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The Commercial Space Launch Act: America's Response to the Moon Treaty?

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Abstract

This note argues that the United States policy, as exhibited by the Launch Act, and the intent of the Moon Treaty are not mutually exclusive. Part I of this Note examines the history of the Moon Treaty. Part II examines the current United States policy regarding private enterprise in outer space in light of the passage of the Launch Act. Part III then argues that private enterprise may legally operate in space under the Moon Treaty and the United States policy of encouraging private space development that would not be adversely affected if the United States signs the Moon Treaty. This note concludes that the intent of the Launch Act and the intent of the Moon Treaty are far from being contradictory, both promote the development of space resources and provide a stable, orderly framework to accomplish that goal.

THE COMMERCIAL SPACE LAUNCH ACT: AMERICA'S RESPONSE TO THE MOON TREATY?

INTRODUCTION

Under United Nations sponsorship in 1984, the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Treaty) entered into force.¹ This treaty provides the most comprehensive framework ever designed for the development of space resources. The accessibility of the moon, coupled with current technology, present the moon's natural resources as the first logical target of development.² One major obstacle preventing realization of the Treaty's purpose is that the United States, the major actor in space activities, has refused to sign the Treaty.³ Detractors of the Moon Treaty within the United States argue that the Treaty would bar the private sector from operating profit-oriented enterprises in outer space.⁴ Moreover, the detractors note that in the United States, the private sector already enjoys the right to launch and operate space vehicles under the Commercial Space Launch Act of 1984 (Launch Act).⁵ Thus, there is an argument that current United States policy, as embodied in the Launch Act, precludes the United States from signing the Moon Treaty.

This Note argues that the United States policy, as exhib-

1. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *opened for signature* Dec. 5, 1979, 18 I.L.M. 1434 [hereinafter Moon Treaty].

2. Soil samples recovered from the landing sites of Apollo missions 14, 16, and 17 contained in amounts greater than 1 percent: oxygen, silicon, aluminum, calcium, iron, and magnesium. Samples which contained amounts of 0.1 to 1 percent were: chromium, manganese, sodium, potassium, sulfur, and phosphorous. There were also trace amounts of hydrogen, helium, carbon, and nitrogen present in the soil. The proposed mining operations upon the moon require no new technological breakthroughs. Simple adaptation of conventional construction equipment such as scrapers and front-end loaders could be used to collect the loose lunar topsoil. This equipment could be operated by remote control. SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSPORTATION, 96TH CONG., 2D SESS., AGREEMENT GOVERNING THE ACTIVITIES OF STATES ON THE MOON AND OTHER CELESTIAL BODIES (Comm. Print 1980) 281 [hereinafter SENATE REPORT].

3. The other major space operator, the Soviet Union, has also refused to sign the Treaty.

4. See SENATE REPORT, *supra* note 2, at 465-67.

5. Commercial Space Launch Act, 49 U.S.C. app. §§ 2601-2623 (1982 & Supp. III 1985) [hereinafter Launch Act].

ited by the Launch Act, and the intent of the Moon Treaty are not mutually exclusive. Part I of this Note examines the history of the Moon Treaty, particularly the controversy surrounding the use of the "common heritage of mankind" provision and the plan for an international regime to regulate space resources. Part II examines the current United States policy regarding private enterprise in outer space in light of the passage of the Launch Act. Part III then argues that private enterprise may legally operate in space under the Moon Treaty and the United States policy of encouraging private space development would not be adversely affected if the United States signs the Moon Treaty. This Note concludes that the intent of the Launch Act and the intent of the Moon Treaty are far from being contradictory, both promote the development of space resources and provide a stable, orderly framework to accomplish that goal.

I. *THE MOON TREATY*

A. *Pre-Moon Treaty Space Law*

When the United States successfully landed a man on the moon on July 20, 1969,⁶ two international agreements existed concerning outer space, the United Nations Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies⁷ (Space Treaty) and the United Nations Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space⁸ (Rescue Treaty). The Space Treaty, signed in 1967, is a general agreement that outlined a plan for the peaceful exploration and development of space.⁹ This treaty provided the foundation upon which all subsequent international space agreements have been constructed. The Space Treaty also established the

6. *TIME*, July 25, 1969, at 10.

7. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205 [hereinafter Space Treaty].

8. Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, *opened for signature* Apr. 22, 1968, 19 U.S.T. 7570, T.I.A.S. No. 6599, 672 U.N.T.S. 119 [hereinafter Rescue Treaty].

9. See Space Treaty, *supra* note 7, preamble, 18 U.S.T. at 2411, T.I.A.S. No. 6347 at 2, 610 U.N.T.S. at 207.

principle that international law, rather than the law of any single nation, would govern man's activities in space.¹⁰

The Rescue Treaty, signed in 1968, was intended "to develop and give further concrete expression"¹¹ to those sections of the Space Treaty dealing with the obligation to aid spacefarers and to return them and their equipment to their countries of origin.¹² Spacefarers are considered representatives of their respective governments under the Space Treaty and as such must be treated by the international community as any other national representative.¹³ In 1973 the United Nations Convention on International Liability for Damage Caused by Space Objects¹⁴ (Liability Treaty) expanded upon the Space Treaty's provisions concerning international tort liability.¹⁵ The Liability Treaty is a detailed document placing responsibility upon a nation for any space activities conducted under its flag, whether of a governmental or private nature.¹⁶ Finally, in 1975 the United Nations Convention on Registration of Objects Launched into Outer Space¹⁷ (Registration Treaty) provided that all objects launched into space be registered with the Secretary-General of the United Nations.¹⁸ The

10. "States Parties to the Treaty shall carry on activities in the exploration of outer space . . . in accordance with international law." *Id.* art. III., 18 U.S.T. at 2413, T.I.A.S. No. 6347 at 6, 610 U.N.T.S. at 208.

11. Rescue Treaty, *supra* note 8, preamble, 19 U.S.T. at 7572, T.I.A.S. No. 6599 at 2, 672 U.N.T.S. at 121.

12. Space Treaty, *supra* note 7, art. V, 18 U.S.T. at 2414, T.I.A.S. No. 6347 at 5, 610 U.S.T. at 208-09.

13. *See id.*

14. Convention on International Liability for Damage Caused by Space Objects, Mar. 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762 [hereinafter Liability Treaty].

15. Space Treaty, *supra* note 7, art. VII, 18 U.S.T. at 2415, T.I.A.S. No. 6347 at 6, 610 U.N.T.S. at 209:

Each State Party to the Treaty that launches or procures the launching of an object into outer space, including the moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air space or in outer space, including the moon and other celestial bodies.

Id.

16. *See generally* Liability Treaty, *supra* note 14.

17. Convention on Registration of Objects Launched into Outer Space, *opened for signature* Jan. 14, 1975, 28 U.S.T. 695, T.I.A.S. No. 8480 [hereinafter Registration Treaty].

18. *Id.* art. II, para. 1, 28 U.S.T. at 698, T.I.A.S. No. 8480 at 4.

registration of space objects in a central place aids in the implementation of the general provisions of the Space Treaty,¹⁹ the proper return of astronauts and equipment under the Rescue Treaty,²⁰ and the determination of international liability under the Liability Treaty.²¹ Thus, space law prior to the Moon Treaty consisted of the foundation Space Treaty and a series of treaties expanding upon the specific provisions of the Space Treaty.

B. *History Of The Moon Treaty*

The Space Treaty did include "the moon and other celestial bodies"²² within its purview. However, the physical presence of man on the moon prompted the international community to seek a more specific agreement on the use of lunar resources to supplement the highly theoretical Space Treaty.²³

Oddly, Argentina, a developing nation without space capabilities, took the initiative within the United Nations on the issue. Argentina submitted a draft treaty in 1970 known as the Draft Agreement on the Activities in the Use of Natural Resources of the Moon and Other Celestial Bodies.²⁴ It was this proposed agreement that first attempted to apply the so-called "common heritage of mankind" principle to the development of space resources.²⁵ In 1971, the Soviet Union submitted its own draft²⁶ of a moon treaty to the United Nations Committee

19. See generally Space Treaty, *supra* note 7. In order to carry out the proposed international cooperative effort in space it would be necessary that a central record be kept of all on-going space operations.

20. See *supra* notes 11-13 and accompanying text.

21. See *supra* notes 14-16 and accompanying text.

22. Space Treaty, *supra* note 7, art. I, 18 U.S.T. at 2412, T.I.A.S. No. 6347 at 3, 610 U.N.T.S. at 207. Celestial bodies include all planets, moons, and asteroids within the Solar System, or the natural resources of any such body. Extraterrestrial material reaching the earth by natural means are specifically excluded. Cheng, *The Moon Treaty: Agreement Governing the Activities of States on the Moon and Other Celestial Bodies within the Solar System other than the Earth, December 18, 1979*, 33 *CURRENT LEGAL PROBS.* 213, 218-19 (1980).

23. See *supra* notes 7-19 and accompanying text.

24. U.N. Doc. A/AC.105/L.71 and Corr. 1 (1970).

25. *Id.*

26. U.N. Doc. A/8391 and Corr. 1 and annex. "In contrast to the Argentine draft, the Soviet proposal (a) applied only to the moon but not to other celestial bodies, and (b) did not deal with the problems of resources." Cheng, *supra* note 22, at 215.

on the Peaceful Uses of Outer Space.²⁷ After seven years of debate,²⁸ the Moon Treaty was finally submitted to the General Assembly²⁹ and formally adopted by a unanimous vote on December 5, 1979.

The Moon Treaty embodies three basic concepts. First, the Moon Treaty provides that the moon is not subject to any territorial claim by any nation or private body.³⁰ Second, the Moon Treaty seeks to further space exploration by providing for free and open access to the moon by all nations.³¹ Third, the Moon Treaty provides for the establishment of an organizational framework for the continuing development of space resources.³² This latter concept has been the leading subject of debate surrounding the Moon Treaty. Exactly who may develop natural resources found in space, or how they may be developed, is not clear in the document. As a result, each nation has its own interpretation of what its rights and duties are under the Treaty.³³

27. The United Nations Committee on the Peaceful Uses of Outer Space was established on December 13, 1958. While originally composed of 24 members, the number grew in proportion to the interest in space operations. There are two subcommittees, the Legal Subcommittee and the Scientific and Technical Subcommittee. Each Subcommittee prepares a report for the parent Committee. The Committee then issues a report for the General Assembly's Special Political Committee which then drafts a resolution for submission to the General Assembly. Hosenball, *The United Nations Committee on the Peaceful Uses of Outer Space: Past Accomplishments and Future Challenges*, 7 J. SPACE L. 95, 95-96 (1979).

28. The Soviet Union was the major opponent of the developing nations during negotiations of the Moon Treaty and was primarily responsible for the seven year delay between the submission of the first draft treaty and the final document. SENATE REPORT, *supra* note 2, at 333.

29. N.Y. Times, July 4, 1979, at A4, col. 1.

30. Moon Treaty, *supra* note 1, art. 11, para. 2, 18 I.L.M. at 1438.

31. *Id.* art. 6, para. 1, 18 I.L.M. at 1436. "There shall be freedom of scientific investigation on the moon by all States Parties without discrimination of any kind, on the basis of equality and in accordance with international law." *Id.* See also *id.* art. 8, 18 I.L.M. at 1437.

32. *Id.* art. 11, 18 I.L.M. at 1438. Article 11 states in paragraph 1 that "[t]he moon and its natural resources are the common heritage of mankind." Paragraph 3 provides that natural resources "in place" are to be free from appropriation by states or non-governmental organizations. Paragraph 5 requires parties to the treaty to establish an international regime to oversee the exploitation of natural resources in space.

33. There are primarily two distinct positions on the Moon Treaty: that of the nations possessing space development capabilities, and that of the developing nations who do not possess space development technology. See *infra* notes 45-55 and accompanying text.

A major problem arises if each nation would file an "understanding" of its inter-

Significantly, the Moon Treaty could enter into force even if the two major space powers, the United States and the Soviet Union, did not sign it.³⁴ The Moon Treaty officially entered into force on July 11, 1984, thirty days after the requisite five nations submitted their ratifications to the Secretary-General of the United Nations.³⁵ The two major space powers, the United States and the Soviet Union, still have not signed the agreement.³⁶ This is mainly due to both nations' concern over two controversial provisions of the Treaty, namely the common heritage of mankind principle and the international regime proposed by the Treaty that would oversee space development operations.³⁷

1. The Common Heritage of Mankind Principle

The Moon Treaty provides that "[t]he moon and its natural resources are the common heritage of mankind."³⁸ The common heritage of mankind principle concerns the conservation of natural resources for present and future generations.³⁹ In particular, it seeks the equitable allocation of such resources, concentrating on the needs of the developing nations.⁴⁰ Originally, the common heritage of mankind principle applied only to earth resources. In recent years, however, the developing nations have sought to extend the concept to space

pretation upon signing the treaty; a nation would not be bound by any interpretation of the Moon Treaty contrary to its own. "There is a risk, however, that all states might ratify the Treaty with their own understandings. In that event, the general agreement and its negotiated history would lose all meaning—it would be as if no Treaty existed at all." Comment, *The International Law of Outer Space and its Effect on Commercial Space Activity*, 11 *PEPPERDINE L. REV.* 521, 552 (1984).

34. See Moon Treaty, *supra* note 1, art. 19, 18 *I.L.M.* at 1441. The only requirement to put the treaty into effect was the ratification of five nations. Although the Space Treaty required the ratification of only five nations before its implementation, three of those five nations had to be the United States, the Soviet Union, and Great Britain. Space Treaty, *supra* note 7, art. XIV, para. 1-2, 18 *U.S.T.* at 2419, *T.I.A.S.* No. 6347 at 10, 610 *U.N.T.S.* at 211.

35. Christol, *The Moon Treaty Enters Into Force*, 79 *AM. J. INT'L L.* 163 (1985).

36. *Id.*

37. See *infra* notes 38-62 and accompanying text.

38. Moon Treaty, *supra* note 1, art. 11, para. 1, 18 *I.L.M.* at 1438.

39. Christol, *The Common Heritage of Mankind Provision in the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, 14 *INT'L LAW.* 429, 452 (1980).

40. *Id.*

resources.⁴¹ The Space Treaty does provide that the moon be free of any territorial claims.⁴² The Moon Treaty goes further, however, stating not only that the surface or subsurface of the moon be free of property claims by states or private parties,⁴³ but also providing for the nonappropriation of all "natural resources in place."⁴⁴

Interpretation of the common heritage language in the Moon Treaty is crucial to the fate of future space development. The developing nations, which do not possess space technology, argue that the principle should be interpreted as it has been in the Law of the Sea Treaty.⁴⁵ The Law of the Sea Treaty concentrates on the needs of the developing nations, especially those which produce the minerals which may be found on the seabed.⁴⁶ In order to ensure that developing nations received an equitable share of the benefits of sea exploitation, the General Assembly voted for a moratorium upon all sea mining operations until an international regime could be established to regulate the operations.⁴⁷ A major concern of the developing nations is that in certain cases their economic strength rests upon their ability to export a certain mineral.⁴⁸ If such minerals are suddenly available from another source, such as the moon, their international bargaining power would diminish along with their economic strength. A further concern of the developing nations is the transfer of the technologies developed through space activities.⁴⁹ Many breakthroughs in space technology are of practical importance to in-

41. *Id.* at 453.

42. Space Treaty, *supra* note 7, art. II, 18 U.S.T. at 2413, T.I.A.S. No. 6347 at 4, 610 U.N.T.S. at 208. "Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." *Id.*

43. "Neither the surface nor the subsurface of the moon, nor any part thereof or natural resources in place, shall become property of any State, international intergovernmental or non-governmental organization, national organization or non-governmental entity or of any natural person." Moon Treaty, *supra* note 1, art. 11, para. 3, 18 I.L.M. at 1438.

44. *Id.*

45. Law of the Sea Treaty, *opened for signature* Dec. 10, 1982, 21 I.L.M. 1245.

46. See Note, *Extraterrestrial Law on the Final Frontier: A Regime to Govern the Development of Celestial Body Resources*, 71 GEO. L.J. 1427, 1438-47 (1973); see also SENATE REPORT, *supra* note 2, at 306.

47. SENATE REPORT, *supra* note 2, at 299.

48. See generally Note, *supra* note 46, at 1438-47.

49. See *id.* at 1438-39.

dustries on earth and the developing nations would wish to share these benefits. The developing nations understandably argue that if the identical language is contained in both the Law of the Sea Treaty and the Moon Treaty, they should be interpreted in the same manner.⁵⁰

The Soviet Union and the United States both oppose the developing nations' interpretation of the common heritage of mankind principle. The Soviet Union has argued that nonappropriation of resources does not mean a complete ban upon the use of space resources.⁵¹ Furthermore, the Soviet Union argues that the term "common heritage of mankind" lacks a historical legal definition and therefore would be impossible to enforce.⁵² However, while the Soviet Union has taken the view that space should be open to international use, it has not supported the idea that space should be open to unlimited commercial use.⁵³ The United States, on the other hand, has placed special emphasis upon the "natural resources in place" language of the Moon Treaty concerning nonappropriation.⁵⁴ The United States asserts that once the natural resource is removed from the moon it becomes subject to appropriation, whether by a state or private body carrying out the operation.⁵⁵ The common heritage principle remains a key determinant in the future of the Moon Treaty. It appears that if the space powers are not guaranteed a substantial share of the benefits of their space operations, they will not sign the treaty.

2. The Proposed International Regime

The Moon Treaty further provides for an international regime to be established once the exploitation of space resources becomes a reality.⁵⁶ This regime would consist of an international body which would oversee the development and man-

50. See Dula, *Free Enterprise and the Moon Treaty*, 2 *HOUS. INT'L L.J.* 3, 8-9 (1979).

51. The Soviet Union argues "that nonappropriation does not preclude the use of natural resources found in space, they draw an analogy with the compatibility of nonappropriation of the high seas with the freedom to use its resources." Jaksetic, *The Peaceful Uses of Outer Space: Soviet Views*, 28 *AM. U.L. REV.* 483, 503 (1979).

52. *Id.* at 504.

53. See *id.* at 505.

54. Christol, *supra* note 39, at 461-62.

55. See *id.*

56. Moon Treaty, *supra* note 1, art. 11, para. 5, 18 *I.L.M.* at 1438.

agement of the natural resources of the moon.⁵⁷ The regime would regulate operations directed toward the recovery of natural resources⁵⁸ from space and address the concerns of the developing nations when determining the distribution of the benefits of these operations.⁵⁹ The proposed regime, like the common heritage of mankind principle, has alienated the United States and the Soviet Union, further distancing them from signing the Moon Treaty. Nations capable of space operations fear that the regime may be organized on a one nation, one vote scheme.⁶⁰ Both the United States and the Soviet Union oppose any regime that would be controlled by the numerically superior developing nations which do not possess space technology.⁶¹ The potential inequities of the proposed regime would have to be eliminated before either nation would sign the Treaty.⁶²

Nevertheless, the Moon Treaty addresses important problems facing the future development of space resources, and its proposals should not be lightly discarded. It is likely, moreover, that once the United States and the Soviet Union actually engage in space resource recovery operations, they will need to look to some document for guidance, and that guidance can be found in the Moon Treaty.

57. The main purposes of the international regime to be established shall include:

(a) The orderly and safe development of the natural resources of the moon;

(b) The rational management of those resources;

(c) The expansion of opportunities in the use of those resources;

(d) An equitable sharing by all States Parties in the benefits derived from those resources, whereby the interests and needs of the developing countries, as well as the efforts of those countries which have contributed either directly or indirectly to the exploration of the moon, shall be given special consideration.

Id. art. 11, para. 7, 18 I.L.M. at 1438.

58. *Id.* art. 11, para. 7(a).

59. *Id.* art. 11, para. 7(d).

60. See Note, *supra* note 46, at 1451-52.

61. See *id.*; see also SENATE REPORT, *supra* note 2, at 333.

62. "It has been pointed out that these stated purposes are so vague as to make them fertile ground for the imposition of Third World controls, limitations, extractions of taxation, demands for technology transfer, and special rights or privileges because they are developing countries." SENATE REPORT, *supra* note 2 at 338.

II. UNITED STATES POLICY ON SPACE DEVELOPMENT

The United States has yet to decide whether or not to sign the Moon Treaty.⁶³ The leading cause of concern within the private sector is the effect the Moon Treaty will have upon private enterprise in space.⁶⁴ Despite its hesitation in joining an international scheme of space development, the United States has acted consistently and decisively in formulating its domestic policy.⁶⁵ The United States has wholeheartedly placed its support behind the private development of space, first through government licensing,⁶⁶ then through presidential initiative,⁶⁷ and most recently through congressional legislation.⁶⁸

A. Government Licensing Of Private Space Operators

In 1982, the United States government received the first request by a private company for clearance to launch a commercial space vehicle.⁶⁹ The government, however, had no bureaucratic mechanism in place to deal with such a request.⁷⁰

63. See *infra* note 102 and accompanying text.

64. See SENATE REPORT, *supra* note 2, at 465. See generally Comment, *Americans and the Moon Treaty*, 46 J. AIR L. & COM. 729, 749-59 (1981).

65. The United States space effort has traditionally been solely the province of the National Aeronautics and Space Administration (NASA) which was created under the National Aeronautics and Space Act of 1958, 42 U.S.C. §§ 2451-84. The launch of the first Soviet sputnik gave Congress the impetus to expedite the United States space program. NASA was created in order to centralize and formulate the United States space effort in hopes of surpassing the Soviet space effort. 1958 U.S. CODE CONG. & ADMIN. NEWS 3160, 3161-65. However, as technology improved relatively small companies became capable of their own space operations in sharp contrast to the all encompassing government efforts of the past. See generally S. REP. No. 656, 98th Cong., 2d Sess., reprinted in 1984 U.S. CODE CONG. & ADMIN. NEWS 5328, 5334 [hereinafter S. REP. No. 656].

66. See *infra* notes 69-74 and accompanying text.

67. See *infra* notes 75-81 and accompanying text.

68. See *infra* notes 82-101 and accompanying text.

69. The request was made by a Texas corporation, Space Services Incorporated of America (SSI), and involved a demonstration model of its Conestoga I rocket which is intended to be a cost effective launch system for carrying payloads into earth's orbit. Steptoe, *United States Government Licensing of Commercial Space Activities by Private Enterprise*, PROCEEDINGS OF THE TWENTY-SEVENTH COLLOQUIUM ON THE LAW OF OUTER SPACE 191, 192 (1984).

70. It quickly became apparent that several federal agencies either directly or indirectly held jurisdiction over various aspects of the launch request. For example, licenses were necessary from the Federal Communications Commission to gain access to government radio frequencies, the Federal Aviation Administration for clearance through controlled air space, and even a license from the Bureau of Alcohol,

Through an innovative interpretation of existing legislation,⁷¹ the government determined that a rocket and its fuel could be considered munitions, and the launching of such items out of the earth's atmosphere could be considered an export of munitions from the United States.⁷² Therefore, the launch clearance request was placed under the administration of the State Department through the authority of the Arms Export Control Act.⁷³ However, this attempted solution proved to be awkward and time consuming.⁷⁴ The companies requesting clearance were faced with a multitude of administrative procedures that caused undue expense and delay.

B. Executive Order No. 12465

In the 1984 State of the Union Address, President Reagan predicted that space was the next natural area of expansion for the United States private sector.⁷⁵ To further this objective, the President signed Executive Order No. 12465.⁷⁶ This order granted the private sector the right to operate expendable launch vehicles.⁷⁷ The Department of Transportation (DOT) was designated the lead agency in the process of granting launch clearance.⁷⁸ DOT was ordered to streamline the process of obtaining the various licenses necessary for the space launch.⁷⁹ Although DOT became the centralized source of information for the fledgling private space industry, it could do

Tobacco, and Firearms of the Treasury Department for the conveyance of munitions. *Id.* at 193.

71. Arms Export Control Act, 22 U.S.C. § 2778 (1982). *See also* International Traffic in Arms Regulations, 22 C.F.R. §§ 121-30.

72. Steptoe, *supra* note 69, at 193.

73. Arms Export Control Act, 22 U.S.C. § 2778 (1982).

74. *See* Steptoe, *supra* note 69, at 193.

75. 20 WEEKLY COMP. PRESS DOC. 61, Jan. 25, 1984 *reprinted in* I Gorove, United States Space Law, Release 85-1 (July 1985) I.A.4 at 17. "Just as the oceans opened up a new world for clipper ships and Yankee traders, space holds enormous potential for commerce today. . . . Companies interested in putting payloads in space must have ready access to private sector launch services." *Id.*

76. Exec. Order No. 12465, 49 Fed. Reg. 7211 (1984) [hereinafter Exec. Order]. The signing of an executive order is a clear indication of an administration's policy on a subject. However, executive orders do not need congressional approval and therefore may be enforced, or not, as the current administration sees fit.

77. An expendable launch vehicle is a non-reusable launch system capable of placing a payload into standard orbit around the earth. *Id.*

78. Exec. Order, *supra* note 76, § 1.

79. *Id.* § 2.

little more than determine which agencies the applicants should contact for licenses. It was still necessary to gain clearance from a multitude of agencies.⁸⁰

The Executive Order clearly demonstrates the strong commitment of the Reagan Administration to private commercial exploitation of space. However, such commitment may waver with a change in administrations, and executive orders do not give the stability required to encourage long-term private investment in space exploitation. Thus, not long after Executive Order No. 12465 was signed, Congress heeded the private sector's call for federal legislation.⁸¹

C. *The Commercial Space Launch Act*

On October 30, 1984, President Reagan signed the Commercial Space Launch Act into law.⁸² The Act was intended by Congress to create a favorable climate for investment in space operations.⁸³ The expectation was that the congressional action would solidify the United States' position on private space development in the eyes of the United States' private sector.⁸⁴

Under the Launch Act, the Secretary of Transportation would oversee the newly-created Office of Commercial Space Transportation (OCST).⁸⁵ The function of the OCST is to "encourage, facilitate, and promote commercial space launches by the private sector."⁸⁶ The Transportation Secretary is empowered to grant a launch license to any United States citizen⁸⁷ who satisfies OCST's requirements which in-

80. See *supra* note 70 and accompanying text.

81. S. REP. NO. 656, *supra* note 65, at 5328.

82. Launch Act, *supra* note 5.

83. S. Rep. No. 656, *supra* note 65, at 5329.

84. The expectation was that a "congressional mandate, via legislation, would eliminate or reduce the possibility of any arbitrary redirection, restructuring, or abandonment of initiative." *Id.*

85. The OCTS was created to implement Executive Order No. 12465, see *supra* note 76.

86. Launch Act, *supra* note 5, § 2604(a)(1).

87. Under the Launch Act a United States citizen is defined as:

(A) any individual who is a citizen of the United States;

(B) any corporation, partnership, joint venture, association, or other entity organized or existing under the laws of the United States or any State; and

(C) any corporation, partnership, joint venture, association, or other entity which is organized or exists under the laws of a foreign nation, if the

clude two separate procedures. The Mission Review assesses the national security and foreign policy implications of the proposed launch.⁸⁸ This includes the purpose of the launch, the nature of the payload and whether the launch would endanger the territory of the United States or of any other nation.⁸⁹ The Safety Review deals specifically with the nature of the applicant's equipment and launch facilities.⁹⁰ One factor is the determination of whether or not the applicant has obtained the necessary expertise to conduct the launch.⁹¹

In enacting the Launch Act, Congress made clear that it was committed to aiding the private sector in space development.⁹² A major step in this regard is the effort to eliminate administrative delays from the licensing procedure. Congress intended that DOT pare down the paperwork and administrative delays normally associated with the licensing process.⁹³ An applicant must now file directly with the OCST information concerning the features of the launch site, the proposed launch vehicle and the nature of the mission.⁹⁴

The OCST is empowered to investigate all such license requests on its own initiative.⁹⁵ The applicant may at any time request an administrative review from the department of any decision made by the Director of OCST concerning the application or any change in the license status.⁹⁶ Furthermore, such administrative rulings may be subject to judicial review.⁹⁷

Congress recognized that the Launch Act would affect a very small number of firms that are capable of conducting their

controlling interest (as defined by the Secretary in regulations) in such entity is held by an individual or entity described in subparagraph (A) or (B).

Id. § 2603(11).

88. 1985 OCTS ANN. REP. at 29.

89. *Id.*

90. *Id.*

91. *Id.* at 30.

92. See *supra* notes 82-84 and accompanying text.

93. Congress intends "DOT to streamline and facilitate the process of complying with the applicable federal regulations for commercial launch and launch operations licenses . . . [and] expects a reduction in paperwork requirements related to this activity." S. REP. NO. 656, *supra* note 65, at 5333.

94. Office of Commercial Space Transportation, 51 Fed. Reg. 6876, 6882 (1986) (to be codified at 14 C.F.R. § 415.17).

95. See Launch Act, *supra* note 5, § 2613.

96. 51 Fed. Reg. 6879 (1986) (to be codified at 14 C.F.R. §§ 406.1-406.3).

97. Launch Act, *supra* note 5, § 2611(b).

own space operations.⁹⁸ Few companies possess the expertise to produce their own launch sites and vehicles.⁹⁹ To remedy this situation, the Launch Act empowers the Transportation Secretary to transfer existing government equipment and launch facilities to the private sector, through sale, lease, or other means as the Transportation Secretary sees fit.¹⁰⁰

The transfer of excess government equipment to the private sector indicates that the United States government no longer considers the United States space effort as solely its own.¹⁰¹ The United States has established a policy of private space development, a policy which it has no intention of sacrificing in order to sign the Moon Treaty.

III. *EFFECT OF THE MOON TREATY ON EXISTING UNITED STATES POLICY*

The United States policy of private space development would not be sacrificed if the United States signed the Moon Treaty. The Moon Treaty is complementary, not contradictory, to the Launch Act. Both documents provide for a stable environment for the peaceful development of space. The Moon Treaty's provision for the establishment of an international system of space development¹⁰² can only benefit the United States policy of private space development. The international framework would further stabilize space operations, which in turn would be conducive to space operations by the private sector of the United States.

A. *Continued Right To Private Development of Space*

Critics of the Moon Treaty within the United States perceive two basic obstacles posed by the Moon Treaty that would be detrimental to the continued private development of space. The critics contend that the Moon Treaty would deny private

98. S. REP. NO. 656, *supra* note 65, at 5333.

99. *See id.*

100. Launch Act, *supra* note 5, § 2614(a).

101. In addition, the Launch Act requires that the private operator acquire its own liability insurance to cover any potential damage its launch might cause. Currently, Space Shuttle payloads are insured to the maximum amount available, 500 million U.S. dollars. However, risk analysis techniques are being developed to determine the exact amounts required. 50 Fed. Reg. 19281 (1985).

102. *See supra* notes 56-62 and accompanying text.

parties both the right to operate in space and the right of private property.¹⁰³ The critics also argue that any international regime established under the Moon Treaty would be hostile to the nations currently capable of space operations as well as to the private sector of the United States.¹⁰⁴ If either of these arguments were true, it would bar the private sector from operating in space.¹⁰⁵ Upon close examination, however, both of these arguments prove to be illusory.

1. Private Sector Operations in Space

There is significant authority in current space law that private organizations may operate legally in space. The Moon Treaty is intended to expand upon, not supersede, principles of existing space law.¹⁰⁶ The Space Treaty clearly provides for the operation in space of private entities by stating that nations party to the Space Treaty are responsible to the international community for any activities in space, whether those activities are conducted by the government or by a "non-governmental entity."¹⁰⁷ The Space Treaty also recognizes that "non-gov-

103. SENATE REPORT, *supra* note 2, at 455-56.

104. Commentators argue that the international regime would be hostile to nations currently possessing space technology and the United States private sector for the following reasons:

1. No entity would be permitted to use the Moon's resources in a commercial operation without obtaining authorization from an international organization whose policies and decisions would be made by a U.N. General Assembly-type body.
2. To obtain that authorization, the entity would have to agree to submit a large share of any profits it makes to the international organization and to transfer to other countries on a subsidized basis any technology it uses.
3. Authorization would probably be withheld if the entity was from a country that was already exploiting Moon resources.
4. Ultimately, no national entity would be permitted to exploit the Moon's resources; instead, an international monopoly would be created.

Dula, *supra* note 50, at 20-21.

105. The private sector would either be barred legally from operating in space, or by making such operations unprofitable, it would be impractical for it to do so. *See* Note, *supra* note 46, at 1445.

106. *See* Moon Treaty, *supra* note 1, preamble, 18 I.L.M. at 1434.

107. Space Treaty, *supra* note 7, art. VI, 18 U.S.T. at 2415, T.I.A.S. No. 6347 at 6, 610 U.N.T.S. at 209. The Rescue Treaty provides for the return of astronauts or equipment to their country of origin regardless of whether they were part of a government controlled operation. *See* Rescue Treaty, *supra* note 8, art. 5, 19 U.S.T. at 7574-75, T.I.A.S. No. 6599 at 4-5, 672 U.N.T.S. at 122-23. Also, the Liability Treaty provides that a nation party to the treaty will be liable for any damage caused by a space object launched under a nation's flag, regardless of whether it was a govern-

ernmental entities" may operate in space because it requires that nations both authorize and provide for "continuing supervision"¹⁰⁸ of such activities.

The Launch Act could be interpreted as providing the "continuing supervision" of "non-governmental entities" required by these treaties. The Launch Act does provide that legislation be implemented by the Transportation Secretary "consistent with any obligation assumed by the United States in any treaty, convention, or agreement" to which the United States is a party.¹⁰⁹ The Moon Treaty allows private exploitation of space. Therefore, if the sponsoring state is willing to accept responsibility for such activities, then the Launch Act, which creates a framework for governmental control of private space ventures, is clearly consistent with the Moon Treaty.

Moreover, the Space Treaty provides that a sponsoring state retain jurisdiction over any person or object launched into space with the party state's authorization.¹¹⁰ Any object launched into space by the private sector of the United States would remain within the jurisdiction of the United States.¹¹¹ The Launch Act provides for the private ownership and operation of space vehicles.¹¹² Since such objects would remain within the jurisdiction of the United States, the private ownership rights of the private sector would be recognized by United States law.

2. The Proposed International Regime

The international regime proposed by the Moon Treaty has yet to be established, and its nature and structure are still the subject of debate. Any determination that the regime is detrimental to private space development would be premature

mental or non-governmental launch. See Liability Treaty, *supra* note 14, art. 1, para. (c)(1), 24 U.S.T. at 2392.

108. Space Treaty, *supra* note 7, art. VI, 18 U.S.T. at 2415, T.I.A.S. No. 6347 at 6, 610 U.N.T.S. at 209.

109. Launch Act, *supra* note 5, § 2620(d). "The Secretary shall carry out this chapter consistent with obligations assumed by the United States in any treaty, convention, or agreement that may be in force between the United States and any foreign nation."

110. Space Treaty, *supra* note 7, art. VIII, 18 U.S.T. at 2416, T.I.A.S. No. 6347 at 7, 610 U.N.T.S. at 209.

111. *See id.*

112. *See generally* Launch Act, *supra* note 5.

at this point in time. However, there are strong arguments to be made that the regime could be constructed in a manner satisfactory to all nations regardless of their current space capabilities.

The Moon Treaty provides that the regime administer the "equitable sharing"¹¹³ of the benefits derived from the development of space resources. It is noteworthy that the phrase used is "equitable sharing,"¹¹⁴ and not "equal sharing." The word "equitable" implies that a return shall be received in proportion to the investment a party places into an operation.¹¹⁵ A company undertaking a commercially profitable space operation could expect, then, to receive a major part of the profits realized.

The basic point of contention in the structuring of the regime is the delegation of power between those nations possessing space capabilities and those that do not.¹¹⁶ The nations capable of space operations, particularly the United States and the Soviet Union, fear that any regime granting every nation party to the Treaty an equal vote would mean that the space-capable nations would be out voted by the numerically superior nations without space capabilities on every issue.¹¹⁷ This would be of particular concern to the private sector of the United States since the regime would determine how the profits of any space venture would be distributed.¹¹⁸

It is clear that the United States and the Soviet Union would not agree to any such situation. A compromise will have to be reached. A possible solution might be that an impartial panel be selected to run the regime.¹¹⁹ However, such an idea is unrealistic. At some point in the selection process a vote would still be needed and the same difficulty would be present. A more realistic answer may be to adopt the compromise made in the United Nations Charter, that is, a regime structured on

113. Moon Treaty, *supra* note 1, art. 11, para. 7(d), 18 I.L.M. at 1438.

114. *Id.*; see *supra* note 57 (text of para. 7(d)).

115. "Equitable" is defined as "just" as opposed to "equal" which is defined as uniform or "alike." BLACK'S LAW DICTIONARY 481-82 (5th ed. 1979).

116. Dula, *supra* note 50, at 19; Note, *supra* note 46, at 1451; see *supra* notes 56-62 and accompanying text.

117. See *supra* notes 56-62 and accompanying text.

118. *Id.*

119. See Note, *supra* note 46.

the same lines as the Security Council.¹²⁰ The nations that possess space capabilities would be given permanent seats with veto power, while the nations without space capabilities would rotate amongst a group of nonpermanent seats.¹²¹ Adhering to such a regime would not pose a high risk because the Moon Treaty provides that a nation may withdraw from the Treaty upon one year's notice.¹²² When balanced against the possible benefits of such a regime, a one-year commitment would appear to be worthwhile.

B. *Benefits Of An International System Of Space Development*

Creation of an international regime for the development of space resources would only help, not hinder the United States policy of private development of space. An international regime would provide the stable political environment necessary to induce private sector investment.¹²³ Any instability within the international community concerning the development of space resources would be seen as a threat to profits, adversely affecting the private sector's move towards space investment.¹²⁴

In signing the Moon Treaty and taking part in the international regime governing the development of space resources, the United States would receive the protection of international law and also not be excluded from the benefits of international space operations.¹²⁵ Furthermore, in playing a major role in the establishment of the international regime, the United States would maintain its leadership position in space affairs.¹²⁶ Finally, the international regime would foster cooperation within the international community, especially in preventing the superpower rivalry between the United States and Soviet Union from going beyond the environs of the Earth.

120. U.N. CHARTER art. 23.

121. *Id.* art. 23, paras. 1-2.

122. Moon Treaty, *supra* note 1, art. 20, 18 I.L.M. at 1441.

123. *See Note, supra* note 46, at 1432-33.

124. *Id.*

125. SENATE REPORT, *supra* note 2, at 464.

126. *Id.*

CONCLUSION

Through the Launch Act of 1984, the United States has demonstrated its intent to encourage private sector operations in space. This intent is reconciliable with the Moon Treaty which also provides for the continued orderly exploration and exploitation of space.

By signing the Moon Treaty and helping to create an international regime to oversee space development, the United States would maintain its leadership position in space development and at the same time protect United States space operations, both public and private. Only a minimum investment of one year is required if the United States signs the Moon Treaty. If at some later date the agreement in fact proves to be adverse to United States interests, then the United States can simply withdraw from the agreement.

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