American objectives regardless of other countries’ interests or concerns. Just as we saw that trends associated with globalization strengthen rather than undermine the logic of mutual restraint in space, the development and diffusion of other technologies that are integral to the global economy and that create new vulnerabilities provide powerful incentives for all countries, regardless of their historical animosities, to engage in forms of security collaboration that would have been unthinkable during the Cold War.70 A shared interest in preventing global terrorism, particularly acts of mass destruction, is motivating new forms of information sharing and policy coordination not only among the United States and its traditional allies, but also with Russia and other countries that are simultaneously cited as justifications for US military transformation. The United States also needs international support to use its military superiority in ways that are considered legitimate enough to avoid stimulating a counter-reaction. That support will be increasingly difficult to achieve unless other countries get more reliable reassurances that this concentration of power will provide protection for everyone — not just the favored few — and that it will not be used against anyone who displeases the United States but is not considered by the rest of the world to be a threat to international peace and security. It remains to be seen how long it will take for the United States to remember that if it wants more reliable cooperation, it must return to its traditional leadership role in building rules and institutions that shape everyone’s behavior for the benefit of all. Even before this general reorientation of US security policy occurs, the dangerous futility of trying to protect US space assets through competitive national programs should be clear enough to create the political conditions for a serious discussion of collaborative steps to enhance space security.

## AT: Space weaponization deters arms race and conflict/ CP solves better

### Space law needed- deterrence fails in the context of weaponized space- due to the goal of space weaponization supporters of dominance not deterrent

Krepon and Clary 03- Michael Krepon with Christopher Clary, Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College., Clary is currently a PhD student in the Department of Political Science of the Massachusetts Institute of Technology., Space Assurance or Space Dominance?

Concepts of limited warfare and escalation control that were intimately associated with nuclear deterrence during the Cold War have not been propounded by U.S. advocates of space warfare. To engage in tit-for-tat, controlled warfare against satellites would suggest that the first kill of a satellite in the his tory of armed conflict would reflect a mere quest for balance or a novel form of message sending. The rationales provided by proponents of space control are notably different. The object of acquiring space warfare capabilities is to win, not to tie. In other words, U.S. advocates of space warfare capabilities are less interested in deterrence than in dominance and compellance. Unlike nuclear weapons, ASAT capabilities have been tested infrequently and deployed (using a generous definition of deployment) minimally. Nuclear deterrence was based on large numbers of overt deployments of lethal capabilities regularly demonstrated at nuclear test sites that made the earth shake. ASAT capabilities, in contrast, are mostly inferential. The basic message of deterrence of space warfare during the Cold War—the prospect of mutual loss exceeding potential gains—was therefore accomplished without the heavy encumbrances and trappings of nuclear deterrence. Library shelves groan under the amount of intellectual effort devoted to deterrence theory written during the Cold War, but there has been little application of these concepts to space warfare. With respect to escalation control, however, nuclear deterrence and space warfare had, and continue to have, much in commo n: Both rely on threats that leave something to chance. Escalation control becomes very problematic once the threat is used. The quest for preemptive space warfare capabilities alongside dominant conventional military capabilities is therefore bound to be viewed in worrisome terms by potential adversaries. The flight-testing and deployment of space weaponry is thus likely to generate low-cost blocking action, comparable to the countermeasures likely to be employed by states fearing the viability of prospective U.S. missile defenses. Space weaponry, like missile defenses, can be designed and sized for the limited purpose of dealing with maverick leaders. Both need not be confined to specific locations; they can go where directed. Additional deployments can be added rather quickly from covert stocks. Moreover, the goal sought by advocates of U.S. space weaponry, as well as missile defenses, is not deterrence but dominance.

## CP solvency- would protect satellites

### Ban on weaponization is key to protect satellites effectively

Hui 05 (Zhang Hui is a research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government. His research includes nuclear arms control verification techniques, the control of fissile material, nuclear terrorism, nuclear safeguards, nonproliferation and space. An extended version of this paper was produced for the, Space Weaponization And Space Security: A Chinese Perspective, www.wsichina.org/attach/CS2\_3.pdf)

[Furthermore, a number of measures could be taken to secure space assets by multilateral rules or agreements. Specific rules or agreements for space use might include, for example, "keep-out zones," a non-interference rule for satellites, cooperation on reducing space debris, notification of space launch, development of safe traffic management procedures, and building a hotline between major missile and space powers. These "rules of the road" would be intended to reduce suspicion and encourage the orderly use of space. However, it should be noted that the above technical measures and rules, although important for reducing present risks, would not remove the implicit threat of ASAT attacks. A potential rule on "keep-out-zones" would not prohibit an attack by a space-based laser at long distance. Technical solutions are unlikely to suffice in the absence of strengthened international agreements on space activity. In addition, hardening satellites would be extremely costly, and potentially infeasible, in particular for civilian and commercial satellites. It would impair the operational flexibility of satellites.]

## CP solvency miscalc/ Arms race

### Compromise on ban of missile defense-would allow some form but not all forms and help avoid the tech that would cause arms race and full scale wep

Johnson 02- Rebecca Johnson, Dr. Johnson is an Assistant Professor of National Security Affairs at the Command and Staff College at Marine Corps University. In addition, she is currently completing a Masters in Divinity at Wesley Theological Seminary with concentrations in ethics and world religions., CHAPTER 3 SECURITY WITHOUT WEAPONS IN SPACE: CHALLENGES AND OPTIONS1

[Another proposal builds on an earlier Bunn proposal to distinguish between weapons in low and high orbit. With the aim of getting the support of key actors among the inevitable weaponizers and militarization realists, James Clay Moltz argued the case for prohibiting the use, testing or 75 deployment of weapons or interceptors of any sort above 500 miles and prohibiting the stationing of weapons in LEO. His proposal would permit the testing (and presumably use) of ground-based, sea-based and air-based interceptors in LEO against ballistic missiles but not against satellites or other space-based objects (while recognizing that implementation of this would have to rely on taboo-building and confidence, since verification techniques would be unable to distinguish between permitted ABM interceptors and banned ASAT purposes).36 While such a compromise would be unlikely to satisfy the space hawks, it allows key elements of the Bush Administration’s missile defence plans, while clear barriers would prevent space-based lasers or kinetic kill weapons, and might therefore head off the escalation to higher levels of space weaponization that many fear as the most threatening and destabilizing facet of the missile defence project.]

### International concent helps avoid future conflicts and improve relations fight test ban is key

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

There is a widespread international desire to avoid the flight-testing and deployment of space weapons. At the same time, a number of nations appear to be hedging their bets by engaging in research and development programmes that would allow them to compete effectively in the event that another country crosses these thresholds first. Only one country—the United States—has publicly endorsed a doctrine of “space dominance” that includes “space force application”. The full fruition of this doctrine would deepen fissures in alliance ties and relations among major powers, whose assistance is most needed to form “coalitions of the willing” to stop and reverse proliferation. The choice between space assurance and space weapons is therefore fundamentally important since it will shape the contours of international security, global commerce, alliance ties and relations between major powers. The United States and other countries cannot have it both ways: the flight testing and deployment of space weapons will come at the expense of space assurance, and space assurance is undermined by the pursuit of space weapons. The United States’ choice is therefore stark and clear: it can either take the initiative to flight-test and deploy space weapons on the assumption that 51 conflict in space is inevitable or useful, or it can seek to reinforce an interlocking network of restraints designed to avoid the crossing of these key thresholds. US restraint, however, would not ensure similar restraint by others. Indeed, potential adversaries might mistakenly conclude that they could gain advantage by covertly developing, flight-testing and then using space weapons against the United States first.

### Space weaponization bad causes arms race and flight testing ban would avoid it

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

By virtue of its leadership position in space commerce and military power, the United States has unprecedented leverage to shape whether the peaceful conditions that now exist in space are maintained, or whether 53 space becomes weaponized. If the United States exercises restraint in the flight-testing and deployment of space weaponry, while maintaining readiness to respond if others do so first, there is a reasonable chance that these thresholds will not be crossed. If, however, the United States takes the lead in flight-testing and deploying space weaponry in the vain pursuit of still greater military supremacy, Washington will find little diplomatic support and much low-tech competition. As a consequence, by initiating the weaponization of space, Washington will find itself isolated diplomatically while placing still greater burdens on US armed forces. The salience of space weapons will remain low if such techniques are not flight-tested or deployed. Given the extraordinary and growing differential in power that the United States enjoys in ground warfare, sea power and air power, it is hard to find compelling arguments for seeking to supplement these advantages by weaponizing space. If the United States pushes to extend its pronounced military dominance into space, others are likely to view this pursuit through the prism of the Bush Administration’s national security strategy, which places emphasis on preventive war and pre-emption.

### COC is key to ensure space warfare is avoided

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

One value of adding to treaty-based prohibitions on space warfare lies in the strengthening of international norms that define unacceptable behaviour in space. Treaty regimes, when combined with military capabilities to deny gains or to punish violators, have more of a salutary deterrent effect than either would have in isolation. Deterrence is further enhanced when treaties contain intrusive monitoring provisions and complementary transparency measures. When deterrence by means of treaty constraints and supplementary military capabilities fails, treaty signatories are on much firmer ground in taking compensatory military steps than in the absence of treaty norms. Negotiating a multilateral treaty prohibiting space warfare in general and ASAT tests in particular will not be easy. The forum in Geneva established for this purpose, the Conference on Disarmament (CD), now has 66 members and operates by consensus. The United States has opposed a negotiating mandate for space arms control, and appears reluctant even to engage in preliminary discussions on this subject. Several nations are likely to be uncomfortable with the transparency measures necessary to provide assurance of compliance and early warning of troubling activities. Nor will it be simple to construct a widely acceptable, common sense definition of what constitutes the acts of space warfare to be prohibited. The mix of monitoring arrangements and transparency measures sufficient to verify that prohibited activities are not being carried out also poses a significant challenge. If the CD remains deadlocked over space arms control, then a single state or a grouping of states might decide to take the lead in tackling these difficult questions. The model here would be the Government of Canada’s 55 role in promoting an international convention banning the use of landmines. The “Ottawa process” was given a significant boost by the technical inputs and energy provided by non-governmental organizations that convened alongside governmental experts. The advantage of this approach is that a coalition of the willing would not be constrained by the requirement for a diplomatic consensus. The disadvantage is that some key states could be absent from the drafting process and would feel no compulsion to join the draft agreement.

## CP key to prevent environment impacts form space weaponization

### Space weapons bad and co op good key to avoid harmful consequences of weaponization acid rain environment- other “bads”

Moltz 2- James Moltz, Department of National Security Affairs, Naval Postgraduate School, Monterey, Protecting safe access to space: Lessons from the first 50 years of space security, <http://www.acronym.org.uk/dd/dd63/63op1.htm>

[Given the presence of four shared factors in encouraging military space restraint across the three cases of greatest tension in space security from the 1957–2007 period, we can conclude with some confidence that these are *general* trends in space behavior, at least for the first 50 years of space activity. Arguably, military space restraint has worked most to the advantage of the USA, since it has been able to use this norm to develop the most advanced scientific, commercial, and military support programs in the world. Indeed, as strategist Barry Posen argues: [The United States] benefits from the fact that those states capable of space activities have eschewed putting weapons in space. The United States has made the same decision, on the assumption that if it did, so would others. Ultimately the United States has more to lose than to gain from such a competition [[16]](http://www.sciencedirect.com/science/article/pii/S0265964607000860#bib16). Looking ahead, the continued presence among all leading actors in space of strong incentives to keep space weapons-free supports the case for the continued maintenance of core cooperative agreements (such as the 1967 Outer Space Treaty) and the prospects for the strengthening of the current foundations of space security, either via rules of the road or more formal arrangements (such as a debris treaty, rather than a voluntary convention). Notably, in other recent areas of human activity affected by collective “bads,” such as acid rain, carbon emissions, and ozone depletion, enhanced international cooperation is emerging, slowly convincing skeptical nations to get on board, largely out of their own, long-term self-interests. National populations in many areas are demanding such collective action, as are a host of international organizations, non-profit groups, and even a growing number of private corporations.]

### CP solvo/Space Weaponization bad- space laws could avoid miscalc through negotiation

Gallagher 5– Nancy Gallagher, Nancy Gallagher is the Associate Director for Research at the Center for International and Security Studies at Maryland (CISSM) and a Senior Research Scholar at the University of Maryland's School of Public Policy. he has been an arms control specialist in the State Department, a Foster Fellow in the Arms Control and Disarmament Agency, and a faculty member at Wesleyan University. , Towards a Reconsideration of the Rules for Space Security,

The prospects for miscommunication, misperception, and inadvertent conflict are multiplied in a world with many space powers unless the rules for cooperation are more clearly defined, states and non-state actors (e.g. commercial entities that may be only loosely associated with states) provide information to document their compliance with the rules, and international arrangements exist both to assist less developed countries with their compliance obligations and to address concerns about willful non-compliance. Of course, multilateral negotiations can be more challenging than bilateral ones, but skillful, motivated diplomats can take advantage of complexity to forge creative bargains and focus intense pressure on recalcitrant states. It is unrealistic to expect that multinational space cooperation will spontaneously increase and be sustained over time with no formal discussion, let alone negotiation, of new rules and reciprocal obligations to enhance mutual space security. It is equally unrealistic to hope that codes of conduct, rules of the road, parallel unilateral declarations, and other less formal arrangements can provide the same scope and stability of cooperation as full-scale legal agreements, without the corresponding difficulties of negotiation and ratification.64

### US efforts to go at it alone will not work to prevent space arms race- only if US takes the lead in wep development

Krepon and Clary 03- Michael Krepon with Christopher Clary, Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College., Clary is currently a PhD student in the Department of Political Science of the Massachusetts Institute of Technology., Space Assurance or Space Dominance?

Put another way, the dominant position of the United States provides agenda-setting powers in space. The flight-testing and deployment of space warfare capabilities is surely inevitable if the United States takes the lead in this pursuit, but not if Washington maintains prudent hedges against unwelcome developments in the form of a readiness to respond in kind to any flight tests or deployments of space weapons by weaker states. These hedges, as discussed in Chapter 3, should be sufficiently persuasive to foreclose such a competition, unless weaker space-faring nations make very unwise choices. While a hedging strategy is necessary, it is also insufficient. Hedges against the flight-testing and deployment of space warfare capabilities need to be accompanied by initiatives that underscore the positive and affirming uses of space for the benefit of humankind. Space assurance, broadly defined, also requires the reaffirmation of existing norms against the weaponization of space

## CP solves China Russia relations and arms race

### US not helping in space arms control- this is pissing off China and Russia killing relations and possibly resulting in an arms race between the US and an advisory internal netbenifit

Elhefnawy 6- Nader Elhefnawy, written on space policy and international security for several years. He is currently teaching at the University of Miami., The National Space Policy and space arms control, November 6 06, <http://www.thespacereview.com/article/755/1>

[Nonetheless, explicitly ruling out even the consideration of arms control in the policy is unquestionably a diplomatic and political error, unnecessarily provocative to other states that already view US policy with alarm. All of this makes the new policy less of a surprise than a formalization of the movement of the US in this direction, though this is debatable where arms control is concerned. Despite the stated willingness to consider arms control in the previous document, the US government showed little sign of being willing to negotiate this matter long before the release of the new document. The abandonment of the ABM Treaty (much to the chagrin of Russia and China) and the more general refusal of the US to participate in new international agreements must have made it seem highly unlikely that a new agreement would be realized anytime soon. Nonetheless, explicitly ruling out even the consideration of arms control in the policy is unquestionably a diplomatic and political error, unnecessarily provocative to other states that already view US policy with alarm. For the last several years, Russia and China have been actively trying to build on the OST. On June 27, 2002 they presented a working paper titled “Possible Elements for a Future International Legal Agreement on the Prevention of the Deployment of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects” at the United Nations Conference on Disarmament in Geneva. The paper proposed a treaty obliging signatories not to place “any kinds of weapons” in space or resort to force or the threat of force against space objects. This would rule out attacks on spacecraft by land-, sea-, and air-based systems. Russia and China have also presented a number of follow-up working papers to continue the case for a new agreement, despite US disinterest. The conventional wisdom appears to be that Russia and China are essentially impotent, and their disapproval irrelevant, which is not accurate. Even if neither they nor any other state is likely to engage the US in an arms race today, they have other options. Professor Robert A. Pape of the University of Chicago recently wrote in the journal International Security about “soft balancing.” Where traditional “hard balancing” in balance of power politics centered on the use or threatened use of military force to counter the power of a threatening state, “soft balancing” involves the use of nonmilitary tools to delay, frustrate, and undermine moves by a state seen as aggressive. The denial of United Nations Security Council approval for the invasion of Iraq by France, Russia, and China, and the refusal of Saudi Arabia and Turkey to provide US forces complete access to their territory, are examples of such soft balancing against the United States prior to the 2003 invasion of Iraq.]

### CP solvo- Join in Russia China US negotiations about international rules and verification and transparency would help relations and solve weaponization

Gallagher 5– Nancy Gallagher, Nancy Gallagher is the Associate Director for Research at the Center for International and Security Studies at Maryland (CISSM) and a Senior Research Scholar at the University of Maryland's School of Public Policy. he has been an arms control specialist in the State Department, a Foster Fellow in the Arms Control and Disarmament Agency, and a faculty member at Wesleyan University. , Towards a Reconsideration of the Rules for Space Security,

Another suggestion is to precede PAROS negotiations by seeking international agreement on verification and transparency measures that would enhance space security “whether or not new treaty prohibitions are implemented.” Michael Krepon suggests that “if Russia and China are as concerned about an arms race in space as their public statements suggest, they will accept the application and adaptation of intrusive measures negotiated for other purposes to a space assurance regime” even though this would “require that Moscow accept even more openness regarding military practices established over the past two decades, and that Beijing adopt a sea change in attitude toward transparency.”67 Regardless of whether or not Russia and China are sincerely interested in mutual constraints on space weapons, they are unlikely to accept specific demands for intrusive verification, let alone undertake a “sea change” in attitudes toward transparency, before the United States even agrees to a negotiating mandate for a PAROS committee. It would be most unfortunate if we repeated the Cold War pattern of interpreting the rejection of a “first step measure” that asked the other side to make all the major concessions as evidence that they were more interested in competition than cooperation.

### CP solvency-Negotations would help avoid negative effects of space weaponization by improving relation ships and avoiding need to weaponize

Moltz 2-James Moltz, A longtime securities analyst and respected mentor cites the importance of geopolitics, Breaking the Deadlock on Space Arms Control

[For the Pentagon, such a regime would entail some limitations in terms of ASAT weapons, but it would also create an environment in which other states would find development of hostile systems extremely difficult without detection. For Congress, space would be protected for high-profile, civilian manned missions and lucrative commercial applications. For the arms control community, this regime would set the world a short distance down the “slope” of weaponizing space by allowing the use of low-Earth orbit for missile defense purposes from the Earth, sea, and air. However, the slope would no longer be “slippery,” as it is today, but would instead be marked with clear barriers against further descent. Detailed negotiations would be needed on how many tests to allow each state per year in low-Earth orbit and what debris mitigation techniques to require. Although this would affect mainly the United States in the short run, it would create a powerful set of restrictions for future space-faring states as well, thus protecting U.S. commercial and passive military interests in debris-free low-Earth orbit. In sum, a number of key players would come away from the table with tangible benefits.]

### CP solvo- US international co op would sustain us heg and would also solve other negative impacts and risks about space- economy- improved relations-

Krepon 4- Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt.,“Weapons in the Heavens: A Radical and Reckless Option”

Rebuilding the political foundations for a more constructive space policy requires reevaluating the strategic circumstances associated with globalization. Space policy is but one of many security problems that illustrate the fallacies of assuming that the ascendance of the United States as the sole information-age superpower offers perpetual military dominance that can be used to achieve a wide range of American objectives regardless of other countries’ interests or concerns. Just as we saw that trends associated with globalization strengthen rather than undermine the logic of mutual restraint in space, the development and diffusion of other technologies that are integral to the global economy and that create new vulnerabilities provide powerful incentives for all countries, regardless of their historical animosities, to engage in forms of security collaboration that would have been unthinkable during the Cold War.70 A shared interest in preventing global terrorism, particularly acts of mass destruction, is motivating new forms of information sharing and policy coordination not only among the United States and its traditional allies, but also with Russia and other countries that are simultaneously cited as justifications for US military transformation. The United States also needs international support to use its military superiority in ways that are considered legitimate enough to avoid stimulating a counter-reaction. That support will be increasingly difficult to achieve unless other countries get more reliable reassurances that this concentration of power will provide protection for everyone — not just the favored few — and that it will not be used against anyone who displeases the United States but is not considered by the rest of the world to be a threat to international peace and security. It remains to be seen how long it will take for the United States to remember that if it wants more reliable cooperation, it must return to its traditional leadership role in building rules and institutions that shape everyone’s behavior for the benefit of all. Even before this general reorientation of US security policy occurs, the dangerous futility of trying to protect US space assets through competitive national programs should be clear enough to create the political conditions for a serious discussion of collaborative steps to enhance space security.

## CP solvency general prevention of space weponization

### CP solvo- expansion of norms about space weapons- including no flight testing

Krepon 4- Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt., Avoiding the Weaponization of Space

[An essential element of space assurance is the strengthening of existing norms against the flight-testing and deployment of space weapons. Many norms for responsible space-faring nations already exist, including prohibiting the placement of weapons of mass destruction in space under the aforementioned Outer Space Treaty, helping astronauts in distress, registering space objects, accepting liability for damage caused by national endeavors in space, and acknowledging that the exploration and use of outer space should be carried out for the benefit of all countries and humankind. The scope of existing norms needs to be expanded if space assurance is to be reinforced. Traditionally, the forum in which international norms are codified is the Conference on Disarmament (CD) in Geneva. This 65-nation body operates by consensus, however, and at best requires many years to reach agreement on treaty texts, which might then be stalled further in the process of ratification, as is now the case with the Comprehensive Test Ban Treaty. This reason is not sufficient to block or reject negotiations in the CD relating to the prevention of space weapons, but it does suggest the wisdom of reinforcing existing norms in quicker ways. The development of a code of conduct establishing agreed “rules of the road” for responsible space-faring nations can expedite international efforts to prevent the weaponization of space. Many codes of conduct already exist in the form of bilateral or multilateral executive agreements. During the Cold War, the United States entered into executive agreements with the Soviet Union to prevent dangerous military practices at sea, on the ground, and in the air. The Bush Administration champions codes of conduct to prevent ballistic missile proliferation and terrorism. A similar approach could reinforce space assurance. ]

### An agreement would be more effective at protecting US space assects and avoid negative effects of the use of

Elhefnawy 6- Nader Elhefnawy, written on space policy and international security for several years. He is currently teaching at the University of Miami., The National Space Policy and space arms control, November 6 06, <http://www.thespacereview.com/article/755/1>

[In short, the opinions of other countries do matter—and the vision espoused by the hawks is a chimera. A case can be made that the current US lead in resources and technology would be best employed to slow down any further weaponization of space, and that there is a great deal of room for negotiation between the US and Chinese-Russian positions. Indeed, experts have already suggested numerous compromise positions, such as a ban on attacks on unarmed satellites or space-to-Earth weaponry, or a no-first-deployment agreement, all of which would allow missile defense and the use of active measures to protect US satellites. An agreement on space weapons could also be linked to strategic weaponry or other security concerns more generally.]

### Co op and bans on space weaponization good- avoids bad parts of it as well and provide military advantage

Moltz 2- James Moltz, Department of National Security Affairs, Naval Postgraduate School, Monterey, Protecting safe access to space: Lessons from the first 50 years of space security, <http://www.acronym.org.uk/dd/dd63/63op1.htm>

[Finally, another factor that transcends the three historical cases has been the role of transparency in promoting cooperation. In dealing with space nuclear testing and in assessing debris from kinetic-kill weapons tests, national decision makers have been able to act with confidence that they will know if their adversary attempts to achieve any “breakout” capability. Unlike in other environments, where the development of new destructive capabilities can often be hidden, the fact that space weapons need to be launched and tested in an internationally governed and highly transparent region allows any other country with a reasonable space surveillance system—such as the type possessed by both the USA and the USSR/Russia since the late 1960s and by at least also members of the European Space Agency and China today—can be confident that they will detect the development of any major weapons systems. This factor should play a positive role in weakening the credibility of claims that “secret” programs by potential enemies might create a “catastrophe” some day in space. Looking ahead, however, it must be noted that there may be limitations on this factor. Specifically, when speaking about non-kinetic weapons (such as lasers) and the activities of small satellites, it will be more difficult to detect the acquisition of potentially harmful capabilities by opponents in space. On the other hand, just as stealth technologies are moving forward, technologies for detection—including through on-board sensors—are advancing as well. Thus, there is likely be a continuing ability to track most capabilities and to continue to have confidence that any *significant* military advantages are not being acquired by other players in space.]

### CP solvo- rules of the road aspects fo the cp /+

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

An alternative or complementary approach would be to pursue a code of conduct or agreed “rules of the road” for responsible space-faring nations. The resulting accords could take the form of bilateral or multilateral executive agreements. During the Cold War, the United States entered into executive agreements with the Soviet Union to prevent dangerous military practices at sea, on the ground and in the air. Comparable cooperative measures could also provide useful building blocks for a space assurance regime. A model code of conduct for responsible sea-faring nations was negotiated in 1972 after a series of highly dangerous military manoeuvres between US and Soviet combatants and naval aircraft. The 1972 Agreement Between the Government of The United States of America and the Government of The Union of Soviet Socialist Republics on the Prevention of Incidents On and Over the High Seas (“Incidents at Sea” agreement) established important rules of the road. These include avoiding collisions at sea; not interfering in the formations of the other party; avoiding “maneuvers through areas of heavy sea traffic where internationally recognized traffic separation schemes are in effect”; requiring that “ships engaged in surveillance of other ships shall stay at a distance which avoids the risk of collision and also shall avoid executing maneuvers embarrassing or endangering the ships under surveillance”; using mutually agreed signals when ships manoeuvre near one another; not simulating attacks at, launching objects toward, or illuminating the bridges of the other party’s ships; informing vessels when submarines are exercising near them; requiring the greatest caution and prudence in approaching aircraft and ships of the other party; and not permitting simulated attacks against aircraft or ships, performing aerobatics over ships, or dropping hazardous objects near them. The US–Soviet Incidents at Sea (or INCSEA) accord has served as a model for comparable agreements signed by more than 30 other navies.

### International concent helps avoid future conflicts and improve relations fight test ban is key

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

There is a widespread international desire to avoid the flight-testing and deployment of space weapons. At the same time, a number of nations appear to be hedging their bets by engaging in research and development programmes that would allow them to compete effectively in the event that another country crosses these thresholds first. Only one country—the United States—has publicly endorsed a doctrine of “space dominance” that includes “space force application”. The full fruition of this doctrine would deepen fissures in alliance ties and relations among major powers, whose assistance is most needed to form “coalitions of the willing” to stop and reverse proliferation. The choice between space assurance and space weapons is therefore fundamentally important since it will shape the contours of international security, global commerce, alliance ties and relations between major powers. The United States and other countries cannot have it both ways: the flight testing and deployment of space weapons will come at the expense of space assurance, and space assurance is undermined by the pursuit of space weapons. The United States’ choice is therefore stark and clear: it can either take the initiative to flight-test and deploy space weapons on the assumption that 51 conflict in space is inevitable or useful, or it can seek to reinforce an interlocking network of restraints designed to avoid the crossing of these key thresholds. US restraint, however, would not ensure similar restraint by others. Indeed, potential adversaries might mistakenly conclude that they could gain advantage by covertly developing, flight-testing and then using space weapons against the United States first.

### CP key to develop create international co op to prevent space weaponization

Hays and Danielson 9- Peter Hays, Senior Scientist, Policy and Strategy Division Science Applications International Corporation National Security Space Office, Mr. Dennis L. Danielson Senior Engineering and Technical Manager Jacobs Technology, National Security Space Office Pentagon, Washington DC, Improving Space Security through Enhanced

[Developing sustainable space security through enhanced international cooperation is a critical issue for the US and all spacefaring actors. The need to improve international space cooperation stems from the burgeoning importance of space, the growing number major foreign space actors, and the increasing efficacy of their space capabilities. In the past, when the US was a more dominant space actor, it sometimes made sense to go it alone. Today, as its relative spacepower declines, the US can bolster prospects for advancing sustainable space security by expanding international space cooperation and improving the effectiveness of these efforts. It is not a panacea, but improving international space cooperation can broaden and deepen the pool of responsible space stewards, make more efficient use of limited resources, and spotlight those actors who choose not to cooperate.]

### should create a ban- US is a part of this organization and that they should ban most militarization

Johnson 02- Rebecca Johnson, Dr. Johnson is an Assistant Professor of National Security Affairs at the Command and Staff College at Marine Corps University. In addition, she is currently completing a Masters in Divinity at Wesley Theological Seminary with concentrations in ethics and world religions., CHAPTER 3 SECURITY WITHOUT WEAPONS IN SPACE: CHALLENGES AND OPTIONS1

[George Bunn and John Rhinelander, legal advisers to earlier US Administrations, have argued that the OST created an “overall rule [that] 74 space shall be preserved for peaceful purposes for all countries”.33 They argue that OST parties would have the right under the treaty to request consultations if another party planned to test or deploy in space a laser or kinetic kill vehicle capable of being used as an ASAT, a description that would cover the space-based component of the Bush Administration’s multi-layered missile defence architecture. Endorsing that OST parties should make use of this provision and request formal consultations with the United States, Jonathan Dean also proposed that nations could pass a resolution in the General Assembly to request the International Court of Justice (ICJ) to give an advisory opinion on whether testing or orbiting space weapons of any kind would be contrary to the core rule and objective of the OST that space be maintained for peaceful purposes. On the grounds that the testing or use of space weapons would jeopardize national technical means of verification, enshrined in several treaties and agreements, and the commercial uses of space, he also suggests that legal action could be taken to prevent such threats, utilizing international and US courts, as appropriate.34]

### Compromise on ban of missile defense-would allow some form but not all forms and help avoid the tech that would cause arms race and full scale wep

Johnson 02- Rebecca Johnson, Dr. Johnson is an Assistant Professor of National Security Affairs at the Command and Staff College at Marine Corps University. In addition, she is currently completing a Masters in Divinity at Wesley Theological Seminary with concentrations in ethics and world religions., CHAPTER 3 SECURITY WITHOUT WEAPONS IN SPACE: CHALLENGES AND OPTIONS1

[Another proposal builds on an earlier Bunn proposal to distinguish between weapons in low and high orbit. With the aim of getting the support of key actors among the inevitable weaponizers and militarization realists, James Clay Moltz argued the case for prohibiting the use, testing or 75 deployment of weapons or interceptors of any sort above 500 miles and prohibiting the stationing of weapons in LEO. His proposal would permit the testing (and presumably use) of ground-based, sea-based and air-based interceptors in LEO against ballistic missiles but not against satellites or other space-based objects (while recognizing that implementation of this would have to rely on taboo-building and confidence, since verification techniques would be unable to distinguish between permitted ABM interceptors and banned ASAT purposes).36 While such a compromise would be unlikely to satisfy the space hawks, it allows key elements of the Bush Administration’s missile defence plans, while clear barriers would prevent space-based lasers or kinetic kill weapons, and might therefore head off the escalation to higher levels of space weaponization that many fear as the most threatening and destabilizing facet of the missile defence project.]

### Code of conduct solvency

Krepon 5 – Michael Krepon is co-founder of Stimson, and director of the South Asia and Space Security programs. Prior to co-founding Stimson, he worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks. Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt. 2005, "Space Security or Space Weapons?" [www.gsinstitute.org/docs/Stimson\_Space\_brief.pdf](http://www.gsinstitute.org/docs/Stimson_Space_brief.pdf)

The peaceful uses of outer space can be promoted by a Code of Conduct to clarify “rules of the road” for responsible nations. Codes of conduct exist to prevent dangerous military practices on the ground, in the air, and at sea. For example, during the Cold War, Washington and Moscow negotiated an agreement to prevent incidents at sea. This agreement requires both navies to avoid collisions and not to interfere with each other’s ships. More than thirty other navies adopted similar agreements. The United States has been wise to set standards to prevent dangerous military practices on the sea, on the ground, and in the air. Space also deserves "rules of the road" to help prevent incidents and dangerous military activities. The Henry L. Stimson Center has drafted a Model Code of Conduct for responsible space-faring nations. It can be found at www.stimson.org/space. OTHER CODES OF CONDUCT Incidents at Sea Agreement (1972) Prevention of Dangerous Military Activities (1989) International Code of Conduct Against Ballistic Missile Proliferation (2002) Proliferation Security Initiative (2003) KEY ELEMENTS OF A SPACE CODE OF CONDUCT NO Flight-testing of space weapons Deployment of space weapons Simulated attacks in space Harmful use of lasers YES Creating special caution areas in space Avoiding collisions in space Avoiding dangerous maneuvers in space Debris mitigation and reduction Cooperative traffic management Registration and notification of launches Space deserves “rules of the road” to help prevent incidents and dangerous military activities. RULES OF THE ROAD ARE NEEDED IN SPACE Why is a Code of Conduct for space-faring nations needed? Because agreed rules can make us safer and better off by promoting national security and global commerce. Agreed rules also make it easier to identify and build coalitions against those who choose to violate them. But rules do not matter to bad actors. And laws are frequently broken. That doesn’t make the laws irrelevant or unimportant. Rules still matter. We also need to take action against rule breakers. How do we punish rule breakers if we can’t send police to outer space? The United States is the strongest nation on Earth. We don’t have to go into space to punish rule breakers

## Space law good

### Space law necessary in order to resolve current disputes

Hays 11- Peter L. Hays, Dr. Peter L. Hays is a senior policy analyst supporting the plans and programs division of the National Security Space Office. A retired Lieutenant Colonel with 25 years of service in the Air Force, he has focused his studies and research on U.S. national security space., Chapter 28: Space Law and the Advancement of Spacepower

[Most fundamentally, however, the current lack of clarity within space law about property rights and commercial interests is the result of both space law and space technology being underdeveloped and immature. Of course, there is also a "chicken-and-egg" factor at work since actors are discouraged from undertaking the test cases needed to develop and mature the regime because of the immaturity of the regime and their unwillingness to develop and employ improved technologies and processes as guinea pigs in whatever legal processes would be used to resolve property rights and reward structures. The most effective way to move past this significant hurdle would be to create more clear mechanisms for establishing property rights and processes by which all actors, especially commercial actors, could receive rewards commensurate with the risks they undertake. In addition, any comprehensive reevaluation of space property rights and liability concerns should also consider how these factors are addressed in analogous regimes such as the Seabed Authority in the Law of the Sea Treaty. Unfortunately, however, there are also several problems with attempting to draw from these precedents. First, several of the analogous regimes like the Law of the Sea build from CMH premises in several ways and it is not clear this approach is entirely applicable or helpful when attempting to sort through how the OST should apply to issues like property rights and reward structures. Second, while these analogous regimes are undoubtedly better developed than the OST and have a significant potential role in providing precedents, today they are still somewhat underdeveloped and immature with respect to their application in difficult areas such as property rights and reward structures, again limiting the current utility of attempting to draw from these precedents.]

### Space law good- help stop earth ending rocks- gamma ray burst- and other things- this is the best approach to solve

Hays 11- Peter L. Hays, Dr. Peter L. Hays is a senior policy analyst supporting the plans and programs division of the National Security Space Office. A retired Lieutenant Colonel with 25 years of service in the Air Force, he has focused his studies and research on U.S. national security space., Chapter 28: Space Law and the Advancement of Spacepower

[It is also imperative that the United States and all spacefaring actors think more creatively about using spacepower to transcend traditional and emerging threats to our survival. Parts of space law can help to illuminate paths toward and develop incentives for creating a better future. Space, perhaps more than any other medium, is inherently linked to humanity's future and survival. We need to link these ideas and better articulate ways spacepower can light a path toward genuinely cooperative approaches for protecting the Earth and space environments from cataclysmic events such as large objects that may collide with Earth or gamma ray bursts that may have the potential to render huge swaths of space uninhabitable. Better knowledge about known threats such as near Earth objects (NEOs) is being acquired but more urgency is needed. All predicted near approaches and possible NEO impacts such as that of the asteroid Apophis, predicted for April 13, 2029, ought to be seen as opportunities since they provide critical real-world tests for our ability to be proactive in developing effective precision tracking and NEO mitigation capabilities. In the near term, it is most important for national and international organizations to be specifically charged with and resourced to develop better understanding of NEO threats and mitigation techniques that can be effectively applied against likely impacts. Ultimately, however, we cannot know of or effectively plan for all potential threats to Earth but should pursue a multidimensional approach to develop capabilities to improve our odds for survival and one day perhaps become a multiplanetary species. There will be inevitable missteps, setbacks, and unintended consequences as we refine space law to improve our quest for sustainable space security, generate wealth in and from space, and protect the Earth and space environments. The inexorable laws of physics and of human interaction indicate that we will create the best opportunities for success in improving space law by beginning long-term, patient work now rather than crash programs later. This patient approach will allow the best prospects for space law to provide a solid foundation for the peaceful advancement of spacepower.]

## AT: Tellis

### Tellis is an idiot—his theories are based on assertions contradictory to overwhelming evidence

Hagt 02-01-08 [Eric, Director of the China Program at the Center for Defense Information, “China's Military Space Strategy: An Exchange,” Survival, p 157-198, http://www.informaworld.com/smpp/title~content=t713659919 Lexis]

Ashley Tellis weaves a compelling argument of China’s counterspace strategy and its implications for space arms control. His logic rests on two principle elements. ‘China’s pursuit of counterspace capabilities … is not driven fundamentally by a desire to protest American space policies … but is part of a considered strategy designed to counter the overall military capability of the United States.’ This underpins Tellis’s conclusion that ‘Washington should not invest time, energy and resources in attempting to negotiate space-control arrangements ... Such regimes are destined to be stillborn because the larger strategic logic conspires against them.’ In other words, the pursuit of a space arms-control regime is futile, even harmful to US interests, because China’s strategy to challenge American space dominance is unyielding to anything the United States can do. Both pillars of Tellis’s rationale are problematic. A comprehensive assessment of China’s strategic aims does not confirm such an inflexible posture. Rather, his assumptions about China’s strategy are far-reaching and worst- case scenarios, most of which are speculative and contradict considerable evidence. The United States, as he repeatedly points out, is an important driver of China’s strategic posture. As such, there are a number of measures the United States can indeed explore to positively alter the security dilemma in space. It is important to understand the core assumption underpinning all of Tellis’s analysis, which is related to but goes beyond the issue of space. That is, his overarching judgement that China is seeking to construct a ‘Sinocentric order in Asia and perhaps globally’. And since the ‘United States, and its superior military power, remains the biggest objective constraint on China’s ability to secure its own political interests’, China will not only challenge the United States in immediate concerns over Taiwan, but will rival US hegemony, particularly in military terms.

How does Tellis know Beijing is committed to such an expansive military strategy or will challenge US military dominance? The evidence is inconclusive at best. China’s policies do not state such goals, but to avoid the debate over their reliability, let us leave government rhetoric aside. Chinese analysts, on balance, certainly argue against this paradigm and the US scholarly community is divided over the validity of such assumptions. That leaves individual interpretation of China’s strategic calculations; Tellis’s is imbued with a highly realist zero-sum framework. He cites the military component of China’s strategic interests as being ‘preventive’, ‘protective’ and ‘defensive’ in nature. Though these terms are fairly accurate, they only support the claim applied to specifically defined goals, which he concurs are, in the near term, ‘to defeat any US expeditionary force that might be committed in support of [Taiwan]’. From this point, however, he moves to a far more expansive strategy: ‘the capabilities thus obtained are intended to mutate gracefully into servicing other, more ambitious geostrategic aims’. In this way Tellis subtly, though assertively, leaps from ascribing to China a defensive posture to one that seeks to challenge and even rival US military power. The literature is not nearly so definitive. Such theorising of China’s strategic intent is highly speculative. Tellis uses a number of examples of American–Soviet competition to support his thesis that China will inevitably seek to confront US military dominance. Meanwhile, he declines to entertain the notion that China’s incentives and actions vis-à-vis the United States may be shaped by strategic values and interests outside his framework. In fact, China’s strategic considerations toward the United States are influenced and constrained by factors beyond a direct militarily antagonistic relationship. They range from China’s profound domestic development challenges; its precarious geopolitical relations with regional players; and its deep dependence on global commercial and energy markets. China also has a unique set of historical experiences (colonialism, foreign occupation, border wars) as well as the lessons learned from current events, not the least of which is the US quagmire in Iraq. These point to conditions for China and an international environment significantly different than were extant during the Cold War.

Even if one assumes that some form of challenge to US hegemony is inevitable, China has a growing kit of tools at its disposal to wield non- military influence. China now has clout in financial, trade and even soft- power terms, all of which could bring to bear considerable economic and political pressure on a potential adversary or strategic competitor. This is not to suggest China would forgo its military options in a conflict with the United States. But it should, at the very least, give pause to consider alterna- tive strategic modalities by China. Tellis doesn’t mention any of these, much less figure them into China’s counterspace strategy. Tellis brings that strategy within his broader framework of China’s goals to challenge and rival the United States. China’s best shot at accomplishing these expansive strategic goals, Tellis writes, is to have a ‘riposte against [America’s] Achilles heel’, its space dominance. Tellis overstates both China’s ability and its incentives to use space in a conflict with the United States. He draws the analogy of Cold War competi- tion between the Soviet Union and the United States: ‘neither side had an incentive to attack the other’s space systems, even though both developed modest instruments for this purpose, because the costs to each individually far outweighed the benefits’. The unstated implication is that China does have the incentive to attack America’s disproportionately vulnerable space assets. He is partly right; the United States is arguably now more vulnerable to asymmetric ASAT weapons that China could employ. But concluding that China has the incentive to act on this advantage removes the ‘battle’ of space out of the context of the larger conflict that such a battle would either be a part of, or would most probably escalate to. It wrongly isolates space from the US capabilities that could be brought to bear on a much inferior China in the dynamic of any military conflict.

The United States has overwhelming military superiority over China. Besides vastly outnumbering China’s conventional and nuclear forces, other key elements include the dramatic advantage the United States has accrued in the past decade in precision-strike conventional weapons. These may even be capable of taking out even hardened nuclear silos in certain circumstances, thus

comprising a new threat to China’s nuclear deterrence.1 There is also the developing US multi-layered missile defence system with boost-phase components based in space that threaten China’s missile force. Even considering space alone, US capabilities and programmes far exceed those of China: for example micro- or nanosatellites, such as the XSS-10, XSS-11, DART, MiTex, Orbital Express and the new DARPA TICS and F6 programmes. There are also laser weapons: MIRACL, the ABL and its COIL, various solid-state HEL and FEL programmes, and the Starfire adaptive optics range, all of which have powerful ASAT capabilities.2 All this means that even if the United States is currently vulnerable in space, China would have little incentive to attack American space assets because the risk of escalation to generalised conflict – a conflict China would have no chance of winning – is far too great, as Tellis admits. Failing to incorporate this into China’s strategic calculus leads to a narrow reading of what China is capable of, to say nothing of what its intentions may be. China’s own investment and interests in commer- cial and civilian space are also rapidly increasing, serving as a further check on any bellicose use of space. There is, of course, one plausible scenario where China could have incentive to attack US assets in space, despite its military disadvantage: a conflict over Taiwan. Kinetic-energy ASATs or other asymmetric counterspace weapons could very well be used if the United States employed its own space assets in a confrontation over the island. But this would be only in extreme circumstances, an act of desperation or self- preservation, since China understands such a scenario could very well bring down the full force of US military might on China. The possibility of China making this calculation is far from certain, however, since to avoid escalation (possibly to nuclear exchange) or outright failure, China would need to reduce US military might to a level relative to its own (a formidable task even without space assets). Just diminishing US military dominance will not suffice if America remains powerful enough to prevail in a conflict. China may one day have the counterspace capability to achieve this goal, but one ASAT test does not get it there. For a successful kinetic-energy ASAT capability alone, China would have to conduct more tests, to say nothing of the other capabilities that would need to be devel- oped and deployed to effectively disable US space assets. Furthermore, all this assumes that the United States is indeed highly vulnerable in space, an assumption scarcely borne out by current Chinese ASAT capabilities and inherent redundancy of US space assets.3 This more narrowly defined scope for China’s counterspace capabilities fits within its overall strategic parameters and defined goals. And Tellis’s judgement that the potential conflict in space will ‘likely persist whether or not the Taiwan conflict is resolved’, is entirely possible if the United States and China find new strategic terms to compete over, but that outcome is speculative and is an entirely separate issue from China’s rivaling US space dominance writ large. A note on sources is also in order, since Tellis uses only secondary mate- rial to make sweeping assumptions about China’s military and counterspace strategies. The discussion of source material often comes up with the subject of China because of the difficulty in deciphering the vast body of litera- ture, often of questionable reliability and predominantly in Chinese. Tellis remains undaunted, however, and cites secondary Western publications analysing this literature that primarily support his hawkish version of China’s space ambitions while giving scant mention to other more moder- ate positions. A selection of the provocative statements and ambitions on the American side would present a similarly distorted picture of US policy and intentions. A comprehensive reading of the Chinese literature is highly inconclusive with regard to both China’s policies and intentions as well as its programmes and capabilities. All this would matter little if it were not employed to support Tellis’s dim prognosis that space arms control is futile: ‘the threat posed by this Chinese effort cannot be neutralised by arms-control agreements’. His rejection of an arms-control regime for space is assured, yet it rests on speculations and opinions about China’s intentions, none of which have any conclu- sive backing. Even his language often belies a degree of uncertainty. For example, ‘it should not be surprising that Chinese leaders … have tasked their military forces to develop means to defeat the power-projection capa- bilities of the United States’. Such a development may not be surprising to Tellis, but that is not proof it is true. Tellis is mirror-imaging his own strate- gic logic onto China. In any case, to conjecture about worst-case scenarios is one thing, but it is dangerous to conclude that any hope of extricating ourselves from a deadly space rivalry is pointless. Tellis refuses to entertain any willingness by China to negotiate a space arms-control regime: ‘the implications are devastating for arms-control theorists who believe that Chinese counterspace investments are primarily bargaining chips aimed at creating a peaceful space regime’. First, where is the recent historical precedent to support this claim? China has negotiated a number of wide-ranging arms-control agreements in the past. The Non- Proliferation Treaty (NPT) is the most obvious, though not the only, example. Tellis’s pronouncements might be justified with solid proof, but not even talking to the Chinese and calling their bluff is illogical and unwise. What is sorely missing in Tellis’s paper is ‘the other side’ of the problem, namely that there are initiatives that the United States (and others) can take to seek to calm the Chinese drive for counterspace capabilities. The report repeatedly details how US military posturing is driving China to invest in and plan counterspace technologies, yet it fails to propose what could be changed to stop and reverse those trends. In reality, it will cost the United States very little (with the potential to gain a significant measure of inter- national support and goodwill) to explore the possibilities for space arms control, notwithstanding the difficulties of definitions and verifiability. Tellis also brushes aside with no analysis whatsoever the value and potential effect of ‘rules of the road’ arrangements to limit or regulate space weapons and operations in space, or space-debris mitigation agreements or the confidence-building measures of reaching agreement on banning spe- cific debris-creating ASAT tests. He does recommend talking with the Chinese to better understand their space programme, a wise suggestion if done seriously and comprehensively with a view to long-term cooperation. Beyond that, however, he proposes surprisingly little to alter the security dynamic in space, concluding that the worst case is probably inevitable and the United States should simply counter with military means. Here, Tellis makes no mention of the critically important debate over whether an unrestricted ‘offence–defence arms race’ in space is something that the United States, or any country, can ‘win’.

## More CoC

### Space weaponization bans not good- Unable to effectively ensure compliance-need to hedge bets and be ready

O'Hanlon 11(senior fellow in Foreign Policy Studies at the [Brookings Institution](http://www.sourcewatch.org/index.php?title=Brookings_Institution), where he specializes in U.S. defense strategy and budgeting, [homeland security](http://www.sourcewatch.org/index.php?title=Homeland_security), Northeast Asian security, and humanitarian intervention. He is also adjunct professor at the public policy school of Columbia University, a visiting lecturer at Princeton University, and a member of the [International Institute for Strategic Studies](http://www.sourcewatch.org/index.php?title=International_Institute_for_Strategic_Studies) and the [Council on Foreign Relations](http://www.sourcewatch.org/index.php?title=Council_on_Foreign_Relations)."[[1]](http://www.sourcewatch.org/index.php?title=Michael_E._O%27Hanlon#cite_note-MEHan-0), Balancing U.S. Security Interests in Space)

Overall, space arms control should not be a top priority for the United States in the future, contrary to what many arms control traditionalists have concluded. Some specific accords of limited scope, such as a treaty banning collisions or explosions that would produce debris above a certain (low) altitude, and confidence-building measures such as keep-out zones near deployed satellites, do make sense. But the inability to verify compliance with more sweeping prohibitions, the inherent antisatellite capabilities of many missile defense systems, and the military need to counter efforts by other countries to use satellites to target American military assets all suggest that comprehensive accords banning the weaponization of space are both impractical and undesirable. That said, the United States should not want to hasten the weaponization of space and indeed should want to avoid such an eventuality. It benefits from its own military uses of space greatly and disproportionately at present. It should take unilateral action, such as by declaring that it has no dedicated antisatellite weapons programs, to help buttress the status quo as much as possible.

### US China co op good- key to R and D

Hays and Danielson 9- Peter Hays, Senior Scientist, Policy and Strategy Division Science Applications International Corporation National Security Space Office, Mr. Dennis L. Danielson Senior Engineering and Technical Manager Jacobs Technology, National Security Space Office Pentagon, Washington DC, Improving Space Security through Enhanced

[Other specific Sino-American cooperative space ventures or TCBMs that have been proposed and are worthy of further consideration include: inviting a taikonaut to fly on one of the remaining space shuttle missions and making repeated, specific, and public invitations for the Chinese to join the ISS program and other major cooperative international space efforts. The US and China could also work towards developing non-offensive defenses of the type advocated by Philip Baines.18 Kevin Pollpeter explains how China and the US could cooperate in promoting the safety of human spaceflight and “coordinate space science missions to derive scientific benefits and to share costs. Coordinating space science missions with separately developed, but complementary space assets, removes the chance of sensitive technology transfer and allows the two countries to combine their resources to achieve the same effects as jointly developed missions.”19 Michael Pillsbury outlined six other areas where US experts could profitably exchange views with Chinese specialists in a dialogue about space weapons issues: “reducing Chinese misperceptions of US space policy, increasing Chinese transparency on space weapons, probing Chinese interest in verifiable agreements, multilateral versus bilateral approaches, economic consequences of use of space weapons, and reconsideration of US high-tech exports to China.”20]

### CP solvo- things China and US should do to avoid space conflict and destruction

Hays and Danielson 9- Peter Hays, Senior Scientist, Policy and Strategy Division Science Applications International Corporation National Security Space Office, Mr. Dennis L. Danielson Senior Engineering and Technical Manager Jacobs Technology, National Security Space Office Pentagon, Washington DC, Improving Space Security through Enhanced

[Bruce MacDonald’s report on China, Space Weapons, and US Security for the Council on Foreign Relations offers a number of noteworthy additional specific recommendations for both the US and China including: For the US—assessing the impact of different US and Chinese offensive space postures and policies through intensified analysis and “crisis games,” in addition to wargames; evaluating the desirability of a “no first use” pledge for offensive counterspace weapons that have irreversible effects; pursuing selected offensive capabilities meeting important criteria—including effectiveness, reversible effects, and survivability— in a deterrence context to be able to negate adversary space capabilities on a temporary and reversible basis; refraining from further direct ascent ASAT tests and demonstrations as long as China does, unless there is a substantial risk to human health and safety from uncontrolled space object reentry; and entering negotiations on a [kinetic energy] KE-ASAT testing ban. MacDonald’s recommendations for China include: providing more transparency into its military space programs; refraining from further direct ascent ASAT ests as long as the US does; establishing a senior national security coordinating body, equivalent to a Chinese National Security Council; strengthening its leadership’s foreign policy understanding by increasing the international affairs training of senior officer candidates and establishing an international security affairs office within the PLA; providing a clear and credible policy and doctrinal context for its 2007 ASAT test and counterspace programs more generally and addressing foreign concerns over China’s ASAT test; and offering to engage in dialogue with the US on mutual space concerns and becoming actively involved in discussions on establishing international space codes of conduct and confidence-building measures.21 Finally, Beijing and Washington should pursue specific initiatives to follow-up on the cooperative dialogue during the visits of General Xu Caihou and President Obama, as well as initiating discussions about recent statements by General Xu Qiliang, commander of the PLA Air Force (PLAAF), that a space arms race is inevitable and the PLAAF must develop offensive space operations.22 President Hu quickly repudiated these statements but the two sides need to find a way to initiate and sustain focused discussions about the difficult space security issues raised by the general’s statements since they represent an unprecedented level of public transparency on the part of the PLA, undoubtedly reflect the position of the PLA and other important stakeholders within the Chinese government, and represent an inherent part of the context for space security about which the US and China must develop better shared understanding. Counterintuitively, Beijing and Washington can lay a stronger foundation for sustainable space security through transparent dialogue over these most difficult issues rather than by trying to avoid them since more diplomatic approaches may assuage but cannot eliminate the growing strategic and military potential of space capabilities.]

### International concent helps avoid future conflicts and improve relations fight test ban is key

Krepon 4 - Michael Krepon, Krepon received an MA from the School of Advanced International Studies at Johns Hopkins University, and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt co-founder of Stimson, and director of the South Asia and Space Security programs., Safeguarding Space for All: Security and Peaceful Uses—Conference Report, 25–26 March 2004, SPACE ASSURANCE OR SPACE WEAPONS

There is a widespread international desire to avoid the flight-testing and deployment of space weapons. At the same time, a number of nations appear to be hedging their bets by engaging in research and development programmes that would allow them to compete effectively in the event that another country crosses these thresholds first. Only one country—the United States—has publicly endorsed a doctrine of “space dominance” that includes “space force application”. The full fruition of this doctrine would deepen fissures in alliance ties and relations among major powers, whose assistance is most needed to form “coalitions of the willing” to stop and reverse proliferation. The choice between space assurance and space weapons is therefore fundamentally important since it will shape the contours of international security, global commerce, alliance ties and relations between major powers. The United States and other countries cannot have it both ways: the flight testing and deployment of space weapons will come at the expense of space assurance, and space assurance is undermined by the pursuit of space weapons. The United States’ choice is therefore stark and clear: it can either take the initiative to flight-test and deploy space weapons on the assumption that 51 conflict in space is inevitable or useful, or it can seek to reinforce an interlocking network of restraints designed to avoid the crossing of these key thresholds. US restraint, however, would not ensure similar restraint by others. Indeed, potential adversaries might mistakenly conclude that they could gain advantage by covertly developing, flight-testing and then using space weapons against the United States first.

### not effective- missile defense- Russia- nuclear capability- gets freaked out- also cp could be to place it on the ground to solve the Russia freak out DA

Edland 2k - Eland Ivan Eland, is Senior Fellow and Director of the [Center on Peace & Liberty](http://www.independent.org/research/copal/) at The Independent Institute. Dr. Eland is a graduate of Iowa State University and received an M.B.A. in applied economics and Ph.D. in national security policy from George Washington University. He has been Director of Defense Policy Studies at the Cato Institute, and he spent 15 years working for Congress on national security issues, including stints as an investigator for the House Foreign Affairs Committee and Principal Defense Analyst at the Congressional Budget Office., January 24, 2000, Should U.S. Missile Defense Be Limited to a Ground-Based Systems? Yes, We Can Build a Limited Homeland Shield Without Breaking an ABM Treaty

[Smaller U.S. defenses do not pose as big a threat to the Russian nuclear arsenal and would be less likely to engender those responses. But the Russians believe that any smaller U.S. defense against rogue states could be a stepping stone to a larger defense that would threaten Russia. That concern is an important reason why the United States should work to negotiate with the Russians to amend the ABM treaty rather than simply abrogate it outright. Although the Russians currently oppose U.S. initiatives to amend the treaty, the Bush administration made substantial progress in renegotiating the treaty to allow the GPALS system, which was more ambitious than the Clinton administration program. U.S. negotiating leverage also would be enhanced by stronger statements that the United States is prepared to abrogate the treaty unilaterally if the negotiations fail. (In addition, the United States could offer deep cuts in offensive warheads--below START III levels [2,000-2,500 warheads]--to lessen the threat to Russia’s decaying nuclear arsenal.) When facing the choice between an unrestrained U.S. defense program and a restrained one under the treaty, the financially strapped Russians probably will see the light.

Given the needless kicks in the pants that the United States recently has delivered to Russia (NATO expansion and a war against Russia’s Serbian ally) and potential Russian retaliation if the United States abrogates the ABM treaty (stopping cooperation on securing Russian weapons of mass destruction or actually selling such weapons to rogue states or terrorists), unilaterally abrogating the treaty before attempting to renegotiate it is a bad idea. Building a sea-based NMD essentially would require abrogation of the treaty merely to obtain a system that is likely to be more costly and less effective in protecting the United States than a land-based system. Renegotiating the ABM treaty to permit the deployment of a limited land-based system is a better alternative.]

1. [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)
3. [↑](#footnote-ref-3)
4. [↑](#footnote-ref-4)
5. [↑](#footnote-ref-5)
6. [↑](#footnote-ref-6)