IAC-08-E8.3.2
51st INTERNATIONAL COLLOQUIUM ON THE LAW OF OUTER SPACE (IISL)
WEAPONISATION OF OUTER SPACE IN THE LIGHT OF THE OUTER SPACE TREATY, PART B
GLASGOW, 1 OCTOBER 2008

OUTER SPACE: ARENA FOR WAR OR PEACE

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ABSTRACT

The Outer Space Treaty does not appear to prohibit weapons in space *per se*, but examination of the context in which it was agreed and the discussions at the time introduce a strong element of ambiguity. How the issues are resolved and whether space will be reserved for peaceful purposes can only be examined in the light of the political, military and international relations imperatives of each contender in the field. Although the United Nations has resolved to keep space free of weapons, the United States has been a notable abstainer, and more recently opponent, of the Resolution. In this paper it is argued that the pursuit of weapons in space weakens the international legal structure for peaceful uses of outer space and serves against the ultimate international relations objectives of those who follow such a course.

INTRODUCTION

In 1959 at Grünsbach in the Alsace, Dr Albert Schweizer was asked for his thoughts on man's attempt to reach the Moon. He replied "Poor Moon".

In this Paper the following issues will be examined.

Views expressed here are the author's alone and do not reflect the views of the London Institute of Space Policy and Law, the IISL or of any other organisation.

RELEVANCE OF INTERNATIONAL LAW TO INTERNATIONAL RELATIONS

Public international law provides part of the framework for international relations between States. The policies pursued by each State will have a direct impact on the nature of those relations. US space policies invoke international laws of outer space, and have to be evaluated in the context of those laws. This paper is concerned with some of the consequences of US space policy on international relations.

The most important principle of international law is the sovereignty of States, recognising the

right of each State to self-determination in its affairs.[1] Treaties and customary conduct define international law, which is further influenced by legal precedent and writings of academics and practitioners. Because it relates to the conduct of States and their relationships, it can only be invoked by a State. The United Nations (UN) provides the forum and administrative structure for the management of international law. States observe international law not because there are UN or other external enforcement provisions, but because it is in each State's best interest to do so. As of today, all but one of the sovereign States are members of the UN.[2]

It is fundamental to the UN that it has no direct enforcement powers or mechanism. Its primary charge in case of a dispute between States is to facilitate resolution by peaceful means. However, when there is a threat to international peace,[3] the UN Security Council can make certain determinations and mount collective international action to remedy a breach of international law.

SHORT HISTORY OF SPACE LAW

The first international treaty on space was concluded in 1967, two years after the launch of Early Bird[4] and six years after Yuri Gagarin became the first man in space on 12 April 1961. The Outer Space Treaty[5] (OST) is the primary instrument of international space law, and specifies permitted uses of space. The principles outlined in the OST have been elaborated in many subsequent treaties and conventions between various States. There are also numerous UN General Assembly Resolutions dealing with specific issues.

At the time the Outer Space Treaty was being negotiated, the Soviet Union and the United States were the two States with space capability. There was considerable discussion about permissible uses of outer space, including military uses. While every State was aware of the potential advantage that would be gained by controlling weapons in space, neither space power wanted the other to have military use of space. The declaration and provisions of the OST, providing that States may use outer space only for peaceful purposes, and in the interest of all States resolved the issue. Like the high seas and Antarctica, outer space is available for exploration and use by all States equally. Nor can any State exclude others from any part or use of outer space. Under the OST, sovereign rights cannot be exercised over any part of outer space.

RELEVANT INTERNATIONAL LAW

A substantial body of international law has been developed that is relevant to consideration of national space policies. A 1999 UN list of relevant documents runs to 55 pages.[6] The following summarises only a few of these.

(1) Peaceful Use Provision of the Outer Space Treaty

As has been stated, the OST precludes an individual State's exclusive right to space, and its unilateral use. More specifically, the peaceful use provision of the OST[7] can be interpreted to prohibit space weapons entirely. Interpretation of the phrase "peaceful purposes" is discussed later in this paper.

(2) Anti-Ballistic Missile Treaty

The Anti-Ballistic Missile Treaty (ABM Treaty or ABMT) was signed in 1972 by the US and the USSR, and remained in force until 2002. The Treaty limited ABM systems used in defending against missile-delivered nuclear weapons.[8] Placement of anti-ballistic missile systems elsewhere than those specified was forbidden under the treaty.

(3) Limited Test Ban Treaty

Any attempt to place nuclear weapons in space will inevitably require some level of testing. The Limited Test Ban Treaty explicitly prohibits such tests.[9]

(4) Strategic Arms Reduction Treaty

Signed between the Soviet Union and the US in 1991, START, later re-named START I,[10] prohibits the placing of nuclear and other

weapons of mass destruction in space.[11] Five months after its signature the Soviet Union dissolved, and the rights and obligations under the Treaty devolved to the constituent parts of the Union: Russia, Belarus, Kazakhstan and Ukraine, the latter three of which no longer have nuclear weapons. (For START II, see note 61.)

(5) Conventional Weapons Convention

Protocol IV to the Conventional Weapons Convention[12] was adopted in 1995.[13] The Protocol goes some way towards limiting the use of laser weapons in space. Although most of the Protocol focuses on technology designed to blind individuals, it also requires parties employing laser systems to "take all feasible precautions to avoid the incidence of permanent blindness to unenhanced vision."[14] To comply with this provision, any use of laser weapons against land-based targets must be "legitimate."[15]

(6) UN Resolutions[16]

The UN General Assembly has passed resolutions each year for the past 25 years calling for the continued peaceful use of space and the prevention of an arms race in space. The resolution asks all States to refrain from actions contrary to the peaceful use of outer space and calls for negotiation in the Conference on Disarmament on a multilateral agreement to prevent an arms race in outer space. Most of these resolutions have been unanimous and without opposition, although the United States and a few other governments have abstained. In the 2006 version, adopted by the First Committee of the General Assembly in October 2006, there were 166 votes for the resolution with only the US opposing. Israel and the Ivory Coast abstained, and 23 permanent representatives were absent from the First Committee. The resolution was again adopted in 2007.[17] The US opposed and Israel abstained from the resolution.

These repeated, nearly unanimous resolutions - against which the United States had not until 2005 found it expedient to vote[18] - demonstrate the existence of a norm against the weaponisation of space. They also indicate a widespread desire to expand existing multilateral agreements to include an explicit prohibition against all weapons in space.

Beyond this, there are five relevant General Assembly resolutions. They are: the Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space (1963), which preceded the Outer Space Treaty and laid out most of its content; the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Use and Benefit and in the Interest of All States (1996); and resolutions on Direct Television Broadcasting, Remote Sensing of the Earth from Outer Space (which seeks to ensure affordable access by developing countries to non-military satellite imaging), and the Use of Nuclear Power in Outer Space (which deals with limiting exposure in the crash landing of nuclear-powered satellites and the liability for such accidents).

(7) International Telecommunications Union

Other international instruments are pertinent to space. The International Telecommunication Union (ITU) allocates radio frequencies used by satellites. It would be difficult for any one country to operate satellites without coordinating its efforts through the ITU. This regime encourages state cooperation and also provides a locus of influence should any State pursue behaviours, such as the deployment of space weapons, that are dangerous for other states.

CHANGING US POLICY

(1) US Space Policy 1996

The US interest in space-based weapons found its most visible expression in the Strategic Defence Initiative (SDI), announced by President Reagan on 23 March 1983. The SDI programme had as its stated aim the development of non-nuclear missile defences.[19] Early plans for the SDI also included the use of space-based technologies such as lasers and particle beam weapons. The space-based elements of the system proved impractical and were abandoned.

Despite these developments, the US government's policy on space remained largely in line with the OST, as manifested by its policy statement of 1996.[20] Militarization of space was not an explicit aim.

US policy underwent a shift after the September 11, 2001 attacks in the United States, when military-based policies and spending increased. Policies relating to space-based weapons also changed. Commenting on these policies, the Washington DC-based Centre for Defence Information (CDI) observes:

> Unlike in Star Trek, the 'final frontier' has yet to become a battlefield. But if the current trends continue, that will change — not in the distant future of science fiction, but within the next several decades. Emerging US plans and policies are clearly aimed at making the United States the first nation to deploy space-based weapons. There are several drivers behind this goal, including the perceived vulnerability of space assets that are increasingly important to how the US military operates, and the administration's decision to pursue missile defence.[21]

The CDI report also points out "The Administration's views were directly reflected in the 2001 Quadrennial Defence Review (QDR), released October 1, 2001." This states: "A key objective ... is not only to ensure US ability to exploit space for military purposes, but also to deny an adversary's ability to do so." In this context, then, by 2002 the US no longer saw space as a resource available for all of humanity, but as another arena from which to fight geopolitical and economic battles. This view became official US policy by 2006.[22]

(2) Policy Comparison 1996 - 2006

The 1996 US Space Policy recognises the equal rights of all States over space[23] including the acquisition of data from space. There have been many developments before and after the publication of this document, which moved in a new direction; some driven by Military and some by Government.

However, it was not until the release of the 2006 Policy that there is an official assertion of a specific US right to operate freely in space.[24] It is also clear that there has been an important change in the U.S. view of acceptable activities in space.

The list of guiding principles of US space policy in 2006 includes the right to assert US interests over all others,[25] and to oppose any attempt to restrict total freedom of action by the US.[26] The latter declared policy guide, together with the first[27] and second[28] stated 2006 Policy[29] goals, are as clear a statement by the US as is likely to be forthcoming of its intention to place weapons in space.

To understand the current policy, and how it differs from previous policy, it is helpful to examine the two policy statements made by the US Government, ten years apart.

(a) Changing Context

A superficial consideration of the policies outlined in 2006 may suggest little change in the US policy from that of 1996. Although both 1996 and 2006 Policy documents discuss the same aspects of military space operations, including denying freedom of action in space to other countries, the 1996 Policy places it in the context of international legal obligations,[30] and recognizes that diplomatic and legal means are important tools in solving space security conflicts.

In contrast, the 2006 Policy[31] asserts US rights of freedom to act and to exclude others, without recognition of legal constraints. This aspect of the 2006 Policy has been said to be indicative of US disregard for international law and its institutions.[32] The 2006 Policy can be interpreted to assert a US right to place weapons in space.[33]

The changes in context include a stated interest by the US administration in new military uses of space and increased funding for military space programmes,[34] and a much greater reliance on

space assets in the conduct of U.S. military operations.[35]

While US authorities characterize their policies as defensive (as with Missile Defence and Star Wars), the US military explicitly says it wants to "control" space to protect its economic interests and establish superiority over the world.

(b) Shifting Emphasis

Evidence of a shift in policy is found in the changes in emphasis, all of which must be carefully interpreted within the context of surrounding circumstances.[36] This is particularly so because, like the 1996 document, the language of the unclassified version of the 2006 Policy is vague. Since the current context of US policy differs significantly from that in 1996, ambiguities in the wording are likely to be interpreted in a new light.[37]

In its emphasis, it is immediately noticeable that the 2006 Policy priorities have been rearranged, with national security uses of space brought to the forefront and civil space and exploration given lower priority. The top two goals listed are related to national security.[38]

There is also an express willingness to undertake pre-emptive[39] and military action unauthorized by the UN.[40]

(c) Vision for 2020

US plans are revealed in several documents. They are explicitly incorporated in the US 2006 Policy on space. They also appear in *Vision for 2020*, a 1996 report of the US Space Command, a body which was set up in 1985 to "help institutionalize the use of space" and that "co-ordinates the use of Army, Navy, and Air Force space forces."[41]

The cover of *Vision for 2020* shows a weapon shooting a laser beam from space at a target below. The report opens with the following: "US Space Command— dominating the space dimension of military operations to protect US interests and investment. Integrating Space Forces into war-fighting capabilities across the full spectrum of conflict." A century ago, "Nations built navies to protect and enhance their commercial interests" by ruling the seas, the report notes. Now it is time to rule space.[42]

IMPACT OF US POLICY SHIFT ON INTERNATIONAL RELATIONS

There is international concern about US motives for pursuing such policies. The changes in US policy have already had an impact on international relations, particularly over four issues: the ABMT; the US National Missile Defence system (NMD); the doctrine of peaceful uses of outer space; and the willingness to use pre-emptive strike. The case of the ABMT and the related developments in NMD provide an interesting illustration of the link between US space policy changes and consequences for international relations.

(1) National Missile Defence

Other States fear that the creation of a national missile defence by the US will allow it to pursue its own national interests even more aggressively, through globalization and other policies, and that it would be a precursor to space-based military developments.[43] Even prior to 2006, concern was being voiced internationally.

(a) International Reaction

French President Jacques Chirac, in an interview with The New York Times on December 17, 1999 observed:[44]

> If you look at world history, ever since men began waging war, you will see that there's a permanent race between sword and shield. The sword always wins. The more improvements that are made to the shield, the more improvements are made to the sword. We think that with these systems [missile defence], we are just going to spur sword-makers to intensify their efforts. China, which was already working harder than we realized on both nuclear weapons and delivery vehicles

> for them, would of course be encouraged to intensify those efforts, and it has the resources to do so. India would be encouraged to do the same thing, and it, too, has the resources. And it would also increase tensions within NATO, which would be too bad.

At the beginning of 2001, the UK Conservative opposition party leader announced that he would support the US NMD scheme and urged the UK government to do so as well. This caused concern within UK political circles and across Europe.[45] If the UK government were to support the US policy, it would be at odds with the rest of Europe. In addition, US proposals to install parts of missile defence systems in the UK and other European countries raised concerns that these countries could consequently become targets of terrorist attacks.[46]

On 11 May 2001, Dr Theodore Postol,[47] sent a letter to the White House in which he asserted a cover-up of fundamental flaws in the missile defence system.[48] Eight days later, the Los Angeles Times published an interview with a high-level US intelligence official who flatly contradicted the US Administration's contention that China has nothing to fear from a limited US NMD system. The official also noted that the North Korean and Iranian missile threats have not been moving along as rapidly as expected, and he asserted that the concept of the "rogue state" was in itself an impediment to objective analysis of the missile threat.[49]

An analysis of potential missile defence threat to US and world security can be found in a report issued in 2000 by the National Intelligence Council. That report suggested that deployment of such a system would be likely to provoke "an unsettling series of political and military ripple effects ... that would include a sharp build-up of strategic and medium-range nuclear missiles by China, India and Pakistan and the further spread of military technology in the Middle East."[50]

The restructuring within the US government, creation of the Missile Defence Agency,[51] and the creation of the National Missile Defence system[52] further strained international relations. Both China and Russia required assurances that the NMD system was not aimed at either. In 2002 the signing of the Strategic Offensive Reductions Treaty (SORT) allowed Russia to reduce its spending on missiles, without decreasing its comparative strength.[53] Given the cash shortage in the Russian armed forces, it is interesting to note that it is cheaper to maintain a strategic missile than to dismantle it.[54] China has already reacted to the new US policy by destroying one of is own satellites with a missile.[55]

The position of Russia has recently become further entrenched with the deal between Poland and the US to locate part of the NMD system in Poland, and by increasing tension between Russia and the US over Georgia.[56]

(b) Proliferation and Arms Race

Instead of reducing security concerns, the missile defence policy has heightened them. The consequence of heightened security fears in other States would be the consideration of further arms procurement. Ironically, this could be the reason that the US could eventually be threatened. The US move equates not to a reaction to arms proliferation, but a cause of it.

This observation is worth noting:[57]

> Once testing [of space weapons] begins, the "need" for destructive capabilities in orbit induces a mindset opposed to rational restraint. The mindset becomes unassailable if testing is completed, for then the system "must" be deployed since, if we have developed the capability, others will want to follow suit and rapidly will do so.

Thus, as more nations have become capable of accessing outer space there is a consequent risk of triggering an arms race in space. India, Pakistan and North Korea, for example, have confirmed their nuclear capabilities and India, together with China and Russia have expressed their concerns at US aggression, and frequent violations of international law. Deployment of a

US national missile defence system therefore risks drawing South Asia into an arms race.

Washington's own intelligence community has warned that NMD deployment is likely to set off a new arms race that could ripple across the Eurasian continent, provoking first China, then India, and then Pakistan to either build up their own missile forces or trying to deploy anti-missile defences of their own.[58]

(c) Associated Risks

There are of course pitfalls inherent in this situation. To win a space arms race, the US or any other State must rely on the uncertain superiority of its technology, intellectual capital and financial resources.

In addition, in order to legitimize a policy of militarizing space, the militarizing State will either have to withdraw from or breach relevant space treaties. Consequently, there can be no reliance on any legal constraints on competitors, since the relevant international legal framework will have been undermined. Other States will inevitably be less likely to join the international space treaties and conventions.

(2) Anti-Ballistic Missile Treaty

At the beginning of May 2001, the US President announced the intention to withdraw from the ABM Treaty, which he considered an outdated Cold War relic. Supporters of the withdrawal argued that it was necessary in order to test and build a National Missile Defence system to protect the United States from nuclear blackmail by a rogue state.

In June 2001 Russian President Vladimir Putin warned that US violation of the ABM Treaty would force Russia to augment its nuclear capability by mounting multiple warheads on its missiles. At the same time, he suggested that both the START I,[59] which prohibits even partial use of the Earth orbit for delivery of nuclear or other weapons of mass destruction, and the START II treaties would be negated if the US abrogated the ABM Treaty. Nevertheless, the US did so in December 2001. The termination of these treaties would eliminate verification and inspection requirements and allow Russia to hide its nuclear capabilities.[60]

The international community, particularly Russia, was concerned about the US withdrawal from the ABMT. When the decision was announced, President Vladimir Putin commented that it was a "mistake", but not a threat to his country. However, On June 14, 2002, one day after the U.S. withdrew from the Anti-Ballistic Missile Treaty, Russia withdrew from START II.[61] That treaty, which banned the use of a particular class of warheads,[62] would have compelled it to destroy its most powerful intercontinental nuclear missiles. Russia instead announced the overhaul more than 100 of these.[63] Ironically the US policy change, which had been explained by a desire to reduce nuclear threat, led instead to an increased nuclear risk not only to the US, but to the world.

The US withdrawal in 2002[64] can be said to have removed one of the legal obstacles to placing weapons in space.[65]

PEACEFUL USE OF OUTER SPACE

Adherence to the principles of the OST serves the interest of all States, as it seeks to ensure that outer space is not used for military activities such as launching attacks from space. The US policy of pursuing the military use of space[66] has the potential to undermine the principle of peaceful use of outer space, and therefore, the international order in space.

(1) Alternative Interpretations

It has been argued, notably by some seeking to justify US placement of weapons in space, that "peaceful use" in the context of outer space law means "non-aggressive" as opposed to "non-military".[67] Some have argued that the OST restricts *only* nuclear weapons and weapons of mass destruction.[68]

There is an obvious risk inherent in the acceptance of these standards. As has been stated, any military use of outer space will lead to a weakening of international law by diminishing incentives for non-party nations to

accede to or ratify the Outer Space Treaty and other space-related international conventions.

It is arguable that any intention to place in space weapons capable of attacking other space objects is not a defensive posture. Since there is no threat to the US space objects by any other country, *it poses at least a threat of use of force (cannot be defensive),* contrary to UN Charter Article 2(4)[69] and therefore falls outside the self-defence provisions of the UN Charter.[70]

In addition, other international documents[71] support the view of many legal scholars that "peaceful" means "non-military", rather than "non-aggressive."[72]

Indeed, the historical context of the OST is indicative of the importance placed on peaceful use. In 1958, U.S. President Eisenhower and Soviet Premier Khrushchev each asked the United Nations to consider the legal issues associated with space activity. The U.N. created the Committee on the Peaceful Uses of Outer Space ("COPUOS"). Its Legal Subcommittee[73] has been the primary forum for discussion and negotiation of international agreements relating to outer space, including the Outer Space Treaty.

More recently, the principle of "peaceful use" and the ban on nuclear weapons in space was reaffirmed by the unanimous UN Resolution on International Co-operation in the Peaceful Uses of Outer Space,[74] by which States have committed to peaceful uses of outer space, and prevention of a space arms race.[75]

(2)Pre-emptive Strike

A further area of potential concern is the US stated policy of pre-emptive strike against potential aggressors. Aside from any legal objection, there is obviously a risk that other States would adopt similar policies.[76]

If such attacks included the use of any space-based weapons, legal questions would arise under the UN Charter. The first-use of military power in outer space is per-se illegal, if undertaken without justification as outlined in the UN Charter[77] (self-defence), or unless authorised by the Security Council,[78] as are space deployment of nuclear and other "weapons of mass destruction."[79]

(3) Other Concerns

It is unarguable that the domination of space would enable the US or any other State to maintain, expand and enforce those policies that will serve the national interest. There is a perception that the US is seeking to create a dominant position in space that would allow it to be even more powerful and influential terrestrially.[80]

PROSPECTS FOR THE FUTURE

(1) International Containment Efforts

There have been many proposals to fill the gap in the Outer Space Treaty's prohibition of weapons. Canada and many NGOs have made proposals. In addition, the PAROS Resolutions of the UN General Assembly[81] address this issue.

On 27 June, 2002, Russia and China presented a working paper to the UN Conference on Disarmament (CD) containing possible elements of an international legal agreement on prohibiting the deployment of any weapons in outer space. It would also prohibit the threat or use of force against space objects, a concept that would ban anti-satellite weapons, either mounted on aircraft or ground-based.

On 12 February 2008, Russia and China submitted a draft treaty[82] for a ban on weapons in outer space to the Conference on Disarmament, based on the elements outlined in their 2002 working paper. The US administration dismissed the proposal out-of-hand, characterizing the offer to preserve space for peaceful uses "a diplomatic ploy by the two nations to gain a military advantage."[83]

At present, there is no prospect that this treaty outline will make progress at the CD, owing to the conference rule of consensus decisions and the outright opposition of the United States. The United States has said it is willing to discuss this

issue at the CD, but not to negotiate a treaty on it. China had long insisted that, in addition to discussion, the possibility of negotiation must be mentioned in the agenda, however in August 2003, China signalled it was prepared to compromise on this point. There is even some agitation to change the consensus rules of the Conference on Disarmament. In the meantime, the Russian-Chinese draft can be refined further and developed into a usable treaty text, with help from other governments and NGOs.

There are other, more peaceful ways to promote better security and cooperation between nations, as Michael Wallace hints:

> [T]he poorer and weaker nations and peoples of the world regard the entire BMD controversy with a mixture of disbelief and disgust. For the world's richest nation [USA] to spend such enormous sums on unproven and provocative technologies while failing to pay the full amount of their dues to the UN, refusing to agree to total debt relief for the poorest nations, and denying full access to American markets for such key Third World products as textiles and sugar, seems utterly incomprehensible. To put this in specific perspective: it was estimated by a Greenpeace activist from the Cook Islands that the $100 million wasted on the failed July 7, 2000 test could have built and run a hospital and provided free university education for the entire population of the Cook Islands for many decades. Surely, American security would be better served by spending money on such worthy projects than by a futile attempt to create an unattainable Fortress America.[84]

The parties to the Outer Space Treaty could decide whether to formally interpret the peaceful use provision to preclude weapons in space.[85] This could be based on a review of state practices since 1967 and the negotiating history of the treaty.[86] Similarly, the United Nations, acting through its First Committee and then through the General Assembly (which recommended the Outer Space Treaty in the first place), could pass a resolution formally interpreting it. If there were significant dissent, pursuant to the UN Charter the General Assembly could request an advisory opinion from the International Court of Justice at The Hague confirming this interpretation.[87]

Repercussions from violating space law, such as lawsuits and international legal actions, should also be included in the calculation of gains and losses from weaponisation.

(2) Need to Review US Policy

On 21 February 2008, the US military shot down a failed satellite with a Standard Missile-3, whose primary vocation is interceptor for the US Navy's missile defense system.[88] It has also evoked criticism from many space security experts,[89] who have voiced two primary concerns.

One concern is the debris. While Marine Corps Gen. James E. Cartwright, vice chairman of the Joint Chiefs of Staff, said most of the debris will come down within two orbits, Jeffrey Lewis of the New America Foundation said, "modeling of debris creation isn't an exact science," arguing, "the debris that the light-weight interceptor will kick into higher orbits when it hits the massive (bus-sized) satellite" will remain in orbit, posing a risk to the International Space Station.

The second concern is the political implications of conducting what amounts to an anti-satellite test. The US administration has argued the test is not the same as the Chinese anti-satellite test in January 2007, which it condemned. The US government says the Chinese test was "designed specifically" to test the ability to destroy satellites, and argues that its own plan is only aimed at protecting civilians on the ground. However, the Russian Defence Ministry asserted the US plan is "in many ways close" to China's test, arguing, "The impression arises that the United States is trying to use the accident with its satellite to test its national anti-missile defence system as a means of destroying satellites." Bruce Gagnon, Coordinator of the Global Network Against Weapons and Nuclear

Power in Space, likewise argued, "The [US] administration is magnifying the risk to justify the testing of new dangerous and provocative offensive space warfare technologies."

There has been little public thinking about the potential for far-reaching military, political and economic ramifications of a US move to break the taboo[90] against weaponising space. Doing so could actually undermine, rather than enhance, the national security of the United States, as well as global stability. There is nothing to be gained, and potentially much to be lost, by rushing such a momentous change in US space policy.[91]

Thus it behoves the Administration, as well as Congress, to undertake an in-depth and public policy review of the pros and cons of weaponising space.

Such a review would look seriously at short-term and long-term threat, as well as measures to prevent, deter or counter any future threat using all the tools in the US policy toolbox: diplomatic, including arms control treaties; economic; and military, including defensive measures short of offensive weapons.

CONCLUSION

The militarization of space by the United States will weaken the international laws of outer space, and affect the interpretation of international and US domestic laws governing space activities. If the US persists in militarizing space it will do so despite the unanimous UN Resolution on International Co-operation in the Peaceful Uses of Outer Space[92] by which the US has joined other countries committing to peaceful uses of outer space, and prevention of a space arms race.[93]

In itself a retrograde step, US actions and policy will also have a chilling effect on the UN efforts to promote ratification of space treaties among countries not already parties to them.

Poor Moon and poor Man.

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1 Sovereignty is an anachronistic concept originating in bygone times when society consisted of rulers and subjects, not citizens. It became the cornerstone of international relations with the Treaty of Westphalia in 1648. Today, though not all nation-states are democratically accountable to their citizens, the principle of sovereignty stands in the way of outside intervention in the internal affairs of nation-states. True sovereignty belongs to the people, who in turn delegate it to their Government [PCIJ, Advisory Opinion, Nationality Decrees Issued in Tunis and Morocco, Series B, N° 4, p. 24.] Sovereignty is not, and has never been, an unlimited power to do all that is not expressly forbidden by international law [See however PCIJ, Judgment, *Lotus Case*, Series A, N° 10, p. 18.] It can only be defined as the very criterion of States, by virtue of which such an entity "possesses the totality of international rights and duties recognized by international law" as long as it has not limited them in particular terms by concluding a treaty. [ICJ, Advisory Opinion, Reparation for Injuries Suffered in the Service of the United Nations, ICJ Rep. 1949, p. 180.]

2 Switzerland and East Timor joined in 2001. The Holy See is not a member of the UN.

3 Articles 41 and 42 of the U.N. Charter declare that no member state has the right to enforce any resolution with armed force unless the Security Council decides there has been a material breach of its resolution, and determines that all non-military means of enforcement have been exhausted. Then, the Council must specifically authorize the use of military force, as it did in November 1990 with Resolution 678, in response to Iraq's occupation of Kuwait in violation of Security Council resolutions passed the previous August. See also, *Invading Iraq Would Violate US and International Law*, Professor Marjorie Cohn, Thomas Jefferson School of Law, JURIST Contributing Editor. http://www.lawyersagainstthewar.org/legalarticles/cohn2.html.

4 Early Bird was the world's first commercial communication synchronous orbit satellite, launched by COMSAT in 1965.

5 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; Signed 1967; 98 Parties (including the United States); 27 Signatories.

6 International Agreements and Other Available Legal Documents Relevant To Space-Related Activities, United Nations, Vienna 1999.

7 Article IV; reference to "peaceful purposes" also occurs in the 4th paragraph of the preamble.

8 By 1972 agreement had been reached to limiting strategic offensive weapons and strategic defensive systems. Each country was allowed two sites at which it could base a defensive system, one for the capital

and one for ICBM silos (Art. III). The treaty was signed in Moscow on 26 May, 1972 and ratified by the US Senate on 3 August, 1972. The 1974 Protocol reduced the number of sites to one per party, largely because neither country had developed a second site. The sites were Moscow for the USSR and Grand Forks Air Force Base, North Dakota, since its Safeguard facility was already under construction, for the US. The treaty was undisturbed until Ronald Reagan announced his Strategic Defence Initiative (SDI) on 23 March, 1983. After the dissolution of the Soviet Union in December 1991 the status of the treaty became unclear, and in 2002 George W Bush announced that the US was withdrawing.

9 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water; Signed at Moscow August 5, 1963; in force 10 October 1963. Article I, Para. 1(a) provides: "Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control: (a) in the atmosphere; beyond its limits, including outer space; ..."

10 Treaty Between the United States of America and the Union of Soviet Socialist Republic on the Reduction and Limitation of Strategic Offensive Arms; Done at Moscow on 31 July 1991.

11 Article V, Para. 18(c): Each Party undertakes not to produce, test, or deploy ... systems, including missiles, for placing nuclear weapons or any other kinds of weapons of mass destruction into Earth orbit or a fraction of an Earth orbit.

12 The Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects; concluded Geneva, 10 October, 1980, entered force December 1983, and is an annexe to the Geneva Conventions of August 12, 1949. It consists of five protocols, including Protocol IV on Blinding Laser Weapons.

13 To date, the United States has ratified Protocols I (fragmentation weapons) and II (landmines). It has assumed certain obligations under Protocol III (incendiary weapons) within stated limits, but has not ratified it, and is obligated under international law not to take actions that defeat the object and purpose of Protocol IV. The United States did not join the consensus approval of the text of Protocol V (clearance of explosive remnants of war, adopted 2003). Accordingly, the view of the United States is that the provisions of Protocol V will not apply until ratified by the U.S. Senate.1 Twenty signatories must ratify Protocol V for it to become legally binding. Currently thirteen states parties have ratified Protocol V.
http://www.ntip.navy.mil/certain_conventional_weapons.shtml

14 Article 2.

15 Article 3 of the Protocol provides: Blinding as an incidental or collateral effect of the legitimate military employment of laser systems, including laser systems used against optical equipment, is not covered by the prohibition of this Protocol.

16 Union of Concerned Scientists, Citizens and Scientists for Environmental Solutions, International Legal Agreements Relevant to Space Weapons, February 2004, http://www.ucsusa.org.

17 Sixty–first General Assembly, First Committee, 20th Meeting, GA/DIS/3334. Sixty-second General Assembly, First Committee, A/62/251 96 Prevention of an arms race in outer space, A/RES/62/20, adopted 10 January 2008. See http://www.reachingcriticalwill.org/political/1com/1com07/ga/Res20.pdf; and http://www.reachingcriticalwill.org/legal/paros/parosindex.html.

18 The US voted against the PAROS Resolution of 2005, breaking with its previous practice to abstain. The US vote was seen by some commentators as an indication of the US drive to weaponise space, and by others as consistent with Ambassador John Bolton's hard line; The Ploughshares Monitor, Winter 2005, Vol 26, no. 4.

19 "SDI consolidated missile defence programs that were scattered among several government offices and moulded them into a coherent program guided by a clear strategic vision-produce non-nuclear defences. The technologies and systems developed under SDI fed into variants of the original SDI program that were managed first by the Ballistic Missile Defence Organization and then by today's Missile Defence Agency." MDA History, from the Missile Defence Agency MDALink, http://www.mda.mil/mdalink/html/history.html

20 President Clinton's Presidential Decision Directive/NSTC-8', National Space Policy, dated 19 September 1996, and released 19 September 1996.

21 Theresa Hitchens, *Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons*, Center for Defence Information, 18 April 2002.

22 National Security Presidential Directive, (NSPD-49) dated 31 August 2006. Only an unclassified summary was released on 6 October 2006.

23 "The United States rejects any claims to sovereignty by any nation over outer space or celestial bodies, or any portion thereof, and rejects any limitations on the fundamental right of *sovereign nations* to acquire data from space." (Emphasis added)

24 "The United States rejects any claims to sovereignty by any nation over outer space or celestial bodies, or any portion thereof, and rejects any limitations on the fundamental right of the *United States to operate in* and acquire data from space." (Emphasis added)

25 "The United States considers space capabilities -- including the ground and space segments and supporting links -- vital to its national interests. Consistent with this policy, the United States will: preserve its rights, capabilities, and freedom of action in space; dissuade or deter others from either impeding those rights or developing capabilities

intended to do so; take those actions necessary to protect its space capabilities; respond to interference; and deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests."

26 "The United States will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space. Proposed arms control agreements or restrictions must not impair the rights of the United States to conduct research, development, testing, and operations or other activities in space for U.S. national interests."

27 "Strengthen the nation's space leadership and ensure that space capabilities are available in time to further U.S. national security, homeland security, and foreign policy objectives."

28 "Enable unhindered U.S. operations in and through space to defend our interests there."

29 Presidential Decision Directive/NSC-49/NSTC-8, National Space Policy, dated 14 September 1996.

30 "DoD shall maintain the capability to execute the mission areas of space support, force enhancement, space control, and force application. ...Consistent with treaty obligations, the United States will develop, operate and maintain space control capabilities to ensure freedom of action in space and, if directed, deny such freedom of action to adversaries. These capabilities may also be enhanced by diplomatic, legal or military measures to preclude an adversary's hostile use of space systems and services."

31 "Maintain the capabilities to execute the space support, force enhancement, space control, and force application missions; ... Develop capabilities, plans, and options to ensure freedom of action in space, and, if directed, deny such freedom of action to adversaries."

32 Global Policy Forum, *US, UN and International Law*, http://www.globalpolicy.org/empire/un/unindex.htm

33 See also Jon Kyl (Republican Senator, Arizona; Senate Committees: Finance, Judiciary, and Sub-Committee on Terrorism, Technology & Homeland Security), *China's Anti-Satellite Weapon and American Security*, 29 January 2007, Heritage Lecture No. 990.

34 Military Space Operations: Planning, Funding, and Acquisition Challenges Facing Efforts to Strengthen Space Control; GAO Report to the Secretary of Defense, September 2002.

35 National Security Presidential Directive, NSPD-49. Cited Federation of American Scientists website, http://www.fas.org/irp/offdocs/nspd/space.html

36 Laura Grego and David Wright , *U.S. Space Weapons Policy*, The Bush Administration's National Space Policy, Union of Concerned Scientists, 13 October 2006.

37 Jon Kyl, Republican Senator for Arizona, *China's Anti-Satellite Weapon and American Security*, 29 January 2007, Heritage Lecture No. 990.

38 See Notes 29 and 30.

39 "The United States has long maintained the option of pre-emptive actions to counter a sufficient threat to our national security. The greater the threat, the greater is the risk of inaction—and the more compelling the case for taking anticipatory action to defend ourselves, even if uncertainty remains as to the time and place of the enemy's attack. To forestall or prevent such hostile acts by our adversaries, the United States will, if necessary, act pre-emptively." National Security Strategy, 17 September 2002, http://www.whitehouse.gov/nsc/print/nssall.html; quoted in Taylor, Rachel S., *International Law - War in Iraq - United Nations - Iraq*. World Press Review Online, www.worldpress.org/Mideast/2230.cfm.

40 O'Connell, Mary Ellen, *UN Resolution 1441: Compelling Saddam, Restraining Bush.* Jurist, 21 November 2002. http://jurist.law.pitt.edu/forum/forumnew73.php#6.

41 Report by United States Space Command; www.fas.org/spp/military/docops/usspac/visbook.pdf.

42 Karl Grossman, *Master of Space*, Progressive Magazine, January 2000.

43 *NMD Again 'Hogging Headlines' As World 'Faces Up to U.S. Missile Plan'*, 2 February 2001, http://www.fas.org/news/usa/2001/usa-010202.htm.

44 Craig R Whitney, *With a 'Don't Be Vexed' Air, Chirac Assesses U.S.*, New York Times, 17 December 1999.

45 *Hague defends 'Star Wars' stance*, BBC News, 12 January 2001, http://news.bbc.co.uk/1/hi/uk_politics/1113018.stm.

46 See James Fergusson, *Nato, Europe and Theatre Missile Defence*, Canadian Military Journal, Spring 2002, p 45.

47 Dr Theodore Postol, Professor of Science, Technology and National Security Policy, Massachusetts Institute of Technology.

48 In the letter dated 11 May 2000, to John Podesta, Whitehouse Chief of Staff, Dr. Postol said Pentagon sensor data he had obtained from the first antimissile test flight in June 1997 showed that the ground-based interceptor was inherently unable to make the distinction and that the Pentagon and its contractors had tried to hide this failure. The cover-up, he said, was "like rolling a pair of dice and throwing away all outcomes that did not give snake eyes." An inability to tell cheap decoys from costly warheads in theory could force a defender to fire interceptors at every threatening object, which as a practical matter could make the system useless.

49 William Hartung and Michelle Ciarrocca, *Star Wars II; Here We Go Again*, The Nation Magazine, June 19, 2000.

50 See *Missile Shield Analysis Warns of Arms Buildup*, Los Angeles Times, 19 May 2000.

51 The Missile Defence Agency (MDA) is the section of the United States government's Department of Defence responsible for developing a layered defence against ballistic missiles.

52 The NMD system consists primarily of radar and ground based interceptor missiles that are intended to intercept incoming warheads in space.

[53] SORT, signed on 24 May 2002, mandated the deepest ever cut in deployed strategic nuclear warheads without actually mandating cuts to total stockpiled warheads.

[54] Yevgeny Miasnikov of the Centre for Arms Control, Energy and Environmental Studies in Moscow, *Moscow extends life of 144 cold war ballistic missiles*, Nick Paton Walsh, The Guardian, Tuesday 20 August 2002.

[55] On 23 January 2007, the Chinese government confirmed that it had conducted a successful test of a new anti-satellite weapon, but said it had no intention of participating in a "space race." Liu Jianchao, the foreign ministry spokesman, issued the first official comment on the matter, stating, "This test was not directed at any country and does not constitute a threat to any country. . . . What needs to be stressed is that China has always advocated the peaceful use of space, opposes the weaponisation of space and an arms race in space. . . . China has never participated and will never participate in any arms race in outer space." On 25 January 2007, Russian President Vladimir Putin criticized US plans for space-based weapons, saying they were the reason behind the Chinese anti-satellite weapons test.

[56] On 14 August 2008, The United States of America and Poland announced a deal to implement the missile defense system in Polish territory, with a tracking system placed in the Czech Republic. The Russians responded by saying such action "cannot go unpunished." [*Russia Lashes Out on Missile Deal*, New York Times, 15 August 2008.] "The fact that this was signed in a period of very difficult crisis in the relations between Russia and the United States over the situation in Georgia shows that, of course, the missile defense system will be deployed not against Iran but against the strategic potential of Russia," Dmitry Rogozin, Russia's NATO envoy, said. [*Russia Angry Over US Missile Shield*, Al Jazeera, 15 August 2008.]

[57] *Space Wars*, by Colonel Daniel Smith, USA (Ret.) Chief of Research, Centre for Defence Information, February 2001.

[58] Jim Lobe, *Bush's New Era of Missile Defence Heightens Tensions*, Inter Press Service, 2 May 2001.

[59] Strategic Arms Reduction Treaty (START) I – The bilateral treaty on the Reduction and Limitation of Strategic Offensive Arms; Signed by the United States and Soviet Union, 1991. Article V.18 commits both parties "not to produce, test, or deploy...systems, including missiles, for placing nuclear weapons or any other kinds of weapons of mass destruction into Earth orbit or a fraction of Earth orbit".

[60] Michelle Ciarrocca and William Hartung, *Star Wars Revisited*, Foreign Policy In Focus, Volume 6, Number 25, June 2001.

[61] Strategic Arms Reduction Treaty, START II, was a weapons treaty signed by George Bush Sr and Boris Yeltsin in 1993.

[62] The weapons banned were multiple independently targetable re-entry vehicle (MIRVs) when carried on a single intercontinental ballistic missile (ICBM). Using a MIRV warhead, a single launched missile can strike several targets, or fewer targets redundantly. MIRVed land-based ICBMs were considered destabilizing because they tended to put a premium on striking first.

[63] A total of 144 of the missiles, which weigh 200 tonnes and can each carry 10 warheads to the US from silos behind the Ural mountains, were due to be dismantled by 2007 under the Treaty.

[64] On 13 December 2001, George W. Bush gave Russia notice of the United States' withdrawal from the treaty, in accordance with the clause that requires six months notice before terminating the pact. This was the first time in recent history the United States has withdrawn from a major international arms treaty. Nick Paton Walsh, *Moscow Extends Life of 144 Cold War Ballistic Missiles*, The Guardian, 20 August 2002.
http://www.guardian.co.uk/russia/article/0,2763,777379,00.html

[65] Corah Ong, *Withdrawal from the ABM Treaty Threatens US and International Security*, Nuclear Age Peace Foundation, December 2001. www.wagingpeace.org/2001/12/00_ong_wihdrawal.htm

[66] Space-based communications, remote sensing and GPS systems, while not in themselves necessarily "military", are increasingly used to provide an advantage in warfare.

[67] Michael N. Schmitt, *Bellum Americanum: The U.S. View of Twenty-First Century War and Its Possible Implications for the Law of Armed Conflict*, 19 MICH. J. INT'L L. 1051, 1087 (1998). Cited in Christopher M. Petras, Military use of the International Space Station and the concept of "peaceful purposes", Air Force Law Review, 22/3/2002.

[68] "Under this...interpretation, none of the exotic future weapons systems currently being proposed or researched by the United States would violate this provision of the Outer Space Treaty. ...violations would only occur if any of the weapon systems included a nuclear explosion to propel them or as a means of destroying a target." Major Douglas S. Anderson, *A Military Look into Space Law: The Ultimate High Ground*, Nov. ARMY LAW 19, 22 (1995). 24–25. Cited in Jackson N. Maogoto, The *Military Ascent into Space: From Playground to Battleground–The New Uncertain Game in the Heavens*, Berkeley electronic press Legal Series. 2006, 1347, 22.

[69] "All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State or in any other manner inconsistent with the purposes of the United Nations."

[70] UN Charter Article 51 provides: Nothing in the present Charter shall impair the inherent right of

individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security. Measures taken by Members in the exercise of this right of self-defence shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security.

71 The thirteenth session of the General Assembly, held in 1958, provided a forum for the debate on 'Questions of the Peaceful Use of Outer Space'. During this session the term 'peaceful' was used as an antonym to 'military'. Sweden appealed to fellow Member States to 'safeguard outer space against any military use whatsoever' and the Soviet Union put forward a proposal to ban the use of outer space for military purposes. The General Assembly adopted resolution 1348 (XIII), which recognized the 'common aim' of humankind that outer space 'should be used for peaceful purposes only.' [Quoted in M.S. McDougal, H.S. Lasswell and I.A. Vlasic, 1963, *Law and Public Order in Space,* New Haven, Yale University Press, p. 395. See also http://www.oosa.unvienna.org/SpaceLaw/gares/html/gares_13_1348.html.

72 But see Bin Cheng, Studies In International Space Law150 (1997), Note 83; "[T]he outer void space as such can be used for any military activity that is compatible with general international law and the Charter of the United Nations, so long as no nuclear weapons or any other kind of weapons of mass destruction are stationed there."

73 The other subcommittee is the Scientific and Technical Subcommittee.

74 Resolution adopted by the UN General Assembly 1982 (and readopted each year, last in 2006) against an arms race in outer space, which "Called upon all States, in particular those with major space capabilities, to contribute actively to the objective of the peaceful use of outer space and of the prevention of an arms race in outer space (PAROS) and to refrain from actions contrary to that objective and to the relevant existing treaties in the interest of maintaining international peace and security and promoting international cooperation." In 2003, the US, Israel, and US supporters Marshall Islands and Micronesia abstained from this vote in the General Assembly. There were 174 'yes' votes and no negative votes. See also under UN Resolutions above. Resolution adopted by the General Assembly; A/RES/61/58; 18 October 2006, PAROS.

75 Para. 34: Urges all States, in particular those with major space capabilities, to contribute actively to the goal of preventing an arms race in outer space as an essential condition for the promotion of international cooperation in the exploration and use of outer space for peaceful purposes. The US, Israel and one other country abstained.

76 Other countries are already adopting similar policies. For example see statement by President Putin of Russia; *The Washington Times*, 13 September 2004, http://www.washtimes.com/upi-breaking/20040913-104239-9091r.htm.

77 UN Charter, Article 51.

78 UN Charter, Chapter VII.

79 Article IV informed states to "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." Weapons of mass destruction (WMD) are weapons designed to kill large numbers of people, typically targeting civilians and military personnel alike. Coined in 1937 to describe aerial bombardment, today they are often referred to as NBC weapons or ABC weapons, comprising: nuclear weapons (including radiological weapons); biological weapon; and chemical weapon.

80 *Academy Paper Examines Russian and Chinese Views of U.S. Plans for Space Weapons*, American Academy of Arts, 21 February 2008; http://www.amacad.org/news/russia_china.aspx.

81 See UN Resolutions above.

82 Draft *Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects*, (PPW Treaty), http://www.reachingcriticalwill.org/political/cd/papers08/1session/Feb12%20Draft%20PPWT.pdf.

83 See http://www.reachingcriticalwill.org/political/cd/speeches08/reports.html#feb12.

84 *Ballistic Missile Defence: The View from the Cheap Seats*, WagingPeace.org (Nuclear Age Peace Foundation)

85 "The prohibition on orbiting of weapons of mass destruction, including nuclear weapons, strongly suggests the distinction between those weapons, and conventional weapons of lesser destructive power, including those directed at satellites. Though Article IV (1) could easily be modified to effect the de-weaponisation of space, conventional weapons are not proscribed." Major Robert A. Ramsey, *Armed Conflict on the Final Frontier: The Law of War in Space* 48 A.F.L. REV. 1, 84. (2000). Cited in Jackson N. Maogoto, *The Military Ascent into Space: From Playground to Battleground–The New Uncertain Game in the Heavens*, Berkeley electronic press Legal Series. 2006, 1347, 29.

86 Unanimity among parties is not required for any formal interpretations, but a large majority of parties adopting a particular position would be persuasive.

87 George Bunn & John B Rheinlander, *Outer Space Treaty May Ban Strike Weapons*, June 2002 Letter to the Editor, Arms Control Association, www.armscontrol.org/act/2002_06/letterjune02.asp.

88 This incident has been said to highlight one of the deficiencies of the draft treaty proposed by Russia and China, which does not address attacks from ground- or sea-based interceptors such as the SM-3. But see Draft *PPW Treaty* at note 79.

89 Security experts have criticised the US on the basis that it has considered the worst case for the tank of hydrazine coming down into a populated area from which people cannot evacuate. This is an unlikely scenario. See http://www.reachingcriticalwill.org/political/cd/speeches08/reports.html#19feb.

90 It is contended that such action is also against international law.

91 Theresa Hitchens, *Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of US Pursuit of Space-Based Weapons*, Centre for Defence Information, 18 April 2002.

92 Resolution adopted by the General Assembly; A/RES/58/89; 17 December 2003.

93 Para. 34: *Urges* all States, in particular those with major space capabilities, to contribute actively to the goal of preventing an arms race in outer space as an essential condition for the promotion of international cooperation in the exploration and use of outer space for peaceful purposes.