

CHAPTER 3

THE CURRENT LEGAL REGIME GOVERNING THE USE OF OUTER SPACE

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The year 2004 marks the 37th anniversary of the Outer Space Treaty, the cornerstone of the treaty regime covering activities in space. The Outer Space Treaty was concluded at a time when the United States and the Soviet Union, fearing the disastrous results of extending their military confrontation into space, joined other United Nations Member States in deciding that space must be used only for peaceful purposes. These worries about the dangers of weapons competition in space remain equally valid today.

Outer space has been “militarized”. It is already inhabited by at least 500 satellites used for military purposes, among them navigation, sensing, imaging, communications and weather. These activities are generally considered useful, passive and non-aggressive. There is no prospect and no widely shared desire for their elimination. They have never been formally challenged. On the other hand, for the past generation, the Outer Space Treaty’s injunction that space should be used only for peaceful purposes has been maintained with regard to orbiting or stationing weapons in space. But there are prospects that this peaceful regime might end.

As part of its missile defence project, the United States foresees two space-based weapons—a space-based laser and a space-based kinetic kill vehicle. A space-based “test bed” for the latter has been postponed at least once and could be deployed some time after 2006. A “test bed” in this context is a space-based complex consisting of one or more prototype weapons, targets for those weapons, and observation and measurement devices in space and on the Earth’s surface. Once this array is deployed in space, it will be fair to say that the red line has been crossed and that the weaponization of space has begun. Even before weapons are orbited in

space, ground-based or aircraft-mounted anti-satellite (ASATs) weapons could be deployed.

A presidential directive ordered a review of US national space policies in June 2002. A wrap-up report on space strategy that was scheduled for the end of February 2003 has not yet appeared. Given the administration's approach in its Nuclear Posture Review, in its National Security Strategy featuring the possibility of pre-emptive attack, and the known views of administration leaders on space policy, it can be expected that, when it appears, this policy review will make a determined case for US domination of space by force of arms that will serve as a rallying point for supporters of weaponization.

The weaponization of space is a looming tragedy for all humanity, an immense destructive iceberg that we can see bearing down on us, even more significant in its long-term consequences than today's real worries over the proliferation of nuclear and biological weapons among rogue states and terrorists. If the weaponization of space does take place, with whatever weapons or justification, it will be the ultimate act of weapon proliferation. All of humanity will feel its self-destructive effects.

To meet these evident dangers, it is time that government and non-governmental organization (NGO) thinking begin to coalesce around a specific, fully articulated approach for preventing the weaponization of space. Given the fact that world governmental and public opinion opposes weaponization and that there is today only one potential proponent of weaponization—the US government—the objective of an agreed approach should be to convince the United States of the fact that the costs of weaponization outweigh its potential gains. This effort must be made at all levels of the US political system: executive, Congress, commercial interests, media and public.

LEGAL AND TREATY ASPECTS

The objective of this paper is to describe the legal and treaty rules covering the use of space. The biggest problem about the legal regime governing the use of space is that while the Outer Space Treaty prohibits the orbiting of weapons of mass destruction (WMD) in space, it does not specifically prohibit orbiting of weapons of other kinds. Article IV of the

Outer Space Treaty prohibits placing in orbit around the Earth any objects carrying nuclear weapons or other WMD. It also prohibits the testing and the deployment of any kind of weapon on the Moon or other celestial bodies.

In practical terms, this means that nuclear weapons mounted on missiles could transit space and that weapons other than nuclear, chemical or biological might be placed in space orbit and used to attack targets in space or on Earth. Countries could also create armed military bases on orbiting satellites. There is no ban on air-, ground- or sea-based ASATs or anti-missile weapons. However, numerous provisions of space treaties could provide obstacles to weaponization of space.

In addition to the 1967 Outer Space Treaty, five other treaties address outer space: the 1963 Partial Test Ban Treaty (or Limited Test Ban Treaty), which prohibits nuclear tests and nuclear explosions in the atmosphere or in outer space; the 1968 Astronauts Rescue Agreement; the 1972 Liability Convention, which established procedures for determining the liability of a state that damages or destroys space objects of another state; the 1975 Registration Convention, which requires the registration of objects launched into space; and the 1979 Moon Agreement, which took the first steps to establish a regime for exploiting the natural resources of space.¹

In addition, there are five relevant United Nations General Assembly resolutions: the 1963 Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space (this preceded the Outer Space Treaty and laid out most of its content); the 1996 Declaration on International Cooperation in the Exploration and Use of Outer Space for the Use and Benefit and in the Interest of All States; the 1982 resolution on Direct Television Broadcasting; the 1986 resolution on Remote Sensing of the Earth from Outer Space (seeks to assure inexpensive access by developing countries to non-military satellite imaging); and the 1992 resolution on Use of Nuclear Power in Outer Space (designed to limit exposure of people in crash landing of nuclear-powered satellites and dealing with liability for such accidents).² After 13 June 2002, when US withdrawal from the Anti-Ballistic Missile (ABM) Treaty became effective, there was no longer any explicit treaty prohibition against testing or deploying weapons in space other than WMD.

The International Telecommunications Union (ITU) allocates radio frequencies and orbital slots for satellites. Both resources are limited and increasingly crowded. The constitution of the ITU has a general provision prohibiting harmful interference with satellite communication. This provision might be invoked in the event of protracted or repeated jamming. Both missile defence and weaponization of space would result in competitive requirements for more frequency bandwidth and orbital slots. New equipment is enabling more economical use of existing frequencies. However, the overall shortage could lead to cooperation among foreign governments to hinder the United States, already the biggest user, from gaining more orbital slots or frequencies.

A further complex of treaties is relevant to space weapons. It arises from the concept of non-interference with national technical means (NTMs) of verification. This first appeared in the 1972 Strategic Arms Limitation Talks (SALT I) Treaty and was taken over by the Intermediate-range Nuclear Forces (INF) Treaty, which is of indefinite duration, as well as into the Strategic Arms Reduction Treaty (START I), which has been prolonged to 2009. The intent of this measure is to preserve NTMs, including space-orbiting means, from attack or interference.

Thus, it would be a violation of the provisions on non-interference with NTMs in the INF and START I treaties to use weapons against any early warning, imaging or intelligence satellite and, by extension, against any ocean surveillance, signals, intelligence or communications satellite of the Russian Federation or the United States. This non-interference obligation was made multilateral in the 1990 Treaty on Conventional Armed Forces in Europe (CFE), which has 30 North Atlantic Treaty Organisation (NATO) and East European participants and is of unlimited duration. It is true that, to be protected by the provisions, satellites must be used to verify specific treaties, but in most cases, it will not be feasible to determine which satellites are being actually used or could be used for this purpose. Hence, in practice, all are protected.

In the spirit of these treaty provisions, I have suggested that the First Committee of the General Assembly consider adopting separate resolutions calling for non-interference with communications, weather satellites, global positioning system (GPS) satellites and others. Such resolutions might provide a measure of protection to US and other satellites and to that extent

weaken the argument for weaponization and help to mobilize world public opinion on the weapons in space issue.

At a July 2002 Paris meeting on space issues of the Eisenhower Institute, a suggestion was made to elevate the status of certain space assets like GPS and other navigation satellites, telecommunication and weather satellites, and to give them special legal status as “global utilities”. The Paris meeting did not suggest how this could be done, but I believe a General Assembly resolution could proclaim satellites performing these functions to be global utilities and state that they should not be interfered with.

THE NORM OF PEACEFUL USE

In addition, the 1967 Outer Space Treaty is based on “the common interest of all mankind in the ... use of space for peaceful purposes”. In fact, the treaty contains four explicit references to the peaceful uses of outer space.

This language points to the fact that, during the nearly forty years of existence of the Outer Space Treaty, an important norm has emerged against the weaponization of space, for keeping armed conflict out of space and for ensuring its peaceful use.

This conclusion has been documented by General Assembly resolutions each year for the past 20-odd years calling for maintaining peaceful uses of space and preventing an arms race in space. Most of these resolutions have been unanimous and without opposition, although the United States and a few other countries have abstained.

In the most recent version adopted by the First Committee of the General Assembly in November 2003, the resolution received the support of 174 states, the highest number in years. As usual, Israel, the Marshall Islands, Micronesia and the United States abstained. The resolution asks all states to refrain from actions contrary to the peaceful uses of outer space and calls for negotiation in the Conference on Disarmament (CD) on a multilateral agreement to prevent an arms race in outer space.

These repeated, nearly unanimous resolutions with huge majorities are not only evidence for the existence of a norm against the weaponization of

space. They also indicate a widespread desire to expand existing multilateral agreements to include an explicit prohibition against all weapons in space.

The Outer Space Treaty has other provisions that could be useful in the event of dispute over weaponization of space: Article VII makes treaty parties that launch objects into outer space liable for damage to the property of another treaty party—the procedure is spelled out in the Liability Convention of 1972. That convention foresees the establishment of a Claims Commission to determine the extent of liability for damage by the space objects of one country to the space objects or property of another state. Article IX of the Outer Space Treaty provides for consultations with other governments if any treaty party believes an activity planned by another treaty party could cause “potentially harmful interference with activities in the peaceful exploration and use of outer space”.

These provisions present important possibilities for legal action in connection with possible moves to weaponize space. Beyond this, the General Assembly could by majority vote request an Advisory Opinion from the International Court of Justice if either the peaceful uses language of the Outer Space Treaty or if these two articles on liability and consultation come into contention, for example, as the space-based component of the missile defence system advances. The court could also be asked for its opinion on whether laser weapons should be classed as WMD and banned under the treaty.

In fact, requests for consultation under Article VII on liability or Article IX on possible interference, or a General Assembly request for an advisory opinion can and should come now, in order to make world opinion aware of the weaponization issue before the damage has been done, and to make the US government more aware of the potential costs for weaponizing space.

The request for consultation under Article IX can come from any party or group of parties to the Outer Space Treaty. George Bunn and John Rhinelander have pointed out that parties to the treaty could convene and issue an interpretation that US testing or orbiting of space weapons of any kind was contrary to the peaceful uses language of the treaty, in effect amending it to preclude weaponization. The General Assembly could then pass a resolution endorsing this interpretation.³

Presumably, the European Union, France or the Russian Federation, or any other state party to the CFE Treaty could also take legal action against moves toward space weaponization, basing its complaint on treaty provisions prohibiting interference with NTMs. Legal action could also be taken in US courts by foreign or US commercial users of space satellites if these satellites were endangered or destroyed by US space weapons.

In short, existing space law provides numerous opportunities to make clear to the United States that weaponization of space could be a costly and difficult process for it to pursue.

EXPANSION OF THE LEGAL REGIME

There have been many proposals to fill the gap in the Outer Space Treaty's prohibition of weapons. Canada and several NGOs have made suggestions. Probably the most important recent suggestion is a Russian–Chinese working paper presented to the CD on 27 June 2002, and subsequently expanded, which contains possible elements of an international legal agreement on the prohibition of deployment of any weapons in outer space. It would also prohibit the threat or use of force against space objects, a concept that would apply to ASAT weapons, either mounted on aircraft or ground-based. The two sponsors have collected comments on their draft and posted them on their web sites at the CD in Geneva.⁴

An important part of an organized campaign against the weaponization of space would be to encourage other space-faring countries, including the European Union and France, India and Japan, as well as the Russia Federation and China, to express to the United States their concern over the prospect of weaponization and to let the United States know, in a constructive way, that they intend to use legal means to oppose weaponization and will as needed invoke the Liabilities Convention and call for consultation under Article IX of the Outer Space Treaty. The US government should be made aware that these governments are seriously concerned about the possibility of weaponization and should see early on that the entire range of other US interests with these countries could be jeopardized by controversy over weaponization of space.

I believe these points demonstrate that the current regime of space treaties can be used even in its present incomplete form to make clear that the weaponization of space could be a very costly undertaking, as well as a very dangerous one.

Notes

- 1 The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (the "Rescue Agreement"), opened for signature on 22 April 1968, entered into force on 3 December 1968, 87 ratifications; The Convention on International Liability for Damage Caused by Space Objects (the "Liability Convention"), opened for signature on 29 March 1972, entered into force on 1 September 1972, 81 ratifications; The Convention on Registration of Objects Launched into Outer Space (the "Registration Convention") opened for signature on 14 January 1975, entered into force on 15 September 1976, 43 ratifications; The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the "Moon Agreement"), opened for signature on 18 December 1979, entered into force on 11 July 1984, 9 ratifications (as of 1 February 2001).
- 2 The Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space (General Assembly resolution 1962 (XVIII) of 13 December 1963); The Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting (General Assembly resolution 37/92 of 10 December 1982); The Principles Relating to Remote Sensing of the Earth from Outer Space (General Assembly resolution 41/65 of 3 December 1986); The Principles Relevant to the Use of Nuclear Power Sources in Outer Space (General Assembly resolution 47/68 of 14 December 1992); The Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries (General Assembly resolution 51/122 of 13 December 1996).
- 3 Letter to the Editor, *Arms Control Today*, June 2002.
- 4 See <www.geneva.un.mid.ru/geneva-un/speeches/03.html>.

ANNEX

BACKGROUND PAPER

Union of Concerned Scientists

MULTIPLE DECLARATIONS TO REFRAIN FROM DEPLOYING WEAPONS IN SPACE

It is proposed that governments of space-faring nations consider issuing individual public declarations along the following lines:

The government of _____ wants to do its utmost to keep outer space free of weapons. It accepts the current military uses of outer space for surveillance, intelligence-gathering and communications. However, it is concerned by the prospect of weapons in space that can destroy objects in space, in the atmosphere, or on the surface of the earth and by the possibility of an arms race in such weapons. It wishes to maintain outer space for peaceful exploitation by all nations, as proclaimed in the Outer Space Treaty. The Treaty, however, prohibits only the orbiting or stationing in space of weapons of mass destruction, leaving a gap of coverage which should be filled.

The government of _____ therefore commits itself not to be the first government to test, orbit or otherwise station any weapon in space.

A "weapon" is defined as any device or component of a system designed to inflict physical harm through deposition of mass or energy on any other object. A weapon is considered to be "in space" if it orbits the earth at least once, or follows a section of an orbital trajectory before being accelerated out of that orbit, or has or will acquire a stable station at some point beyond earth orbit. The reference to acquiring "a stable station beyond earth orbit" is intended to cover stationing weapons in space or on celestial bodies in addition to orbiting them.

The government of _____ also commits itself to cooperate with other governments issuing this declaration to develop effective methods of verifying this commitment, which will remain in force unless another

government or organization deploys, tests, orbits or stations a weapon in space.

RATIONALE

1. This declaration can meet one major motivation for the weaponization of space: the desire to prevent other states from doing so.
2. This approach is also designed to test the feasibility of a treaty to ban the weaponization of space. But this is a different approach than a proposal for negotiating a treaty on this subject, which would require consensus among the members of the Conference on Disarmament (CD). In contrast, no one can block individual statements.
3. The present approach does not seek an agreement that would prevent another state from acting in space. Instead, it would consist of voluntary declarations that would obligate only the issuing government.
4. A series of individual national declarations could lead to useful cooperation upon verification of the declaration among those governments making the declaration. Considerable ground- and space-based technology for verification of declarations is available. It includes means such as open source information analysis, Earth-based surveillance of space such as radar and electron-optic systems, pre-launch declarations and inspections, space-based surveillance of space objects by specialized satellites and on-board sensors mounted on space objects.
5. If all major space-faring states issued such a declaration, this would provide considerable protection to existing space assets. It would also provide a practical preparatory stage for negotiating a treaty prohibiting weapons in space.
6. If most space-faring states participated in issuing a declaration, but one major space-faring state refused to do so, this refusal would indicate that it is the sole government that insists on the option of orbiting weapons in space.

7. If a considerable number of space-faring countries made individual declarations, those governments could then draft a treaty banning the weaponization of space and promote such a treaty under considerably more favourable circumstances than those they would face if they tried to launch a draft treaty without advance preparation of this kind.
8. The proposed measure would only prohibit weapons in space that could destroy or damage objects in space, in the atmosphere or on the surface of the planet—weapons that could lead to competition and to an arms race in space. The proposed measure would not ban all military activity in space. It would not ban a wide range of satellites with military functions. It also would not ban the passage of missiles through space, space-based sensors, or ground-, sea- or air-based missile defence weapons. Nor would it ban anti-satellite (ASAT) weapons other than space-based ASAT weapons. There could be separate subsequent negotiation on ASAT weapons if states so desired, but including them at the outset would make it far more difficult to gain acceptance of the declaration.
9. The statement would become invalid if another government tested a weapon in space.

POSSIBLE QUESTIONS

1. *In the proposal, “space” is not defined, why not?*

Instead of defining “space”, “weapons in space” is defined, which are those that travel on a complete or partial orbit, or are placed at a stable point beyond Earth orbit.

2. *A space weapon is defined as “any device or component of a system designed to inflict physical harm through deposition of mass and/or energy on any other object.” Is there a further definition?*

Yes. A space weapon is a device operating in space with the aim to permanently damage or destroy another object in space, in the atmosphere or on the surface of the planet. In the interests of focusing on a workable definition, this definition of a weapon omits devices such as jammers that are not designed to inflict permanent damage.

3. *Is a “weapon” a separate device or part of another system?*

It could be either, as long as it has the capabilities of a weapon to inflict physical harm. For example, a component that is part of a system not exclusively based in space, such as a relay for a ground-based laser, would be considered a space-based weapon.

4. *What would happen if my government makes such a declaration, but other space-faring states do not issue them?*

To address this possibility, it would be reasonable to establish a rule at the outset specifying that after an individual government makes its declaration, it could withdraw its declaration if there are fewer than five participating states within a specific period of time—for example, two years—just as it could withdraw its declaration once it became clear that another state had deployed or tested a weapon in space.

5. *What would happen in the event of testing or deployment of a space weapon?*

States could withdraw their declarations and/or take action to deploy weapons in space.

6. *How would it become known that a space weapon has been deployed if it is not tested in space, actually used or its use threatened?*

It should be possible to verify the nature of a new orbiting or stationed object in space through a variety of agreed measures that might include pre-launch verification, pre-launch inspection, special verification satellites or verification and warning devices mounted on satellites used primarily for other purposes. Joint discussion of verification among those issuing a declaration would test whether these means would be effective.

7. *Nonetheless, verification is complicated. What would happen if the space-faring states that have issued unilateral statements are unable to agree on a verification system?*

It could be agreed that, if cooperative efforts to develop a specific verification system are not successful within a set period of time—for

example, three years—from the date of a fourth or fifth individual declaration, this situation would be grounds for withdrawing individual declarations.

8. *Why is it urgent that a declaration be issued now?*

The urgency is that the United States missile defence budget contains funds to establish a “test bed” to begin deploying a space-based kinetic kill weapon in 2007–2008. This action will effectively begin the weaponization of space and lead to competitive counteraction.

9. *Why should these statements be individual? Could a group of similar-thinking governments issue a joint statement?*

A joint statement is a possibility. However, it is probable that waiting for a group to assemble and for all to agree to act along identical lines would delay the action since one or more states could always object. A series of individual statements could provide momentum for the entire enterprise and might generate more publicity than a single event. It could also increase the total number of states making declarations. It is not necessary to wait for others, because the individual statements will be at no cost to the issuing country and can be cancelled if others do not cooperate or in the event of adverse developments.