Appendix 2 to Chapter 3

A Discussion of Applicable Space Treaties

Note: This appendix provides a basic discussion of some of the treaties that are applicable to US space planning, beyond the 1967 Outer Space Treaty discussed in the chapter itself. It is meant to provide the non-expert with enough of an understanding of existing international agreements to understand the limitations and potential of current agreements. The reader is also asked to understand that treaties are those agreements that are confirmed by the US Senate. Treaties thus become equal to Federal law and are binding upon individual US citizens. Other agreements bind the US Government to some degree, but not individual US citizens.

Limited Test Ban Treaty (1963)

Over 110 nations, including the United States, former USSR and Great Britain, have signed this treaty. France and China have not signed. This treaty prohibits nuclear explosions in the atmosphere, outer space or underwater, and prohibits parties to the treaty from causing or participating in nuclear weapon explosions in any of these environments. Specifically, the treaty was aimed at limiting the spread of radioactive material from nuclear tests. The treaty review in "Jane's Strategic Weapons Systems" offered the opinion that this treaty "has little intrinsic merit" except the historical footnote that a wider treaty foundered on the issue of on-site inspections, which the Soviets wished to severely constrain.

Rescue and Return of Astronauts and Return of Objects from outer Space (1968)

Over 83 nations, including the United States and former USSR, are parties to this treaty. It requires parties to render emergency aid to the personnel of spacecraft landing in their territory and to render assistance. In the only known instance of an emergency landing in another country, in 1975, after a Soyuz launch abort dropped two

Soviet cosmonauts across the border in Mongolia, the Soviets didn't even bother to invoke the treaty, they just ignored the border and retrieved the crew and the spacecraft.

Astronauts arriving at another nation's territory (including off-Earth manned facilities) are to be promptly returned to their home nation. Astronauts/cosmonauts cannot be kept as hostages nor imprisoned for territorial border violations. Interestingly, this requirement for automatic return to the country of origin excludes the wishes of the astronauts themselves—no appeals for political asylum on space flight!

The agreement also called on all signatories to recover and return space objects and component parts, a requirement that overlooked the country of origin's interest in denying ownership so as to avoid admitting liability for damages. In practice, most fallen space objects are retained by the finders and are not returned to the state of origin, since there is no enforcement mechanism for this legal requirement.

ABM Treaty between the United States and the Union of Soviet Socialist Republics (USSR) (1972)

This treaty covers ABM systems designed to counter strategic ballistic missiles. It limits ABM systems and requires that parties will not use deliberate concealment to impede verification (there are other potential techniques to impede verification not addressed by the treaty). There is to be no development, testing, or deployment of ABM systems or components that are sea-based, air-based, space-based, or mobile land-based. The parties agree not to give missiles, launchers or radars, other than ABM missiles, launchers or radars, the capabilities to counter strategic ballistic missiles and not to test them "in an ABM mode."

In terms of space power, the ABM Treaty of 1972 forbids the development, testing or deployment of space-based ABM systems. By general agreement, although not according to any definitive interpretation, the ABM Treaty is considered to ban the deployment of any components of an ABM system on the Moon as well.

However, the treaty does contain several loopholes that have resulted from the development of new technologies over the quarter century since the treaty was signed. The ABM Treaty permits space-

based sensors that can track ICBM warheads so long as such sensors cannot communicate directly with an interceptor and cannot by themselves provide all the data required for a successful intercept.

However, as noted in "Jane's Strategic Weapons Systems" (1994), "the ABM treaty has proved more resilient to interpretative attack because of the way in which it was written. Rather than specify everything which is to be allowed, as is generally the style of the arms limitation treaties, it bans everything and then lists exceptions; the effect of this is that new approaches and technologies are automatically excluded."

Liability for Damage Caused by Space Objects (1972)

Over 76 nations, including the United States and the former USSR, are parties to this treaty. It specifies that the launching state is liable for compensation for damages caused by its space objects, on the ground or in outer space, based on showing of fault. The damages are to be based "on principles of international law, justice, and equity" to restore damaged material or locations to their original position or condition. The claims are to be presented through diplomatic channels.

When the Soviet Union's Kosmos-954 nuclear-powered satellite fell over western Canada in 1978, the Canadians billed the USSR for the cleanup expenses. Pursuant to the treaty, Moscow did in fact pay Canada about half of its claim.

Registration of Objects Launched into Outer Space (1975)

Over 39 nations, including the United States and the former USSR, are parties to this treaty. Each launching state must establish and maintain its own system of registry of space objects. Launches must be reported to the United Nations which maintains a master registry and provides free and open access to all inquirers. This applies to component parts of space objects and launch vehicles.

The USSR with one exception (a booster test that unexpectedly placed some upper stage debris in low orbit) has scrupulously abided by the treaty in terms of providing operational orbital elements. The United States has regularly evaded treaty intent by providing only

initial orbital elements, not final operational data, for active military missions, with frequent errors and occasional omissions. Both the USSR and the United States provide meaningless or even misleading descriptions of the purpose of many satellites. Without any enforcement provisions, the treaty depends entirely on the voluntary compliance of registering states, and everyone seems to have gotten used to the charade of misleading information in defiance of the treaty's original intent.

Bogota Declaration (1976)

Eight countries through which the geographic equator passes signed the Bogota Declaration: Brazil, Colombia, Ecuador, Indonesia, Congo, Kenya, Uganda, and Zaire. Their representatives met and signed a declaration which stated that geostationary orbit is a scarce natural asset that is not part of outer space. Instead, they declared that the geostationary orbit arc above each country is the sovereign territory of the country. The declaration also stated that such sovereign rights are in the best interest of all countries and all mankind, not just the most developed countries. It finishes by stating that the geostationary arc above the oceans are part of the common heritage of all mankind and should be exploited to the benefit of all mankind. Although the arguments made in the Bogota Declaration have been discussed almost annually for the last twenty years in the United Nations' "Committee on the Peaceful Uses of Outer Space," they have not received any legal standing. Nevertheless, since the declaration was signed, additional equatorial countries have made claims of ownership to their own overhead geostationary arcs.

Moon Treaty (1979)

This controversial treaty never went into effect but illustrates many of the major objections the developed countries have for the "common heritage" argument. Crafted under the auspices of the United Nations' "Committee on the Peaceful Uses of Outer Space," it states that the Moon and its natural resources are the "common heritage"—in essence, the legal property—of all mankind (with a United Nations department presumably collecting fees for use). It proposed the

establishment of an international regime to ensure "equitable sharing" (not otherwise defined) and management of the lunar resources. Although initially the Carter Administration was inclined to accept the treaty, campaigns by private space enthusiasts energized a political alliance which prevented signature by the United States. The Soviet Union also declined to sign the treaty, and although seven non-spacefaring nations did sign it, it never went into force. The fatal objections centered on the image of a United Nations department assessing the value of a lunar resource such as water ice, and then levying a usage tax on spacefaring nations which utilize the resource.

Despite the failure of the Moon Treaty, it can be predicted that when industrial exploitation of lunar resources is about to become practical, the issue will be raised again. A powerful precedent will be the "Law of the Sea Convention," which entered into force in 1994. The Law of the Sea Convention was not signed by the United States although it has US acquiescence—the treaty is supported by many Senators and Representatives, the US Navy, US commercial interests, and oceanographic researchers. It establishes an "International Seabed Authority" to govern the commercial exploitation of seafloor resources. Earlier US objections to the "Law of the Sea" centered on its deleterious effect on property rights, but several provisions were modified, and there were also shifts in US interests, so a formal US signature is widely expected. Since analogous US interests regarding lunar resources are still unclear, it is premature to create any binding international authority over such activities—but the time will come when the issue returns.