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## Revolution and Evolution in the Law of Outer Space

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# Revolution and Evolution in the Law of Outer Space

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### I. INTRODUCTION

The Law of Outer Space has been written in bold strokes and then interpreted and decided upon in numerous forums and locals. Initially, it developed in a time of revolutionary technological changes; then, as these innovations became more evolutionary, the laws became more discrete and focused. The reason for new treaty law was at first critical—the fear of war and the crucial need for international cooperation and détente during the Cold War. The response was timely and universal. Then, over time, the decision-making arenas became global and were not entirely restricted to traditional state-to-state negotiations. In short, revolutionary times challenged mankind to produce revolutionary advances in the law. Now, we live in quieter times, with most worrying being due to the threat of an arms race in space (which may or may not require new treaty law depending on one's vantage point), and consequently, much law evolves incrementally by less formal arrangements.

### II. COLD WAR TREATIES

Sputnik seemed to promise much in the way of international cooperation as it was launched as part of the International Geophysical Year ("IGY"), yet it was sent into orbit by an ICBM—the SS6, and this produced great fear in the West. On the one hand, there was the immediate fear of actual nuclear war, and on the other hand, there was the chronic fear that the Soviet system was ahead of the United States

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scientifically and economically. Thus, we see elements of conflict, competition, and cooperation in the relations between the two superpowers. In terms of game theory, we may ask the question, "Were the two superpowers in a zero-sum conflict in which one side would win and the other lose, or were they in a non-zero sum game in which, through learning, cooperation and peaceful competition might evolve?"

Looking backward, we can say that the Cold War turned out to be a non-zero sum game leading to more benefits, peaceful uses, and spinoffs for the United States, Russia, and all of mankind. (Of course, vis-à-vis the USSR—it lost as an empire.) The 1967 Outer Space Treaty,<sup>1</sup> negotiated under the United Nations' auspices, prohibited sovereignty in outer space, thus removing one of the classic causes of war—the search for new territory. It mandated that the exploration and use of outer space would be for the benefit and in the interests of all countries and be the province of all mankind. Further, it was an arms control treaty as well, for it banned State parties from placing weapons of mass destruction ("WMDs") in orbit. For these and other reasons, the Treaty was a revolutionary advance in the law and reflected the spirit of détente, which existed at intervals during the Cold War period of 1945/47 to 1989/91.

The Outer Space Treaty also had articles which pointed the way forward to the four other United Nations/COPUOS negotiated treaties—the Rescue and Return Agreement of 1968,<sup>2</sup> the Liability Convention of 1972,<sup>3</sup> the Registration Convention of 1976,<sup>4</sup> and the Moon Agreement of 1979.<sup>5</sup> National legislation and subsequent UN Resolutions all derive from the initial burst of energy and purpose in this formative period with the exception of early ventures by the space powers such as NASA legislation in the United States in 1958<sup>6</sup> and

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1. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, *done* Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 (entered into force Oct. 10, 1967).
  2. Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, *done* Apr. 22, 1968, 19 U.S.T. 7570, 672 U.N.T.S. 119 (entered into force Dec. 3, 1968).
  3. Convention on International Liability for Damage Caused by Space Objects, *done* Mar. 29, 1972, 24 U.S.T. 2389, 961 U.N.T.S. 187 (entered into force Oct. 9, 1973).
  4. Convention on Registration of Objects Launched into Outer Space, *opened for signature* Jan. 14, 1975, 28 U.S.T. 695, 1023 U.N.T.S. 15 (entered into force Sept. 15, 1976).
  5. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *opened for signature* Dec. 18, 1979, 18 I.L.M. 1434, 1363 U.N.T.S. 3. This is usually called the "Moon Agreement of 1979," but it did not enter into force until July 11, 1984. The United States is not a party to this agreement.
  6. National Aeronautics and Space Act of 1958, 42 U.S.C. § 2451 (2000). Some of the language in this statute suggests the language in the 1967 Outer Space Treaty. For instance, Section 2451(a) reads, "The Congress declares that it is the

the formation of Comsat in 1962<sup>7</sup> and Intelsat in 1964.<sup>8</sup> National legislation followed much later in other countries ranging from Australia to the United Kingdom. In general, we may say that the era of treaty formation for the law of outer space is over, and it has been replaced by more specific and incremental steps including memoranda of understandings, Framework Agreements, voluntary regimes, codes of conduct, and case law decisions.

### III. THE EVOLUTION OF SPACE LAW

The five major space treaties are not the only treaties pertaining to the development of space law. Other related instruments include the United Nations Charter, the Convention of the International Telecommunications Union, the 1963 Partial Test Ban Treaty, and the now out of force bilateral Anti-Ballistic Missile Treaty (part of SALT I). In addition, there are other treaties, which, by analogy, can be used to interpret the space treaties. For instance, the UN Convention on the Law of the Sea can be used to elaborate on the concepts of freedom of access and use found in the space treaties and on the meaning of the concept "the Common Heritage of Mankind" found in both UNCLOS and the Moon Agreement.

Less global treaties are the regional conventions setting up different space agencies such as the Convention of the European Space Agency in 1975, Arabsat in 1976, and EUMETSAT in 1983.

Beyond multilateral, bilateral, global, and regional treaties are the United Nations' Principles relating to more specific concerns such as the Principles Relating to Remote Sensing of the Earth from Space and the Principles Relevant to the Use of Nuclear Power Sources in Outer Space. Relating to Telecom law, we should also note the Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting.<sup>9</sup> Also to be emphasized

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policy of the United States that activities in space should be devoted to peaceful purposes for the benefit of mankind."

7. Communications Satellite Act of 1962, 47 U.S.C. § 701 (2000). While Comsat was established by Congress, Comsat as a company was incorporated in the District of Columbia. Due to mergers and acquisitions, it no longer exists as an independent corporation.
8. The Interim Arrangements of the International Telecommunications Satellite Consortium were established in 1964 and the Definitive Arrangements of the International Telecommunications Satellite Organization in 1973. For the negotiating history, see JONATHAN F. GALLOWAY, *THE POLITICS AND TECHNOLOGY OF SATELLITE COMMUNICATIONS* 137-69 (1972).
9. On the DBS principles, see Jonathan F. Galloway, *United States Policy for Direct Broadcast Satellites*, in *PROCEEDINGS OF THE TWENTY-FIFTY COLLOQUIUM ON THE LAW OF OUTER SPACE* 313-15 (1983).

are the annual UN General Assembly Resolutions on Preventing an Arms Race in Outer Space ("PAROS").<sup>10</sup>

There are also voluntary regimes such as the 1987 Missile Technology Control Regime, and there are also voluntary codes of conduct such as the one on space debris produced by the Inter-Agency Space Debris Coordination Committee ("IADC")—now also supported by the Committee on the Peaceful Uses of Outer Space ("COPUOS").<sup>11</sup> The best example of a framework agreement is the 2007 one on Global Exploration Strategy between the space agencies of thirteen countries and the European Space Agency.<sup>12</sup> Additionally, work has begun on a comprehensive Space Traffic Management ("STM") regime as well.<sup>13</sup>

Less formal still are legal agreements related to specific space projects such as the International Space Station ("ISS"), memorandum of understandings relating to implementing specific programs, and case law which will fill out the lacunae of possible interpretations involving such issues as liability and intellectual property rights.

As with the U.S. Constitution, one may say that most of the basic principles are still a tribute to the founding fathers and mothers, but one must have courts and a Supreme Court to bring finality to different interpretations of these principles in individual cases. Of course, at the global level, the International Court of Justice does not have the same powers as a high national court, so the international community must rely on agreements which are in everyone's self-interest, and thus, they do not depend upon enforcement for their legal weight. It can be confidently stated that law does not need to be enforced by force to be upheld in the everyday commerce of nations. A prime example of law as a mutually self-interested coordination of and reciprocity between nations is the ITU and its rules vis-à-vis frequency allocations and orbital slot notifications. Of course, there are often competing interests involving the spectrum and orbital slots, but they are not zero-sum conflictual issues.

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10. See Prevention of an Arms Race in Outer Space, G.A. Res. 62/20, U.N. Doc. A/RES/62/20 (Dec. 5, 2007). The resolution passed 178-1-1 with the United States voting against.
  11. For an excellent analysis of less formal arrangements, see Steven A. Mirmina, *Reducing Proliferation of Orbital Debris: Alternatives to a Legally Binding Instrument*, 99 AM. J. INT'L L. 649 (2005).
  12. The Global Exploration Strategy: The Framework for Coordination (2007), [http://www.nasa.gov/pdf/178109main\\_ges\\_framework.pdf](http://www.nasa.gov/pdf/178109main_ges_framework.pdf).
  13. Corinne Contant Jorgensen et al., *Space Traffic Management—IAA Cosmic Study*, in PROCEEDINGS OF THE FORTY-NINTH COLLOQUIUM ON THE LAW OF OUTER SPACE 580–86 (2007).

#### IV. CHALLENGES TO THE FUTURE DEVELOPMENT OF SPACE LAW

Some observers think that policy pronouncements are more important than law, especially if parts of them are secret. For instance, the recent 2006 U.S. space policy is partially classified and has a disturbing ambivalence concerning the legitimacy of space law and its further development. The Bush Administration opposes establishing new regimes that prohibit or limit U.S. use of or access to space. On the other hand, the Bush Administration is committed to existing treaty law. There is a somewhat illogical approach to future law as compared to present law. Many aspects of current law cannot be enforced. For instance, how do we know whether there are any WMDs in orbit, and what would we do about it if we did know? Yet, we cannot establish future arms control regimes because they cannot be enforced. In the philosophy of law, this is called the legal positivist approach. It ignores the point made above, which, to repeat in the words of Professor Louis Henkin, "The fact is that nations do generally observe law, and pursuant to law, they do what they would not have done were there no law."<sup>14</sup> One should count on states to obey international law if it is in their mutual interest. Thus, the evolution of most of space law since 1957 does indeed resemble the iterations of a non-zero sum game.

#### V. CONCLUSIONS

Let me return to the theme of technological change and future evolutions or revolutions in space law. Some commentators argue that we must press on with technical innovation whenever possible. Technological change becomes a force of history which we cannot stop. In this case, we have made a Faustian bargain not with the devil but with technology. However, such a view ignores the rule of law and the force of law in history. Without law, there would be little technological change because the corporations which usher it in would not be incorporated, would not have taken the chance at innovation without assurances of intellectual property rights, and would not be able to seek liability protection. In short, the force of technological change must be tempered by the rule of law. This, in a non-zero sum world, can promise that changes are aligned with human values that promote peaceful purposes and peaceful benefits during the Space Age.

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14. LOUIS HENKIN, *HOW NATIONS BEHAVE: LAW AND FOREIGN POLICY* 329 (2d ed. 1979).