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# COMMON GROUND IN THE SKY: EXTENDING THE 1967 OUTER SPACE TREATY TO RECONCILE U.S. AND CHINESE SECURITY INTERESTS

Alex B. Englehart<sup>†</sup>

*Abstract:* A storm is brewing 100 kilometers above the Pacific Rim. The early 21st century finds the People's Republic of China in the throes of astronomical economic growth, national development, and military expansion. The United States, meanwhile, is staunchly determined to develop an effective missile defense system and to extend its military capabilities in space as it pursues its global war on terrorism. China sees U.S. military space activities as a threat and, along with Russia, has pushed hard in recent years for a ban on all space weapons. So far, the United States has been unwilling to negotiate on the subject, claiming that the 1967 Outer Space Treaty—which bans weapons of mass destruction in space, but not other weapons—is sufficient. Pursuing space weapons without coming to an understanding with the Chinese does not serve U.S. national security interests. There is a better way.

Article IV of the 1967 Outer Space Treaty should be extended in a targeted manner that will alleviate the worst of China's worries—space-based kinetic kill vehicles and lasers, and ground-based anti-satellite weapons—while at the same time leaving the United States plenty of room to pursue its other military and strategic interests in space. By following the examples set by UNCLOS III and the ABM and SALT treaties, China, Russia, and the United States can amend Article IV in a way that will be acceptable to all sides.

## I. INTRODUCTION

China's recent test of an anti-satellite weapon on January 11, 2007, put the incipient arms race in space between the United States and China back into the public consciousness.<sup>1</sup> Under the Bush Administration, the United States has been aggressively pursuing offensive space weapons that have the potential to seriously threaten China and upset the longstanding geopolitical equilibrium based on mutually assured destruction.<sup>2</sup> Russia and others also fear the U.S. pursuit of space weapons,<sup>3</sup> and these countries are likely to rally to China as the arms race progresses. As the overall situation continues to deteriorate, it is becoming increasingly clear that the unbridled American pursuit of space weapons is a dangerous game and that the consequences could be very severe indeed.

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<sup>†</sup> The author would like to thank Professor Veronica Taylor and the editors of the *Pacific Rim Law & Policy Journal* for their support and encouragement.

<sup>1</sup> William J. Broad & David E. Sanger, *China Tests Anti-Satellite Weapons, Unnerving U.S.*, N.Y. TIMES, Jan. 18, 2007, available at <http://www.nytimes.com/2007/01/18/world/asia/18cnd-china.html>.

<sup>2</sup> See *id.*

<sup>3</sup> See Stephanie Nebehay, *U.S. Blasts China Test, Sees "No Arms Race in Space"*, REUTERS, Feb. 13, 2007, <http://www.alertnet.org/thenews/newsdesk/L13267247.htm>.

The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (“Outer Space Treaty”)<sup>4</sup> is the major legal instrument dealing with weapons in space.<sup>5</sup> Originally, it concerned mainly the United States and the Soviet Union at the height of the Cold War—these were the only countries with space programs at the time. But the treaty now has ninety-one states-parties, including all members of the United Nations Security Council.<sup>6</sup> Article IV of the Treaty bans the stationing of all weapons of mass destruction in space,<sup>7</sup> but says nothing about the emerging threats of kinetic kill vehicles, space-based lasers, and anti-satellite weapons.

This Comment examines the incipient arms race between the United States and China and the current state of the Outer Space Treaty. It argues that Article IV of the Treaty should be updated in order to deal with the new types of weapons that form the backbone of this arms race. Part II provides background on the current state of space weapons technology and the dangerous geopolitical ramifications that are likely to result from the further pursuit of that technology. Part III examines the Outer Space Treaty as it currently exists and demonstrates that it is dangerously outdated. Part IV argues that the international community should look to the principles that guided it in developing the United Nations Convention on the Law of the Sea (“UNCLOS III”)<sup>8</sup> for the law of the sea, as well as the Anti-Ballistic Missile Treaty (“ABM Treaty”) and other Cold War era arms control treaties, and update the Outer Space Treaty accordingly.

## II. THE U.S. PURSUIT OF SPACE WEAPONS THREATENS CHINA AND DOES NOT IMPROVE U.S. NATIONAL SECURITY

The development and deployment of space weapons will cost enormous sums<sup>9</sup> and ultimately lead to a much less safe and stable world. Kinetic kill vehicles and space-based lasers are very complex devices that

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<sup>4</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410 [hereinafter Outer Space Treaty].

<sup>5</sup> Union of Concerned Scientists, International Legal Agreements Relevant to Space Weapons, Feb. 2004, [http://www.ucsusa.org/global\\_security/space\\_weapons/international-legal-agreements-relevant-to-space-weapons.html](http://www.ucsusa.org/global_security/space_weapons/international-legal-agreements-relevant-to-space-weapons.html).

<sup>6</sup> U.S. Department of State, Outer Space Treaty, <http://www.state.gov/t/ac/trt/5181.htm> (last visited May 5, 2007).

<sup>7</sup> Outer Space Treaty, *supra* note 4, art. IV.

<sup>8</sup> United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS III].

<sup>9</sup> Tim Weiner, *Air Force Seeks Bush's Approval for Space Weapons Programs*, N.Y. TIMES, May 18, 2005, available at <http://www.nytimes.com/2005/05/18/business/18space.html>.

have the potential to unleash enormous firepower on ground targets, but they are themselves extremely vulnerable to relatively cheap and simple anti-satellite weapons (“ASATs”).<sup>10</sup> Moreover, the deployment of space weapons and further development of ASATs will upset the longstanding strategic logic of mutually assured destruction by significantly weakening the effectiveness of intercontinental ballistic missiles (“ICBMs”) armed with nuclear warheads.<sup>11</sup> If the United States chooses to go the route of aggressive space weapons development in spite of these dangers, it is sure to further alienate the rest of the world—especially Russia—and drive it into the arms of a welcoming China.<sup>12</sup> In short, there are a number of very serious long-term consequences to the development of space weapons that the United States would be wise to consider before it is too late.

A. *A Number of Very Dangerous Space Weapons Are Being Developed*

A variety of space weapons are currently being tested in preparation for deployment over the next several years. These weapons generally fall into one of two categories: kinetic kill vehicles and directed energy weapons.<sup>13</sup> Kinetic kill vehicles are conceptually straightforward—they are simply solid objects designed to crash into their targets.<sup>14</sup> Because of the extreme velocities of objects traveling in orbit, no explosives are needed—the force of the impact alone is enough to destroy almost any conceivable target on the ground.<sup>15</sup> The major difficulty is accurate targeting.<sup>16</sup> Kinetic kill vehicle launchers in orbit must be accurate to within several meters while traveling at 4 kilometers per second at an altitude of tens of thousands of kilometers—not an easy task.<sup>17</sup> These weapons are also extremely expensive to deploy.<sup>18</sup>

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<sup>10</sup> Zhang Hui, *Space Weaponization and Space Security: A Chinese Perspective*, CHINA SECURITY, Spring 2006, at 24, 26-27, available at [http://www.wsichina.org/attach/CS2\\_3.pdf](http://www.wsichina.org/attach/CS2_3.pdf). See also Phillip Saunders et al., *China's Space Capabilities and the Strategic Logic of Anti-Satellite Weapons*, CENTER FOR NONPROLIFERATION STUDIES RESEARCH STORIES, Jul. 22, 2002, <http://cns.miiis.edu/pubs/week/020722.htm>.

<sup>11</sup> See Hui, *supra* note 10, at 26.

<sup>12</sup> See generally DMITRI TRENIN, RUSSIA'S NUCLEAR POLICY IN THE 21ST CENTURY ENVIRONMENT 11 (Institut français des relations internationales, Proliferation Papers, 2005), available at [http://www.ifri.org/files/Securite\\_defense/prolif\\_12\\_Trenin.pdf](http://www.ifri.org/files/Securite_defense/prolif_12_Trenin.pdf).

<sup>13</sup> See Hui, *supra* note 10, at 24-25.

<sup>14</sup> See *id.*

<sup>15</sup> Michael Goldfarb, *The Rods from God*, THE DAILY STANDARD, Jun. 8, 2005, <http://www.weeklystandard.com/Content/Public/Articles/000/000/005/700oklkt.asp>.

<sup>16</sup> See *id.*

<sup>17</sup> See *id.*

<sup>18</sup> See *Pegasus*, ENCYCLOPEDIA ASTRONAUTICA, <http://www.astronautix.com/lvs/pegasus.htm> (last visited May 5, 2007).

One of the most widely discussed possibilities for the near future is the so-called “rods from God.”<sup>19</sup> These are tungsten rods twenty feet in length and one foot in diameter that could hit a target anywhere on earth at 36,000 feet per second with about fifteen minutes notice.<sup>20</sup> Such a weapon would obviously be extraordinarily threatening to any potential adversary, and there would be a huge incentive to develop methods of countering the threat.<sup>21</sup> In other words, there would be a new and terrifying arms race—each country would feel the need to develop its own weapons program in order not to be completely outmatched by its potential adversaries.<sup>22</sup>

Beyond kinetic kill vehicles, various forms of space-based lasers may be being considered for deployment in the future.<sup>23</sup> These could be used mainly to counter enemy ICBMs and other small targets, rather than to inflict nuclear-level destruction.<sup>24</sup> They have the major benefit of being reusable—after the laser apparatus is launched into orbit, it will function for long periods of time without the need to replenish ammunition, as would be required for kinetic kill vehicles. Additionally, they can hit their target within a matter of seconds, as opposed to the delay of several minutes involved with kinetic weapons.<sup>25</sup> However, these types of lasers are at least ten years away and many engineering problems remain to be solved before they can become operational.<sup>26</sup> The research and development of these weapons will cost many billions of dollars.<sup>27</sup>

While space-based kinetic kill vehicles and lasers still remain to be deployed, ground-based “ASATs” have been operational for quite some time.<sup>28</sup> These are specialized weapons that are launched from the ground and designed to accurately hit a targeted satellite in orbit. The United States has had them since the 1980s,<sup>29</sup> and China successfully tested one in January 2007.<sup>30</sup> They are much simpler and cheaper than the space-based weapons they are designed to counter.<sup>31</sup> And now that space-based weapons may

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<sup>19</sup> Goldfarb, *supra* note 15.

<sup>20</sup> *Id.*

<sup>21</sup> See generally Hui, *supra* note 10, at 26.

<sup>22</sup> Hui, *supra* note 10, at 26.

<sup>23</sup> See Steven Lambakis, *Space Weapons: Refuting the Critics*, 105 HOOVER INSTITUTION POL’Y REV. 41 (2001), available at <http://www.hoover.org/publications/policyreview/3479337.html>.

<sup>24</sup> See *id.*

<sup>25</sup> Weiner, *supra* note 9.

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> See Dwayne Day, *Blunt Arrows: the Limited Utility of ASATs*, SPACE REV., Jun. 6, 2005, <http://www.thespacereview.com/article/388/1>.

<sup>29</sup> *Id.*

<sup>30</sup> See Broad & Sanger, *supra* note 1.

<sup>31</sup> Hui, *supra* note 10, at 26.

become operational, ASATs are naturally taking on a more important strategic role.

B. *A U.S. Deployment of These Space Weapons Will Open the Door for Other Countries to Do So in the Future*

The United States appears to be increasingly determined to proceed with the development and deployment of space weapons. Late in 2006, President Bush signed a new National Space Policy that categorically rejects all future legal limitations on space weapons and declared that the United States has the right to deny access to space to those that are “hostile to U.S. interests.”<sup>32</sup> One of the President’s top priorities is to “enable unhindered U.S. operations in and through space to defend our interests there.”<sup>33</sup> This sounds laudable, but in an interconnected world there are sure to be dangerous consequences to the pursuit of entirely “unhindered” U.S. operations in space. Specifically, other nations will also have a license to pursue “unhindered” operations in space, presenting the United States with grave military threats in the future.<sup>34</sup> Even now, China sees the U.S. operations as a direct threat and tensions between the two countries will increase as the United States goes down this unilateral path.<sup>35</sup> Ultimately, the current policy of simply flouting the positions of other world powers will come back to haunt the United States.

While the United States is the only country in the world with the potential to deploy space weapons within the next two decades, China, Russia, and others may have the capability later in the twenty-first century.<sup>36</sup> Nothing lasts forever. The United States may be the dominant economic and military power at this point in history, but China, at least, is catching up. Current projections have China reaching economic parity with the United States around 2050.<sup>37</sup> As with the American development of nuclear weapons in the twentieth century, a robust deployment of space weapons by the United States will open up a Pandora’s box of unpredictable and frightening consequences as the twenty-first century progresses.<sup>38</sup> China,

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<sup>32</sup> Marc Kaufman, *Bush Sets Defense as Space Priority*, WASH. POST, Oct. 18, 2006, at A1.

<sup>33</sup> *Id.*

<sup>34</sup> See generally, Bill Gertz, *Moscow, Beijing Eye Space Weapons*, WASH. TIMES, Jan. 17, 2007, at A06, available at <http://www.washtimes.com/national/20070116-101320-7600r.htm>.

<sup>35</sup> See Hui, *supra* note 10, at 24.

<sup>36</sup> See John Pike, *American Control of Outer Space in the Third Millennium*, FED’N AM. SCIENTISTS, <http://www.fas.org/spp/eprint/space9811.htm> (last visited May 5, 2007).

<sup>37</sup> *China ‘To Dwarf G7 States by 2050’*, BBC NEWS, Mar. 3, 2006, <http://news.bbc.co.uk/2/hi/business/4770590.stm>.

<sup>38</sup> See Hui, *supra* note 10, at 24.

seething with resentment at the United States' cavalier attitude on space weapons earlier in the century, will be as determined as ever to develop its own offensive space weapons as soon as it is able to. Russia and eventually others are sure to follow. Ultimately, it may be better for no one to have these weapons than for everyone to have them.

C. *If They Are Deployed, Space Weapons Will Be Inherently Vulnerable to Attack by Much Cheaper and Simpler Weapons—a Strategically Destabilizing Development*

The ASATs that already exist are quite capable of destroying the orbiting space-based weapons of the future.<sup>39</sup> This is the fundamental problem with the strategic logic behind the development of kinetic kill vehicles and space-based lasers—they pack an amazing offensive punch, but can be destroyed extremely easily.<sup>40</sup> As long as both China and the United States have ASATs only, there is strategic stability. If either country used ASATs in anger against the other's satellites, the other could retaliate in kind.<sup>41</sup> On the other hand, once space-based weapons are deployed, the situation changes dramatically.<sup>42</sup> As soon as a conflict begins, an adversary equipped with ASATs would use them to destroy the enemy's space-based weapons (as well as other critical satellites).<sup>43</sup> Therefore, in order to be effective, space-based weapons would need to be used first, in a massive surprise attack.<sup>44</sup> This is extremely destabilizing logic.<sup>45</sup> As tensions rise between two countries, each would have a huge incentive to strike first—one to use space-based weapons before they could be destroyed, the other to use ASATs to destroy the space-based weapons before they could be used.<sup>46</sup> Unlike the situation in the U.S.-Soviet Cold War of the twentieth century, there is no guarantee of mutually assured destruction to prevent the onset of conflict.<sup>47</sup> Whoever strikes first gains an enormous advantage.

Given this reality, space-based weapons are not a wise investment.<sup>48</sup> A robust deployment of kinetic kill vehicles alone would have costs in the

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<sup>39</sup> *Id.* at 26-27.

<sup>40</sup> *See generally* Saunders et al., *supra* note 10.

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

<sup>47</sup> *See generally* RUSSELL F. WEIGLEY, *THE AMERICAN WAY OF WAR* 399-441 (1973).

<sup>48</sup> *See* Saunders et al., *supra* note 10.

hundreds of billions of dollars,<sup>49</sup> but these weapons could be neutralized by ASATs costing several orders of magnitude less.<sup>50</sup> Any country contemplating extensive development of these weapons should take this into account.<sup>51</sup> Other weapon systems may very well cost less and be much more effective in the long run.

While the United States, China, and perhaps Russia are the only countries on earth with any likelihood of developing space-based weapons in the first half of the twenty-first century,<sup>52</sup> ASATs could easily find their way into the hands of rogue states and even non-state actors. As noted, they are orders of magnitude less expensive than space-based weapons and do not require nearly the same level of technical expertise to deploy and use effectively.<sup>53</sup> A terrorist organization or rogue state could destroy American satellites—including multi-billion dollar weapons systems—with ASATs costing only a few million dollars. This threat from smaller adversaries is another reason to forego the extreme expense and risk involved in full-scale development and deployment of space-based weapons.

*D. An Effective U.S. Space Weapons Deployment Would Neutralize the Effectiveness of ICBMs and Create a Powerful Incentive for Nuclear Preemptive Strikes*

In addition to the strategic interplay between space-based weapons and ASATs discussed above,<sup>54</sup> space-based weapons would have a major impact on the effectiveness of ICBMs,<sup>55</sup> the mainstay weapons of the second half of the twentieth century. ICBMs armed with nuclear warheads have been the primary guarantor of mutually assured destruction since their inception in the 1960s—any use of ICBMs against another country also equipped with them would lead to massive retaliation in kind.<sup>56</sup> The threat of mutual annihilation kept the peace between the superpowers during the Cold War and has continued to preserve stability among powerful nations up to the present day.<sup>57</sup> Even in today's so-called "uni-polar" world, Russia and China maintain vast quantities of weapons of mass destruction that serve as

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<sup>49</sup> Weiner, *supra* note 9.

<sup>50</sup> See Hui, *supra* note 10, at 32.

<sup>51</sup> See generally Saunders et al., *supra* note 10.

<sup>52</sup> See Pike, *supra* note 36; Saunders et al., *supra* note 10.

<sup>53</sup> See Saunders et al., *supra* note 10.

<sup>54</sup> See *supra* Part II.B.

<sup>55</sup> See Hui, *supra* note 10, at 26.

<sup>56</sup> See generally WEIGLEY, *supra* note 47 at 399-441.

<sup>57</sup> See *id.*; Hui, *supra* note 10, at 26.



a strong deterrent to any potential adversary considering an attack.<sup>58</sup> Unfortunately, with the development of space-based weapons, especially missile interceptors, this stability would be eviscerated.<sup>59</sup> Space-based interceptors would be accurate and fast enough to reliably shoot down ICBMs in flight.<sup>60</sup> If one country possessed space-based interceptors, it would effectively neutralize the ICBMs of all other countries, allowing it to use its own ICBMs with relative impunity.<sup>61</sup>

If the United States starts to deploy space-based interceptors that can shoot down ICBMs, China will face enormous internal pressure to at least consider the idea of launching a massive nuclear first strike.<sup>62</sup> This is because once a robust space-based interceptor system is deployed, the United States would have essentially unlimited power to dictate terms to China on any matter it chooses—China would be at the absolute mercy of the United States.<sup>63</sup> China would have a limited window of time in which to use its ICBMs before they became worthless in the face of orbiting interceptors, and it could very well feel compelled to do so in order to avoid the total collapse of its strategic nuclear deterrent.<sup>64</sup>

*E. Beyond the Inevitable Direct Harm to Sino-American Relations, the Deployment of Space Weapons Would Inflammate Russia and Drive It into a Closer Relationship with China*

Even though Russia is now much weaker than the Soviet Union of the Cold War era,<sup>65</sup> it still has thousands of ICBMs,<sup>66</sup> and the United States should carefully consider the ramifications of its planned space weapons deployment in light of that reality.<sup>67</sup> Russia's opinion cannot be ignored.<sup>68</sup> While it may not be capable of effectively deploying space-based weapons in the near to mid-term, it may well have an operational ASAT capability<sup>69</sup> and, in any case, its ICBMs demand respect.<sup>70</sup> Like China, Russia depends

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<sup>58</sup> See Hui, *supra* note 10, at 26; TRENIN, *supra* note 12, at 7.

<sup>59</sup> See Hui, *supra* note 10, at 26.

<sup>60</sup> *Id.*

<sup>61</sup> See generally *id.*

<sup>62</sup> See generally WEIGLEY, *supra* note 47 at 399-441.

<sup>63</sup> See Hui, *supra* note 10, at 26.

<sup>64</sup> See generally WEIGLEY, *supra* note 47 at 399-441.

<sup>65</sup> See generally TRENIN, *supra* note 12, at 7.

<sup>66</sup> Natural Resources Defense Council, Table of USSR/Russian ICBM Forces, 1960-2002, <http://www.nrdc.org/nuclear/nudb/datab4.asp> (last visited May 5, 2007).

<sup>67</sup> See Gertz, *supra* note 34.

<sup>68</sup> See generally TRENIN, *supra* note 12.

<sup>69</sup> See Gertz, *supra* note 34.

<sup>70</sup> *Id.*

on its ICBM capability to maintain its international respect. By being able to threaten any potential adversary with nuclear annihilation, Russia maintains its strength and independence in a changing world.<sup>71</sup> Also like China, Russia is understandably worried about the American pursuit of space weapons, which have the potential to undermine the effectiveness of ICBMs.<sup>72</sup>

Russia has long been a strategic player in the space weapons arena. In the late 1970s, the United States and the Soviet Union entered into negotiations on an ASAT ban, but the discussions fell apart before any agreement was reached.<sup>73</sup> Ever since, the Soviet Union (later Russia) has been wary of American plans to deploy any kind of weapon in space or further pursue ASAT capabilities.<sup>74</sup> The Strategic Defense Initiative under the Reagan administration—a predecessor to twenty-first century American space weapons programs—arguably hastened the collapse of the Iron Curtain.<sup>75</sup> The actual deployment of satellite-based weapons in the coming decades is sure to inflame Russia and drive it further away from the United States.

If Russia moves away from the United States, it will move towards China.<sup>76</sup> Now that China has taken the geopolitical lead in opposing the United States—particularly with respect to space weapons development<sup>77</sup>—a disillusioned Russia is sure to find a strong ally in its neighbor to the east.<sup>78</sup> In fact, it already has.<sup>79</sup> In 2002, Russia and China jointly submitted a working paper to the Conference on Disarmament on a treaty to completely ban space weapons.<sup>80</sup> The preamble to this proposed treaty states that “for the benefit of mankind, outer space shall be used for peaceful purposes, and it shall never be allowed to become a sphere of military confrontation.”<sup>81</sup>

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<sup>71</sup> *Id.*

<sup>72</sup> Nina Tannenwald, *Law Versus Power on the High Frontier: The Case for a Rule-Based Regime for Outer Space*, 29 *YALE J. INT’L L.* 363, 369 (2004).

<sup>73</sup> See Day, *supra* note 28.

<sup>74</sup> See *id.*

<sup>75</sup> See Ronald Hilton, *The Collapse of the Soviet Union and Ronald Reagan*, [http://wais.stanford.edu/History/history\\_ussrandreagan.htm](http://wais.stanford.edu/History/history_ussrandreagan.htm) (last visited May 5, 2007).

<sup>76</sup> See generally TRENIN, *supra* note 12, at 11.

<sup>77</sup> Hui, *supra* note 11, at 24.

<sup>78</sup> See generally TRENIN, *supra* note 12, at 11.

<sup>79</sup> See ARIEL COHEN, HERITAGE FOUND, *THE RUSSIA-CHINA FRIENDSHIP AND COOPERATION TREATY: A STRATEGIC SHIFT IN EURASIA?* (2001), <http://www.heritage.org/Research/RussiaandEurasia/BG1459.cfm>.

<sup>80</sup> Conference on Disarmament Delegations of China and the Russian Federation, *Possible Elements for a Future International Legal Agreement on the Prevention of the Deployment of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects* (Joint Working Paper, 2002), available at <http://www.nti.org/db/china/engdocs/chnruss.htm>.

<sup>81</sup> *Id.*

The basic obligations proposed include “[n]ot to place in orbit around the Earth any objects carrying any kinds of weapons, not to install such weapons on celestial bodies, or not to station such weapons in outer space in any other manner” and “not to resort to the threat or use of force against outer space objects.”<sup>82</sup> This sweepingly broad language was too much for the United States, and it declined to enter any kind of negotiations on the proposal.<sup>83</sup> But even so, the proposal should serve as a strong warning to the United States of the close alignment between China and Russia on the space weapons issue.<sup>84</sup> If the United States completely flouts the manifest wishes of China and Russia on this issue, those two countries will be driven more closely together—not just on space weapons, but generally.<sup>85</sup> The United States would be wise to consider the significant long-term consequences of fortifying the Moscow-Beijing axis in this way.<sup>86</sup> The combined geopolitical—and specifically, military—might of these two nations would pose a grave threat to U.S. interests all over the world.<sup>87</sup> If a united Russia and China decided to support Iran or North Korea, the United States would be effectively blocked from pursuing its interests and security vis-à-vis those states.<sup>88</sup> As China inevitably becomes more powerful economically and militarily, the United States must do its best to maintain good relations with Russia and prevent it from moving completely into the Chinese camp.<sup>89</sup> Showing a willingness to negotiate on the space weapons issue would serve that goal well.

### III. THE OUTER SPACE TREATY IS DANGEROUSLY OUTDATED

The best hope for averting a major conflict over space weapons in the future is a targeted updating of the 1967 Outer Space Treaty. The goals set forth in the preamble to the Treaty remain as valid today as they were forty years ago, but technology has changed to such an extent that the body of the Treaty is no longer capable of fulfilling those goals.

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<sup>82</sup> *Id.*

<sup>83</sup> Eric M. Javits, U.S. Ambassador, Conference on Disarmament, Address at Conference on Future Security in Space (May 28, 2002), available at <http://www.acronym.org.uk/docs/0205/doc17.htm>.

<sup>84</sup> See *U.S. Clashes with China, Russia over Space Arms*, MSNBC.COM, Feb. 13, 2007, <http://www.msnbc.msn.com/id/17129938/>.

<sup>85</sup> See Cohen, *supra* note 79.

<sup>86</sup> See generally TRENIN, *supra* note 12, at 11.

<sup>87</sup> *Id.*

<sup>88</sup> See generally *An Iran-Russia-China Axis?*, JANE'S INFO. GROUP, Oct. 27, 2005, [http://www.janes.com/security/international\\_security/news/jid/jid051027\\_1\\_n.shtml](http://www.janes.com/security/international_security/news/jid/jid051027_1_n.shtml).

<sup>89</sup> See generally TRENIN, *supra* note 12, at 11.

A. *The Preamble to the Outer Space Treaty—and the Noble Principles Behind It—Are Still Valid*

The Outer Space Treaty begins with a number of noble principles that are as valid today as they were in 1967:

The States Parties to this Treaty,

Inspired by the great prospects opening up before mankind as a result of mans entry into outer space,

Recognizing the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes,

Believing that the exploration and use of outer space should be carried on for the benefit of all peoples irrespective of the degree of their economic or scientific development,

Desiring to contribute to broad international co-operation in the scientific as well as the legal aspects of the exploration and use of outer space for peaceful purposes,

Believing that such co-operation will contribute to the development of mutual understanding and to the strengthening of friendly relations between States and peoples<sup>90</sup>

As demonstrated by the renewed vigor of NASA<sup>91</sup> and the rapid growth of Chinese civilian space flight in the last decade,<sup>92</sup> the principal signatory nations are certainly still “inspired by the great prospects opening up before mankind as a result of man’s entry into outer space.”<sup>93</sup>

It also goes without saying that these nations continue to recognize “the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes.”<sup>94</sup> The exploration of space is surely the long-term destiny of humanity, and on a general level, all nations believe “that the exploration and use of outer space should be carried on for the benefit of all peoples irrespective of the degree of their economic or

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<sup>90</sup> Outer Space Treaty, *supra* note 4, pmbl.

<sup>91</sup> Press Release, The White House, President Bush Announces New Vision for Space Exploration Program, (Jan. 14, 2004), *available at* <http://www.whitehouse.gov/news/releases/2004/01/20040114-1.html>.

<sup>92</sup> Jim Banke, *China Launches its First Piloted Spaceflight*, SPACE.COM, Oct. 15, 2003, [http://www.space.com/missionlaunches/shenzhou5\\_launch\\_031014.html](http://www.space.com/missionlaunches/shenzhou5_launch_031014.html).

<sup>93</sup> Outer Space Treaty, *supra* note 4, pmbl.

<sup>94</sup> *Id.*

scientific development”<sup>95</sup> and “desire to contribute to broad international cooperation in the scientific as well as the legal aspects of the exploration and use of outer space for peaceful purposes.”<sup>96</sup> And the proposition “that such cooperation will contribute to the development of mutual understanding and to the strengthening of friendly relations between States and peoples” is self-evident. All of these principles are as valid today as they were in 1967, and the United States, China, and others should continue to look to them for guidance as they consider revising the details of the treaty to keep up with the changing technological landscape of the 21st century.

B. *Article IV of the Outer Space Treaty Has Not Kept Up with Technology*

The meat of the Outer Space Treaty was placed in Article IV: “States Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner.”<sup>97</sup> This agreement on weapons of mass destruction was a major accomplishment in 1967. At that time, ICBMs were first being deployed and there was real fear that soon nuclear weapons would be stationed in space.<sup>98</sup> The United States and the Soviet Union agreed that, even if stationing nuclear weapons in space were feasible, such a development would be very dangerous for both sides and would hamper the noble, peaceful uses of space that are outlined in the Treaty’s preamble.<sup>99</sup> A ban would be best for both sides and for humanity at large.<sup>100</sup>

In 1967, the stationing of nuclear weapons in orbit was the only significant military threat that either side could envision in space.<sup>101</sup> The idea of precision-guided kinetic kill vehicles or laser weapons being effectively used in space was science fiction at the time and thus did not merit serious attention in the Treaty. But in 2007, these weapons are not only conceivable, they are being actively pursued and some could become operational within the next decade.<sup>102</sup> While perhaps not as massively destructive in their own right as actual nuclear weapons, these weapons have

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<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

<sup>97</sup> *Id.*, art. IV.

<sup>98</sup> See U.S. Department of State, *supra* note 6.

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> See *id.*

<sup>102</sup> See Andrew T. Park, *Incremental Steps for Achieving Space Security: The Need for a New Way of Thinking to Enhance the Legal Regime for Space*, 28 HOUS. J. INT’L L. 871 (2006).

the potential to be just as damaging to world peace and to humanity's future. Kinetic kill vehicles, space-based lasers, and ASATs have the potential to seriously disrupt the effectiveness of ICBMs and thus vitiate the peace through mutually assured destruction that has prevailed for more than half a century.<sup>103</sup> These threats are at least as serious today as the stationing of nuclear weapons in space was in 1967, and updating the Treaty to deal with them is the only way to fulfill the spirit of the Treaty in the 21st century.

#### IV. THE OUTER SPACE TREATY SHOULD BE AMENDED IN A TARGETED MANNER

The current Outer Space Treaty is dangerously outdated, but so far all proposals to update the legal regime for space weaponry have fallen on deaf ears. The 2002 joint proposal by China and Russia was too blunt an instrument and was completely ignored by the United States. Instead of simply banning all space weapons in a new treaty, Article IV of the original Outer Space Treaty should be updated to include certain types of kinetic kill vehicles, laser weapons, and ASATs, in addition to the weapons of mass destruction that it already expressly bans. This is likely to be a more palatable option for the United States, which will still be able to pursue other military uses of space essential to its national security.

##### A. *International Law Has the Potential to Stabilize Space as It Has Stabilized Other Areas of International Relations*

International law has served the world well in a number of important contexts, most notably at sea<sup>104</sup> and in the general field of arms control.<sup>105</sup> Wherever international law is applied successfully, relative anarchy turns into relative peace and security;<sup>106</sup> just as all individuals benefit from the rule of law in a given nation, all nations benefit from the rule of law in the international context. Now, in the 21st century, these lessons must be applied to space.

The development of space law is analogous to the growth of the law of the sea from the *Mare Clausum* ideas of the 17th century, through the

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<sup>103</sup> See *supra* Part II.A.

<sup>104</sup> See JOHN F. TURNER, ACCESSION TO THE 1982 LAW OF THE SEA CONVENTION AND RATIFICATION OF THE 1994 AGREEMENT AMENDING PART XI OF THE LAW OF THE SEA CONVENTION, TESTIMONY BEFORE THE SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE, S. TREATY DOC. NO. 103-39 (2004), available at <http://www.state.gov/g/oes/rls/rm/2004/30723.htm>.

<sup>105</sup> See generally THOMAS GRAHAM JR., DISARMAMENT SKETCHES: THREE DECADES OF ARMS CONTROL AND INTERNATIONAL LAW (2002).

<sup>106</sup> See generally ANTONIO CASSESE, INTERNATIONAL LAW 117-126 (2001).

“freedom of the seas” of the 19th century, to the 1982 UNCLOS III treaty.<sup>107</sup> *Mare Clausum*, or “closed seas,” involved the idea that each country had the right to claim as much of the ocean for itself as it could—the more powerful the navy, the wider the sovereignty.<sup>108</sup> This worked reasonably well for 200 years, but with the coming of the industrial revolution, the dominant sea power—Great Britain—found that its interests would be much better served by “freedom of the seas.”<sup>109</sup> Britain would be better off if it could sail the globe unhindered by the territorial claims of other nations, even if this meant that it had to give up its own territorial claims to parts of the oceans where it had the ability to exert control by brute force.<sup>110</sup> Britain was still the dominant sea power for another century after “freedom of the seas” supplanted *Mare Clausum*, and even though it did have to give up its claims to actual sovereignty at sea, its navy was as strong as ever and it prospered greatly during this period.<sup>111</sup> Eventually, however, “freedom of the seas” itself became obsolete and unmanageable as more and more nations began to assert themselves at sea and interfere, directly or indirectly, with the freedom of other nations.<sup>112</sup> The solution was international law, as embodied in the UNCLOS III treaty.<sup>113</sup>

Like Britain in the 19th century with respect to the oceans, the United States in the 21st century sees the idea of “freedom” as the perfect legal regime for space. No country “owns” space—there is no *Mare Clausum* in space—but every country has the right to use its power however it sees fit in order to exploit its interests there. In every conventional sense, the United States is the dominant world power of the early 21st century. But unfortunately, as was demonstrated on September 11, 2001, conventional power does not guarantee security in today’s world. This vulnerability is even more apparent in space. While the United States is indeed capable of unilaterally extending its military presence into space via the deployment of satellite-based weapons, these multi-billion dollar devices are inherently vulnerable to attack from relatively cheap and unsophisticated ASATs based on Earth. A determined enemy would be able to cripple any potential United States space weapon systems, and an ability to cripple satellite-based weapons implies an ability to cripple any other satellites—including military reconnaissance satellites currently in use by the United States. Before

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<sup>107</sup> Tannenwald, *supra* note 72, at 391.

<sup>108</sup> *Id.*

<sup>109</sup> *Id.* at 392.

<sup>110</sup> *Id.*

<sup>111</sup> *Id.*

<sup>112</sup> *Id.*

<sup>113</sup> *Id.* at 394-95.

opening this Pandora's box of satellite-based weapons, the United States should consider the downsides of discarding the "gentleman's agreement" against space weaponization that has prevailed for decades.<sup>114</sup>

Instead, the United States should advocate adopting a UNCLOS III-type treaty for space that would provide a detailed legal regime protecting the interests of all nations in space.<sup>115</sup> Even though this would circumscribe the United States' freedom of action in space by, *inter alia*, putting strict limits on the weaponization of space, the United States would be better served overall. Its other satellite systems (including non-weaponized military support satellites) would be protected by limits on ASATs, and it would not have to bear the expense and insecurity inherent in an arms race in space. Just as "freedom of the seas" became obsolete in the 20th century when states saw that unilateral exertions of power to protect their interests at sea caused unnecessary expense and insecurity, "freedom of space" is an obsolete concept that should be reigned in by international law. All nations—and humanity at large—will be better off.

Unfortunately, under the Bush administration, the United States seems firmly committed to "freedom of space"—it sees no need to consider other possibilities.<sup>116</sup> For the last several years, the United States has pursued space weapons technology in the face of opposition from the rest of the world.<sup>117</sup> The justifications for these space weapons programs usually come back to national security, but commercial interests in space for the United States and its citizens are also implicated.<sup>118</sup> As with other aspects of United States foreign policy in the last several years, the American position on space weapons has been characterized by a distinct unwillingness to compromise with other nations. In a major speech to the Conference on Disarmament, the U.S. representative stated that "the commitment of the United States to the exploration and use of outer space by all nations, for peaceful purposes and for the benefit of humanity, is clear. But the peaceful exploration and use of space obviously does not rule out activities in pursuit of national security goals."<sup>119</sup> The United States sets its national security goals, and pursues them unilaterally—it has so far been unwilling to consider all of the manifold international ramifications of its policies. The space weapons debate has been simmering since the 1970s, but only since

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<sup>114</sup> *Id.* at 422.

<sup>115</sup> *Id.*

<sup>116</sup> See Javits, *supra* note 83.

<sup>117</sup> See *supra* Part II.

<sup>118</sup> Park, *supra* note 102, at 911.

<sup>119</sup> Javits, *supra* note 83.



the early 21st century has it reached crisis proportions—not only because of rapidly advancing technology, but also because of American domestic politics.<sup>120</sup>

*B. The UNCLOS III Treaty Is an Excellent Recent Example of the Power of International Law to Stabilize Relations Among Nations*

The 1982 UNCLOS III Treaty revolutionized ocean law, and now that space is becoming more and more heavily used, it is time to consider revolutionizing space law as well. However, the UNCLOS III Treaty is extraordinarily lengthy and detailed—it took several years to fully draft.<sup>121</sup> The issues in space are not nearly as complex and varied as the maritime law issues covered in UNCLOS III. In fact, if Article IV of the Outer Space Treaty is simply updated to deal with kinetic kill vehicles, lasers, and ASATs, that will be enough to have a comparable effect on peace and stability in space.

The preamble to the UNCLOS III Treaty is remarkably similar to that of the Outer Space Treaty. It begins by affirming that “the States Parties to this Convention . . . [are] aware of the historic significance of this Convention as an important contribution to the maintenance of peace, justice and progress for all peoples of the world.”<sup>122</sup> This is the same type of magnanimous language found in the preamble to the Outer Space Treaty, and shows that noble humanitarian principles are at the heart of both treaties. The UNCLOS III preamble goes on to say that the parties believe:

[T]hat the codification and progressive development of the law of the sea achieved in this Convention will contribute to the strengthening of peace, security, cooperation and friendly relations among all nations in conformity with the principles of justice and equal rights and will promote the economic and social advancement of all peoples of the world, in accordance with the Purposes and Principles of the United Nations as set forth in the Charter.<sup>123</sup>

This again shows the similarity between the noble principles of the UNCLOS III Treaty and the Outer Space Treaty. Both treaties are designed to harmonize the interactions of diverse parties in vast open areas that are owned by no one.

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<sup>120</sup> See generally Javits, *supra* note 83.

<sup>121</sup> UNCLOS III, *supra* note 8..

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

Even though the UNCLOS III Treaty and the Outer Space Treaty share the same noble goals, the UNCLOS III Treaty is far ahead of the Outer Space Treaty in its level of detail. For one thing, the UNCLOS III Treaty is over 200 pages long, while the Outer Space Treaty is less than ten pages long.<sup>124</sup> This is understandable to some extent—because humans have obviously been exploring the seas much longer than they have been exploring space, more rules need to be written in order to cover the more varied interactions that go on at sea. UNCLOS III also took many years to put together and implement. The problems facing the international community in space are simpler, but more pressing, and should therefore be dealt with in a more straightforward and faster way.

It is unlikely that a treaty on the scale of UNCLOS III will be needed for space any time soon. But some of the fundamental principles of UNCLOS III can and should be adapted to the space context and incorporated into the Outer Space Treaty. Specifically, the “freedom of space” idea that largely prevails under current international law should be reigned in to some extent, in the same manner that “freedom of the seas” has been reigned in by UNCLOS III.<sup>125</sup> At a general level, this is the way to deal with the most pressing issues in space—namely, the impending deployment of kinetic kill vehicles and lasers, and the continued development and testing of ASATs.

*C. While UNCLOS III Is a Good Example to Follow on a General Level, an Amended Outer Space Treaty Should in Its Details Resemble the Arms Control Treaties of the Cold War*

The arms control treaties of the Cold War between the United States and the Soviet Union—particularly the ABM Treaty<sup>126</sup> and the Interim Agreement Between the United States of America and the Union of Soviet Socialist Republics on Certain Measures with Respect to the Limitation of Strategic Offensive Arms (“SALT Treaties”)<sup>127</sup>—were instrumental in reducing tensions and mitigating the scale of the continuous arms race

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<sup>124</sup> *Id.*; Outer Space Treaty, *supra* note 4.

<sup>125</sup> Tannenwald, *supra* note 72, at 422.

<sup>126</sup> Treaty on the Limitations of Anti-Ballistic Missile Systems, U.S.-U.S.S.R., May 26, 1972, 23 U.S.T. 3435 [hereinafter ABM Treaty].

<sup>127</sup> Interim Agreement Between the United States of America and the Union of Soviet Socialist Republics on Certain Measures with Respect to the Limitation of Strategic Offensive Arms, U.S.-U.S.S.R., May 26, 1972 [hereinafter SALT Treaties].

between the two superpowers.<sup>128</sup> Today, the United States, China, and Russia should look to this past experience as a guide to the potential benefits of constructively updating the Outer Space Treaty. The United States and China are at a crossroads—they can either throw themselves into a destabilizing arms race involving space-based weapons and ASATs, or they can come to the table and rethink the aging Outer Space Treaty. The consequences of the former could be catastrophic, but they will in any case be very expensive. The latter option, however, would lead to increased stability and understanding between the two nations and to a better, more peaceful world.

The ABM Treaty, which was in effect from 1972 to 2002, serves as an excellent model for what should be done with the Outer Space Treaty. The ABM Treaty provides a very detailed description of the types of weapons it is designed to affect:

For the purpose of this Treaty an ABM system is a system to counter strategic ballistic missiles or their elements in flight trajectory, currently consisting of: (a) ABM interceptor missiles, which are interceptor missiles constructed and deployed for an ABM role, or of a type tested in an ABM mode; (b) ABM launchers, which are launchers constructed and deployed for launching ABM interceptor missiles; and (c) ABM radars, which are radars constructed and deployed for an ABM role, or of a type tested in an ABM mode.<sup>129</sup>

This is exactly the sort of detailed weapons definition that should be done for the Outer Space Treaty. Both sides should agree on specific definitions of kinetic kill vehicles, space-based laser systems, and ASATs, and spell out those definitions in the text of an updated Article IV of the Outer Space Treaty. The ABM Treaty lasted from 1972 to the end of the Cold War, and then for another decade.<sup>130</sup> Without it, both the United States and the Soviet Union would have been forced into a destabilizing and expensive arms race that could have had tragic consequences.

The fact that the United States withdrew from the ABM Treaty after thirty years of adherence does not detract from the enormous benefits gleaned by all sides during the time the treaty was in force. The ABM

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<sup>128</sup> U.S. ARMS CONTROL & DISARMAMENT AGENCY, 1997 ANNUAL REPORT CH. VII.: ADHERENCE TO AND COMPLIANCE WITH ARMS CONTROL AGREEMENTS, <http://dosfan.lib.uic.edu/acda/reports/annual/comp97.htm> (last visited Oct. 25, 2007).

<sup>129</sup> ABM Treaty, *supra* note 126, art. II.

<sup>130</sup> Manuel Perez-Rivas, *U.S. Quits ABM Treaty*, CNN.COM, Dec. 14, 2001, <http://archives.cnn.com/2001/ALLPOLITICS/12/13/rec.bush.abm>.

Treaty was ideally suited to the Cold War, and even though it was superceded by events during the decade following the collapse of the Soviet Union, it served its original purpose well.<sup>131</sup> The United States and China should look to the ABM Treaty as a shining example of the benefits of arms control and amend the Outer Space Treaty in accordance with that example.

The principles behind other Cold War arms control treaties are also highly relevant to the current standoff between the United States and China over space weapons. The SALT treaty recognizes in its preamble that nuclear war would be disastrous for both sides and that limiting the weapons that could take part in or instigate such a conflict is a good idea for both sides.<sup>132</sup> The Parties to the SALT II Treaty were “conscious that nuclear war would have devastating consequences for all mankind” and “convinced that the additional measures limiting strategic offensive arms provided for in this Treaty will contribute to the improvement of relations between the Parties, help to reduce the risk of outbreak of nuclear war and strengthen international peace and security.”<sup>133</sup> These very same ideas militate in favor of adopting amendments to the Outer Space Treaty that would ban destabilizing kinetic kill vehicles, space-based lasers, and ASATs. With a new geopolitical dynamic and rapidly advancing technology, the Cold War limits on ICBMs and the current Outer Space Treaty’s ban solely of weapons of mass destruction in space are no longer enough to protect the peace and security of humanity in the 21st century.

*D. Specifically, Article IV of the Outer Space Treaty Should Be Amended in a Targeted Manner to Address the Emerging Threats of Kinetic Kill Vehicles, Space-Based Lasers, and ASATs*

It will not take much to effectively update the Outer Space Treaty to deal with emerging threats related to the development and deployment of space weapons and ASATs. As discussed above,<sup>134</sup> the relevant portion of Article IV of the Treaty currently reads “States Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such

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<sup>131</sup> See NuclearFiles.org, Time to Abandon 30-year-old “Mutual Assured Destruction” Pact with Soviet Union, Nov. 10, 1999, <http://www.nuclearfiles.org/menu/key-issues/missile-defense/history/time-to-abandon-mad.htm>.

<sup>132</sup> SALT Treaties, *supra* note 127, pmb1.

<sup>133</sup> *Id.*

<sup>134</sup> See *supra* Part III.B.

weapons on celestial bodies, or station such weapons in outer space in any other manner.”<sup>135</sup> It should be updated to read:

States Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons, any other kinds of weapons of mass destruction, kinetic kill vehicles, or directed energy weapons, install such weapons on celestial bodies, station such weapons in outer space in any other manner, or attack objects in outer space with weapons based on Earth.

Put simply, Article IV of the Treaty must be updated to ban not only weapons of mass destruction—as it currently does—but also kinetic kill vehicles, space-based laser weapons, and ASATs.

These simple changes would make a world of difference, and could prevent catastrophe. In any case, they will save all sides the enormous trouble and expense that would be involved in a full-fledged arms race in space. Eventually the legal regime in space will need a more complete overhaul along the lines of UNCLOS III—by the 22nd century, humanity’s use of space could easily be as common and complex as its use of the oceans is today—but in the near to mid-term, amending Article IV of the Outer Space Treaty in the manner described would be enough to avert the worst dangers. In any case, as discussed below,<sup>136</sup> it is the option with the most realistic chance for success.

If the United States continues to refuse to negotiate an extension to the Outer Space Treaty, the geopolitical standoff with China will become more and more severe as the 21st century progresses. China’s bold test of an ASAT in January 2007 demonstrates that it is not cowed by the current U.S. technological superiority in space, and that it is able and willing to continue developing its own weapons. It will have no incentive to slow down or halt development of these weapons until the United States comes to the negotiating table to discuss limiting its own weapons.<sup>137</sup> While it might be possible for both sides to reach a sort of *de facto* agreement on limiting space weapons, a written document—specifically the proposed amendment to Article IV of the Outer Space Treaty—is preferable because it will provide more certainty, and therefore more security overall.<sup>138</sup>

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<sup>135</sup> Outer Space Treaty, *supra* note 4.

<sup>136</sup> *See infra* Part IV.E.

<sup>137</sup> *See Hui, supra* note 11, at 27.

<sup>138</sup> *See generally* CASSESE, *supra* note 106, at 117-126.

E. *Because This Proposed Amendment Meets the Needs of All Sides, the United States and China Are Likely to Agree to It*

Ultimately, this simple proposed amendment to Article IV of the Outer Space Treaty is likely to be accepted by both the United States and China. The critical thing for the United States is that such a change will not hamper its ability to effectively develop and deploy the types of military support satellites that it currently uses and plans to use in the future.<sup>139</sup> For China, such a change to the Outer Space Treaty would have almost the same effect on its security as the ban on “all types of weapons” that it is currently proposing<sup>140</sup>—all major offensive space weapons would be banned.

The United States has recently reaffirmed its unequivocal support for the current Outer Space Treaty.<sup>141</sup> Eric M. Javits proclaimed—in reference to arms control treaties affecting space—that “most important . . . is the Outer Space Treaty, to which the United States remains firmly committed.”<sup>142</sup> In order to appear firmly committed to international law in space, the United States continues to make statements such as this, where it reaffirms its complete commitment to past treaties.<sup>143</sup> The problem, however, is that space weapons technology is advancing rapidly, and a firm commitment to uphold the letter of the 1967 Outer Space Treaty is not enough to uphold the spirit of the treaty in the 21st century. Throughout his speech, Mr. Javits references the bold principles set forth in the preamble to Outer Space Treaty, discussed extensively above,<sup>144</sup> and reaffirms unequivocal support for those principles.<sup>145</sup> If such proclamations are true, the United States ought to be willing to sit down and discuss modest extensions to the Treaty in order to allow it to keep up with the times. A simple proposal to extend Article IV of the Treaty in the very targeted manner advocated here could very well meet with a receptive response.

Some conservatives in the United States have argued strongly for the further development of space weapons.<sup>146</sup> They claim that “a powerful and influential United States is good for world peace, stability, and enforcing the rule of law internationally,”<sup>147</sup> and that therefore American space weapons

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<sup>139</sup> See Hui, *supra* note 11, at 31-32.

<sup>140</sup> Conference on Disarmament Delegations of China and the Russian Federation, *supra* note 80.

<sup>141</sup> Javits, *supra* note 83.

<sup>142</sup> *Id.*

<sup>143</sup> *Id.*

<sup>144</sup> See *supra* Part III.A.

<sup>145</sup> Javits, *supra* note 83.

<sup>146</sup> See, e.g., Steven Lambakis, *Missile Defense from Space*, 141 HOOVER INSTITUTION POL’Y REV 46, 48 (2007), available at <http://www.hoover.org/publications/policyreview/5516446.html>.

<sup>147</sup> *Id.* at 57.

development will actually serve to increase global stability, rather than decrease it.<sup>148</sup> This argument seems to assume that the United States is so much more powerful than all other nations that it does not really need to worry about how they will react to a space weapons deployment—if China and Russia resent American military action in space, they will need to keep their opinions to themselves due to fear of overwhelming American military superiority. However, as has been discussed above,<sup>149</sup> the deployment of space weapons will not provide this sought-after military superiority—ASATs will still pose a serious threat to the much more complicated and expensive space weapons being considered for deployment. Moreover, China, Russia, and others are unlikely to submit so easily to American power, no matter how advanced the available weaponry.<sup>150</sup>

International law is the better solution. As has been demonstrated by numerous successful arms control treaties in the past—the original Outer Space Treaty, the SALT treaty, and the ABM Treaty for three decades—international law, while not perfect by any means, can often be successful in averting destabilizing arms races. The United States must of course remain somewhat cautious—it should not entirely dismantle its research and development of future space weapons—but at the same time it should not cynically refuse all negotiation simply because of the potential for its strategic adversaries to act in bad faith.

China and Russia have been pushing very hard in recent years for negotiations on the space weapons issue, and they have given the United States no reason to doubt their sincerity. The 2002 working paper jointly submitted by the two countries to the Conference on Disarmament called “not to place in orbit around the Earth any objects carrying any kinds of weapons, not to install such weapons on celestial bodies, or not to station such weapons in outer space in any other manner” and “not to resort to the threat or use of force against outer space objects.”<sup>151</sup> This language was too broad and sweeping, because instead of proposing to ban only the specific types of offensive weapons currently being planned for deployment in the next few decades—kinetic kill vehicles and lasers—it simply proposes to ban “all types of weapons.” China and Russia almost certainly understood that such a comprehensive ban on all space weapons would be unacceptable to the United States, which has already invested heavily in various types of

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<sup>148</sup> *Id.* at 56-57.

<sup>149</sup> *See supra* Part II.C.

<sup>150</sup> *See supra* Parts II.B, II.E.

<sup>151</sup> Conference on Disarmament Delegations of China and the Russian Federation, *supra* note 80.

military support satellites<sup>152</sup> that could arguably fall within such a broad prohibition. China and Russia mainly want to avoid the major impending threats posed by kinetic kill vehicles and space-based lasers—they are not nearly as concerned about U.S. military support satellites.<sup>153</sup> It is therefore very likely that this general language was intended only to be a starting point for negotiations, and not by any means the “final offer” from the two countries.

A ban on “all types of weapons” is a complete non-starter to the United States because it has already invested significantly in various military support satellites that could technically fall within that language, and it would be unwilling to turn back the clock in favor of its potential adversaries. But banning only kinetic kill vehicles and space-based laser weapons (and ASATs) through the amendment to Article IV of the Outer Space Treaty proposed above would be a very different matter. If the language in the amended treaty is made sufficiently clear so that only these weapons, and not any other types of satellites, are banned, the United States is much more likely to at least come to the table and discuss amending the Treaty. Also, a simple amendment to Article IV of the Outer Space Treaty—which has been in effect since 1967 and has never been the subject of significant controversy in the interim—might be easier to swallow than an entirely new treaty. On a visceral level, the idea of adopting a new treaty based on the China-Russia joint paper might be unpalatable to the United States in a way that amending the current treaty would not be. The Outer Space Treaty must simply be updated to keep pace with changing technology—an eminently reasonable proposition.

The actual implementation of this proposed amendment to Article IV of the Outer Space Treaty would be relatively straightforward. A ban on actual space weapons—kinetic kill vehicles and lasers—would be easy to implement since these weapons have yet to be deployed at all. A ban on the use of ASATs would be a bit more difficult because these weapons are already operational. However, both sides realize that ASATs are extremely destabilizing from a strategic point of view. Additionally, since ASATs threaten all satellites—not just actual space weapons—they have the potential to disrupt all sorts of vital infrastructure. Banning them would be to everyone’s benefit, and would be no more difficult to implement than the reductions in ICBM inventory required under SALT. If the international

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<sup>152</sup> See Weiner, *supra* note 9.

<sup>153</sup> See generally Hui, *supra* note 11, at 24.



community can muster the will to amend Article IV of the Outer Space Treaty, the implementation of that amendment will be reasonably painless.

## V. CONCLUSION

The space weapons currently under development are extremely complex and extremely expensive devices. They are inherently vulnerable to asymmetrical attacks by much cheaper and less complex ASATs, and the strategic interplay between them, ASATs, and ICBMs will greatly increase geopolitical instability between the United States and China. Space weapons are also sure to inflame Russia and others and drive them into the welcoming arms of China. The long-term consequences for the United States of a lack of law in this area could be quite serious—China, at least, is likely to reach economic parity with the United States later in the century, and by that time it will have its own offensive space weapons capability.

The solution to this problem is to update Article IV of the 1967 Outer Space Treaty to cover these new offensive space weapons. As long as it is made perfectly clear in the treaty language that the changes affect only these new weapons—kinetic kill vehicles, lasers, and ASATs—and not any other sorts of military satellites being used by the United States, the United States would have good reason to come to the table and negotiate such an amendment. China and Russia have been pushing for such negotiations for a long time, but their insistence thus far on broad, sweeping treaty language—and, in fact, an entirely new treaty, as opposed to a simple amendment to the Outer Space Treaty—has kept the United States from even beginning negotiations. A compromise is in order.