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## 1NC PPWT CP 1/2

### Counterplan text: The United States federal government should engage in negotiations with China and Russia and ratify the Prevention of the Placement of Weapons in Outer Space Treaty.

### 1. The counterplan bans ASATs – this solves the Chinese threat

Su, Jinyuan. 2010. (Jinyuan Su is a fellow of The Silk Road Institute of International Law, School of Law, Xi'an Jiaotong University, China)("The “peaceful purposes” principle in outer space and the Russia/China PPWT Proposal." Space Policy 26.2 (2010): 81. Web. <http://www.sciencedirect.com/ science/article/pii/ S026596461000024X>.)jk

The debate on militarization vis-à-vis non-aggression in interpreting “peaceful purposes” in the context of outer space is already settled, with the latter doctrine having the advantage. However, non-aggression is too loose a concept when facing the issue of space weaponization. The current regime of space law should be amended to prohibit all weapons in space and ASATs on Earth. The PPWT provides a good basis for efforts in this direction. But it is noteworthy that, absent a legally binding treaty, deploying weapons in outer space in situations not amounting to self-defense still constitutes a violation of the general principle of maintaining international peace and security and falls foul of the current cooperative background theme of international law.

### 2. The U.S. should to enter negotiations with China and Russia to ratify the PPWT. Old problems have been addressed.

Su, Jinyuan. 2010. (Jinyuan Su is a fellow of The Silk Road Institute of International Law, School of Law, Xi'an Jiaotong University, China)("The “peaceful purposes” principle in outer space and the RussiaeChina PPWT Proposal." Space Policy 26.2 (2010): 81. Web. <http://www.sciencedirect.com/ science/article/pii/ S026596461000024X>.)jk

Using the global commons for “peaceful purposes” is agreed upon among states in principle but disputed in substance. While non-militarization has been superceded by the doctrine of non-aggression, the latter, as a necessary rather than sufficient condition for “peaceful purposes”, is tested to its limit by the pressing issue of space weaponization. An international treaty to plug the gaps of the Outer Space Treaty should be negotiated. This would require the prohibition of both weapons in outer space and anti-satellite weapons on Earth. The Draft Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT), proposed by Russia and China at the Conference on Disarmament, is an effort in this direction. However, divided views are held on several issues arising from the draft treaty, e.g. the efficiency of the current regime of outer space law, definitions of “weapons in space” and “threat or use of force”, and verification. A primary reason for US opposition to the draft treaty are security concerns over its space assets. However, exercising the right of self-defense is excluded from the obligations of disarmament and this is explicitly affirmed in the draft treaty.

1NC PPWT CP 2/2

### 3. Russian and Chinese cooperation signal that they want to work with all states on the PPWT

Loshchinin, Valery. 2011. (Permanent Representative of the Russian Federation to the conference on disarmament at the Plenary Meeting of the Conference on Disarmament)(PREVENTION OF AN ARMS RACE IN OUTER SPACE." CONFERENCE ON DISARMAMENT. PAROS. Geneva, Geveva, Switzerland. 2/8/2011. Address.)jk

Russia considers that the introduction of the draft Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT) (CD/1839 of 29 February 2008) jointly with China represents an attempt to adopt preventive measures against the emergence of new high-tech destabilizing types of weapons and new areas of confrontation. Placement of weapons in outer space could trigger unpredictable consequences for the international community – similar to those at the advent of the nuclear era. Moreover, weapons deployment in outer space by one state will inevitably result in a chain reaction. And this, in turn, is fraught with a new spiral of the arms race both in outer space and on Earth. All States have equal and inalienable right to access to outer space, its research and use. And it is natural that space security should be our common goal and we should join our efforts to find a solution that would consolidate international security and stability. Undoubtedly, PPWT is an effective and practical way to reach this goal. We stand ready to closely work with all CD Member States on this issue.

### 4. China would launch a pre-emptive strike on U.S. NMD systems

FitzGerald, Mary. 2007. (Research Fellow, Hudson Institute)("China’s Military Modernization and its Impact on the United States and the Asia-Pacific ." China’s Military Strategy for Space (2007): 83. Web. <www.hudson.org/files/ publications/07\_03\_29\_30\_fitzgerald\_statement.pdf>.)jk

Chinese military strategists stress that the creation of ballistic missile defense systems and corresponding “penetrating measures” again prove the “shield-spear” dialectic, each of which will always generate the other and advance competitively. For today, the Chinese propose the following “penetrating measures”: 1) multiple warhead attack, 2) decoy penetration, 3) interruption and concealed penetrations, 4) enclosing balls (huge metallic membrane balloons), 5) trajectory change penetrations, 6) mobile launch, and 7) preemptive strike: “attack and destroy a certain part” of the NMD system. Conducting a preemptive strike includes: 1) use “suicide satellites” (an orbital type of cruise satellite) or laser weapons to destroy the early-warning satellite system and space- based infrared systems of the NMD system to paralyze them, and 2) launch preemptive attacks against each component of the NMD system. According to Russian scientists, say the Chinese, it is possible to use a mid-air nuclear explosion to destroy the “command, control, and communication management center” of the NMD system to both paralyze and attack its essential defensive capabilities.

## Solvency

### Absent PPWT, all space weaponization of space is offensive. NMD triggers asymmetrical responses.

Semin, Valery. 2008. (Dr. Valery Semin is Deputy Permanent Representative of the Russian Federation to the United Nations Ofﬁce)("THE DRAFT TREATY ON THE PREVENTION OF THE PLACEMENT OF WEAPONS IN OUTER SPACE, THE THREAT OR USE OF FORCE AGAINST OUTER SPACE OBJECTS ." Security in Space: The Next Generation—Conference Report (2008): 146-147. Web. <www.unidir.org/pdf/articles/pdf-art2822.pdf>.)jk

First, because without such a treaty it would be difﬁcult to predict the development of the strategic situation in outer space and on Earth due to the global operating range of space weapons. It would be impossible to claim that space weapons were “not targeted” at a given nation. Moreover, space weapons will enable actors to discreetly tamper with outer space objects and disable them. Second, because the international situation would be seriously destabilized due to a possibility of unexpected, sudden use of space weapons. This alone could provoke pre-emptive acts against space weapons and, consequently, the spiral of an arms race. Third, because space weapons, unlike weapons of mass destruction, may be applied selectively and discriminately, they could become real-use weapons. Fourth, because the placement of weapons in outer space would arouse suspicions and tensions in international relations and destroy the current climate of mutual conﬁdence and cooperation in exploration of outer space. Fifth, because attaining monopoly of space weapons would be an illusionary goal, all kind of symmetrical and asymmetrical responses would inevitably follow, which in substance would constitute a new arms race, which is exactly what humankind wants to avoid.

### Only the PPWT solves. Current treaties don’t prevent all forms of space militarization.

Semin, Valery. 2008. (Dr. Valery Semin is Deputy Permanent Representative of the Russian Federation to the United Nations Ofﬁce)("THE DRAFT TREATY ON THE PREVENTION OF THE PLACEMENT OF WEAPONS IN OUTER SPACE, THE THREAT OR USE OF FORCE AGAINST OUTER SPACE OBJECTS." Security in Space: The Next Generation—Conference Report (2008): 145-146. Web. <www.unidir.org/pdf/articles/pdf-art2822.pdf>.)jk

Modern international space law does not prohibit deployment in outer space of weapons that are not weapons of mass destruction. However, such weapons, if deployed in outer space, would have a global reach, high readiness and capability for engagement not only with other space objects to render them inoperative, but also with critical infrastructure on Earth. Such weapons would be ﬁt for real use, generate suspicions and tension among states and frustrate the climate of mutual trust and cooperation in space exploration, rather than serve as a means of containment. This, in fact, will equate their military utility to that of weapons of mass destruction. Besides, deployment of weapons in outer space by one state will inevitably result in a chain reaction. And this, in turn, is fraught with a new spiral in an arms race both in outer space and on the Earth. The objective of the draft PPWT is to prohibit the placement of weapons of any kind in outer space, and the use or threat of force against space objects. The treaty is to eliminate existing gaps in international space law, create conditions for further exploration and use of outer space, preserve costly outer space property and strengthen international security and arms control regimes.

## ASATs Bad

### China’s ASATs are destabilizing to space development

---Van Ness, Peter. 2010. (Peter Van Ness is a Visiting Fellow at School of International, Political and Strategic Studies) ("THE TIME HAS COME FOR A TREATY TO BAN WEAPONS IN SPACE." ASIAN PERSPECTIVE 34.3 (2010): 220. Web. <http://www.asianperspective.org/articles/v34n3-h.pdf>.)jk

Cyber warfare potentially constitutes a “space weapon,” as most analysts define the term, because cyber attacks have the capacity to shut down, or even distort, ground-based command and control for orbiting satellites. The U.S. government has published detailed studies of China’s cyber warfare capability7 and its space warfare thinking,8 and both studies make clear that China, if need be, is determined to hold its own in any future confrontation in space. There is no doubt that the United States is still far ahead in space technology, but the combination of China’s ASAT and missile-defense tests and its cyber capability suggests that China could launch an asymmetrical response to any U.S. effort to build and deploy space-based weapons.

### ASATs are uniquely destabilizing

Garwin, Richard. 2008. (Chair of the Conference)("XVII International Amaldi Conference of Academies of Sciences and National Scientific Societies on Scientific Questions of Global Security." International Amaldi Conferences of Academies of Sciences (2008): 224. Web. <https://amaldi2008.desy.de/sites/site \_amaldi2008/ content/e58428/e58429/infoboxContent 58430/Amaldi\_Sammelmappe\_31July2009.pdf#page=245>.)jk

Another key question that needs to be addressed is whether and to what extent a possible future use of High Energy Lasers (HEL) may lead to political instabilities or to escalation of an existing conflict. One example of a potentially destabilizing event is the deployment of a ground- or space-based laser anti-satellite (ASAT) weapon. In the aftermath of an attack with an ASAT weapon, the country attacked and others may be uncertain as to whether a future satellite failure is due to technical reasons or the result of an attack by a hostile power. In time of crisis, the existence of such a weapon alone might be enough to trigger further military escalation of a conflict. It is interesting to note in this context that the US first tested HELs for use against satellites in October 1997 to examine whether a ground-based HEL can blind satellite optics.

## AT: PPWT FAILS B/C OST FAILS

### The PPWT fills gaps in the OST – failure to ratify risks international cooperation.

Su, Jinyuan. 2010. (Jinyuan Su is a fellow of The Silk Road Institute of International Law, School of Law, Xi'an Jiaotong University, China)("The “peaceful purposes” principle in outer space and the RussiaeChina PPWT Proposal." Space Policy 26.2 (2010): 84-85. Web. <http://www.sciencedirect.com/ science/article/pii/ S026596461000024X>.)jk

The gap in the OST could be ﬁlled either by working out an additional protocol, or by drafting a new treaty like the PPWT. While both approaches would require an equivalent level of consensus, a separate treaty would entail stronger, more focused and detailed obligations. The lesson drawn from the failure of the USSR to introduce a similar treaty at the General Assembly in the early 1980s is that an international treaty aimed at safeguarding the tranquility of outer space should ban weapons in space and ASATs on Earth in parallel. The PPWT is one such proposal, although it is fair to say that these twin tasks have not yet been equally addressed. The core provision of the PPWT is Article II, which reads: The States Parties undertake not to place in orbit around the Earth any objects carrying any kinds of weapons, not to install such weapons on celestial bodies and not to place such weapons in outer space in any other manner; not to resort to the threat or use of force against outer space objects; and not to assist or induce other States, groups of States or international organizations to participate in activities prohibited by this Treaty.

## AT: NO ENFORCEMENT

### Negotiations establish enforcement mechanisms

Conference on Disarmament. 2009.(China and Russia answering questions about the PPWT)("Principal questions and comments on the draft Treaty on Prevention of the Placement of Weapons in Outer Space." CONFERENCE ON DISARMAMENT (2009): 7. Web. <www.reachingcriticalwill.org/political/cd/papers09/3session /CD1872.pdf>.)jk

The dispute settlement mechanism should be established on the basis of the authority and working mechanisms of the executive organization and may become the subject of an additional protocol to PPWT.

### The PPWT sets up the legal framework to make the treaty enforceable

Ministry of Foreign Affairs. 2009. (The Ministry if Foreign Affairs gave the Chinese Delegation for UNIDIR)(Zero-Weapon Outer Space: Foundation for a Safer Space Environment. Interview by UNIDIR. 6/15/2009. 3. Web. <www.unidir.ch/pdf/conferences/pdf-conf96.pdf>.)jk

The answer to this question would be short and, in turn, can be answered in the form of another question: "If a country is already politically committed to a zero-weapon outer space, why not make it legally-binding to make it more effective?" While political will is of vital importance for states to build trust and confidence, legal framework will make such trust and confidence obligatory and enforceable. Besides, we all witnessed the significant contribution made by existing international legal instruments governing outer space activities to prevent arms race in outer space. Unfortunately, the 1967 Outer Space Treaty and the 1979 Moon Agreement, apparently have certain loopholes or limitations. In order to fundamentally safeguard peace and security in outer space and to prevent an arms race in outer space, a new international legal instrument is obviously needed.

### Negotiations key to establish verification methods to regulate adherence to the PPWT

Su, Jinyuan. 2010. (Jinyuan Su is a fellow of The Silk Road Institute of International Law, School of Law, Xi'an Jiaotong University, China)(Towards an Effective and Adequately Verifiable PPWT (April 1, 2010). Space Policy, Vol. 26, pp. 152-162, 2010. Available at SSRN: http://ssrn.com/abstract=1662223)jk

The 2008 Russia-China proposal to the Conference on Disarmament on preventing space weapons has attracted wide attention. Lengthy debates have been made on the need for such a treaty and for two of its most disputed elements, namely prohibition of ground-based anti-satellite weapons and verification. This article argues that, regardless of verifiability, such a treaty is urgently needed for the benefit of international peace and security, and for the security interests of space-faring countries. But in order to serve these purposes effectively, the treaty should at least explicitly prohibit testing, deployment and use of space-based weapons and ground-based anti-satellite weapons. Given the necessary political will, it is feasible to “adequately verify” these constraints. The verification regime should permit the incorporation of new measures in the future, combine international technical means and national technical means, combine remote-sensing technologies and on-site inspections, and be complemented by transparency and confidence-building measures.

## AT: PPWT WON’T DETER CHINA

### China is ready to halt their proliferation of ASATs if the U.S. agrees not to weaponize space.

Ministry of Foreign Affairs. 2009. (The Ministry if Foreign Affairs gave the Chinese Delegation for UNIDIR(Zero-Weapon Outer Space: Foundation for a Safer Space Environment. Interview by UNIDIR. 6/15/2009. 3. Web. <www.unidir.ch/pdf/conferences/pdf-conf96.pdf>.)jk

We believe an ambitious working programme should be adopted by CD regarding PAROS, starting with substantive discussion on PPWT and reviving all relevant proposals that contribute to the security of outer space. In this regard, we are open to proposals such as worldwide ban on ASAT, which is, in our view, in line with the PPWT and could be well incorporated into this document. China is ready to exchange views with all interested parties, both bilaterally and multilaterally, on the issues related to a zero-weapon outer space.

Mr. Chairman, We are now at a historical juncture. Sticking to the doomed remedial philosophy, we may lose the golden opportunity to keep outer space away from armed conflicts. Be creative and proactive, we will take a critical step forward and embrace the age of a zero-weapon outer space, which will mark the 21th century as a peak in human civilization.

## MORE CARDS 1/6

### Space debris is the greatest risk to U.S. space assets. Arms control agreements reduce the chance of an arms race

Liemer, Ross, and Christopher Chyba. 2010. (Ross Liemer has undergraduate at Princeton University, has spent the last year at Tsinghua University in China. Christopher Chyba is professor of astrophysics and international affairs at Princeton University)("A Veriﬁable Limited Test Ban for Anti-satellite Weapons ." THE WASHINGTON QUARTERLY (2010): 149-150. Web. <www.princeton.edu/sgs/.../LiemerChyba\_Verifiable-Limited-Test-Ban.pdf>.)jk

In light of these recent developments, can any verifiable space arms control measures be taken to enhance national and international security? We argue that the answer is **yes**, and recommend that the chief goal of these new measures should be to protect the space assets of the United States and other countries against the future generation of long-lived orbital debris. Since the United States relies more on space systems for military operations than any other country, it has the greatest interest in limiting the increase of space debris. Moreover, the United States, other space-faring nations, and private companies are poised to embark on more ambitious human spaceflight missions that may be threatened by increasing debris.17 Measures to minimize orbital debris would reduce the risk to people and property in outer space, and might also reduce the chances of a costly and destabilizing arms race among space powers.

### China and Russia don’t trust the U.S. – they know that the U.S. retains ASAT capabilities

Liemer, Ross, and Christopher Chyba. 2010. (Ross Liemer has undergraduate at Princeton University, has spent the last year at Tsinghua University in China. Christopher Chyba is professor of astrophysics and international affairs at Princeton University)("A Veriﬁable Limited Test Ban for Anti-satellite Weapons ." THE WASHINGTON QUARTERLY (2010): 150-151. Web. <www.princeton.edu/sgs/.../LiemerChyba\_Verifiable-Limited-Test-Ban.pdf>.)jk

In February 2008, the United States used a direct-ascent kinetic energy interceptor to destroy, at an altitude of 247 km, a failed U.S. satellite (USA-193) about to make an uncontrolled atmospheric reentry.6 The resulting debris was comparatively short-lived due to the greater atmospheric drag at the lower altitude of intercept, with 99 percent of the debris expected to enter the atmosphere within one week.7 U.S. officials have consistently stated that the destruction of USA-193 was not intended to test U.S. anti-satellite capabilities. For instance, the head of the U.S. mission at the UN Conference on Disarmament said the ‘‘engagement is not part of an anti-satellite development and testing program, and we do not intend to retain the technical capability resulting from the modifications required.’’8 The Chinese foreign ministry, however, expressed vague concerns about ‘‘possible damage to the security of outer space and relevant countries by the U.S. move.’’9 Further, the Russian defense ministry said that the satellite destruction ‘‘does not look harmless as they try to claim, especially at a time when the U.S. has been evading negotiations on the prohibition (limitation) of arms race in outer space for a long time.’10

MORE CARDS 2/6

### The U.S. benefits for minimizing space debris – key to any human space flight

Liemer, Ross, and Christopher Chyba. 2010. (Ross Liemer has undergraduate at Princeton University, has spent the last year at Tsinghua University in China. Christopher Chyba is professor of astrophysics and international affairs at Princeton University)("A Veriﬁable Limited Test Ban for Anti-satellite Weapons ." THE WASHINGTON QUARTERLY (2010): 154-155. Web. <www.princeton.edu/sgs/.../LiemerChyba\_Verifiable-Limited-Test-Ban.pdf>.)jk

There are at least two arguments that favor a ban on debris-producing intentional destruction of space systems. The first is that the United States has the greatest stake in minimizing the amount of orbital debris, since the United States makes the most use of space. The limited ban proposed here would be both an arms control measure and an environmental measure to decrease debris collision risk for astronauts and space systems. Such a proposal would also be consistent with safeguarding the more ambitious, and strongly international, human spaceflight program that is likely to develop in the coming decades.41

### Failure to ratify the PPWT would be seen as a lack of engagement on the FMCT

Liemer, Ross, and Christopher Chyba. 2010. (Ross Liemer has undergraduate at Princeton University, has spent the last year at Tsinghua University in China. Christopher Chyba is professor of astrophysics and international affairs at Princeton University)("A Veriﬁable Limited Test Ban for Anti-satellite Weapons ." THE WASHINGTON QUARTERLY (2010): 155. Web. <www.princeton.edu/sgs/.../LiemerChyba\_Verifiable-Limited-Test-Ban.pdf>.)jk

The second argument is that members of the Conference on Disarmament have linked discussions on space arms control to negotiations on a fissile material cut-off treaty (FMCT), a priority of the Obama administration.42 U.S. leadership in space arms control discussions does not guarantee progress on an FMCT – indeed, Pakistan’s apparent concerns with an FMCT seem to be holding up progress on all issues at the Conference on Disarmament. China, however, has consistently linked discussions on the ‘‘prevention of an arms race in outer space’’ with negotiations on an FMCT, suggesting that a lack of serious U.S. engagement on limiting space weapons could impede FMCT progress.43

MORE CARDS 3/6

### China and Russia feel threatened by space weapons – militarization triggers global arms race

Hitchens, Theresa. 2002. (Vice President, Center for Defense Information)("Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons ." Presentation to the Ballistic Missile Defense and the Weaponization of Space Project (2002): 12-13. Web. <http://www.cdi.org/pdfs/Hitchens-April2002-silver-bullet.pdf>.)jk

“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 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 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.

### Space weapons cost too much to maintain – we would be entering a game we can’t win

Hitchens, Theresa. 2002. (Vice President, Center for Defense Information)("Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons ." Presentation to the Ballistic Missile Defense and the Weaponization of Space Project (2002): 13. Web. <http://www.cdi.org/pdfs/Hitchens-April2002-silver-bullet.pdf>.)jk

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

MORE CARDS 4/6

### Weaponization of space kills Heg – space race risks asymmetrical attacks on the U.S.

Mueller, Karl. 2002. (Analysis for the School of Advanced Airpower Studies at Maxwell Air Force Base and now at RAND)( <http://www.cdi.org/pdfs/Hitchens-April2002-silver-bullet.pdf>.)jk

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.

### Expensive space weapons are vulnerable to cheap Chinese ASATs

Zhang, Hui. 2007. (Research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University)("Space Weaponization And Space Security: A Chinese Perspective." Security in Space (2007): 26-27. Web. <http://kms1.isn.ethz.ch/serviceengine/Files/ISN/32339/ichaptersection\_singledocument

/d27da8ae-cf9b-41d5-b4bf-ffc35e193967/en/cs2\_chapter3.pdf>.)jk

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.

### BMDs lead to a “space Pearl Harbor” – weaponization tanks hegemony

Zhang, Hui. 2007. (Research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University)("Space Weaponization And Space Security: A Chinese Perspective." Security in Space (2007): 32. Web. <http://kms1.isn.ethz.ch/serviceengine/Files/ISN/32339/ichaptersection\_singledocument

/d27da8ae-cf9b-41d5-b4bf-ffc35e193967/en/cs2\_chapter3.pdf>.)jk

Furthermore, a space-based BMD system would inevitably encourage other countries to pursue ASATs as countermeasures. Thus, a space weapon ban would reduce the proliferation of ASATs. It would reduce the risk of a “space Pearl Harbor” for other military and civilian satellites. As many experts in the U.S. point out, given the heavy dependence of the United States on its space assets, “the United States has more to lose than to gain by opening the way to the testing and deployment of ASATs and space weapons.”31 The United States is now more dependent on satellites to perform important military functions than any other state. By placing weapons in space, the United States could stimulate others to balance symmetrically and asymmetrically against U.S. space assets. It would be very difficult for the United States to maintain unchallenged hegemony once space is weaponized. The current U.S. military advantage in space instead would be lost, or at a minimum degraded, by weaponization. Further, space weaponization would threaten U.S. civilian and commercial assets by making them far more vulnerable than they are today. The U.S. economy and society are highly dependent on the applications of commercial satellites.

MORE CARDS 5/6

### Even if funding was restored to the Bush administration levels, solvency is 9 years off.

Zhang, Hui. 2007. (Research associate at the Project on Managing the Atom of the Belfer Center for Science and International Affairs at Harvard University)("Space Weaponization And Space Security: A Chinese Perspective." Security in Space (2007): 33. Web. <http://kms1.isn.ethz.ch/serviceengine/Files/ISN/32339/ichaptersection\_singledocument

/d27da8ae-cf9b-41d5-b4bf-ffc35e193967/en/cs2\_chapter3.pdf>.)jk

In short, as Richard Garwin and his co-authors point out: “A regime that effectively prohibits the deployment of space weapons and the use of destructive ASATs before they can destroy U.S. or other satellites would be a smart, hard- nosed investment in U.S. national security, but would require U.S. leadership.”32 It is clear that the United States still has time for serious re-consideration of its space activities. While current funding requests from the Bush administration show continued interest in space-based weapons systems, the actual level of funding is small and these weapons remain in the conceptual and research stages. At the current speed of development, for example, the planned space-based BMD system would not reach fruition until around 2020.

### China ASATs can kill effectiveness of BMD

Hill, Matthew. 2011. (Matthew Hill is a Fellow at the Australian National University's Strategic and Defence Studies Centre)("Space: The Final Frontier of Strategic Competition?." Pynx. N.p., 3/2/2011. Web. <http://www.pnyxblog.com/pnyx/ 2011/3/2/space-the-final-frontier-of-strategic-competition.html>.)jk

A mature ASAT system could compromise Washington’s ability to contest Chinese military action in East Asia. Degrading the Pentagon’s satellites would greatly impede the US ability to pursue in joint warfare and deep strike operations. By ‘blinding’ or destroying Washington’s missile early warning satellites, Beijing could threaten the effectiveness of BMD during an escalating military crisis. The very possibility of these capabilities is of deep concern to US defense planers.

### Satellites and space weapons are equally vulnerable in space.

Patricia A H Williams Edith Cowan University Dec 2010 Austrtalian Information Warfare and Security Conference. “Information Warfare: Time for a redefinition” http://ro.ecu.e du.au/cgi/viewcontent.cgi?article=1036&context=isw

There are some new topics in information warfare emerging such as the concept of space war. Our dependency on satellite technology and the potential to create havoc in the space environment has prompted the US to introduce the National Space Policy (Shiga, 2010). The problem is not restricted to space weapon systems, it also involves the impact that uncontrolled satellites and satellite debris could have in space. It has already been proven that anti-satellite capabilities are a reality by both China in 2007 and the US in 2008. Unfortunately as with most security technologies, whilst the technology is designed to protect and repair satellites it could also be used to interfere with them. The idea of a malicious satellite may seem far fetched but is indeed a reality. Another aspect of space war more in the domain of information warfare is that of incepted and altered satellite signalling.

MORE CARDS 6/6

### ASATs cause space debris and treaties cause success.

Michael Krepon 2009 Co-Founder of the Henry L. Stimson Center, a Diplomat Scholar at the University of Virginia and “Space Security or Anti-satellite Weapons?” (first choice) http://www.bing.com/search?q=Michael+Krepon+and+Samuel+Black+Space+Security+or+Anti-satellite&src=IE-SearchBox

US advantages in space and global security can best be enhanced by seeking to stop debris-producing ASAT tests and, more broadly, by establishing stronger protections against acts of purposeful, harmful interference against satellites. The most clear cut way to establish agreed protections of satellites is by means of a treaty — and the most verifiable treaty is one that bans the testing and use of destructive methods against space objects. But treaties can entail lengthy and difficult negotiations. In addition, the consent of two-thirds of the United States Senate is required for treaty ratification, which means that the Pentagon must strongly advocate a ban of destructive ASAT tests.

### China would launch a pre-emptive strike on U.S. NMD systems

FitzGerald, Mary. 2007. (Research Fellow, Hudson Institute)("China’s Military Modernization and its Impact on the United States and the Asia-Pacific ." China’s Military Strategy for Space (2007): 83. Web. <www.hudson.org/files/ publications/07\_03\_29\_30\_fitzgerald\_statement.pdf>.)jk

Chinese military strategists stress that the creation of ballistic missile defense systems and corresponding “penetrating measures” again prove the “shield-spear” dialectic, each of which will always generate the other and advance competitively. For today, the Chinese propose the following “penetrating measures”: 1) multiple warhead attack, 2) decoy penetration, 3) interruption and concealed penetrations, 4) enclosing balls (huge metallic membrane balloons), 5) trajectory change penetrations, 6) mobile launch, and 7) preemptive strike: “attack and destroy a certain part” of the NMD system. Conducting a preemptive strike includes: 1) use “suicide satellites” (an orbital type of cruise satellite) or laser weapons to destroy the early-warning satellite system and space- based infrared systems of the NMD system to paralyze them, and 2) launch preemptive attacks against each component of the NMD system. According to Russian scientists, say the Chinese, it is possible to use a mid-air nuclear explosion to destroy the “command, control, and communication management center” of the NMD system to both paralyze and attack its essential defensive capabilities.

## 1NC Outer Space Treaty Amendment CP

### **Text: The United States federal government should propose an addendum to the Outer Space Treaty that in the event that a nation militarizes space or uses ASATs for offensive purposes, the United States will** deploy a constellation of kinetic energy ballistic missile interceptors in space above the mesosphere

### **If we wait for other countries to militarize, we can militarize space and it’ll be perceived as a natural extension of the OST.**

Deblois ’98, Lt Col Bruce M. DeBlois (BS, MS, Union College; PhD, Oxford University) is the division chief of Strategic Studies and Assessments at the National Reconnaissance Office, Chantilly, Virginia, Space Sanctuary: A Viable National Strategy, Aerospace Power Journal - Winter 1998, http://www.airpower.maxwell.af. mil/airchronicles/apj/ apj98/win98/deblois.html

A treaty with the clause “the positioning of any weapon in space or attacking any space platform will be considered an act of war against all signatories of this treaty” would provide formal and instant coalition (or collective security) against any actor seeking the weaponization of space and would be a natural extension of the Outer Space Treaty of 1967. Clearly, the United States has the opportunity and means to lead the diplomatic ventures, as well as the resources to lead in developing the methods and tools of verification37 and punitive response.38 The question of securing US space capabilities remains. One can reconcile this “security of assets” issue by a variety of initiatives other than protective weapons.

## Turns the Case

### **Turns heg and economy-diplomatically pursuing space peace is key to safety of commercial space assets and to maintaining primacy.**

Deblois ’98, Lt Col Bruce M. DeBlois (BS, MS, Union College; PhD, Oxford University) is the division chief of Strategic Studies and Assessments at the National Reconnaissance Office, Chantilly, Virginia, Space Sanctuary: A Viable National Strategy, Aerospace Power Journal - Winter 1998, <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj98/win98/deblois.html>

More than being a lot cheaper than a space-weapons strategy, space-sanctuary strategy in practice has many advantages as it relates to global commerce. Space weapons are economically provocative because they can appear to threaten that commerce. During a conflict, distinguishing space friend from space foe would prove difficult since most nations do not overtly “flag” their satellites. Additionally, a number of satellites have many roles and are possessions of many nations. Discriminating impartial, commercial space assets from adversarial space assets will be problematic. Furthermore, even in the event that one can isolate adversarial space assets, the collateral effects of space debris32 will be extremely difficult to control. One cannot posit the benefits of having space-weapons capability without logically thinking through all the ramifications of using them. Given the multinational commercialization of space that is being pursued far more intensely than a weapons program could be, it is very doubtful that the political arm would ever authorize the use of space weapons even if the United States possessed them. Why, then, should we pursue a huge investment toward a suboptimal space-weapons strategy—while the better space-sanctuary strategy is overlooked? Probably because such a strategy comes across as a weak, “do-nothing” approach, something disdainful to American military leaders. On the contrary, though, actively pursuing space sanctuary does not need to be a “sit-on-your hands” approach to national strategy.

## Solves Arm Race

### **Updates to the OST solve Chinese militarization and space challengers. Your author is a CP advocate.**

CIAO Focus May 2004 (CIAO Focus, May 2004: Space Weapons, <http://www.ciaonet.org/focus/focus_0405.html>)

Proponents of space weaponization argue that since the United States spends 65% of the world expenditure on commercial satellites and approximately 95% of the world expenditure on military space uses, the government must provide for defensive measures to protect such assets. Space weapons could also be used to make preemptive strikes against enemy targets and, possibly, to defend against missile attack. The stakes are high. In addition to the great expense and difficulty involved in developing space weapons, a race with China to weaponize space might be in the offing. Critics suggest that inexpensive technologies could thwart costly space weapons and that the U.S. should take the lead in updating the Outer Space Treaty to ensure that space is kept weapons free.

### Russia/China Compliance

### Russia and China would go along with the counter plan-it was their idea.

Paros ‘8 (The Prevention of an Arms Race in Outer Space) 2008. ("Outer Space Militarization, weaponization, and the prevention of an arms race." Reaching Critical Will. Kache Productions, 2008. Web. <http://www.reachingcriticalwill.org/legal/paros/parosindex.html>.)

The overwhelming majority of UN member states are concerned that the weaponization of outer space will lead to an arms race and insist that a multilateral treaty is the only way to prevent such an arms race, emphasizing that this treaty would not limit space access, but would prevent such limitations. In 2006, Russia argued that if all states observe a prohibition on space weaponization, there will be no arms race. Russia and China also support establishing an obligation of no use or threat of use of force against space objects and have submitted a draft treaty to the UN on preventing the placement of weapons in outer space.

## 1NC Outer Space Treaty DA 1/2

### **A. Unique Internal Link- The U.S. is committed to the Outer Space Treaty now-official documents prove *and* the OST is key to global space partnerships.**

Rose 6/13, Frank Rosen is Deputy Assistant Secretary of the Bureau of Arms Control, Verification, and Compliance Space Security, Through the Transatlantic Partnership Conference, http://www.state.gov/t/avc/rls/165995.htm

Today, space systems are vital to enhancing, for example, our national security, foreign policy, and global economic interests, as well as expanding scientific knowledge. Yet space is becoming increasingly contested – meaning, space systems and their supporting infrastructure confront a range of natural and man-made threats that could potentially deny, degrade, deceive, disrupt, or destroy them. As more nations and non-state actors develop counter-space capabilities over the next decade, threats to U.S. and other nations' space systems will increase. The interconnected nature of space capabilities and the world’s growing dependence on them mean that irresponsible acts in space have damaging consequences not only for the United States but also for all nations. Measures that enhance stability – include providing prior notifications of launches of space launch vehicles, establishing “best practices guidelines,” and warning of risks of collisions between space objects enhance stability and thus our mutual security interests. Each of us here at this conference has a different interpretation of what “space security” means based principally upon our respective country’s national interests. Based on the U.S. National Space Policy and other Presidential guidance, as well as our obligations under the 1967 Outer Space Treaty and other international law, we associate “security” as it relates to space with the pursuit of those activities that ensure the sustainability, stability, and free access to, and use of, outer space in support of a nation’s vital interests. This is reinforced by several other related principles in the new U.S. National Space policy: It is in the shared interest of all nations to help prevent mishaps, misperceptions, and mistrust. All nations have the right to explore and use space for peaceful purposes, and for the benefit of all humanity, in accordance with international law. Consistent with this principle, “peaceful purposes” allows for space to be used for national and homeland security activities. The United States considers the space systems of all nations to have the rights of passage through, and conduct of operations in, space without interference. Purposeful interference with space systems, including supporting infrastructure, will be con­sidered, in the U.S. view, an infringement of a nation’s rights.

### B. Link-NMD deployment kills the OST-it’s explicitly prohibited AND OST solves global space arms races-turns their heg internal link.

Wolter, Detlev. 2007. (PhD in international law and arms control from Humboldt University and Head of European Policy and Law Division)("Common Security in Outer Space and International Law." Global Security Institute (2007): 4-5. Web. <www.reachingcriticalwill.org/ legal/paros/CSSEP%20Wolter% 20final.doc>.)

The deployment of space weapons would clearly not be a use in the “interest of all states”, it would thus violate Article I OST.7 While the international community has accepted passive military uses of outer space, such as reconnaissance satellites, communication satellites, it clearly opposes the transgression of the threshold towards active uses of outer space of a destructive nature. Since 1981, the annual resolutions of the UN General Assembly regarding outer space and for the prevention of an arms race in outer space,8 have repeatedly requested the nuclear powers to actively participate in the prevention of an arms race in outer space “with a view to reaching agreement” as well as to restart or speed up parallel bilateral arms control negotiations concerning outer space and refrain from any contrary activities.

1NC Outer Space Treaty DA 2/2

### C. U.S. adherence to the OST is key to global perception of the treaty.

Armor, National Security Space Office, Office of the Under Secretary of the Air Force, November 2007 (James B.,”AlternAtIve ApproACHeS for enSurIng SpACe SeCurIty,” http://www.unidir.org/pdf/articles/pdf-art2667.pdf.)

Having briefly provided the context above, this section presents several specific approaches to space security in hopes that they will help to generate and sustain a dialogue on these issues. There is much consensus on the broad outlines of where the international space community is heading on many space security issues, but, as in so many other critical issue areas, the devil is in the details concerning how to proceed. As the most important first step, the United States should work harder to achieve more universal adherence to the Outer Space Treaty regime. It simply does not make sense to charge far ahead when this key foundational piece still has significant gaps in terms of compliance with existing rules and norms. The United States should also encourage more frequent but less formalized cooperation and dialogue among like-minded states and major space actors. Ronald Sega, as the DoD Executive Agent for Space, with my office supporting him, has already taken several steps in this direction. For example, he chairs an annual meeting with the chief executive officers of all major commercial satellite communications providers, such as Intelsat and Inmarsat, and this transparent effort is helping to institutionalize a process for the improved sharing of space situational-awareness information and good housekeeping practices in outer space. One specific good housekeeping tool that may be developed from this effort would be a data warehouse for ephemeris and propagation data for all active satellites. Such a warehouse would make freely available information that could be used by satellite operators to plan for and avoid conjunctions.

### D. Impacts-Co-operative peaceful space development creates a global community of nations-solves all war.

Asimov ‘3 [Isaac Asimov, author, former president of the American Humanist Association, and biochemist, Speech at Rutgers University, "Our Future in the Cosmos-Space," http:/lwww.wronkiewicz.net~asimov.html]

I have a feeling that if we really expanded into space with all our might and made it a global project, this would be the equivalent of the winning of the West. It's not just a matter of idealism or preaching brotherhood. If we can build power stations in space that will supply all the energy the world - needs, then the rest of the world will want that energy too. The only way that each country will be able to get that energy will be to make sure these stations are maintained. It won't be easy to build and maintain them; it will be quite expensive and time-consuming. But if the whole world wants energy and if the price is world cooperation, then I think people are doing to do it. We already cooperate on things that the whole world needs. International organizations monitor the world's weather and pollution and deal with things like the oceans and with Antarctica. Perhaps if we see that it is to our advantage to cooperate, then only the real maniacs will avoid cooperating and they will be left out in the cold when the undoubted benefits come in. I think that, although we as nations will retain our suspicions and mutual hatreds, we will find it to our advantage to cooperate in developing space. In doing so, we will be able to adopt a globalist view of our situation. The internal strife between Earthlings, the little quarrels over this or that patch of the Earth, and the magnified memories of past injustices will diminish before the much greater task of developing a new, much larger world. I think that the development of space is the great positive project that will force cooperation, a new outlook that may bring peace to the Earth, and a kind of federalized world government. In such a government, each region will be concerned with those matters that concern itself alone, but the entire world would act as a unit on matters that affect the entire world. Only in such a way will we be able to survive and to avoid the kind of wars that will either gradually destroy our civilization or develop into a war that will suddenly destroy it. There are so many benefits to be derived from space exploration and exploitation; why not take what seems to me the only chance of escaping what is otherwise the sure destruction of all that humanity has struggled to achieve for 50,000 years? That is one of the reasons, by the way, that I have come from New York to Hampton despite the fact that I have a hatred of traveling and I faced 8 hours on the train with a great deal of fear and trembling. It was not only The College of William and Mary that invited me, but NASA as well, and it is difficult for me to resist NASA, knowing full well that it symbolizes what I believe in too.

## Link-Militarization

### ANY military installation violate the OST.

Steve TULLIU and Thomas SCHMALBERGER UNIDR: UN Institute of Disarmament Research. 2003 “Coming to Terms with Security: A Lexicon for Arms Control, Disarmament and Confidence-Building” http://www.unidir.org/pdf/ouvra ges/pdf-2-92-9045-152-1-en.pdf

OUTER SPACE TREATY (Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies)

Multilateral accord that prohibits the deployment of objects carrying nuclear or other kind of weapons of mass destruction (WMD) in orbit, on celestial bodies, or in outer space. Further, the moon and other celestial bodies are to be used exclusively for peaceful purposes, and the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies, is forbidden. The Treaty entered into force on 10 October 1967. It is of unlimited duration and withdrawal requires one year prior notification.

### Even a perceived infringement of the OST violates it.

UNITED NATIONS INSTITUTE FOR DISARMAMENT RESEARCH November 2002 “OUTER SPACE AND GLOBAL SECURITY Geneva - 26-27 CONFERENCE REPORT” <http://www.unidir.org/pdf/activites/pdf3-act238.pdf>

Jonathan Dean, of the Union of Concerned Scientists, assessed the current legal regime related to outer space activity, which includes but is not confined to the 1967 Outer Space Treaty (OST).3 Dean argued that this body of law establishes a legal norm against the weaponization of space, and also places certain constraints on potential space weapons development. He argued that to use weapons against any early warning, imaging or intelligence satellite would violate the concept of non-interference with national technical means of verification, described in the SALT and START treaties. This principle provides the basis for General Assembly resolutions calling for non-interference with communications, weather and GPS satellites. He also suggested that there are grounds for the UN General Assembly to call for an Advisory Opinion from the International Court of Justice (ICJ) to assess specific actions the US might take in pursuing space-based missile defence for example, and establish a legal opinion on the validity of pursuing space weapons. Articles VII and IX of the OST allow for consultations to resolve dispute over space activity, including a Liability Claims Commission. Dean argued that immediate steps should be taken to demonstrate international concern over US intentions.

## Link-NMD

### **NMDs are considered Space Weapons. 1AC Author**

CIAO Focus May 2004 (CIAO Focus, May 2004: Space Weapons, <http://www.ciaonet.org/focus/focus_0405.html>)

Given recent public statements and military assessments, such as the Air Force's Vision 2020 report, the deployment of space weapons has the air of inevitability. The weaponization of outer space is controlled through norms and treaties, most notably the 1967 Outer Space Treaty which prohibited the deployment of weapons of mass destruction in space and was signed by 97 countries, including the United States. The treaty bans weapons of mass destruction from space, defined as "nuclear weapons or any other kinds of weapons of mass destruction." Space weapons fall into three general categories: those that would defend against ballistic missile attacks, those that attack or defend satellites, and those that would strike terrestrial targets.

## AT “It’s not Militarization”

### It wouldn’t be perceived as “for the benefit of all mankind”-even this perception kills the OST.

Wolter, Detlev. 2007. (PhD in international law and arms control from Humboldt University and Head of European Policy and Law Division)("Common Security in Outer Space and International Law." Global Security Institute (2007): 4-5. Web. <www.reachingcriticalwill.org/ legal/paros/CSSEP%20Wolter% 20final.doc>)

The legal status of outer space as determined in the Outer Space Treaty (OST) of 1967 requires that the use and exploration of space have to be in the “interest of all states” and “for the benefit of all mankind” (Article I OST). And thus emerges an implication, indeed an obligation, of all states to embrace “common” or “cooperative security” as the only option for truly guaranteeing the peaceful use of space. Such a cooperative regime finds its legal basis established in the mankind clause in Article I of the OST and the principle of cooperation and due account of the interests of all states in Articles IX and X of the OST, which are the principal elements attributing the status of outer space as a “common heritage of mankind.” However, in view of the risks of transgressing the line between the current passive military uses of space and the envisaged active military uses of a destructive nature in outer space (“weaponization of space”), the substantive and procedural institutionalisation of the mankind clause, the cooperation principle and the peaceful purpose clause as expressed in Articles I and IX of the OST becomes increasingly pressing.

## I/L-Int’l Co-Op

### OST solves international co-operation.

West, Jessica. 2007. ("Back to the future: The Outer Space Treaty turns 40." The Space Review. The Space Review, 10/15/2007. Web. <http://www.thespacereview.com/article/982/1>.)jk

At the heart of the OST is the advancement of civil space programs, which have fostered both international cooperation and technical and scientific achievement but also driven geostrategic competition. In recent years, changes in funding and policy priorities of several space programs indicate the growing rivalry in space, particularly in human space flight and lunar exploration. In 2003 China became the third country to launch a human into space, and India has since proposed a human spaceflight program. The US, Russia, Japan, India, China, and the European Space Agency have each announced plans for future lunar exploration. Whether or not these announcements will bear fruit, or if the new space race is real or imagined, the military tensions that drove the first space race cannot be ignored. Cooperation and rivalry in space tend to follow the geopolitical patterns on Earth, and there are indications that strategic partnerships are strengthening. Of note is the relaxation of US trade restrictions on sensitive space technologies to India at the same time that China is working with key allies such as Pakistan, Nigeria, and Venezuela. The OST aimed to reduce the potential for confrontation in space, but as the number of players increases and the stakes get higher, it becomes more difficult to manage political and military tensions.

## Turns ASATS

### Credible OST solves ASAT development.

Bhat, Sandeepa, and Kiran Mohan. 2009. ("ANTI SATELLITE MISSILE TESTING: A CHALLENGE TO ARTICLE IV OF THE OUTER SPACE TREATY." NUJS LAW REVIEW (2009): 208-209. Web. <www.nujslawreview.org/.../sandeepa-bhat-and-kiran-mohan-v.pdf>.)jk

Article IV of the OST establishes a clear prohibition against placing in orbit around Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction. It reads, “The moon and other celestial bodies shall be used by the state parties to the treaty exclusively for peaceful purposes. The establishment of military bases, fortifications and installations, the testing of any type of weapons and the conduct of military maneuvers shall be forbidden.” An reasonable interpretation of the expression ‘any type of weapons’ used in the clause would naturally include weapons with ASAT capabilities. Amongst the other safeguards against ASAT weapons, one of the prominent would include Article IX of the OST, which directs nations to “undertake appropriate international consultations” before proceeding with any activity that might cause “potentially harmful interference with the activities of other states in the peaceful exploration and use of outer space.” Although the exact procedure and ramification of the consultation process is not clear, it is possible to argue that states developing ASATs should do so only after ‘appropriate international consultations.’ Nonetheless, the vague wording of Article IX and the forced nature of such an interpretation reduce the Article’s value as an arms control provision.

## Turns China

### Robust international space co-operation is a key check on Chinese aggression.

Hagt, Eric. 2007. (Eric Hagt is the Director of the China Program at the World Security Institute)("China’s ASAT Test: Strategic Response." China Security, Winter 2007 (2007): 36-37. Web. www.wsichina.org/cs5\_3.pd)jk

Even if we are facing the worst-case scenario and China is bent on space weaponization (entirely inconsistent with its past behavior), the reality remains that China can be brought to the negotiating table with appropriate measures and international pressure. After all, China clearly remains the far weaker space power vis-à-vis the United States and a space race would be proportionately far more costly to China than the United States. But in order for progress to be made, the United States also needs to come to terms with a new reality. China’s ASAT test was a voice of opposition both to the structure of security in space and the U.S. pursuit of military dominance in space at the exclusion of others.

## Turns Heg

### International cooperation is critical to U.S. space leadership.

Newton 11 (Elizabeth K., Professor of Physics – University of Alabama, Huntsville and Michael D. Griffin, Former Administrator – NASA and Eminent Scholar and Professor – University of Alabama, Huntsville, “United States Space Policy and International Partnership”, Space Policy, 27(1), February, p. 8)

1. Will the USA be more secure? As stated in the White House’s space policy and Lynn’s preview of the National Security Space Strategy, US security hinges on fostering a cooperative, predictable space environment where countries can operate in a stable, sustainable way. Planned debris tracking standards, considerations of international ‘rules of the road’, and shared data sets for collision avoidance and debris mitigation are measures that undoubtedly will contribute to the security of space as a shared venue for national activities. The stated desire to develop a Combined Space Operations Center for coalition operations could expand access to information, awareness, and services. Leveraging partner capabilities, integrating them into system architectures, and increasing the interoperability of systems are important planned steps as well. These new strategies do not diminish the USA’s current strengths in the national security space realm and quite likely stand to capitalize on international interest in multilateral solutions. Further information will doubtless be forthcoming in the Space Posture Review. One might also mention, under the theme of security, the USA’s ability to access its strategic assets in space. On the civil space side, the ‘gap’ in the government’s ability to access the International Space Station (ISS), a >$70 billion asset, after the Shuttle’s retirement is certainly detrimental from a strategic point of view. The USA will be dependent on the goodwill of international partners until an as-yet-unrealized commercial capability becomes available. However even then, the policy’s lack of support for having an independent federal capability is worrying, for it is tantamount to relying on FedEx without the back-up of a US postal service; or on commercial airlines without alternative military air transport; or on commercial weather forecasting without a National Oceanographic and Atmospheric Agency (NOAA).

## Impact-Space Debris

### **Asian co-op solves space debris-this kills any benefits of space and the ability to develop it-empirics prove.**

Fukushima – National Institute for Defense Studies, Ministry of Defense, Japan – 10

Yasuhito, An Asian perspective on the new US space policy: The emphasis on international cooperation and its relevance to Asia, December

Another reason the USA is in need of cooperation has something to do with the fact that outer space is a highly interdependent domain. Just as the maritime domain has several major routes for transportation called the sea lines of communication, highways for satellites (e.g. LEO and GEO) exist in outer space.12 These are shared by all spacefaring nations and non-state actors, and are becoming increasingly congested as satellites and space debris increase. In this context, the NSP states “the now-ubiquitous and interconnected nature of space capabilities and the world’s growing dependence on them mean that irresponsible acts in space can have damaging consequences for all of us.” The NSP also names the increase in the amount of space debris and the risks of satellite collisions as examples of challenges for the sustainable use of space. These descriptions are no doubt influenced by the results of two incidents China’s 2007 ASAT test and the 2009 US-Russia satellite collision which have occurred since the last NSP was released in 2006. These two incidents have made the challenges to the sustainability of the space environment more imminent, multiplying the number of catalogued LEO space objects by more than 60%.13

### Debris guarantees extinction through blocking out the sun

Rebecca Johnson, Director of the Disarmament and Arms Control Programme at the Liu Institute for Global Issues, University of British Columbia, 2003, ("Missile defense and the weaponisation of space," ISIS Policy paper on missile defense, January, http://www.isisuk.demon.co.uk/0811/isis/uk/bmd/no11.html)

Space in low earth orbit is teeming with human generated debris, defined by NASA as “any man-made object in orbit about the Earth which no longer serves a useful purpose”. There are some 9,000 objects larger than 10 cm and over 100,000 smaller objects. As orbiting debris may be travelling at very high velocities, even tiny fragments can pose a significant risk to satellites or spacecraft, as experienced by US astronaut Sally Ride, when a tiny, orbiting fleck of paint gouged the window of the space shuttle during her first flight.25 If the fleck of paint had been metal, its impact might have had lethal consequences. As noted by Joel Primack, a physics professor at the University of California and expert on the problems of space debris, “the weaponisation 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”.26 This would entomb the earth and jeopardise the possibility of further space exploration. In addition, 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 twiligh**t”**.27

## **Impact-Economy 1/2**

### Cooperation key to competitiveness

Col Rendleman and Faulconer – 10 James and J. Walter, Improving international space cooperation: Considerations for the USA, Space Policy 26 (2010) 143-151

Scientific research, engineering, and innovation are at the heart of the success of the US economy and world leadership. Some argue that the Apollo Moon landing program laid the technical foundations and infrastructure underpinning advances by the USA for the next 40 years. It inspired hundreds of thousands to become engineers and live on the innovation frontlines. Its communications, weather, precision navigation and timing, surveillance and warning satellites systems became part of a revolution that connected the USA and the rest of the world. Even when interest in manned space programs waned, the engineers it generated drove a technological innovation engine that sparked many years of advances a cross many other arenas. These successes rightly led to the 20th century being called the American Century. Over the past 50 years, 50-85% of the growth in America’s gross national product (GNP) can be attributed to its science and engineering strengths. As noted in a recent report published by the National Academy of Sciences, “scientists and engineers tend, through innovation, to create new jobs not only for themselves but also for workers throughout the economy.”27 They generate economic growth for others unlike many other elements of society, and this success is highly leveraged; only 4% of the US workforce is involved in engineering and science.28 Many other nations are eager to duplicate this success. They are working diligently to grow indigenous capabilities to exploit orbital space for their own commercial or military gain, or for national pride. This has all had the effect of generating considerable interest from other nations and commercial entities to seek space cooperation with USA and other potential partners. Initially such space cooperation might be perceived as inimical to the US aerospace industrial base: cooperation could cause decreased domestic employment because foreign nations could then build space systems and components that might otherwise have been constructed in the USA. India and China are producing huge numbers of science, technology, engineering, and math (STEM) qualified manpower in their rush to become first-tier superpowers. This is problematic for the USA, as cooperation with such states could allow them eventually to better engineer and then undercut US markets. While international space programs often survive the US Congress’ budget knife for the prestige and political reasons described above, spending on cooperative programs also generates large numbers of jobs. In turn, these can serve as key sources of revenue in local communities or among leading edge and educated engineering constituencies. Those who are employed in such programs benefit from the government largess that arises out of the cooperative space effort’s prestige and political support. On the other hand, the prospective loss of aerospace community jobs and revenue can easily pose a serious political problem for both the administration and Congress. Given this, political appointee and elected official perceptions of ongoing international cooperation programs is a matter of great importance.

**Impact-Economy 2/2**

### Economic decline causes global war

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

Less intuitive is how periods of economic decline may increase 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 transition from 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 a significant variable in 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 a strong correlation between 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 an increase 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 United States, 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 science scholarship 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.

## FMCT Disad 1/5

### **China supports FMCT now but is tentative due to possible US space-based missile defense**

Zhang, physicist and a specialist in nuclear arms control and Chinese nuclear policy issues, 2010 (Liu, “China’s Perspective on a Nuclear-Free World,” http://www.thewashingtonquarterly.com/10april/docs/10apr\_Zhang.pdf.)

Due to its concerns about U.S. missile defense and space weapons plans, however, China had stated its willingness to simultaneously discuss an FMCT and the prevention of an arms race in outer space (PAROS). In 2003, China dropped its insistence on a formal linkage between an FMCT and the PAROS negotiations and agreed to a negotiation of an FMCT alone. The United States, however, proposed an FMCT without verification in 2004, essentially blocking the restarting of negotiations yet again, although Obama declared in Prague that ‘‘the United States will seek a new treaty that verifiably ends the production of fissile materials intended for use in state nuclear weapons.’’ Although China’s recent position on an FMCT is to support the negotiations, the reference to ‘‘a comprehensive and balanced program of work acceptable to all’’ could mean a consideration of space weapons issues. In practice, if Beijing remains concerned about U.S. missile defense, one optional countermeasure for China is to build more ICBMs (even though its current stockpile is sufficient), which would mean a need for more plutonium and HEU to fuel those weapons, ultimately hurting China’s support of an FMCT. China may go so far as to be unwilling to negotiate or join an FMCT under those circumstances. In other words, U.S. missile defense and space weapons plans will affect China’s willingness to participate in an FMCT negotiation.

FMCT Disad 2/5

### Further NMD use leads to expansion of Chinese nuclear arsenal, kills US-China relations, promotes overall nuclear proliferation, and stops FMCT participation which is key to treaty passage

Zhang, physicist and a specialist in nuclear arms control and Chinese nuclear policy issues, 6/1/2k (Hui, “How US Missile Defense Plans Affect China’s Nuclear Arms Control Policies: A Chinese Perspective,” http://www.reachingcriticalwill.org/legal/nwc/mon2china.html.)

On September 1, 2000, the Clinton Administration opted to defer any decision on whether to deploy a national missile defense (NMD) intended to protect the United States from attacks by nuclear-tipped missiles. The new Bush administration, which assembled a pro-missile defense national security team, however, is likely to deploy missile defenses, even larger than Clinton’s version. Before taking irrevocable steps down this path, the United States should stop and consider that deploying missile defenses could have grave consequences for US-China relations, and the future of nuclear arms control. China will regard NMD deployment as a hostile act meant to neutralize its nuclear weapons. To China, US claims that missile defenses are intended to defend US territory from missile attacks by "states of concern" and unauthorized or accidental missile launches from Russia and China do not bear scrutiny. None of the alleged "states of concern" has actually initiated deployment of ballistic missiles capable of reaching the US in the foreseeable future. Nor would the planned system guard against thousands of Russian warheads. The US NMD system under development, however technically flawed, could in principle neutralize China’s strategic nuclear deterrent. China currently has about 20 single-warhead intercontinental ballistic missiles (ICBMs) capable of reaching the United States. Even the limited initial deployment of 100 interceptors designed for 4-to-1 engagements could intercept China’s entire current arsenal. China worries that the possible military superiority NMD could offer may allow the United States to feel it has more freedom to intervene in China’s affairs and encroach on its sovereignty, including undermining China’s efforts at reunification with Taiwan. This concern is exacerbated by US cooperative research and development of advanced Theater Missile Defense (TMD) with Japan and potentially Taiwan — the 1997 amended US-Japan Defense Cooperation Guidelines refer explicitly to "Cooperation in Situations in Areas Surrounding Japan," which could include Taiwan. Furthermore, in view of the recent noisy anti-China clamor raised by some politicians, including bombing China’s embassy at Belgrade and the recent spy plane incident, it may be natural for China to have some worries over this program. Given Chinese concerns, if the United States goes ahead and deploys even a limited system of national missile defenses, China is likely to react in ways that will hurt US-Chinese relations and harm US interests. To retain its nuclear deterrent, China’s direct response to the US NMD could be to speed up and enhance its nuclear arsenal modernization. For instance, China's relatively slow and modest pursuit of less vulnerable mobile and solid-fueled missiles may become more urgent. China’s military planners may make a worst-case assumption of 100 % effectiveness for US missile interceptors and prepare to face the fully deployed NMD system, which may have 250 interceptors. Thus, the number of ICBMs China fields might possibly be expanded tenfold or more. Moreover, all these missiles would be deployed with decoys and other countermeasures. Given its rate of economic and technological development, China can afford the possible costs of several billion dollars and overcome any technical obstacles over the next decade or so. Further, China could reconsider its participation in multilateral nuclear arms control treaties. Most important, perhaps, US NMD plans have already impacted negotiations on a global Fissile Material Cut-off Treaty (FMCT), which has been stuck at the UN Conference on Disarmament in Geneva since 1993. An FMCT, which would ban the production of nuclear materials for weapons, has long been seen as a key building block in nuclear disarmament and nonproliferation. The 2000 NPT Review Conference called for the CD to commence negotiations immediately on an FMCT, with a view to its conclusion within five years. China’s participation in an FMCT, however, will be critical to its success, however. Without China’s participation in the FMCT, India will not sign it, and Pakistan will not sign unless India does. Both South Asian countries and Israel are believed to be continuing to produce fissile materials for their stockpiles. Like the other four NPT nuclear weapon states, China is believed to have stopped producing highly enriched uranium and plutonium for weapons, and China has consistently supported the FMCT negotiations.

FMCT Disad 3/5

Because of its concerns about US missile defense plans, however, China has recently made clear it is not willing to start FMCT talks without also starting talks on agreements to prevent an arms race in outer space — which would include limiting US missile defenses. For China, the issues of NMD and an FMCT are inextricably linked, because China could not afford to end the production of both highly enriched uranium and plutonium for weapons if it needed this fissile material to expand its nuclear arsenal in response to US deployment of missile defenses. China also worries that US deployment of missile defenses over Russia’s objections–which have been strenuous and persistent–could scuttle the US-Soviet ABM treaty, which limits missile defenses. Russia has announced that continued US compliance with the ABM Treaty is a condition for Russia's implementation of the START I and START II nuclear-arms-reduction treaties. An end to the START process and possible resumption of arms racing could lead to a new and very serious threat to China’s small nuclear arsenal, giving China another reason to rethink its position on the FMCT. Moreover, a redoubled Chinese nuclear modernization effort could raise calls in China for carrying out additional nuclear tests to perfect modernized weapon designs. While such tests are barred by the Comprehensive Test Ban Treaty — another key element of the global regime limiting the spread of nuclear weapons — that treaty has never entered into force, the United States has refused to ratify it, and the United States would be withdrawing from or violating the ABM Treaty to build an NMD. In that situation, China might feel well within its rights to carry out prohibited tests in response. At the same time, with the United States carrying out an action that threatened China, China might well decide to stop cooperation with the United States in other security areas — such as constraining its nuclear and missile exports, helping to convince North Korea to rein in its arms programs, and working to resolve nuclear issues in South Asia. Eventually, failure to proceed with the nuclear disarmament process to which the nuclear weapon states are already committed under the nuclear Non-Proliferation Treaty would inescapably damage global efforts to prevent the spread of nuclear weapons. Thus the effect of US deployment of NMD would be a major breakdown of nuclear arms control. This would clearly not benefit any country’s security interests, including those of the United States. Should the United States run the risks posed by China’s potential responses to US deployment of NMD? The choice is for the new administration to make.

FMCT Disad 4/5

### FMCT stops proliferation and nuclear terrorism

Clinton, Secretary of State, 2/28/11 (Hillary, “Secretary Clinton Urges Conference on Disarmament to open FMCT Negotiations Without Delay,” http://geneva.usmission.gov/2011/02/28/secretary-clinton-our-long-term-goal-our-vision-is-a-world-without-nuclear-weapons/.)

Thank you, Mr. President. Thank you for your leadership and your efforts to make the Conference on Disarmament an effective tool for addressing the critical challenges we face today. I also want to thank the Secretary General for convening this important plenary session and for the opportunity to address you. And I owe a special thanks to our Ambassador Laura Kennedy and the U.S. mission here for their hard work in advancing President Obama’s disarmament agenda. Nearly 20 years after the end of the Cold War, the world has more than 20,000 nuclear weapons. As I speak to you today, centrifuges around the world are spinning out more enriched uranium, a still significant amount of it to weapons grade. Plutonium is being churned out in reactors and separated from spent fuel in reprocessing plants. The world faces no shortage of ingredients for nuclear bombs. Yet more fissile materials are made every single day. The question before us today is whether we will – at last – agree to end the dedicated production of fissile material for use in nuclear weapons. Halting production is in the interest of every country, and I urge this conference to end the stalemate and open negotiations on a Fissile Material Cutoff Treaty without further delay. The FMCT would be an important step toward creating the conditions for a world without nuclear weapons, a vision that President Obama laid out in Prague nearly two years ago, and it would build on the notable progress we have made together these past years. The United Nations Security Council unanimously approved Resolution 1887 to strengthen the global nonproliferation regime. The United States released our Nuclear Posture Review that reduces the prominence of nuclear weapons in our national defense. We convened a Nuclear Security Summit, where 47 countries agreed to lock down vulnerable nuclear materials over four years, and we joined with other NPT members in a successful Nuclear Nonproliferation Treaty Review Conference. And of course, the United States and Russia brought the New START Treaty into force. That treaty will cut our deployed strategic warheads to the lowest numbers since the 1950s. It was my great pleasure to exchange the instruments of ratification with Minister Sergey Lavrov in Munich earlier this month. Our two countries are now positioned to discuss further arms control reductions, including nonstrategic and non-deployed nuclear weapons. We must not squander this momentum. We should continue to advance nuclear security by turning now to the negotiation of a verifiable ban on fissile material production for bombs. The United States has been committed to the Conference on Disarmament as the logical forum for this negotiation. This conference after all produced such landmark treaties as the Biological and Chemical Weapons Conventions, the NPT, and the Comprehensive Test Ban Treaty. But the last treaty was completed in 1996. And this conference has been deadlocked ever since. The Program of Work agreed to in May 2009 remains stalled. And one single country – a country that is a friend and partner of the United States – continues to undermine the international consensus in favor of an FMCT. I know this conference has always cherished the principle of consensus, which ensures that every state can defend its national interests at the negotiating table. But our patience is not infinite. There is no justification for a single nation to abuse the consensus principle and forever thwart the legitimate desire of the 64 other states to get negotiations underway on an agreement that would strengthen our common security. It is clear that there is a wide range of views inside the conference, and these views will have to be accommodated through the process of negotiation. That process will be difficult, and it will take a number of years, and it that is all the more reason to begin negotiations now. If we cannot summon the shared will even to begin negotiations in this body, then the United States is determined to pursue other options. Global nuclear security is too important to allow this matter to drift forever. The FMCT is critical to our broader agenda. If we are serious about reducing the possibility that fissile material could fall into terrorists’ hands, then we must reduce the amount of such material that is available. For that reason, the United States also supports reducing stocks of separated plutonium and highly enriched uranium and minimizing the future use of highly enriched uranium for civilian purposes.

FMCT Disad 5/5

The United States has made significant progress towards those goals – both bilaterally with Russia and multilaterally – and we will continue to make them an important focus of U.S. nuclear diplomacy. The United States is deeply committed to reducing nuclear weapons and the risk of nuclear proliferation. Our long-term goal, our vision, is a world without nuclear weapons. Now, we understand this will be difficult and it will certainly take time. But we believe it is attainable if we tackle each piece of the problem step by step. Therefore, I ask each of your nations for support in strengthening global security by taking the next step – beginning negotiations on a Fissile Material Cutoff Treaty. No nation has to agree to the treaty. But it is unacceptable for any nation to prevent other nations from pursuing what such a treaty could look like and what benefits it could produce for the world. So I hope that we will see action now from this esteemed conference that has meant so much to the world over so many years. This is the forum; you are the leaders who should be making these decisions. It would be unfortunate if that were not to be pursued in terms of this particular treaty. And the United States stands ready to support the beginning of negotiations, to do whatever is necessary to try to accommodate legitimate national interests, and then to reach a resolution and the production of such a treaty, otherwise we believe this is too important a matter to be left in a deadlock forever. So we thank you for your attention to this critical issue and we look forward to working with you as we continue the work of a Conference on Disarmament. Thank you very much.

### Prolif causes multiple scenarios for nuclear war.

Taylor, former Deputy Director of the Defense Nuclear Agency, 1

Theodore, Chairman of NOVA, Former Nuclear Weapons Designer, Recipient of the US Atomic Energy Commission’s 1965 Lawrence Memorial Award and former Deputy Dir. of Defense Nuclear Agency, “Proliferation of Nuclear Weapons”, in “Breakthrough: Emerging New Thinking”, http://www-ee.stanford.edu/~hellman/Breakthrough/book/chapters/taylor.html

Nuclear proliferation - be it among nations or terrorists - greatly increases the chance of nuclear violence on a scale that would be intolerable. Proliferation increases the chance that nuclear weapons will fall into the hands of irrational people, either suicidal or with no concern for the fate of the world. Irrational or outright psychotic leaders of military factions or terrorist groups might decide to use a few nuclear weapons under their control to stimulate a global nuclear war, as an act of vengeance against humanity as a whole. Countless scenarios of this type can be constructed. Limited nuclear wars between countries with small numbers of nuclear weapons could escalate into major nuclear wars between superpowers. For example, a nation in an advanced stage of "latent proliferation," finding itself losing a nonnuclear war, might complete the transition to deliverable nuclear weapons and, in desperation, use them. If that should happen in a region, such as the Middle East, where major superpower interests are at stake, the small nuclear war could easily escalate into a global nuclear war.

## Miscalc Turn

### NMD falsely boosts the confidence of US and its allies which leads to miscalculation and nuclear war

### **Butt**, physicist in the High-Energy Astrophysics Division at the Harvard-Smithsonian Center for Astrophysics. Former fellow in the Committee on International Security and Arms Control at the National Academy of Sciences, nuclear physics Ph.D., 5/8/**10** (Yousaf, “The myth of missile defense as a deterrent,” http://www.thebulletin.org/web-edition/features/the-myth-of-missile-defense-deterrent.)

Exaggerating the abilities of missile defense is downright dangerous and military leaders ought to make sure that it doesn't happen; unfortunately, it does. Take, for example, these claims made in the February 2010 Ballistic Missile Defense Review (BMDR) report PDF: "The United States now possesses a capacity to counter the projected threats from North Korea and Iran for the foreseeable future." And: "The United States is currently protected against the threat of limited ICBM [intercontinental ballistic missile] attack, as a result of investments made over the past decade in a system based on ground-based midcourse defense." Neither of these statements is remotely true. The current system cannot even reliably intercept a single missile that's launched at a known time and on a known trajectory. None of the various missile defense systems, sea- or land-based, have ever been tested in a realistic setting: For instance, a surprise attack with salvos of missiles with decoy warheads (and other countermeasures) and unknown trajectories. J. Michael Gilmore, the director of the Operational Test and Evaluation Office of the Secretary of Defense, recently testified PDF that "it will take as many as five to seven years to collect" just the necessary data to determine whether the administration's planned missile defense architecture is even sensible. And if future tests do prove it to be an empirical failure will the administration really roll back missile defense? It's unlikely. The long-range plans appear to be unencumbered by any realistic testing requirements. Unfounded claims of missile defense's effectiveness create a serious risk that political leaders might be misled into mistakenly believing that missile defenses actually work. And if they incorrectly think that missile defense has secured the country by neutralizing the threat of ballistic missile attack, policy makers might be emboldened to stake out riskier and more aggressive regional policies than in the absence of missile defense. A similar mistaken confidence in overwhelming U.S. conventional firepower misled Washington into the Iraq War debacle; nuclear miscalculations would be much more costly. For this reason, missile defense should not, as the NPR claims it would, play any role in "reassuring allies and partners around the world"; no ally should feel secured by a defensive system that can be penetrated by nuclear-tipped missiles. If allies do feel they have neutralized their adversaries' deterrent forces, they too might be tempted to undertake riskier actions, possibly leading to conflict and ultimately even U.S. nuclear intervention. A misplaced confidence in missile defenses could even lull Washington into complacency regarding the spread of WMD and ballistic missile technology: Imagining that they have largely addressed the threat from ballistic missiles, policy makers might feel less urgency to fight proliferation.

## Arms Race Turn

### Space-based missile defense results in an arms race with China, India, and Pakistan—impact is nuclear war.

Zhang, physicist and a specialist in nuclear arms control and Chinese nuclear policy issues, 2010 (Liu, “China’s Perspective on a Nuclear-Free World,” http://www.thewashingtonquarterly.com/10april/docs/10apr\_Zhang.pdf.)

Beijing has paid close attention to the missile defense issue. Chinese officials have expressed a growing concern that U.S. space and missile defense plans will stimulate a costly and destabilizing arms race. In its 2008 white paper, Beijing maintains that ‘‘the global missile defense program will be detrimental to strategic balance and stability, undermine international and regional security, and have a negative impact on the process of nuclear disarmament.’’ Responding to continued U.S. missile defense cooperation with Taiwan and Japan, China further contended that: . . . the establishment of a global missile-defense system, including the deployment of the system in some parts of the world and related cooperation . . . is neither conducive to global arms control and non-proliferation efforts nor favorable to mutual trust among states and regional stability. We hope that parties concerned could seriously consider other countries’ position and concern, so as to address this issue properly. Some Chinese officials are concerned that even a limited missile defense system could neutralize China’s fewer and smaller nuclear forces. ‘‘It is evident that the U.S. [national missile defense system] will seriously undermine the effectiveness of China’s limited nuclear capability from the first day of its deployment,’’ said Sha Zukang, while he served as the Chinese disarmament ambassador to the UN and a former director general of the Department of Arms Control and Disarmament at the Ministry of Foreign Affairs. ‘‘This cannot but cause grave concerns to China,’’ he said. Many Chinese officials assume that China is the real target for U.S. missile defense and space planning. From Beijing’s perspective, it is inconceivable that Washington would expend such massive resources on a system that would be purely defensive and aimed only at ‘‘rogue’’ states. Although the Obama administration had changed the Eastern European elements of the missile defense program, thus temporarily relaxing Russian concerns and encouraging Moscow’s willingness to negotiate a START followup, the United States still plans to develop its missile defense systems, which could impede further reduction of U.S. and Russian arsenals. Even worse, the changes in the Eastern European elements do nothing to relax China’s concerns about U.S. domestic ground-based midcourse defense systems based in California and Alaska, which U.S. officials claim are mainly there to target rogue missiles, but are assumed in Beijing to indirectly target China. Eventually, as a countermeasure to U.S. missile defense, China would likely be forced to build more warheads to maintain its nuclear deterrent, which could encourage India and then Pakistan to follow suit.

## Prolif Turn 1/2

### NMD leads to nuclear proliferation – defense only sparks offensive measures from enemies

Butt, physicist in the High-Energy Astrophysics Division at the Harvard-Smithsonian Center for Astrophysics. Former fellow in the Committee on International Security and Arms Control at the National Academy of Sciences, nuclear physics Ph.D., 5/8/10 (Yousaf, “The myth of missile defense as a deterrent,” http://www.thebulletin.org/web-edition/features/the-myth-of-missile-defense-deterrent.)

It's often incorrectly asserted that missile defenses dissuade adversaries from researching and producing ballistic missiles. For instance, the BMDR report states: "The United States, with the support of allies and partners, seeks to create an environment in which the acquisition, deployment, and use of ballistic missiles by regional adversaries can be deterred, principally by eliminating their confidence in the effectiveness of such attacks, and thereby devaluing their ballistic missile arsenals." But the countries developing ballistic missile technology do so for numerous reasons, not just to launch nuclear attacks against the United States. Many countries desire conventional ballistic missile technology for prestige or because of regional considerations. Whether or not a U.S. missile defense system is operational, such nations will still try to acquire ballistic missile technology. In fact, the countries of most interest to the United States--Iran and North Korea--currently have well-developed ballistic missile programs. The BMDR's claims of an already-functioning missile defense shield obviously haven't diminished their ballistic ardor. Furthermore, space-launch technology and ICBM technology are identical, and U.S. missile defenses are unlikely to dissuade an adversary from pursuing a space-launch capability. So missile defense has been, is, and will be, an empirical failure at dissuading countries of concern to the United States from pursuing ballistic missile programs. Instead of dissuading countries from pursuing ballistic missiles, missile defense actually incites proliferation. Adversarial and competitor nations will build up their offensive capabilities to ensure some missiles get through. The development of alternate delivery methods and sneakier attack tactics will be a natural response to the fielding of a U.S. missile defense system. As the bipartisan Strategic Posture Commission has pointed out PDF, "China may already be increasing the size of its ICBM force in response to its assessment of the U.S. missile defense program." And the BMDR report explicitly states, "Both Russia and China have repeatedly expressed concerns that U.S. missile defenses adversely affect their own strategic capabilities and interests." As George Lewis and Ted Postol have reported, in the past, Russia had a legitimate concern regarding U.S. missile defense architecture in Eastern Europe. Interceptors based in Poland could "engage essentially all Russian ICBMs launched against the continental United States from Russian sites west of the Urals. It is difficult to see why any well-informed Russian analyst would not find such a potential situation alarming." Similar concerns are now resurfacing. Considering that missile defense won't change the U.S. strategic equation with respect to Iran or North Korea (except perhaps to engender in leaders a false sense of security), is it really worth unnecessarily antagonizing U.S. relations with Russia and China and possibly sparking Russia's withdrawal from New START? Just as with nuclear weapons, the U.S. infatuation with missile defense will cause other nations to desire this expensive and destabilizing technology. Following the U.S. lead, both China and India now have missile defense test programs. It doesn't take much imagination to anticipate Pakistan's response. There will be legitimate pressure for Islamabad to attempt to redress this perceived Indian defense by producing more missiles and nuclear weapons. In response, India and subsequently China will likely increase their own stockpiles--in turn increasing pressure on U.S. and Russian strategists to respond. So rather than reducing the value of nuclear weapons, missile defense actually increases it. Unfortunately, much of the wrongheaded and inaccurate thinking about the deterrent value of missile defense has seeped into the NPR. Thus, there's now an urgent need for an informed, unbiased reappraisal of U.S. strategic thinking on the conceptual basis of nuclear missile defense policy.

Prolif Turn 2/2

### Wildfire prolif will trigger global preemptive nuclear wars.

Utgoff 02, Deputy Director of Strategy, Forces, and Resources Division of Institute for Defense Analysis [Victor A., “Proliferation, Missile Defence and American Ambitions,” Survival, Summer, p. 87-90] bg

Further, the large number of states that became capable of building nuclear weapons over the years, but chose not to, can be reasonably well explained by the fact that most were formally allied with either the United States or the Soviet Union. Both these superpowers had strong nuclear forces and put great pressure on their allies not to build nuclear weapons. Since the Cold War, the US has retained all its allies. In addition, NATO has extended its protection to some of the previous allies of the Soviet Union and plans on taking in more. Nuclear proliferation by India and Pakistan, and proliferation programmes by North Korea, Iran and Iraq, all involve states in the opposite situation: all judged that they faced serious military opposition and had little prospect of establishing a reliable supporting alliance with a suitably strong, nuclear-armed state. What would await the world if strong protectors, especially the United States, were [was] no longer seen as willing to protect states from nuclear-backed aggression? At least a few additional states would begin to build their own nuclear weapons and the means to deliver them to distant targets, and these initiatives would spur increasing numbers of the world’s capable states to follow suit. Restraint would seem ever less necessary and ever more dangerous. Meanwhile, more states are becoming capable of building nuclear weapons and long-range missiles. Many, perhaps most, of the world’s states are becoming sufficiently wealthy, and the technology for building nuclear forces continues to improve and spread. Finally, it seems highly likely that at some point, halting proliferation will come to be seen as a lost cause and the restraints on it will disappear. Once that happens, the transition to a highly proliferated world would probably be very rapid. While some regions might be able to hold the line for a time, the threats posed by wildfire proliferation in most other areas could create pressures that would finally overcome all restraint. Many readers are probably willing to accept that nuclear proliferation is such a grave threat to world peace that every effort should be made to avoid it. However, every effort has not been made in the past, and we are talking about much more substantial efforts now. For new and substantially more burdensome efforts to be made to slow or stop nuclear proliferation, it needs to be established that the highly proliferated nuclear world that would sooner or later evolve without such efforts is not going to be acceptable. And, for many reasons, it is not. First, the dynamics of getting to a highly proliferated world could be very dangerous. Proliferating states will feel great pressures to obtain nuclear weapons and delivery systems before any potential opponent does. Those who succeed in outracing an opponent may consider preemptive nuclear war before the opponent becomes capable of nuclear retaliation. Escalation of violence is also basic human nature. Once the violence starts, retaliatory exchanges of violent acts can escalate to levels unimagined by the participants before hand. Intense and blinding anger is a common response to fear or humiliation or abuse. And such anger can lead us to impose on our opponents whatever levels of violence are readily accessible. In sum, widespread proliferation is likely to lead to an occasional shoot-out with nuclear weapons, and that such shoot-outs will have a substantial probability of escalating to the maximum destruction possible with the weapons at hand. Unless nuclear proliferation is stopped, we are headed toward a world that will mirror the American Wild West of the late 1800s. With most, if not all, nations wearing nuclear ‘six-shooters’ on their hips, the world may even be a more polite place than it is today, but every once in a while we will all gather on a hill to bury the bodies of dead cities or even whole nations.

## China Frontline 1/5

### China’s rise is peaceful-

### a. Emphasis on soft power.

Gifford 6/6

Rob Gifford is a staff-writer for NPR, China’s Rise: A Quest to Hug the World?, 6/6/11, http://www.npr.org/2011/06/06/136889301/chinas-rise-a-quest-to-hug-the-world

China's search for natural resources comes in the context of its growing military. But many Chinese people point out that it was the West that semi-colonized China in the 19th century, not the other way around, and they stress that China's peaceful culture has not changed since Adm. Zheng He's time. Aware of its need to project its soft power, the Chinese government has put out advertisements and expanded a whole department of the Chinese Ministry of Education to recruit teachers and send them out to foreign countries around the world, promoting the teaching of Mandarin. Xiang Huanxin, 24, went to Thailand to teach, and like many young Chinese, she believes China will never threaten anyone. "China's rise is very different from Westerners' rise 100 years ago," she says. "For a country, if you want to rise, you can't force people to accept you. If people love you, they will accept you. That's what Chinese people think."

### b. Strengthening relations.

Wenzhao, 09

Senior Researcher at the Institute of American Studies of the Chinese Academy of Social Sciences (Tao, 2/17/09, “Positive signs ahead for Sino-US relations,” China Daily, http://www.chinadaily.com.cn/cndy/2009-02/17/content\_7482140.htm)

The direction of Sino-US relations under Barack Obama's presidency is drawing increasing attention as the new US administration takes shape. The new president made remarks about China during his election campaign and wrote for the US Chamber of Commerce in China an article on the prospect of Sino-US ties in his term of office. In January, newly assigned Secretary of State Hillary Clinton also deliberated on US foreign policy in a Senate hearing. Obama acknowledges that common interests exist between China and the US and welcomes a rising China. He realizes China's remarkable achievement in the past 30 years has driven economic development in neighboring nations and believes its emergence as a big power is irreversible and the US should cooperate to deal with emerging challenges. The US and China have had effective and smooth cooperation on a wide range of economic and security issues, from anti-terror, nonproliferation and climate change to the restructuring of the extant international financial system. This is expected to be the new administration's mainstream China policy and dominate the future of Sino-US relations. As multilateralism believers, both President Obama and Vice-President Joe Biden advocate international cooperation instead of unilateral action to deal with international challenges and resolve disputes. Fruitful cooperation between China and the US on the Korean Peninsula nuclear issue clearly indicates constructive bilateral and multilateral cooperation on sensitive issues can help ease strained regional situations. The new US administration has expressed its wishes to continue to promote a stable Korean Peninsula and to improve ties with the Democratic People's Republic of Korea. The new administration has also expressed expectations for cooperation with China on other international issues, such as the Iranian nuclear and Darfur challenges. China now plays a crucial role in the world's political landscape and we look forward to cooperative ties with it, Clinton recently said. **Ever-deepening economic and trade ties, as the cornerstone of bilateral relations, are expected to continue to develop during Obama's tenure**.

China Frontline 2/5

### Double bind on their Freidburg evidence, either—

### Realism means China will inevitably challenge the U.S. despite the plan OR

### They don’t get their only Chinese expansionism coming now evidence.

### No risk of Chinese space attacks

Zhang ‘5

(Hui, research associate at Harvard Kennedy School, December 2005, “Action/Reaction,” Arms Control Association, http://www.armscontrol.org/act/2005\_12/DEC-CVR)

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] Most analysts believe no country seriously threatens U.S. space assets.[9] 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] No wonder that many countries, including China and Russia, have sought multilateral negotiations on the prevention of space weaponization.

### China isn’t even developing ASAT’s – their evidence is based on faulty old intelligence

Day ‘8

(Dwayne, 6-23, “Paper Dragon,” Space Review, http://www.thespacereview.com/article/1155/1)

But if you look in the current version of CMP, laser ASATs are mentioned only briefly, without any supporting evidence. Thus, over the past several years, Military Power of the People’s Republic of China has gone from extensive discussion about Chinese interest in laser ASATs, to the conclusion that they were actually in development, to dramatically downplaying the entire subject. Now there could be a number of reasons for this. Intelligence reports only represent points in time and they are inherently incomplete and inaccurate. Perhaps the U.S. intelligence community gathered better information indicating that the possibility of Chinese laser ASAT weapons is now less likely than they thought five years ago. Or perhaps the Chinese abandoned laser research that proved too costly or unproductive. Or perhaps the authors of CMP took a closer look at their earlier data and determined that it was unreliable. We do not know. Like the parasitic microsatellite case, the DoD has not bothered to explain why it changed its conclusions. However, this is important in part because it does not appear as if the American press actually noticed the change. When the 2008 version of CMP was released, several press accounts noted that the report indicated that the Pentagon believes that China is now developing laser ASATs—ignoring the fact that a) such a claim has appeared in numerous previous versions of CMP, and b) the Pentagon statements about Chinese laser ASATs have actually decreased over time.

China Frontline 3/5

### At best, China could take out 16 satellites.

Forden ‘8

(Geoffrey, PhD at MIT, former UN weapons inspector, 1-10, “How China Loses,” Wired, http://blog.wired.com/defense/2008/01/inside-the-chin.html#more)

But does China have enough to wipe out even a single set of American satellites? Let’s examine the possibilities: Attacking Navigation Satellites You need a launch pad to attack a target in deep space, like an American GPS satellite. China has just three of these pads. This really restricts China’s offensive capabilities in space. Assuming that China devotes all its deep-space ASATs on GPS satellites, it could destroy at most 16 satellites. At the current time, with 32 functioning navigation satellites, that would still leave 16 satellites still working. Over a period of years, the debris from those collisions would represent a significant threat to more than those satellites immediately attacked. They would pass, time and time again, through the belts of debris that resulted from the interceptions. However, it would probably take longer than the military conflict China initiated with these attacks before additional satellites were destroyed by subsequent collisions. Usually, there are about nine GPS satellites over China at any given time. If China somehow managed to destroy all of these, it could eliminate America’s use of precision-guided munitions—for a few hours, until the orbits of other GPS satellites take them over the Taiwan Straits. Quite quickly, the constellation’s other 23 satellites would fill in the gap due to their normal orbital movement. Even if it destroyed 16 satellites, China could still only interrupt GPS over the Straits for about eight hours. During the other 16 hours there would be the four or more satellites present over the target area for bombing runs, unmanned aerial vehicle (U) flights, and ship tracking. This pattern of eight hours off followed by 16 hours when GPS could be used would be repeated every day until new satellites are launched. This outage would certainly cause difficulties; GPS not only guides American precision bombs – it helps pilot UAV spy planes, and monitor ships. US casualties might increase, with air crews forced to fly missions during daylight hours – and conduct some of the "dull, dirty, and dangerous" missions now flown by robotic planes. It’s a situation no American commander would want to face. But it would not be a catastrophic one. And it would not eliminate precision weaponry, UAVs, or any other American activity that depends on GPS. Keep in mind, this is the worst of the worst-case scenarios. It is highly unlikely that China could remove all the satellites over the conflict area at the same time. After all, attacking 16 satellites, all in different orbits with ASATs launched on just four different rockets involves some fairly complex orbital maneuvers. A much more likely scenario is that, at best, China could destroy four GPS satellites in the initial wave followed roughly seven hours later by four more, a third wave at roughly 45 minutes after that, and the final wave two hours later. Thus, the GPS attack is spread over ten hours and never eliminates all the satellites visible over the area of conflict at the same time. This Chinese attack on US navigation satellites would not eliminate or even significantly degrade the US’s ability use precision-guided munitions.

China Frontline 4/5

### Prevalence of fiber optics minimizes the economic importance of satellites.

Held ‘99

Gilbert Held is an internationally known award-winning lecturer and author, he is the author of more than 40 technical books and 300 articles covering the fields of personal computing and computer communications, Fiber-Optic and Satellite Communications, http://technet.microsoft.com/en-us/library/bb726936.aspx

The photophone demonstrated the basic principle of optical communications as it is practiced today. The two requirements for commercial success, however, were almost a hundred years away. These requirements were a powerful and reliable light source and a reliable and low-cost medium for transmission.In 1960, the laser was recognized as the long-sought light source, and systems were tried using both the atmosphere and beam waveguides as the transmission medium. The application of a glass fiber with a cladding was proposed in 1966, and by 1970, fibers with losses of only 20 decibels per kilometer (dB/km) were demonstrated. Since then, progress in the invention and application of fiber optics has been startling. Fibers with losses of less than 0.2 dB/km have been demonstrated in the laboratory (in 1979), as have systems that can transmit at data rates in excess of 400 million bits per second (Mbps) over distances in excess of 100 km without repeaters or amplifiers. Advances in fiber optics began to threaten to make satellite systems obsolete for some kinds of communications (point-to-point where large bandwidths are required, such as transoceanic telephone systems) only 15 years after the satellite systems were commercially employed as the communications systems of the future. Today modern optical fibers are capable of transporting information at data rates exceeding several Gbps. In fact, applying the principle of frequency division multiplexing to light in the form of wavelength division multiplexing (WDM) enables a single fiber to transport up to ten multi Gbps transmissions! To put this in context with something we might appreciate, this is equivalent to transporting the contents of the Library of Congress in perhaps a second! Optical-fiber transmission has come of age as a major innovation in telecommunications. Such systems offer extremely high bandwidth, freedom from external interference, immunity from interception by external means, and cheap raw materials (silicon, the most abundant material on earth).

### Their Mead evidence doesn’t assume two years of prolonged economic decline and their Lewis evidence is from 1998.

### Emerging markets mean the U.S. economy isn’t key to the world economy.

Wassener, BETTINA 6/30/09 (news rerporter from the new york times. Newyorktime.com)

For a while, when the economic crisis was at its worst, it was a dirty word that only the most provocative of analysts dared to use. Now, the D-word — decoupling — is making a comeback, and nowhere more so than in Asia. Put simply, the term refers to the theory that emerging markets — whether China or Chile — will become less dependent the United States as their economies become stronger and more sophisticated. For much of last year, the theory held up. Many emerging economies had steered clear of investments that dragged down banking behemoths in the West, and saw nothing like the turmoil that began to engulf the United States and Europe in 2007. But then, last autumn, when the collapse of Lehman Brothers caused the financial system to convulse and consumer demand to shrivel, emerging economies around the world got caught in the downdraft, and the D-word became mud. Now, the tables are turning, especially in Asia, where many emerging economies are showing signs of a stronger recovery than in the West. And economists here have begun to talk of the decoupling once again. “Decoupling is happening for real,” the chief Asia-Pacific economist at Goldman Sachs in Hong Kong, Michael Buchanan, said in a recent interview.

China Frontline 5/5

### Economic decline doesn’t cause war-it makes military spending difficult, economic collapses are isolated, and outsourcing disproves diversionary theory.

Deudney 91 - Hewlett Fellow in Science, Technology, and Society at the Center for Energy and Environmental Studies, Princeton [Daniel, Bulletin of the Atomic Scientists]

In addition, economic decline does not necessarily produce conflict. How societies respond to economic decline may largely depend upon the rate at which such declines occur. And as people get poorer, they may become less willing to spend scarce resources for military forces. As Bernard Brodie observed about the modein era, “The predisposing factors to military aggression are full bellies, not empty ones.”’” The experience of economic depressions over the last two centuries may be irrelevant, because such depressions were characterized by under-utilized production capacity and falling resource prices. In the 1930 increased military spending stimulated economies, but if economic growth is retarded by environmental constraints, military spending will exacerbate the problem. Power Wars. A third scenario is that environmental degradation might cause war by altering the relative power of states; that is, newly stronger states may be tempted to prey upon the newly weaker ones, or weakened states may attack and lock in their positions before their power ebbs firther. But such alterations might not lead to war as readily as the lessons of history suggest, because economic power and military power are not as tightly coupled as in the past. The economic power positions of Germany and Japan have changed greatly since World War 11, but these changes have not been accompanied by war or threat of war. In the contemporary world, whole industries rise, fall, and relocate, causing substantial fluctuations in the economic well-being of regions and peoples without producing wars. There is no reason to believe that changes in relative wealth and power caused by the uneven impact of environmental degradation would inevitably lead to war. Even if environmental degradation were to destroy the basic social and economic fabric of a country or region, the impact on international order may not be very great. Among the first casualties in such country would be the capacity to wage war. The poor and wretched of the earth may be able to deny an outside aggressor an easy conquest, but they are themselves a minimal threat to other states. Contemporary offensive military operations require complex organizational skills, specialized industrial products and surplus wealth.

### U.S. deployment of NMDs trigger arms race with China.

NTI. 2007. (Nuclear Threat Initiative)("China." James Martin Center for Nonproliferation Studies at the Monterey Institute of International Studies. NTI, 2007. Web. <http://www.nti.org/db/china/spacepos.htm>.)

China became a member of the Committee on the Peaceful Uses of Outer Space (COPUOS) in 1981 and acceded to the Outer Space Treaty (OST) in December 1983. Beginning in 1984, China has consistently proposed draft resolutions to the UN General Assembly on the prevention of an arms race in outer space, insisting that space is to be used strictly for peaceful purposes, and criticized the United States and the former Soviet Union for failing to take the lead in seeking prohibitions on all military uses of outer space. China is publicly opposed to the weaponization of space for a number of reasons.  Most notable, Beijing opposes the use of space-based equipment in missile defense systems, such as the space-based sensors and intercept warheads in outer space potentially to be deployed in planned US missile defense systems.  Although not mentioned in official statements, China is concerned that the US deployment of missile defenses, especially national missile defense (NMD), will negate its strategic nuclear deterrent, potentially forcing China into an expensive arms race that it can not currently afford. Beijing's focus on arms control in outer space is an attempt to block future deployment of missile defense by the US.

## No Offensive Chinese Space Program

### **US military dominance of space is not threatened by China.**

Hitchens, Director of World Security Institute’s Center for Defense Information, 2003 (Theresa, “Monsters and shadows: left unchecked, American fears regarding threats to space assets will drive weaponization.”)

It is obvious that American space systems do have inherent vulnerabilities. It is also obvious that technologies for exploiting those vulnerabilities exist, or are likely to become available over the next several decades. However, neither vulnerabilities in American systems nor the potential capabilities of others necessarily translate into threats. In order to threaten American space assets, a potential adversary must have not only the technological ability to develop weapons and the means to develop and use them, but also the political will and intent to use them in a hostile manner. There is little evidence to date that any other country or hostile non-state actor possesses both the mature technology and the intention to seriously threaten American military or commercial operations in space—and even less evidence of serious pursuit of actual space-based weapons by potentially hostile actors. There are severe technical barriers and high costs to overcome for all but the most rudimentary ASAT capabilities, especially for development of on-orbit weapons. It further remains unclear what political drivers—outside of American development of space-based weaponry—would force American competitors, in the near- to medium-term to seriously pursue such technology. Moreover, there is little public concern voiced by other space-faring nations, including American friend and allies, about potential threats to their space-based assets—although China and the Russian Federation are uncomfortable with the possibility that the United States might deploy ASAT capabilities. This may be explained by the fact that no other nation’s military and commercial operations are so space-dependent, but it also may be that these nations simply do not see the emergence anytime soon of a credible threat. Indeed, most other countries are more concerned about the threats to global space systems from the possible weaponization of space, thus the widespread international interest in a space weapons ban. Key concerns include the creation of debris from testing or actual warfare, and space traffic. American fears control as orbital positions become more crowded. Debris is considered perhaps the most critical near-term issue, according to many space scientists. Even tiny pieces of debris can damage or kill satellites, and there are several ongoing efforts to find ways to mitigate creation of space debris—in fact, the United States is a leader in this arena, having developed national guidelines for debris mitigation applicable to both commercial and military space activities. As noted, there are scattered reports of Chinese interest in ASAT technologies, but evidence of actual progress is scant. The Russian Federation, like the United States, has explored ASAT technology since the beginning of the Cold War, but there is little reason to believe that Moscow has changed its policy against deploying such weapons (the Russian Federation has had a unilateral ban on ASAT testing for some time), especially given the current cash-starved state of the Russian space programme. No other country has shown visible signs of interest (although obviously any space-faring nation, such as India or Pakistan, has latent capability). ‘[C]laims of adversarial space weapons are simply unfounded. Military futures studies often cite predictions of foreign space-based particle beams and other such technologies, but in reality they merely provide paranoid justification for U.S. space programs. … The overwhelming evidence suggest that, unprovoked, the rest of the world is simply not interested in space weaponization at this time’, states former Air Force Lt. Col. Bruce M. DeBlois in a 1998 study.

## Ext—U.S. Deterrence Checks

### U.S. regional deterrence checks.

Ross, 05

Professor of Political Science at Boston College, an Associate at the John King Fairbank Center for East Asian Research at Harvard University, and Senior advisor in the Security Studies Program at the Massachusetts Institute of Technology (Fall 2005, Robert S, “Assessing the China Threat,” http://www.allbusiness.com/government/3584280-1.html)

On the other hand, the United States has long defined U.S. dominance in maritime Southeast Asia as vital to U.S. security. So far, the rise of China does not threaten this interest. Moreover, despite the growth of Chinese economic influence, U.S. strategic partnerships in maritime East Asia are stronger than ever. So far, the United States has responded well to the rise of China. It has maintained its deterrent and stabilized the regional order.

## Ext—U.S. Not Key

### **U.S. economy is rapidly losing importance-multiple studies prove.**

Bracy ‘9 (Gerald, may 20, Fellow at the Education Policy Studies Laboratory at Arizona State University, “U.S. Fails International Competitiveness Test: Schools (Rightfully) Blamed”, http://www.huffingtonpost.com/gerald-bracey/u-s-fails-international-c\_b\_205593.html)

If this result came from an international comparison of young people (9- and 13 year-olds) on math and science tests it would make front page news of most newspapers, but I'm betting it doesn't get any coverage at all (this is being sent just after the embargo hour has passed, EDT). But I'm also betting that the people who sent the economy over the cliff were not people who couldn't do the arithmetic. The stress test included four factors, Economy Forecasts, Government, Business, and Society each made up of about a half-dozen sub-components. The United States' lowest ranking, 33rd, was on the Business component. That component itself is comprised of ethical practices, credibility of managers, corporate boards, corporate values and entrepreneurship. It appears that the Business Roundtable, National Association of Manufacturers, and independent businesses, don't have much to offer in these areas. These results confirm allegations in the April 24th, 2009 *Wall Street Journal* that the principal culprits in the present debacle are indeed the schools, namely, the business schools. "What have business schools failed to teach our business leaders and policy makers?" asked Walter Jacobs, himself a B-school professor. As the U. S. Chamber of Commerce and the Center for American Progress put it in a different context, "the measures of our educational shortcomings are stark indeed." First, everyone agrees that "incentive systems that rewarded short-term gain took precedence over those designed for long-term value creation." A proper B-school education would inoculate against such folly. Second, "as Washington scrambles to restructure the financial regulatory system, those who still believe in the private sector are asking why corporate boards were AWOL as institution after institution crumbled. Why did it take rumors of nationalization and a drop in Citicorp stock to below $2 a share to inspire Citigroup to nominate directors with experience in financial markets?" Jacobs reports giving a speech at a B-school after which one student, only weeks away from her MBA, said she'd never heard any discussion of the responsibilities of boards or the rights of shareholders. Third, while B-schools taught the value of a diversified portfolio, they did not examine the notion of "agency cost." "The concept is simple: When money provided to homeowners or businesses comes from an anonymous source, possibly half way around the world, there are serious challenges to operating a functioning system of accountability... It should come as no surprise that financial institutions amassed securities that consist of a diversified portfolio of deadbeats." Jacobs thinks we could have avoided the problems we now face had we attended to the three items noted above. "America's business schools need to rethink what we are teaching -- and not teaching--the next generation of leaders." Now there's something Bob Wise, Roy Romer, Eli Broad, and Bill Gates and the rest of the professional K-12 fear mongers should pay attention to. It's much more important than how well 4th and 8th graders bubble in answer sheets on math and science tests. But it's doubtful that the fear mongers will let go of their lucrative propaganda machines.

## AT WWII

### The World War II example is wrong-not all countries were overtaken by fascist regimes and it overlooks tons of alternative causes.

Ferguson 2006 [Niall, Laurence A. Tisch Professor of History at Harvard University and a Senior Fellow at the Hoover Institution at Stanford. The next war of the world, Foreign Affairs. V 85. No 5.]

Nor can economic crises explain the bloodshed. What may be the most familiar causal chain in modern historiography links the great depression to the rise of fascism and the outbreak of World War II. But the simple story leaves too much out. Nazi Germany started the war In Europe only after its economy had recovered. Not all the countries affected by the Great Depression were taken over by fascist regimes, nor did all such regimes start wars of aggression. In fact, no general relationship between economics and conflict is discernible for the century as a whole. Some wars came after periods of growth, others were the cause rather than the consequences of economic catastrophe, and some sever economic crises were not followed by war.

## No Economic Motivation

### China doesn’t want war—no economic benefits.

Bijian 05

Chair of the China Reform Forum (Zheng Bijian, Summary of the article: “China’s Peaceful Rise to Great Power Status.” Foreign Affairs, October/September 2005. Pg.1 , http://www.foreignaffairs.com/articles/61015/zheng-bijian/chinas-peaceful-rise-to-great-power-status)

Despite widespread fears about China's growing economic clout and political stature, Beijing remains committed to a "peaceful rise": bringing its people out of poverty by embracing economic globalization and improving relations with the rest of the world. As it emerges as a great power, China knows that its continued development depends on world peace -- a peace that its development will in turn reinforce.

## Taiwan War =/= Nuclear War

### China wouldn’t use nukes against Taiwan, no strategic value and deterrence checks.

Pike ’04

(John, Global Security, China’s Options in the Taiwan Confrontation, http://www.globalsecurity.org/military/ops/taiwan-prc.htm)

China would almost certainly not contemplate a nuclear strike against Taiwan, nor would Beijing embark on a course of action that posed significant risks of the use of nuclear weapons. The mainland's long term goal is to liberate Taiwan, not to obliterate it, and any use of nuclear weapons by China would run a substantial risk of the use of nuclear weapons by the United States. An inability to control escalation beyond "demonstrative" detonations would cause utterly disproportionate destruction.

## NMD🡪China Arms Race

### Space militarization ensures Chinese Weaponization.

Hagt, Eric. 2007. (Eric Hagt is the Director of the China Program at the World Security Institute)("China’s ASAT Test: Strategic Response." China Security, Winter 2007 (2007): 32-33. Web. www.wsichina.org/cs5\_3.pd)jk

Coupled with a number of key U.S. policy and military documents that call for control in space and the development of space weapons as well as the U.S. refusal to enter into any restrictive space arms control treaty, China has concluded that America is determined to dominate and control space.3 This perceived U.S. intent leads Beijing to assume the inevitable weaponization of space.4 Even more worrisome for China is the direct impact of these developments on China’s core national interests. The accelerated development of the U.S. ballistic missile system, especially as it is being developed in close cooperation with Japan, has been cited as threatening China’s homeland and nuclear deterrent.5 The ‘Shriever’ space war games conducted by the U.S. Air Force in 2001, 2003 and 2005 strongly reinforced the conclusion that U.S. space control sets China as a target.7 Most central to China’s concerns, however, is the direct affect U.S. space dominance will have on China’s ability to prevail in a conflict in the Taiwan Straits.8 As U.S. military space developments have evolved, China’s observations and subsequent conclusions have engendered a fundamental response: we cannot accept this state of affairs. For reasons of defense of national sovereignty as well as China’s broader interests in space – civilian, commercial and military – America’s pursuit of space control and dominance and its pursuit to develop ASATs and space weapons pose an intolerable risk to China’s national security.9 China’s own ASAT test embodied this message. Attempting to redress what China perceives as a critically imbalanced strategic environment that increasingly endangers its interests, China demonstrated a deterrent to defend against that threat. Its willingness to risk international opprobrium through such a test conveys China’s grim resolve to send that message.

### ASATs are a direct response to provocative U.S. action.

Hagt, Eric. 2007. (Eric Hagt is the Director of the China Program at the World Security Institute)("China’s ASAT Test: Strategic Response." China Security, Winter 2007 (2007): 36-37. Web. www.wsichina.org/cs5\_3.pd)jk

China has also taken a deeper lesson from U.S. action: the United States negotiates based primarily on strength. Without strength of its own, China cannot bring the United States to the negotiating table. This reveals a strong strain of realism running through Chinese strategic thinking. A balance of force, attained by a show of strength, can redress strategic imbalance in space and ultimately promote peace. These lessons are ingrained in China’s perspective on the Cold War, where such a balance maintained world peace for 50 years. The ASAT test will, the Chinese hope, restore a modicum of balance and deter the United States from acting on that position of superiority.

### Martel Flows Neg

### Your author goes neg—says the plan causes Chinese militarization.

Martel ‘3

William C. Martel (Professor of National Security Affairs at Naval War College, RI) and Toshi Yoshihara (Research Fellow at the Institute for Foreign Policy Analysis in Massachusetts) 2003, Avoiding a Sino-American Space Race, Washington Quarterly: Autumn 2003 issue, published by the Center for Strategic and International Studies and the Massachusetts Institute of Technology, http://pdfserve.informaworld.com/440173\_915549761\_918386378.pdf

This prevailing indifference, however, risks overlooking the longer-term consequences of China's growing space power and, more dangerously, the potential collision of U.S. and Chinese interests in space. From China's perspective, the United States' self-appointed guardianship of space is presumptuous and represents a genuine challenge to China's national security concerns. For the United States, China's extension into space symbolizes its ambitions to challenge U.S. national security. Deeply seated, mutual suspicions are evident in both countries' strategic assessments as the contours of potential strategic competition between Washington and Beijing emerge. In essence, both sides agree that the other represents a challenge. Although this potential clash of interests is not yet sufficiently severe to be visible to casual observers, the United States and China are on the threshold of a space race that could radically influence international security.

## Heg Frontline 1/3

### No challengers to U.S. space dominance.

Hitchens, Director of World Security Institute’s Center for Defense Information, 2003 (Theresa, “Monsters and shadows: left unchecked, American fears regarding threats to space assets will drive weaponization.”)

It is obvious that American space systems do have inherent vulnerabilities. It is also obvious that technologies for exploiting those vulnerabilities exist, or are likely to become available over the next several decades. However, neither vulnerabilities in American systems nor the potential capabilities of others necessarily translate into threats. In order to threaten American space assets, a potential adversary must have not only the technological ability to develop weapons and the means to develop and use them, but also the political will and intent to use them in a hostile manner. There is little evidence to date that any other country or hostile non-state actor possesses both the mature technology and the intention to seriously threaten American military or commercial operations in space—and even less evidence of serious pursuit of actual space-based weapons by potentially hostile actors. There are severe technical barriers and high costs to overcome for all but the most rudimentary ASAT capabilities, especially for development of on-orbit weapons. It further remains unclear what political drivers—outside of American development of space-based weaponry—would force American competitors, in the near- to medium-term to seriously pursue such technology. Moreover, there is little public concern voiced by other space-faring nations, including American friend and allies, about potential threats to their space-based assets—although China and the Russian Federation are uncomfortable with the possibility that the United States might deploy ASAT capabilities. This may be explained by the fact that no other nation’s military and commercial operations are so space-dependent, but it also may be that these nations simply do not see the emergence anytime soon of a credible threat. Indeed, most other countries are more concerned about the threats to global space systems from the possible weaponization of space, thus the widespread international interest in a space weapons ban. Key concerns include the creation of debris from testing or actual warfare, and space traffic. American fears control as orbital positions become more crowded. Debris is considered perhaps the most critical near-term issue, according to many space scientists. Even tiny pieces of debris can damage or kill satellites, and there are several ongoing efforts to find ways to mitigate creation of space debris—in fact, the United States is a leader in this arena, having developed national guidelines for debris mitigation applicable to both commercial and military space activities. As noted, there are scattered reports of Chinese interest in ASAT technologies, but evidence of actual progress is scant. The Russian Federation, like the United States, has explored ASAT technology since the beginning of the Cold War, but there is little reason to believe that Moscow has changed its policy against deploying such weapons (the Russian Federation has had a unilateral ban on ASAT testing for some time), especially given the current cash-starved state of the Russian space programme. No other country has shown visible signs of interest (although obviously any space-faring nation, such as India or Pakistan, has latent capability). ‘[C]laims of adversarial space weapons are simply unfounded. Military futures studies often cite predictions of foreign space-based particle beams and other such technologies, but in reality they merely provide paranoid justification for U.S. space programs. … The overwhelming evidence suggest that, unprovoked, the rest of the world is simply not interested in space weaponization at this time’, states former Air Force Lt. Col. Bruce M. DeBlois in a 1998 study.\

Heg Frontline 2/3

### Lack of Launcher capability means we can never have total space primacy.

Ken Kremer, ’10, Feb 6, 2010, (Universe Today, Orion can Launch Safely in 2013 says Lockheed, <http://www.universetoday.com/54703/orion-can-launch-safely-in-2013-says-lockheed/>)

"We can fly Orion in 2013", says John Karas, the VP and General Manager of Human Space Flight for Lockheed Martin. Lockheed is the prime contractor for NASA's Orion capsule. "There is no doubt in my mind we can do this. And Orion is very safe". He strenuously repeated this statement to me several times with absolutely no doubt in his mind during a wide ranging interview. I spoke at length with Karas today (Feb. 6) at the NASA Press Center shortly before the scheduled Feb. 7 launch of shuttle Endeavour on the STS 130 mission to the ISS.   
Lockheed Martin has issued an official statement saying, "We are keenly disappointed in the Administration's budget proposal for NASA that would cancel Project Orion as part of an elimination of NASA's Constellation Program. Orion's maturity is evident in its readiness for a first test flight in a matter of weeks. In fact, Orion can be ready for crewed flights to low Earth orbit and other exploration missions as early as 2013, thus narrowing the gap in U.S. human space flight capability when the shuttle is retired later this year". Karas decried the complete lack of vision and realism by the Obama Administration and NASA in deciding to terminate Project Constellation, which includes the new Orion Capsule, the Ares 1 booster rocket for Orion and the Ares 5 Heavy Lift booster required to reach the Moon, Mars and beyond. "I was very surprised by the cancellation. We expected and felt that a middle ground with some changes to Constellation was reasonable. We did not expect to be left with nothing". "**Where is the US Leadership in space if we don't have a heavy lifter soon** ? "Russia, China and India will all have Heavy Lift boosters better than the US. Why would anyone have an incentive to work with us if they have already developed their own Heavy Lifter. **The nations of the world will look elsewhere, not to the US"**, Karas told me emphatically. "We will not maintain Space leadership if the US will only be spending money on technology development under the new proposals by the Obama Administration, and not on an actual rocket program that builds, tests and launches flight hardware."

### Alt Causes to Heg-Deficits, Soft Power losses, and Afghanistan.

### Pape answers himself-says the U.S. lost 30% of its relative hegemonic power in the past 30 years—making transition wars empirically denied and means this hegemonic decline is different from Pape’s historical warrants.

### Collapse won’t be violent, multiplolar institutions make this different than the past.

Pieterse, ’08 – professor in global sociology at the University of Illinois at Urbana-Champaign, specializes in globalization (Jan Nederveen, Future, Globalization the next round: Sociological perspectives, Lexis)

The general possibilities in relation to hegemony are continued American hegemony, hegemonic rivalry, hegemonic transition and multipolarity. The previous episode of hegemonic decline at the turn of the nineteenth century took the form of wars of hegemonic rivalry culminating in hegemonic transition. The current transition looks to be structurally different from the previous episode. Rather than hegemonic rivalry, we are witnessing global realignments toward growing multipolarity. Thus, what is at issue is not just a decline of (American) hegemony and rise of (Asian) hegemony, but a more complex field.

Heg Frontline 3/3

### Democracies, international institutions, and global norms of nonaggression check violent hegemonic transition.

Ikenberry ‘8 (John, Albert G. Milbank Prof of Politics and International Affairs at Princeton University, “The Rise of China and the Future of the West: Can Liberal System Survive?” <http://www.foreignaffairs.org/20080101faessay87102-p40/g-john-ikenberry/the-rise-of-china-and-the-future-of-the-west.html>)

Some observers believe that the American era is coming to an end, as the Western-oriented world order is replaced by one increasingly dominated by the East. The historian Niall Ferguson has written that the bloody twentieth century witnessed "the descent of the West" and "a reorientation of the world" toward the East. Realists go on to note that as China gets more powerful and the United States' position erodes, two things are likely to happen: China will try to use its growing influence to reshape the rules and institutions of the international system to better serve its interests, and other states in the system -- especially the declining hegemon -- will start to see China as a growing security threat. The result of these developments, they predict, will be tension, distrust, and conflict, the typical features of a power transition. In this view, the drama of China's rise will feature an increasingly powerful China and a declining United States locked in an epic battle over the rules and leadership of the international system. And as the world's largest country emerges not from within but outside the established post-World War II international order, it is a drama that will end with the grand ascendance of China and the onset of an Asian-centered world order. That course, however, is not inevitable. The rise of China does not have to trigger a wrenching hegemonic transition. The U.S.-Chinese power transition can be very different from those of the past because China faces an international order that is fundamentally different from those that past rising states confronted. China does not just face the United States; it faces a Western-centered system that is open, integrated, and rule-based, with wide and deep political foundations. The nuclear revolution, meanwhile, has made war among great powers unlikely -- eliminating the major tool that rising powers have used to overturn international systems defended by declining hegemonic states. Today's Western order, in short, is hard to overturn and easy to join.

### NMD deployment means states will shoot it out of the sky and invites global challengers to heg.

Tom Wilson, United States Space Commission Staff Member, 01 Global Security, “Threats to United States Space Capabilities”, 1/01, <http://www.globalsecurity.org/space/library/report/2001/nssmo/article05.pdf>

As history has shown—whether at Pearl Harbor, in the killing of 241 U.S. Marines in their barracks in Lebanon, or in the attack on the USS Cole in Yemen—if the U.S. offers an inviting target, it may well pay the price of attack. With the growing commercial and national security use of space, U.S. assets in space and on the ground, offer just such targets. Widely dispersed counterspace threat capabilities coupled with space situational awareness platforms threaten the U.S. ability to freely operate in space. We can no longer look at traditional adversaries as the only threat as there will likely be various space threats from several nations. History is replete with instances in which warning signs were ignored and change resisted until an external, “improbable” event forced resistant bureaucracies to take action. The question is whether the U.S. will be wise enough to act responsibly and soon enough to reduce U.S. space vulnerability. Or whether, as in the past, a disabling attack against the country and its people—a “Space Pearl Harbor”—will be the only event able to galvanize the nation and cause the U.S. Government to act.

## No Challengers Ext 1/2

### There are no challengers, we’ll go through main hostile and rising powers-

### India’s space program is peaceful.

Ramachandran, independent journalist/researcher based in Bangalore, 6/18/08 (Sudha, “India goes to war in space,” http://www.atimes.com/atimes/South\_Asia/JF18Df01.html.)

India's expression of its intentions to set up an aerospace command and its announcement of the Integrated Space Cell has raised concern in some quarters that India is entering the arms race in space. Such fears might be premature, given that the Integrated Space Cell is at a very rudimentary stage. "India is just putting in place a very minimal budget initiative that will take several years to develop," argued Prabhakar. "Besides satellites in space, India's space architecture of offensive and defensive systems are yet to be conceived, built and deployed," said Prabhakar, pointing to the different kinds of satellites, space-based laser systems, space stations and ground-based laser stations for offensive space operations that the "space superpowers" - the United States, Russia and China - have. In the event of their satellites being knocked out by enemy action during a crisis, the US, Russia and China have the capability to launch substitute satellites into space at short notice. The US can move its satellites from one orbit level to another, higher level to escape being taken out by an enemy anti-satellite system (ASAT). India can program a satellite launch only on a programmed sequence basis and not on short notice for rapid launches to replenish lost satellites, Prabhakar said. "India doesn't have even preliminary capability to defend its satellites," he said, adding "it will take another 15 to 20 years or more before India can put these systems in place." For all its impressive achievements in building and launching satellites, India is decades away from establishing a fully-operational aerospace command. It has formidable capability in building satellites. It is now trying to find a way to defend them.

### Iran doesn’t have the capabilities.

Shapir, head of the INSS Middle East Military Balance project, 2005 (Yiftah S., “Iran’s Efforts to Conquer Space,” Strategic Assessment 8, no.3)

Iran is determined to attain an independent satellite capability for communications and research, and in the future, for military purposes. If the launches of the Zohreh communications satellites and the other research satellites are successful, Iran will probably seek to obtain additional capabilities, especially the independent construction and launching of its own satellites. It will also probably try to build a military image-collecting satellite for supplying photographs of military quality. Iran regards these projects beyond their functional aspects, as contributing to the nation's strength and deterrence capability and bolstering its position as the region's leader. Today, at a time when almost every state can purchase satellite products on the open market - from imagery for research to communications channels, and even military quality imagery (up to a resolution of one meter) - there is little cost effectiveness in investing enormous resources to attain an independent satellite capability. Nevertheless, a close examination of the projects that Iran has been engaged in indicates its great difficulty in attaining these capabilities. Iran has failed to reach even the basic stages in these grandiose projects after many years of effort, stages that other states attained a long time ago. The reasons for this failure are not clear but they seem to be linked to the government's inherent inability to coordinate government agencies, resolve conflicting demands, and mobilize the required resources for the projects. In other words, Iran is motivated to achieve far-reaching goals. Iran also has a significant technological infrastructure. Nevertheless, the engine is stalled and important projects are being delayed. If this assessment is correct and the Iranian failure is a deep systemic failure, this could point to questions on Iran's capability to materialize other ambitious programs, such as in the realms of ballistic missiles and nuclear weapons.

No Challengers Ext 2/2

### North Korea has no ambitions of a space program.

Katz-Hyman and Krepon, research associate for the Space Security, co-founder of Stimson, and director of the South Asia and Space Security programs, 2005 (Michael and Michael, “Iran and North Korea unlikely to try and attack U.S. in space,” Non-Proliferation Review 12, no. 2, http://www.spacedebate.org/evidence/2153/.)

The dictates of asymmetric warfare suggest that while rudimentary forms of space related initiatives by Tehran and Pyongyang cannot be ruled out in the future, it is more likely that they would seek to produce casualties on the ground rather than to try to damage inanimate objects in space. The proximity of forward-deployed U.S. forces, as well as America's allies and friends, provides a ''target-rich'' environment for asymmetric attacks. Covert attacks against the U.S. homeland by various means would also seem to be more likely than easily attributable attacks against U.S. satellites. Seoul is within artillery range of North Korea's ground forces, and North Korean ballistic missiles can target U.S. bases in South Korea and Japan. Iran has already acquired missiles of sufficient range to target Israel and Turkey and appears intent on developing missiles of sufficient range to reach Western Europe. Even so, Iran's most troubling weapon against U.S. forces and national interests is not ballistic missiles, but rather its ability to support insurgents and attacks by proxy forces against U.S. troops, friends, and allies in nearby countries.

### Russia doesn’t have the industrial base.

Krepon and Podvig, co-founder of Stimson, and director of the South Asia and Space Security programs, affiliate and former research associate at the Center for International Security and Cooperation at Stanford University, 4/7/09 (Michael and Pavel, “The Space Nuclear Nexus,” Carnegie Endowment for International Peace.)

It would be actually be fairly difficult to do that in practical terms. In terms of actual programs and developments, things are not very good for either space weapons or ASAT in Russia because most of the industrial and organizational infrastructure that supported those programs has been scattered around, and we don’t have either the military service dedicated to this kind of thing but also Russia does not have a unified ministry in the defense industry that would carry enough weight to lobby for this kind of a program. Besides, looking from the other direction, Russia, the discussion about ASAT and space, military uses of space, is actually influenced by the fact that Russia doesn’t really have a lot of space assets to protect. The integration of military satellites into the actual military operations is actually not very good. Again, on a positive note, access to space is basically controlled largely by the space forces, by Roscosmos, the civilian agency, to a certain extent the rocket forces, and none of those institutions actually has great interest or any real investment in any kind of an ASAT capability or any weapon-in-space developments.

## Russia Frontline 1/2

### Technical safeguards check Russian accidental launch.

National Intelligence Council ‘2 “Annual report to Congress on the Safety and Security of Russian Nuclear Facilities and Military Forces” <http://www>. nci.org/02NCI/02/nic\_annual-report.htm

Moscow has maintained adequate security and control of its *nuclear weapons*, but a decline in military funding has stressed the nuclear security system.  An unauthorized launch or accidental use of a Russian nuclear weapon is highly unlikely as long as current technical and procedural safeguards built into the command and control system remain in place and are effectively enforced.  Our concerns about possible circumvention of the system would rise if central political authority broke down.

### Central authority checks accidental launch.

National Intelligence Council ‘2 “Annual report to Congress on the Safety and Security of Russian Nuclear Facilities and Military Forces” <http://www>. nci.org/02NCI/02/nic\_annual-report.htm

Russia currently uses essentially the same nuclear command and control system built by the Soviet Union, whose military and political leadersconcerned about the possibility of an unauthorized launchbuilt a highly centralized system with technical and procedural safeguards.  We judge that an unauthorized launch or accidental use of a Russian nuclear weapon is highly unlikely as long as those safeguards remain in place.  A breakdown of central political authority, however, would raise our concerns about possible circumvention of the system.

### Ground based missile defense checks accidental launch.

Gale 1991, Cengage Learning “Analysts say unauthorized Soviet nuclear launch unlikely” http://findarticles.com/p/articles/mi\_671 2/is\_n23\_v172/ai\_n2 8604063/

An accidental launching of tactical or strategic weapons or the takeover of Soviet weapons systems by rebel or terrorist groups is barely plausible under most circumstances due to the complex, multi-layered release procedures the Soviets have designed for their arsenals, Blair and Warner said. The Soviets employ a series of measures to protect their nuclear arsenal--about 27,000 weapons mostly located in the Russian Republic--against seizure by disaffected groups and lessen the risk of accidental or unauthorized launch by military personnel, Blair said. The first line of defense has been to place most of the weapons in heavily guarded storage sites protected by specially designated troops that operate outside the normal military chain of command, he said. The Soviets also have taken a number of technical steps to ensure that legitimate authorities control both strategic and tactical weapons, Warner said. In essence, the Soviet system ensures that no single person, including President Gorbachev, can issue the order to launch nuclear weapons, he said. Both the top political and military leadership must generate special codes independently and transmit them to a separate facility. The codes are then sent down the chain of command, Warner said.

Russia Frontline 2/2

### NMDs and other militarized mechanisms of defence cause Russian war.

George N. Lewis and Theodore A. Postol October 2007 Lewis has Ph.D. in experimental physics and is associate director of the Peace Studies Program at Cornell University and Postol is a professor of science, technology, and national security policy at the Massachusetts Institute of Technology and a former scientific adviser to the chief of naval operations. “European Missile Defense: The Technological Basis of Russian Concerns” http://www.armscontrol.org/act/2007\_10 /LewisPostol

Clearly, Putin’s proposals open the door to potentially fruitful discussions that would lead to a missile defense configuration that would be far more robust than the configuration currently proposed for Europe by the United States. More of Europe could be defended and the system would have more reliability and redundancy. The reconfigured defense would pose no plausible threat of contributing to a U.S. continental defense aimed at Russian strategic ICBMs. Thus, from a purely technical point of view, Putin’s proposal to Bush addresses both Russia’s stated concerns about future threats to its security and U.S. stated objectives to deploy missile defenses that protect its European allies while posing no threat to Russia. Nevertheless, policymakers must be aware of the costs and benefits of these two narrow policy choices. A serious discussion is under way about whether and how we could move toward a world free of nuclear weapons.[**[2](http://www.armscontrol.org/act/2007_10/LewisPostol.asp" \l "2)**] Because missile defenses and deterrent forces raise questions of national survival, activities in these areas create powerful inconsistencies in state behavior. The Russians are deeply upset and suspicious of what appears to be a lack of candor, understanding and realism with regard to U.S. plans for missile defenses. U.S. political leaders relentlessly deny basic technical facts that show that the current U.S. missile defense might well affect Russia. The result of this standoff is clear and predictable: a world with expanded nuclear forces on high alert aimed at compensating for defenses, and defenses that will be so fragile to simple or inadvertent countermeasures that they will, at very best, have little or no chance of working in combat. Any consideration of the potential costs and benefits of future missile defense systems either for Europe or the continental United States that ignores these technical realities in favor of political ideology is simply an invitation to disaster.

## Solvency Frontline 1/2

### Other defense systems solve.

Butt, physicist in the High-Energy Astrophysics Division at the Harvard-Smithsonian Center for Astrophysics. Former fellow in the Committee on International Security and Arms Control at the National Academy of Sciences, nuclear physics Ph.D., 5/8/10 (Yousaf, “The myth of missile defense as a deterrent,” http://www.thebulletin.org/web-edition/features/the-myth-of-missile-defense-deterrent.)

The strategic uselessness of missile defenses aimed at intercepting nuclear-tipped missiles is clear (as I have argued before). This is a conceptual problem, not merely a technical one. The reason is simple: There is always a reasonable probability that one or more nuclear missiles will penetrate even the best missile defense system. Since a single nuclear missile hit would cause unacceptable damage to the United States, a missile defense system shouldn't change U.S. strategic calculations with respect to its enemies. Washington should treat North Korea, Iran, and other adversaries the same before and after setting up missile defense systems. Recently, Schelling publicly stated that missile defense will be of dubious value in addressing the possible future threats from Iran.

### BMD will miss targets.

George N. Lewis and Theodore A. Postol [May 2010](http://www.armscontrol.org/epublish/1/136) Lewis has Ph.D. in experimental physics and is associate director of the Peace Studies Program at Cornell University and Postol is a professor of science, technology, and national security policy at the Massachusetts Institute of Technology and a former scientific adviser to the chief of naval operations. “A Flawed and Dangerous U.S. Missile Defense Plan” [http://www.a rmscontrol.org/act/2010\_05/Lewis-Postol](http://www.armscontrol.org/act/2010_05/Lewis-Postol)

The SM-3 kill vehicle is designed to hit the target at a relatively low closing speed of about four to five kilometers per second and to acquire and home in on targets at ranges of less than 150 kilometers. At this range, the objects in the search volume look like points of light to the infrared sensor on the kill vehicle, so it is not possible for the kill vehicle to obtain information about the shape or size of different objects ahead of it. These substantial limits on what the SM-3 kill vehicle can see makes distinguishing the warhead from other objects a considerable challenge. The effects of these challenges can be clearly seen in SM-3 intercept test data made public by the Defense Department.[**4**] In eight or nine of the 10 SM-3 intercept tests from 2002 to 2009 involving these relatively slow closing speeds, the SM-3 kill vehicle failed to hit the warhead target directly. This means that, in real combat, the warhead would have not been destroyed but would have continued toward the target and detonated in eight or nine of the 10 SM-3 experimental tests.[5] Yet, the Missile Defense Agency (MDA) has reported these 10 tests as “successful” without explaining that the test outcomes would not have resulted in true combat intercepts.[**6**] The flight-test data, taken from videos published by the MDA, are shown in Figure 1. Each of the images is the last video frame taken by the interceptor just before it hit the target. The flight-test data show that the SM-3 kill vehicles in these tests almost always missed hitting target warheads.[7] The details of the process by which the kill vehicle tries to identify and hit the warhead make clear why the task of directly hitting the warhead is so difficult and prone to catastrophic failure in real combat conditions. One to two seconds prior to impact, the images on the SM-3 kill vehicle’s sensor look like slightly elongated dots at the center of the screen. If the kill vehicle hits the body of the rocket, the kill vehicle will tend to shatter and pass through the rocket body much like a bullet hitting a thin-walled drinking glass or an empty soda can, leaving the warhead undamaged and still falling on a nearly unchanged trajectory toward its target.

Solvency Frontline 2/2

### BMDs fail—can’t respond to unexpected contingencies.

THEODORE A. POSTOL 19 Nov 2009 19 (a professor of science, technology, and national security policy at the Massachusetts Institute of Technology and a former scientific adviser to the chief of naval operations.) “Abstract Submitted for the MAR10 Meeting of The American Physical Society” http://absimage.aps.o rg/image/MWS\_MAR10-2009-003522.pdf

The National Missile Defense System utilizes UHF and X-band radars for search, track and discrimination, and interceptors that use long-wave infrared sensors to identify and home on attacking warheads. The radars and infrared sen- sors in the missile defense system perform at near the theoretical limits predicted by physics. However, in spite of the fantastic technical advances in sensor technology, signal processing, and computational sup- port functions, the National Missile Defense System cannot be expected to ever work in realistic combat environments. This talk will describe why these impressive technologies can never deliver on the promise of a credible defense against long-range ballistic missiles.

## Solvency Exts 1/5

### **Missile defense fails – can’t distinguish between empty balloons and nukes.**

Postol, professor of science, technology, and national security policy at MIT, 2002 (Ted A., “Why Missile Defense Won’t Work,” http://www.pbs.org/wgbh/pages/frontline/shows/missile/etc/postol.html.)

During a typical intercept attempt, the closing speed between the kill vehicle and targets is around 10 kilometers per second. If targets can be detected from a distance of 600 kilometers, that doesn't leave much time -- a minute or less -- to distinguish between warheads and decoys and maneuver to ram into the right target. The resolving power of the kill vehicle's telescope is quite limited, so all objects look like points of light. Still, the distinction can be made -- by measuring the brightness of each object, and to some extent its wavelength or "color," which in turn can give clues to its infrared temperature. If, for instance, one object is a tumbling, featureless sphere, no orientation will look different from any other, and its signal will be steady. However, if another object is of a different shape, the different faces it presents to the kill vehicle will show varying degrees of brightness as it tumbles end over end through space; a rod, for example, will be brighter when its more luminous side area is exposed to the telescope than when viewed end-on and will appear to the kill vehicle as a distant point of light that increases and decreases in brightness twice during each complete rotation. So if there is prior knowledge that one target is a tumbling rod and the other is a featureless sphere, it will be clear which is which. That's the theory. The truth is more complicated. For one thing, measuring temperature with this infrared equipment is not possible when objects in space are observed close to the earth, because their signals are routinely contaminated by reflected infrared radiation from the planet's surface; they are further confused by such factors as the amount of cloud cover, time of year and which part of the earth the target is over. Even without such earthly interference, the limited strategies available to the defense for distinguishing warhead from decoys put it at a disadvantage. For example, one simple way for an adversary to make discrimination impossible is to put the warhead inside a balloon and deploy it with many additional balloons of different sizes and surface coatings. The temperature of a balloon exposed to the sun can be drastically altered, as can the amount of infrared heat it radiates and reflects from the earth and sun, depending on its size and surface coating. Balloons of different dimensions and with different coatings would each look slightly different. Since there would be no way to know why this was so, there would be no way to know which balloons were empty and which contained warheads -- and discrimination by the kill vehicle's infrared telescope would be impossible. This is the central point that backers of missile defense have not been able to circumvent.

Solvency Exts 2/5

### **BMD is not technologically feasible, draws money away from realistic military projects, and fails to deter potential threats**

Krauss, co-chair of the Board of Sponsors of the Bulletin of the Atomic Scientists, and a member of the American Physical Society’s Panel on Public Affairs, 1/7/2011 (Lawrence M., “The Emperor's New Missile Defense,” http://www.scientificamerican.com/blog/post.cfm?id=the-emperors-new-missile-defense-2011-01-07.)

However, absent from the debate was a key reality check: The President’s statement was wrong. We do not have an effective Intercontinental Ballistic Missile Defense system, and no one has ever demonstrated that such defense is technologically and strategically workable. This point should have been brought home on the day the Senate voted to begin debate on the treaty. That same day our existing Missile Defense system was tested, and once again, for the second time that year, it failed. The air of unreality surrounding the Senate Debate followed a long tradition in this country. In a survey taken well before our current ballistic missile defense system was installed in 8 silos in Alaska and California in 2003 and 2004, 50% of the US public thought we already HAD such a system in place. They were about as correct in their assumption at that time as they would be now. Failure has been the norm rather than the exception regarding our experience with Missile Defense. Before deployment, the system failed in at least 40% of its tests, even allowing for some debate about what constituted success, and after deployment the failure rate has been worse, with even the Defense Department acknowledging success in only 8 of 15 tests. In 2002, the American Physical Society, which represents the entire physics community in this country, was so concerned about the technological challenges that it passed a resolution which seemed eminently reasonable, although it was subsequently ignored. The resolution called on the US government not to deploy a missile defense system until it was demonstrated to be workable against a realistic threat. In fact, the system has never been tested against a realistic threat: an incoming missile with decoys, long known to be the Achilles Heel of Missile Defense. A decoy was supposed to be used in one recent test, but that test failed because the decoy failed to deploy. The central problem with missile defense systems is that decoys are always cheaper to deploy than interceptors. Moreover, an imperfect system is intrinsically destabilizing, because it encourages building and launching more weapons. Even a system with 90% efficiency, far in excess of any existing system, will result in a 50-50 chance of successful penetration for every 5 missiles launched. In 1972 Richard Nixon signed the ABM treaty because an active campaign by the scientific community convinced his administration that a workable ICBM defense system was not technologically feasible. Nothing much has changed in the interim. This unfortunately has not stopped active campaigns to resuscitate expensive and flawed missile defense systems. Our current dysfunctional system has cost in excess of 100 billion dollars, with about 10 billion dollars per year going into the program. Efficacy questions aside, there are serious National Security issues that make one wonder whether we should be spending such sum—and even in today’s world 100 billion dollars is significant—instead on systems that might address realistic threats. Even ignoring the fact that neither North Korea nor Iran are currently capable of delivering nuclear weapons to the US via ballistic missiles, one wonders whether any potential adversary would choose the risk of immediate obliteration (ballistic missiles automatically allow one to determine, on the basis of their trajectory, where they were launched), or instead might decide it was preferable to attempt to smuggle a nuclear device into, say, New York harbor, where its origin might be harder to unambiguously discern and prove. Some ABM advocates have argued that even if strategic missile defense systems have fundamental technological obstacles, simply the threat of a system that might shoot down some incoming missiles is enough to dissuade a possible aggressor from attacking. Logic suggests otherwise. In the first place, if an attack was based on rational decision-making (and again, since such an attack would have a high likelihood of being followed by an annihilating counterattack it is hard to wonder how reason would enter into such a decision)—presumably to inflict damage or terrorize our country—then in the face of an imperfect ABM system, reason would dictate launching several missiles instead of 1 against any prospective target. Others have questioned why, if any potential ABM system is flawed, Russia objects so strongly to the US building such systems.

Solvency Exts 3/5

One clear answer, which has been enunciated by Russia since the days of the former Soviet Union, is that such a system encourages a costly renewed arms race, requiring building more missiles to overcome each interceptor. There could easily be another, even more cogent Russian concern. An imperfect missile defense system is nevertheless likely to be most useful when we know in advance an attack is imminent, and from where that attack will come. Such circumstances would occur if we chose to strike first for example. In this sense, building an ABM system can be viewed as an aggressive step rather than a defensive one. There is no doubt that now that New Start has been ratified both the United States and Russia will be more secure in the near term. However, what will be the long-term cost of ratification? If it empowers proponents of missile defense to grow a flawed program or otherwise increase the already ludicrous sums being spent on these systems, the net impact of the treaty on our national security could be more ambiguous. What we need to do, now that we have introduced some more rationality into the international balance of nuclear weapons between the superpowers, is to follow up New Start with further negotiations on tactical nuclear weapons, and to focus on the best defense against nuclear catastrophe: getting rid of nuclear weapons altogether. Whatever the future brings, it was nevertheless unfortunate that the debate in the Senate on an issue as important as New Start—of relevance to the safety and security of much of the world’s population—was not more firmly grounded in empirical reality.

### Missile interceptors are an abysmally poor deterrence mechanism

Butt, physicist in the High-Energy Astrophysics Division at the Harvard-Smithsonian Center for Astrophysics. Former fellow in the Committee on International Security and Arms Control at the National Academy of Sciences, nuclear physics Ph.D., 5/8/10 (Yousaf, “The myth of missile defense as a deterrent,” http://www.thebulletin.org/web-edition/features/the-myth-of-missile-defense-deterrent.)

The Obama administration's long-awaited Nuclear Posture Review (NPR) "establishes U.S. nuclear policy, strategy, capabilities and force posture for the next five to ten years." The review signals a fresh approach to nuclear doctrine; however, its reliance on missile defense as an element of nuclear deterrence is wrong. Such systems are useless, dangerous, and destabilizing, and ramping up reliance on missile defenses because of planned reductions to the U.S. operational nuclear stockpile is deeply misguided. Specifically, the new NPR states, "Nuclear forces will continue to play an essential role in deterring potential adversaries and reassuring allies and partners around the world. But fundamental changes in the international security environment in recent years--including the growth of unrivaled U.S. conventional military capabilities, major improvements in missile defenses [emphasis added], and the easing of Cold War rivalries--enable us to fulfill those objectives at significantly lower nuclear force levels and with reduced reliance on nuclear weapons." In other words, the posture review essentially asserts that missile defense can somehow compensate for the deterrent capability that will supposedly be lost due to reductions in the U.S. nuclear stockpile. Setting aside the fact that there haven't been any realistic tests indicating "major improvements in missile defenses," such logic is questionable on three levels. First, it's far from clear that the precise number of deployed U.S. nuclear weapons affects an adversary's deterrent calculus--especially when the operational stockpile will still consist of more than 1,000 weapons. (Even if New START is ratified and the Russian and U.S. operational warheads are reduced to about 1,550 each, many thousands of additional weapons will remain in the reserve stockpiles.) As Jeffrey Lewis has pointed out, "An enemy who can be deterred, will be deterred by the prospect of a counterattack, even if it consists of only a few nuclear weapons. Beyond that minimum threshold, nuclear weapons provide little additional deterrent benefit." Similarly, Col. B. Chance Saltzman, chief of the air force's Strategic Plans and Policy Division, has argued PDF that "the United States could address military utility concerns with only 311 nuclear weapons in its nuclear force structure while maintaining a stable deterrence." So contrary to what the NPR indicates, slightly reducing the U.S. operational arsenal won't create a "deterrence gap" that needs to be filled. Second, even if reducing the U.S. stockpile did affect U.S. deterrent posture, missile defense couldn't replace any lost deterrent value because missile defense doesn't deter nuclear attacks. The purpose of missile defense is to defend--or, more accurately, attempt to defend. An adversary wouldn't be deterred from launching a nuclear attack because of the existence of missile defense; rather, it's the credible threat of overwhelming nuclear retaliation that deters an adversary. If the enemy is irrational and suicidal enough to discount the threat of massive nuclear retaliation, then a missile defense system that can theoretically intercept only some of the attacking missiles most certainly isn't going to be a deterrent. In wonk parlance, the NPR conveniently conflates reprisal deterrence with denial deterrence. Reprisal deterrence is the 800-pound gorilla, and denial deterrence is the flea. If our adversaries are thinking twice about using nuclear weapons it's because they're scared of reprisal deterrence. And if they aren't sufficiently scared of reprisal, fractional denial certainly isn't going to stop them. To borrow an analogy used by Thomas Schelling, a Nobel laureate with a deep knowledge of arms control and game theory: Denial deterrence adds to reprisal deterrence like tying an extra cotton string adds to the strength of an aircraft carrier's anchor chain. Third, even if one agrees with the NPR's argument that missile defense can somehow compensate for the deterrence allegedly lost by reducing the nuclear arsenal, an enormous logical flaw persists: The two alleged "deterrents"--the operational stockpile and missile defenses--are aimed at different countries and aren't interchangeable. Reducing the U.S. operational nuclear stockpile, which is calibrated to Russia's arsenal, isn't going to be compensated by investing in missile defenses to protect against an Iranian attack. Plus, many experts agree that if Iran obtains nuclear weapons, it wouldn't use them in a suicidal first strike. A detailed National Defense University study concluded that Tehran desires nuclear weapons mainly because it feels strategically isolated and that "possession of such weapons would give the regime legitimacy, respectability, and protection." Basically, Iran wants a nuclear capability for deterrence purposes--just like every other nuclear-armed nation. The Polish foreign minister has even admitted that Warsaw is involved with U.S. missile defense plans in Europe to improve diplomatic ties with Washington, not out of any fear of Iranian nuclear attack. But if Tehran does obtain nuclear weapons, surrounding it with missile defenses, no matter how effective, will never eliminate the threat that a single missile could penetrate the defense system. Thus, the United States can never neutralize the deterrent value of any possible future Iranian nuclear ballistic missiles with any incarnation of missile defense. A nuclear-armed Iran would have to be treated identically by Washington whether or not missile defenses were in play.

Solvency Exts 4/5

### Missile defense doesn’t compensate for other defense systems in strategic calculations – no reason to use them

Butt, physicist in the High-Energy Astrophysics Division at the Harvard-Smithsonian Center for Astrophysics. Former fellow in the Committee on International Security and Arms Control at the National Academy of Sciences, nuclear physics Ph.D., 5/8/10 (Yousaf, “The myth of missile defense as a deterrent,” http://www.thebulletin.org/web-edition/features/the-myth-of-missile-defense-deterrent.)

The strategic uselessness of missile defenses aimed at intercepting nuclear-tipped missiles is clear (as I have argued before). This is a conceptual problem, not merely a technical one. The reason is simple: There is always a reasonable probability that one or more nuclear missiles will penetrate even the best missile defense system. Since a single nuclear missile hit would cause unacceptable damage to the United States, a missile defense system shouldn't change U.S. strategic calculations with respect to its enemies. Washington should treat North Korea, Iran, and other adversaries the same before and after setting up missile defense systems. Recently, Schelling publicly stated that missile defense will be of dubious value in addressing the possible future threats from Iran.

### Has Alternatives in the SQUO-being created and tested by the army.

Raymond Duvall and Jonathan Havercroft 2008 “Taking sovereignty out of this world: space weapons and empire of the future” British International Studies Association Professor at U of M in Poli Sci and Department of Political Science University of Oklahoma [http://journals.cambridge.org/action/displayFulltext ?type=1&fid=2185920&j](http://journals.cambridge.org/action/displayFulltext%20?type=1&fid=2185920&j)id=RIS&volumeId=34&issueId=04&aid=2185916&bodyId=&membershipNumber=&societyETOCSession=

Kinetic-energy weapons, such as hypervelocity tungsten rod bundles, use the force of a collision to destroy a target either in space/entering space or on Earth. Alternative and complementary to kinetic-energy weapons are space-based high- energy laser systems. While laser technology has existed since the 1960s, only recent advances have made it possible to produce sufficiently powerful lasers to be used as weapons. The US Army has successfully demonstrated the ability of a ground-based laser to destroy rocket shells in flight, and the United States Air Force has mounted an airborne laser on a modified Boeing 747 capable of destroying ballistic missiles in the boost phase.26 Furthermore, the Air Force and the Ballistic Missile Defense Organization are collaborating on the Integrated Flight Experiment, which plans to launch a space-based laser to destroy a ballistic missile between 2010 and 2012.27 While the initial purpose of developing space-based lasers is missile defence, it will be possible to modify the technology, once in place, so that lasers can destroy ground-based targets as well. A system of relay mirrors in space could work from a laser based on the land, sea, air, or in space to attack any point able to be targeted by mirror reflection. This laser system would be capable of nearly instantaneously attacking any place on the Earth.

Solvency Exts 5/5

### BMDs have never worked and will never work.

Jacques S. Gansler April 2010 Under Secretary of Defense for Acquisition, Technology and Logistics “Ballistic Missile Defense: Past and Future” http://ww w.dtic.mil/cgibin/GetTRDoc?AD=ADA527876&Location=U2&doc=GetTRDoc.pdf

Interest group advocacy is also strongly argued and equally polarized—including groups that were, in theory, independent and objective. Such nonprofit organizations as the Union of Concerned Scientists have issued statements (including those by former Nobel Prize winners) that “showed” why not only would the system not work, but why it was wrong to deploy it. For example, in an article titled “Technical Realities,” the Union of Concerned Scientists stated that the system to be deployed in late 2004 “will have no demonstrated capability and will be ineffective against real attack by long-range ballistic missiles,” and went on to state that the Bush Administration’s “claims that the system will be reliable and highly effective are irresponsible exaggerations.” Similarly, John Pike published an article with the title “National Missile Defense: Rushing to Failure.”7 Eight years later, William Hartung published “Anti-Missile Missiles in Europe: A Weapon that Doesn’t Work for a Threat that Doesn’t Exist.”8 At the extreme, perhaps, after a successful intercept (direct hit) of a target intercontinental ballistic missile, one of their members, Ted Postol of MIT, wrote to the President of the United States stating that I, as Under Secretary of Defense and thus responsible for the ballistic missile defense program, had “fixed” the test so that the interceptor missile (launched from the Marshall Islands, out over the Pacific) would “home on a signal from the target.” (An allegation that had no factual basis whatsoever.)

### BMDs are expensive and ineffective.

Alice Underwood, Harvard University 2010 “Media Bias and the State of Perpetual Rivalry: How Journalism Propagates a Vicious Cycle of Miscommunication between the United States and Russia” [http://www.joinsurf.com/uploads/pd f/surfj ournal09 10.pd f#page=35](http://www.joinsurf.com/uploads/pd%20f/surfj%20ournal09%2010.pd%20f#page=35)

However, the BMD system draws constant criticism for the underperformance of its various aspects. Its development demands considerable spending – $ 6-10 billion per year16 – but its effectiveness has yet to be proven. For example, field tests have not yielded definitive results, and many critics draw attention to the unrealistic scenarios rehearsed by missile developers. As argued by George N. Lewis and Theodore A. Postol, professors at Cornell and MIT respectively, “when MDA’s [Missile Defence Agency of the US Department of Defense] description of how the system functions is subjected to a detailed technical analysis, it becomes clear that none of the system’s components can work as MDA claims.”17 Such a weakness of technical arguments stipulates the necessity to search for substantial driving forces for the BMD program in political sphere.

## 1NC Quality Politics Link

### Major political opposition-NSP, influential politicians, and even the army hate the plan.

Sheenan, ‘7 – Mike, prof of IR @ university of Swansea (The International Politics of Space, page 121. Series: Space Power and Politics, ed. Everett C Dolman and John Sheldon, both @ School of Advanced Air and Space Studies, USAF Air. )

While there may be clear military rationales in favour of the weaponisation of space by the United States, it is a decision that would have considerable political implications. It is also true that to date there have always existed powerful cultural and political domestic obstacles in the United States to such a development. Even at the outset of the space age leading US politicians speculated on the idea of space as a force for peace rather than a theatre of war. House Majority Leader McCormack suggested in 1958 that the exploration of space had the potential to encourage a revived understanding ‘of the common links that bind the members of the human race together and the development of a strengthened sense of community of interest which quite transcends national boundaries’.84 President Kennedy similarly suggested that it was ‘an area in which the stale and sterile dogmas of the Cold War could be literally left a quarter of a million miles behind’.85 US National Space Policy states that the United States is committed to the exploration and use of outer space ‘by all nations for peaceful purposes and for the benefi t of all humanity’.86 US national space policy does allow for the use of space for the purpose of national defence and security, but nevertheless, the weaponisation of space would seem to run counter to a very long-standing national policy. Similarly, the US National Security Strategy declares that uninhibited access to space and use of space are essential to American security. Space policy objectives include protecting US space assets, ‘preventing the spread of weapons of mass destruction to space, and enhancing global partnerships with other space-faring nations across the spectrum of economic, political and security issues’.87 It is also notable that the US armed forces are aware of the need to respect the concept of space as a ‘global commons’, so that if ‘the United States impedes on the commons, establishing superiority for the duration of a confl ict, part of the exit strategy for that confl ict must be the return of space to a commons allowing all nations full access’.88 Current US military space doctrine is careful to emphasise the political implications of military operations in space and the need to be sensitive to legal issues. USDD 2-1.1, Counterspace Operations, insists that ‘in all cases, a judge advocate should be involved when considering specifi c counterspace operations to ensure compliance with domestic and international law and applicable rules of engagement’. 89

Past Votes Prove not Popular

### Empirics go neg-past votes to cut BMD have had bipartisan support.

ACT 3 (Arms Control Today, September, “Missile Defense Funding Eases Through Congress”, <http://www.armscontrol.org/node/3266>)

Legislators agreed upon significant cuts to the Pentagon’s $301 million request to develop, in part, a common interceptor to be launched from a variety of platforms to destroy ballistic missiles minutes after they are fired. The House basically halved the request for this new boost-phase interceptor, and the Senate reduced it by more than two-thirds. Both bodies also reduced funding for researching general missile defense hardware and software. The Senate exacted nearly $87 million in cuts and the House $63 million. A House report justifying the reductions stated that “it is not clear what activities, levels of effort, or deliverables warrant the level of funding proposed.”

## Public Backlash

### Public will backlash.

Callahan, William 2000 ((lieutenant colonel US Air Force) <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA433750&Location=U2&doc=GetTRDoc.pdf>) JA

As the first openly proposed plan for putting weapons in space, the Strategic Defense Initiative generated more controversy than any previous space weapon system. The arguments against SDI centered on three general areas: the strategic instability that would be generated by pursuing a nuclear advantage; the inherent infeasibility of the concepts being explored; and the projected expense of the programs. Taken together, these problems spelled the end of SDI. Those who thought that the program was technologically unfeasible and a waste of money were able to garner support from those who deemed a successful program to be politically destabilizing and likely to lead to nuclear holocaust. “Regardless of the merits of the arguments, the domestic political resistance became such that SDI was eventually terminated”

## Political Focus Trade-Off

### Pushing space mil kills Obama’s agenda focus.

Callahan, William 2000 ((lieutenant colonel US Air Force) <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA433750&Location=U2&doc=GetTRDoc.pdf>) JA

Tests of the F-15 ASAT system also generated domestic controversy. “Some of the concerns verged onparanoia, such as using the weapons to destroy Soviets early warning satellites so that the United States could launcha preemptive nuclear strike” Others thought ASATs should never be developed because using weapons in space is an “intrinsically bad idea” While neither of these arguments was decisive, they added to the political resistance against the program. The final demise of the successful F-15 ASAT system has been attributed to cost overruns and a Congressional ban on further testing against targets in space. “The U.S. Air Force cancelled the program in March 1988, and turned over ground-based ASAT development to the Army” If the controversy surrounding a recent U.S. test-firing of a ground-based laser at a satellite is any indication, opposition to using weapons in space remains strong today. This opposition continues to be directed against all weapons intended to engage targets in space, regardless of where they are based. The test firing of the MIRACL laser against an orbiting satellite prompted at least three articles in the New York Times alone, much more than would normally be expected for feasibility tests of a potential future weapon. “This time the arguments centered on the even more relevant point of exactly who had the most to lose were a space weapons race to start” The fact remains that using weapons in space is still extremely controversial, and actually placing weapons in space is certain to be more so.

## Unpopular-Spending

### Even if otherwise popular, perception of costliness makes Democrats hate BMD spending.

Sieff 6 (Martin, Nov 20, “US, Japan Boost BMD Cooperation”, <http://www.spacewar.com/reports/US_Japan_Boost_BMD_Cooperation_999.html>)

Abe's statement will be especially welcome news for Boeing, Raytheon, Lockheed Martin and the other main U.S. defense contractors on BMD. With the opposition Democrats taking over control of the U.S. Senate and House of Representatives in the Nov. 7 U.S. midterm elections, the Bush administration is expected to face pressure to cut costs and tighten spending on BMD.

## Biden Backlash Link 1/2

### Biden will backlash.

AP ‘8, Sen. Biden Warns Against Arms Race in Space, http://www.msnbc.msn.com/id/16743519/ns/technology\_and\_science-space/t/sen-biden-warns-against-space-arms-race/

[WASHINGTON](http://www.bing.com/maps/?v=2&where1=WASHINGTON&sty=h&form=msdate) — The chairman of the Senate Foreign Relations Committee warned on Sunday against fostering an arms race in space after China was reported to have conducted an anti-satellite weapons test. Sen. Joe Biden, D-Del., said that the test was provocative, but that the United States had ways to combat the threat posed by it. "I don't think we should be overly worried about this at this point," Biden said. "We have ways to deal with that ability." The U.S. said China conducted the test earlier this month, by using a ground-launched missile to destroy an old Chinese weather satellite. Biden, who is running for president in 2008, said President Bush's policy on weapons in space need to be reviewed.

Biden Backlash Link 2/2

### **He’s key to KORUS.**

McLarty & Cunningham, 1/24 – \*chief of staff to Clinton in 1993-94 and helped bring Bill Daley into the White House to lead the 1993 Nafta ratification effort, AND \*\*Mr. Cunningham was an aide to President Clinton and to then-Sen. Joseph Biden (1/24/11, Thomas "Mack" McLarty III and Nelson W. Cunningham, “Obama's Free Trade Opportunity,” Factiva,)

Much has been written about Bill Daley's selection as White House chief of staff, a position sometimes called "Chief Javelin Catcher" (a title whose accuracy one of us strongly affirms). Most agree that Mr. Daley is the perfect choice to help President Obama set a new tone for his presidency. He is a moderate, strongly rooted in Democratic principles and politics. Though he comes from the business community, he is no colorless technocrat or Republican shill. He is a Daley from Chicago and will not forget the needs of the lunchbucket voters who've supported Daleys for 50 years, or the political lessons he learned at the knee of his father, Mayor Richard J. Daley. Mr. Daley will need all his political skills to tackle what we think should become one of the signature accomplishments of his tenure: the return of liberalized trade as a centerpiece of Democrats' vision of economic competitiveness and globalization. Bill Clinton embraced this vision, and he understood that trade liberalization required strong bipartisan efforts. To pass the North American Free Trade Agreement (Nafta) in 1993, we set up a bipartisan war room within the White House, headed by Bill Daley and former Republican Congressman Bill Frenzel. Messrs. Daley and Frenzel worked together, with the full support of the president and White House staff, to push Nafta through the House with 102 Democratic and 132 Republican votes, and on to an equally bipartisan total in the Senate. Liberalized trade was also at the heart of President Clinton's view that America needed international competition to succeed in an increasingly trade-dependent world. Not every Democrat supported this view, though Mr. Clinton strongly pushed it within the party. But we quickly lost this bipartisan consensus and the progress Mr. Clinton had forged in his own party. By 1997, when Mr. Clinton sought renewal of "fast track" authority to negotiate more trade agreements, Republican Speaker of the House Newt Gingrich could not corral his majority to support the president and the effort failed. And although President George W. Bush did manage to make congressional headway on trade with his Republican majorities, he did so principally with Republican support. In the first two years of President Obama's tenure, progress on trade was largely frozen. Mr. Obama stated his support for the uncompleted pieces of the Bush trade agenda -- free trade agreements with South Korea, Panama and Colombia, the dangling Doha World Trade Organization round, and Russia WTO accession -- but little measurable progress was made. Now, in a few short weeks, Mr. Obama has renegotiated the U.S.-Korea free trade agreement and announced that it will be a priority in the new Congress. He has taken steps to resolve a longstanding trade dispute with Mexico over trucks that goes back to the Clinton years. And, with his selection of Mr. Daley, the president has hired the man who can make this trade revival a reality. What now? Our experience tells us that the only way to push a major trade agreement through Congress -- **even one where the nominally pro-trade GOP rules the House** -- is with **strong and unyielding presidential leadership,** a unified White House staff and cabinet, and a genuinely bipartisan approach to stakeholders and the Congress. First, **the president must be fully committed.** Nafta was a bipartisan success in no small part because of the personal involvement of Mr. Clinton and sometimes tortuous negotiations with members of Congress. It's true that some pork was doled out and more than one bridge was built as a result of a Nafta vote -- something they probably still understand in Chicago. Second, the White House and cabinet must be unified in pulling for passage. Everyone from **Vice President Joe Biden** to Secretary of State Hillary Clinton to Labor Secretary Hilda Solis and U.S. Trade Representative Ron Kirk **must be fully engaged**, without hesitation. Don't forget the crucial role that then-Vice President Al Gore's 1993 debate with Ross Perot played in swinging public opinion in favor of Nafta. Third, **the effort must be genuinely bipartisan. We'll need scores of members from both sides to make passage possible** (this is particularly true with a large tea party GOP caucus that is as yet undefined on trade). Perhaps Mr. Obama could even take a page from the 1993 playbook and bring into the White House a prominent Republican -- former U.S. Trade Representative Carla Hills, former Reagan Chief of Staff Ken Duberstein, or a former congressman such as Jim Kolbe or Chris Shays, for example -- to help quarterback the effort. Finally, the president has to show that his commitment to the U.S.-Korea free trade agreement isn't a one-off. Moderates and independents who have been spooked by an economic approach they see as veering strongly to the left are looking for signs that this president embraces their centrist views. A commitment to deficit reduction, sustained outreach to business, and a genuine embrace of trade liberalization must go hand-in-hand. Most importantly, the president should commit to advancing the pending trade agreements with Colombia and Panama right now, instead of leaving them until later as some in his administration would prefer. Why bother taking a half-measure on trade? A full-throated campaign for the Korea, Colombia and Panama trade agreements, along with WTO accession for Russia, can help reset this presidency. Capitalizing on his selection of Mr. Daley with a renewed American trade policy, Mr. Obama has the chance to remind moderates in both parties and independent voters that he is the man they voted for in 2008 -- a leader who appreciates the goals of businesses large and small, and who sees America as confident and innovative enough to remain the global economy's True North. It also gives the president the opportunity to strengthen ties with longtime allies who cultivate liberal democracy, reject old and ugly political and social traditions, stand shoulder-to-shoulder with us when it comes to fighting the world's darkest forces, and are willing to open their markets to us -- or in the case of Russia, to encourage that behavior. It won't be easy, and it may alienate some in the Democratic base, but it is essential.

## AT Link Turn

### Even if some support the plan, they’re marginalized politically.

Tannenwald, ‘3 – Nina, Associate Research Professor at Brown University's Watson Institute for International Studies (Yale Journal of International Law. April. <http://www.cissm.umd.edu/papers/files/tannenwald.pdf>)

Although SPACECOM and its supporters aggressively assert their views, advocates of weapons in space may be in the minority, even in the Pentagon. As many observers recognize, the interests of the United States in space are much broader than SPACECOM presents. U.S. testing and deployment of orbital weapons could make using space for other military and commercial purposes more difficult. Many in the military, especially those involved in crucial military support activities, are quietly aware of this, as are officials at NASA and the international space station, and their supporters in Congress. 26 Congressional support for antisatellite (ASAT) programs does not appear to be deep or widespread. Serious questions remain as to whether the threats to U.S. assets in space are really as great as SPACECOM argues, and whether, even if the threats were real, expensive and difficult space-based weapons would really be the most effective way to deal with them. In many cases, those wishing to hurt the United States will likely find it much easier, and more effective, to attack terrestrial targets. 27

## KEI=Nuke War

**Interception of an ASAT from space would be equivalent to a nuclear war.**

Mutschler ’10, Max Mutschler, Institute of Political Science, University of Tübingen, Preventative Arms Control In Space: Breaking the Deadlock, http://stockholm.sgir.eu/uploads/Mutschler\_SGIR2010\_Arms\_Control\_in\_Space.pdf

One can conceive of ASAT weapons that act from space to space, too. They would be satellites that have the capacity to either destroy or to manipulate other satellites. This could be done either with kinetic energy: one simply manoeuvres one satellite into the orbit of another one, or with directed energy (satellite-based laser). In addition to earth to space and space to space weapons, military planners also considered weapons that could project force from space to earth. Proposals have been made, for example, to develop a space-based strike system with rods of heavy metal deployed in orbit that would be hurled earthwards at extremely high speed, creating an impact equivalent to a small nuclear weapon. Another proposal that has its origins in the SDI plans of the 1980s is the idea of making use of space-based lasers for the purpose of missile defence.

KEI Not Feasible

### **KEI is not technologically feasible**

Dinerman, space writer regarding military and civilian space activities, 1/24/05 (Taylor, “Save missile defense: cancel KEI,” <http://www.thespacereview.com/article/307/1>.

It is a program that never should have been started in the first place. KEI is supposed to be a boost-phase interceptor (BPI). That is, it is designed to kill an enemy ballistic missile in the very early stages of its flight. This is, of course, the best possible moment to intercept an enemy missile. It is still struggling with gravity as it fights its way though the heavy soup of the Earth’s lower atmosphere, and it is putting out joule upon joule of heat, making it an ideal target for infrared guided weapons.Sitting outside MDA, the answer is obvious, to wit, kill KEI. It is a program that never should have been started in the first place. KEI is planned to be a BPI system that will be based on land and, later, in ships and even on aircraft. The first version to be deployed will be fitted onto a transportable trailer that can fit inside a C-130 aircraft; this trailer can be trucked up close to the borders of an enemy nation that is preparing to launch long-range missiles at US or allied targets. It would be difficult to imagine a worse solution to the BPI problem. To begin with, the KEI will have to have an exceptionally powerful booster rocket in order to catch up with the missile it is supposed to hit. After all, by the nature of the mission, it will be trying to catch up with a target that has already been launched. If the enemy missile maneuvers or changes velocity, the KEI booster will have to adjust, thus bleeding off its own power. Also, being close to an enemy’s border, the launcher and its associated systems will be vulnerable to short-range enemy weapons. The launch of an ICBM or IRBM could be preceded by a barrage of shorter-range rockets of the Frog or Al Samoud type, equipped with cluster bombs. Politically, the idea of land-basing BMD weapons on the soil of our allies makes no sense. For their own domestic reasons, they will want to ensure that no weapons are fired from their soil without their permission. In a real emergency, getting permission might involve panicked political leaders or communications failures that might leave the enemy missile flying freely towards the US mainland. Any arrangements for consultation, or even a dual-key arrangement, would reduce intercept time by precious seconds. For a BPI weapon, this makes all the difference. A country larger than North Korea—say, Iran—would not find it difficult to base its long-range missiles far away from its borders, creating a difficult or impossible intercept problem for the KEI. The geometry of such a mission, if the target missile is launched from more than 650 kilometers from the KEI, would make the intercept more of a midcourse encounter than a boost-phase one.

## Tech K NMD Alternative

### The alternative is to reject the affirmative’s hybrid of scientific knowledge and militaristic aims.

### We aren’t a total disavowal of science, but we sever scientific knowledge production from the aims of the militaristic state-our analysis against space militarization is key to influencing decision makers and short circuiting the drive to extinction.

Mutschler ’10, Max Mutschler, Institute of Political Science, University of Tübingen, Preventative Arms Control In Space: Breaking the Deadlock, http://stockholm.sgir.eu/uploads/Mutschler\_SGIR2010\_Arms\_Control\_in\_Space.pdf

How can epistemic communities carry out their role as norm entrepreneurs? Uncertainty about how the world works and what consequences political decisions might have make policymakers turn to experts to seek advice. This provision of knowledge constitutes the power of epistemic communities (Haas 1997). They point out the alternatives decision-makers have and they can, on the basis of their causal or normative understanding, discount and sometimes even exclude certain alternatives. “If rationality is bounded, epistemic communities may be responsible for circumscribing the boundaries and delimiting the options” (Haas 1997, 16). What can be the role of epistemic communities in the process of the construction of national interests in regard to preventive arms control? Naturally, there is quite a high degree of uncertainty in the process of developing new weapon technology regarding the usefulness of this new technology. The central question for political decision-makers is: would this technology enhance our security? It seems natural that governmental decision-makers turn to actors of the state apparatus first to get advice on the military utility of potential weapons. These are the defence bureaucracy and the military, which cooperate with the defence industry in the field of research and development (R&D). Plenty has been written on the “military-industrial complex” and the tendency of the industry, the military and the defence officials to advocate certain weapons because they either hope for profitable contracts later on (in case of the defence-industry), or because the weapons are considered prestige projects (in case of the military).14 14 For an excellent overview of perspectives that look at domestic structures to explain armament decisions, see Buzan and Herring (1998, 101–18). Epistemic communities outside of the state apparatus sometimes have a more critical view of certain technologies, and they can provide knowledge of the expected military utility of certain weapons and their role in national security. The central question from the 18 theoretical point of view outlined above, however, is how do such epistemic communities manage to get heard and to make their knowledge consensual? I hypothesize that their chances to do so increase if they can portray the development of a particular weapon technology as detrimental to the security of the state. This is important because new norms do not emerge in a vacuum. In order to be seen as legitimate and hence be accepted, the new norm must be coherent with this existing normative framework (Florini 1996, 376–7). “Efforts to promote a new norm take place within the standards of ‘appropriateness’ defined by prior norms” (Finnemore and Sikkink 1998, 897).15 By using their information to present the development of certain weapons as counterproductive for national security, epistemic communities do exactly this; they make the link between a new norm – do not develop these weapons – and appropriate behaviour. The development of new weapons in order to improve the security of one’s country can be seen as the appropriate behaviour of any head of state. If convincing evidence can be presented that certain technologies compromise national security, the development of these weapons can be presented as in conflict with appropriate behaviour. Epistemic communities of scientist that have the technical expertise and authority to assess technologies for potential weapons are particularly suited to provide technical information in order to show consequences of differing policy choices.16 15 According to this perspective, actors are not conceived in terms of utility-maximizers but as role-players that abide by a “logic of appropriateness”. Their behaviour is driven by the following questions: 1) What kind of situation is this? 2) Who am I? 3) How appropriate are different actions for me? March and Olsen (1989). 16 Johnson (2006, 76) calls this tactic “stepladder”. However, it is not enough to come up with good arguments and convincing evidence alone. In order to make their knowledge influential upon the thinking of decision-makers, epistemic communities must institutionalize their scientific advice (Haas 1997). Adler (1997), for example, shows that American scientists in the 1960s who were concerned about the threat of a nuclear war between the United States and the Soviet Union played a key role in bringing about superpower arms control by providing knowledge on the impossibility of a technical solution, i.e. unilateral armament, to the threat of mutual assured destruction, pointing out that nobody can win a nuclear war. However, their convincing arguments were only one part of the success story. The other part was the fact that many prominent members of the arms control community were hired into key positions in the Kennedy administration. In addition, the scientists managed to institutionalize their knowledge on a transnational level by means of conferences and scientific forums. Such institutions helped 19 to establish contacts with Soviet scientists who learned about the ideas of their American colleagues and “translated” them to the Soviet leadership. This in turn facilitated a shared understanding between U.S. and Soviet officials “about why and how they should cooperate, how to start negotiations, what to include in the agenda, and how to conceptualize norms and rules for particular tasks” (Adler 1997, 144).

## Micro-Political Solvency

### Bottom up approaches against the fusion of technology and militarism in space spill over—in round discussion is key to generating societal awareness.

Mutschler ’10, Max Mutschler, Institute of Political Science, University of Tübingen, Preventative Arms Control In Space: Breaking the Deadlock, http://stockholm.sgir.eu/uploads/Mutschler\_SGIR2010\_Arms\_Control\_in\_Space.pdf

It stands out that two established theories about international cooperation fail to explain the non-existence of an international regime of preventive arms control in space. If we look simply at the interests of the states, we should expect an international regime with verification procedures as a functional solution to the collective action problem associated with space weapons. A power-based approach criticizes this view as naive and draws our attention to the problem of relative gains. Admittedly, tough negotiations would lie before an agreement on arms control in space that offers balanced gains to all major actors. However, some trade-offs and package deals are possible, and the power-based approach 22 cannot sufficiently explain why we have not seen more efforts to realize this potential. The knowledge-based approach instead seems to offer an explanation for the scepticism of the U.S. (and eventually the other actors, too) towards arms control in space; a scepticism that results from the positive view about the military utility of space weapons and lacking awareness of the problems that come with the weaponisation of space. By pointing to the fact that such views can be called into question, this approach offers an explanation for changes in the foreign policy behaviour of states. The knowledge-based approach draws our attention to epistemic communities as norm entrepreneurs and agents of change. These findings have consequences for the way we look at arms control in space. Serious attempts for arms control in space must not be discredited by either pointing to a lack of interest in it or to the unfeasibility of coming to a verifiable agreement that satisfies all parties. Preventive arms control in space is possible. However, in order to break the deadlock in the negotiations on preventive arms control in space, more knowledge on the consequences of the weaponisation of space must be produced and diffused within and between the societies and governments of the major space-faring nations. The literature examined above suggests that the development of a transnational epistemic community that manages to institutionalize this knowledge would be an important factor in this regard.