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# Comments

## AMERICANS AND THE MOON TREATY

NANCY L. GRIFFIN

ON JULY 20, 1969, the United States successfully completed a technological space maneuver to place man on the moon for the first time.<sup>1</sup> Man's physical presence on the lunar surface represented such significant progress that the existing international law governing activities in outer space<sup>2</sup> was no longer adequate to deal with the consequent legal questions.<sup>3</sup> The United States had taken a major step toward making the future occupation<sup>4</sup> and exploitation<sup>5</sup> of the moon a reality. This event created a particular

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<sup>1</sup> TIME, July 25, 1969, at 10.

<sup>2</sup> In 1969, the international law governing states' activities in outer space consisted of United Nations General Assembly resolutions and two treaties: the Outer Space Treaty of 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 206, and the Rescue and Return Agreement of 1969, 19 U.S.T. 7570, T.I.A.S. 6599. See Matte, *Legal Principles Relating to the Moon*, in 1 MANUAL ON SPACE LAW 253, 253-55 (N. Jasintuliyana & R. Lee ed. 1979) [hereinafter cited as Matte].

<sup>3</sup> See 27 U.N. GAOR, Supp. (No. 20) 23, 24-25, U.N. Doc. A/8720 (1972) (Statement by the Chairman of the Legal Subcommittee at the 110th meeting on September 5, 1972).

<sup>4</sup> See M. McDUGAL, H. LASSWELL & I. VLASIC, LAW AND PUBLIC ORDER IN SPACE 760 (1963) [hereinafter cited as McDUGAL], citing A. CLARKE, THE CHALLENGE OF SPACESHIP 36 (1959). Clarke more recently observed that "the moon may turn out to be such a valuable and interesting place that it may one day be colonized on a really large scale." McDUGAL, *supra*, at 760 n.46. Doctors speculate that heart patients could significantly prolong their lives as inhabitants of the moon because of low gravity conditions. McDUGAL, *supra*, at 760 n.46. Soviet commentators anticipate the formation of a lunar city which would start manufacturing spacecraft by the twenty-first century. McDUGAL, *supra*, at 760 n.46, citing M. VASSILIEV & S. GUSHCHEV, REPORTS FROM THE TWENTY-FIRST CENTURY 207 n.34 (1962).

<sup>5</sup> See Office of Technology Assessment, Study of the United Nations Moon Treaty (1980) (unpublished study), reprinted in SENATE COMM. ON COMMERCE, SCIENCE AND TRANSPORTATION, 96TH CONG., 2D SESS., AGREEMENT GOVERNING THE ACTIVITIES OF STATES ON THE MOON AND OTHER CELESTIAL BODIES 276-94 (Comm. Print 1980) [hereinafter cited as OTA Study]. The OTA Study contains portions of a number of reports. Among those cited for their treatment of lunar resource exploitation are Schwenk and Sadin, Technological Opportunities for Lunar Resources Utilization: A NASA Study Program (1980) (report to be published); Driggers, Is Lunar Material Use Practical in a Non-SPS Scenario?

need for the further development of extraterrestrial property law.<sup>6</sup>

Responding to the deficiency in international space law, the United Nations began work on an agreement that would specific-

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(May 14-17, 1979) (a paper presented at the Fourth Princeton/AIAA Conference on Space Manufacturing Facilities); Lunar and Planetary Institute, *Extraterrestrial Materials Processing and Construction*, NSR 09-051-001 Mod. No. 24 (1980). See also OTA Study, *supra* at 283 for a table of useful products from lunar sources. One example of a potentially marketable resource is "Moon Iron" which is not subject to corrosion on Earth and could be used for industrial purposes. The production of this iron is expected to be highly profitable. Vassilevskaya, *Notions of "Exploration" and "Use" of Natural Resources of Celestial Bodies*, PROC. 20TH COLLOQUIUM ON OUTER SPACE L. 473 (1977). Many commentators foresee technological success in producing rocket fuel from lunar materials, improving the economics of space flight "by a factor of ten or more." A. CLARKE, *THE EXPLORATION OF SPACE* 116 (rev. ed. 1960). See generally J. HOLMES, *AMERICA ON THE MOON* (1962).

The OTA was established by the Technology Assessment Act of 1972, 2 U.S.C. §§ 471-481 (1976). The function of the office is set forth in § 472(c):

The basic function of the Office shall be to provide early indications of the probable beneficial and adverse impacts of the applications of technology and to develop other coordinate information which may assist the Congress. In carrying out such function, the Office shall:

- (1) identify existing or probable impacts of technology or technological programs;
- (2) where possible, ascertain cause-and-effect relationships;
- (3) identify alternative technological methods of implementing specific programs;
- (4) identify alternative programs for achieving requisite goals;
- (5) make estimates and comparisons of the impacts of alternative methods and programs;
- (6) present findings of completed analyses to the appropriate legislative authorities;
- (7) identify areas where additional research or data collection is required to provide adequate support for the assessments and estimates described in paragraph (1) through (5) of this subsection; and
- (8) undertake such additional associated activities as the appropriate authorities specified under subsection (d) may direct.

Senator Howard W. Cannon, Chairman of the Senate Committee on Commerce, Science and Transportation, and Senator Adlai E. Stevenson, Chairman of the Subcommittee on Science, Technology and Space, jointly wrote to Congressman Morris K. Udall, Chairman of the Technology Assessment Board and requested that the OTA undertake a small scale assessment of the impact the Moon Treaty would have on the capability of the United States to exploit extraterrestrial materials. OTA Study, *supra*, at 265. In conducting this study, the OTA staff held interviews with selected specialists, examined contributed articles, papers, and correspondence, and reviewed the available literature. *Id.* at 275.

<sup>6</sup> Bhatt, *Legal Controls of the Moon and Celestial Bodies*, 8 INDIAN J. INT'L L. 33, 34-35 (1968) [hereinafter cited as Bhatt]. Bhatt lists issues concerning lunar property rights which are left unanswered by the existing international law dealing with outer space. *Id.*

ally address the legal problems arising from man's newly acquired capacity to land on the moon.<sup>7</sup> After seven years of deliberations,<sup>8</sup> the United Nations produced the *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*<sup>9</sup> (Moon Treaty). To date only five countries have signed the treaty.<sup>10</sup>

The United States was an active participant in the formulation of the Moon Treaty.<sup>11</sup> It has not signed the agreement, however, because it has met with strong opposition from a variety of sources.<sup>12</sup> The United States government has decided to postpone a final decision regarding ratification of the treaty until it has had time to thoroughly evaluate its principles.<sup>13</sup>

This comment will discuss the legal implications of the Moon Treaty. Analysis will focus on both the agreement's provisions and the treaty's effect on prospective space activities by the United States. The alternatives to ratification available to the United States will also be reviewed.

### I. HISTORICAL BACKGROUND

Although man has always been curious about the realm of outer space, particularly the moon,<sup>14</sup> the possibility of physical

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<sup>7</sup> See Matte, *supra* note 2, at 255.

<sup>8</sup> N.Y. Times, July 4, 1979, at A4, col. 1.

<sup>9</sup> Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *opened for signature* December 18, 1979, 18 INT'L LEGAL MATERIALS 1434; 34 U.N. GAOR, Supp. (No. 20) 33, U.N. Doc. A/34/20 (1979) [hereinafter cited as the Moon Treaty]. In 1978, the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space decided to refer to the instrument as an "agreement" instead of a treaty. Matte, *supra* note 2, at 253.

<sup>10</sup> Galloway, *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies: History and Analysis* (1980), *reprinted in* SENATE COMM. ON COMMERCE, SCIENCE AND TRANSPORTATION, 96TH CONG., 2D SESS., AGREEMENT GOVERNING THE ACTIVITIES OF STATES ON THE MOON AND OTHER CELESTIAL BODIES 1 & 44 (Comm. Print 1980) [hereinafter cited as Galloway]. The five nations which have signed the treaty are: Chile on January 3, 1980; France on January 20, 1980; Romania on April 17, 1980; Philippines on April 23, 1980; and Austria on May 21, 1980. *Id.*

<sup>11</sup> See *International Space Activities, 1979: Hearings Before the Subcomm. on Space Science and Applications of the House Comm. on Science and Technology*, 96th Cong., 1st Sess. 82 (1979) (Statement of S. Neil Hosenball) [hereinafter cited as *1979 Hearings*].

<sup>12</sup> OTA Study, *supra* note 5, at 319.

<sup>13</sup> *Id.* at 346.

<sup>14</sup> See generally G. ABETTI, *THE HISTORY OF ASTRONOMY* (1952).

exploration was not a reality until the late 1950s when the United States and the Soviet Union each launched an unmanned satellite into outer space.<sup>15</sup> Encouraged by this initial breakthrough, and despite the high costs of exploration,<sup>16</sup> both the United States and the Soviet Union became committed to developing their space capabilities as matters of national policy.<sup>17</sup>

In response to the high priority the major powers had placed on space exploration, the United Nations decided to give the same priority to the development of appropriate legal controls.<sup>18</sup> In 1958 the General Assembly of the United Nations adopted a resolution calling for a study of "the nature of legal problems which may arise in the carrying out of programmes to explore outer space."<sup>19</sup> One year later the United Nations General Assembly established the Committee on the Peaceful Uses of Outer Space (hereinafter

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<sup>15</sup> S. BHATT, LEGAL CONTROLS OF OUTER SPACE ix (1973) [hereinafter cited as S. BHATT]. The U.S.S.R. launched its unmanned Satellite Sputnik-I into outer space in 1957, which was followed by the United States unmanned Satellite Explorer I in 1958. *Id.*

<sup>16</sup> When space exploration first began there was considerable debate whether such exploration was of sufficient significance to the community of mankind to justify the high cost involved. The "Killian" Report to the President of the United States in 1958 suggested that "it does not seem as though the moon and other planets offer possibilities for settlements or that they will have significant value as military bases or as the source of raw materials." Bhatt, *supra* note 6, at 83, citing Schachter, *Recent Technological Developments: Political and Legal Implications*, PROCEEDINGS OF THE SOCIETY OF INTERNATIONAL LAW 246 (1958). When NASA first began looking ahead to Project Apollo it estimated that it would cost a total of \$20 billion. McDougal, *supra* note 4, at 756 n.27.

<sup>17</sup> Bhatt, *supra* note 6, at 34. Urging the importance of remaining at the forefront of space technology, President Kennedy said, "We cannot possibly permit any country whose intentions toward us may be hostile to dominate space." J. HOLMES, AMERICA ON THE MOON: THE ENTERPRISE OF THE SIXTIES 20 (1962). President Johnson stated later, "We cannot be second in space and first in the world." S. LAY & H. TAUBENFELD, THE LAW RELATING TO ACTIVITIES OF MAN IN SPACE 10 n.3 (1963). For a discussion on the motivating factors of power and prestige, see V. VAN DYKE, PRIDE AND POWER: THE RATIONALE OF THE SPACE PROGRAM 119 (1964).

<sup>18</sup> Bhatt, *supra* note 6, at 34. The U.N. had previously given lunar exploration and the associated legal problems a lower priority ranking. See 24 U.N. GAOR, Supp. (No. 21) 28, U.N. Doc. A/7621 (1969).

<sup>19</sup> G.A. Res. 1348, 13 U.N. GAOR, Supp. (No. 18) 5-6, U.N. Doc. A/4090 (1958). This responsibility was delegated to the Ad Hoc Committee on the Peaceful Uses of Outer Space created by the same resolution. For a discussion of the Ad Hoc Committee, see Jessup & Taubenfeld, *The Ad Hoc Committee on the Peaceful Uses of Outer Space*, 53 AM. J. INT'L L. 877 (1959).

referred to as COPUOS) as a standing committee of the United Nations.<sup>20</sup>

The early work of COPUOS, though often interrupted due to the tensions of the cold war,<sup>21</sup> eventually led to the adoption of the Outer Space Treaty of 1967.<sup>22</sup> The Outer Space Treaty was the first major international agreement governing the use of outer space and codified the general legal principles<sup>23</sup> the United Nations had previously adopted via resolution in order to govern activities in outer space.<sup>24</sup> The drafters realized at the time of its

<sup>20</sup> G.A. Res. 1472, 14 U.N. GAOR, Supp. (No. 16) 5, U.N. Doc. A/4354 (1959). The Committee on the Peaceful Uses of Outer Space originally consisted of twenty-four countries. After the Committee became a permanent body its membership was increased to twenty-eight countries in 1962, thirty-seven in 1974, and forty-seven in 1977. As the group grew larger, it became more difficult for its members to reach a consensus on the different issues. The Committee decided, however, that decision making by consensus was superior to any other method for their purposes. Galloway, *Consensus Decisionmaking by the United Nations Committee on the Peaceful Uses of Outer Space*, 7 J. SPACE L. 3 (1979).

<sup>21</sup> Hosenball, *The United Nations Committee on the Peaceful Uses of Outer Space: Past Accomplishments and Future Challenges*, 7 J. SPACE L. 95, 97 (1979); 1979 Hearings, *supra* note 11, at 83 (statement of S. Neil Hosenball).

<sup>22</sup> Outer Space Treaty, *supra* note 2. The Outer Space Treaty was signed by over 60 nations, including Canada, Japan, the U.S.S.R., the United Kingdom, and the United States. See generally Adams, *The Outer Space Treaty: An Interpretation in Light of the No Sovereignty Provision*, 9 HARV. INT'L L.J. 140 (1968); Dembling & Arons, *The Evolution of the Outer Space Treaty*, 33 J. AIR L. & COM. 419 (1967).

<sup>23</sup> See Dembling & Arons, *supra* note 22, at 428. The authors summarize the Outer Space Treaty's general principles as follows:

[T]he Treaty reflects a broad international consensus that outer space and celestial bodies are to be free for exploration and use for the benefit of all mankind; that the principles of international law are applicable thereto; that celestial bodies are to be devoted exclusively to peaceful purposes, and weapons of mass destruction are to be banned from outer space; that assistance is to be rendered to astronauts; that States are to be held internationally responsible for their activities in outer space, and held liable for damages caused thereby; that ownership of objects is not changed by their presence in outer space and on celestial bodies; that harmful contamination of the environment of earth, outer space, and celestial bodies shall be avoided; that information gathered from activities in outer space and on celestial bodies is to be broadly disseminated; and that stations, installations, etc., on celestial bodies are to be open for inspection.

*Id.* at 456.

<sup>24</sup> See G.A. Res. 2222, 21 U.N. GAOR, Supp. (No. 16) 13, U.N. Doc. A/6316 (1966); G.A. Res. 1721A, 16 U.N. GAOR, Supp. (No. 17) 7, U.N. Doc. A/5100 (1962).

creation that the broad precepts of the Outer Space Treaty would require further elaboration as progress in space science and technology created a need for more specific regulation.<sup>25</sup>

Since space science and technology were progressing at such a rapid pace, the members of COPUOS had the requisite incentive to develop the provisions of the Outer Space Treaty. Within the first nine years after the Outer Space Treaty took effect, the Committee successfully expanded portions of the treaty in three supplemental agreements: the Rescue and Return Agreement of 1968,<sup>26</sup> the Liability Convention of 1973,<sup>27</sup> and the Registration Convention of 1976.<sup>28</sup>

The decision to formulate an agreement governing man's activities on the moon was the result of proposals submitted by Argentina and the Soviet Union. In 1970 Argentina submitted to the Legal Subcommittee of COPUOS<sup>29</sup> a draft agreement concerning the use of the moon's natural resources.<sup>30</sup> In May 1971 the Soviet Union requested that the General Assembly include an item entitled "Preparation of an International Treaty concerning the moon" in its agenda for the twenty-sixth session.<sup>31</sup> The Soviet Union then submitted its own draft treaty that dealt with navigational matters relating to lunar exploration.<sup>32</sup> In response to the draft of the Soviet Union, the General Assembly adopted Resolution 2779<sup>33</sup> which formally requested that COPUOS and its Legal

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<sup>25</sup> See I. WHITE, DECISIONMAKING FOR OUTER SPACE 182 (1970), where the author has tabulated the legal problems associated with the Outer Space Treaty; Dembling & Arons, *supra* note 22, at 428, 456.

<sup>26</sup> Rescue & Return Agreement, *supra* note 2.

<sup>27</sup> Convention on International Liability for Damage Caused by Space Objects, effective October 9, 1973, 24 U.S.T. 2389, T.I.A.S. No. 7762.

<sup>28</sup> Convention on Registration of Objects Launched into Outer Space, effective September 15, 1976, T.I.A.S. No. 8480.

<sup>29</sup> COPUOS consists of two subcommittees, a Legal Subcommittee and a Scientific and Technical Subcommittee. The Legal Subcommittee holds a four-week session in the spring of each year and at the conclusion of that session prepares a report to the parent Committee. Hosenball, *supra* note 21, at 96.

<sup>30</sup> 24 U.N. GAOR, Annex (Agenda Item 28) 6-7, U.N. Doc. A/AC 105/101 (1970).

<sup>31</sup> 26 U.N. GAOR, Annex (Agenda Items 33 & 92) 1, U.N. Doc. A/8391 (1971). See Matte, *supra* note 4, at 255.

<sup>32</sup> 26 U.N. GAOR, Annex (Agenda Items 33 & 92) 10, U.N. Doc. A/C.1/L. 568.

<sup>33</sup> 26 U.N. GAOR, Supp. (No. 29) 28, U.N. Doc. A/8429 (1971).

Subcommittee consider as a matter of high priority the development of a draft treaty and report on this draft the following year.<sup>34</sup>

At its 1972 session, the members of the Legal Subcommittee formulated a draft treaty consisting of a preamble and twenty-one articles.<sup>35</sup> The Subcommittee was unable to reach a final consensus on the treaty, however, due to conflict over the scope of the treaty, provisions regulating information exchange and natural resource exploitation.<sup>36</sup> Most of the delay was caused by the refusal of the Soviet Union to accept a provision in Article 11<sup>37</sup> which stated that "the moon and its resources are the common heritage of mankind."<sup>38</sup>

During the seventeenth session of the Legal Subcommittee the Austrian delegation made a special effort to resolve the outstanding issues by conducting a series of informal consultations<sup>39</sup> and formulating a new draft of the agreement on the basis of those discussions.<sup>40</sup> The Austrian text was reviewed by the Legal Subcommittee the following year,<sup>41</sup> approved by COPUOS with a few minor changes,<sup>42</sup> and submitted to the General Assembly of the United Nations for adoption.<sup>43</sup> On December 5, 1979, the Moon Treaty was formally adopted by a unanimous vote of the General Assembly<sup>44</sup> and it was opened for signature and ratification on December 18.<sup>45</sup>

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<sup>34</sup> *Id.* See Matte, *supra* note 2, at 255.

<sup>35</sup> 27 U.N. GAOR, Supp. (No. 20) 19 & 25, U.N. Doc. A/8720 (1972). The draft was formulated by the members of the Working Group that the Legal Subcommittee had appointed to handle the project. *Id.* Working papers were variously submitted by Australia, Bulgaria, Egypt, France, India, Italy, Sweden, the United Kingdom, and the United States with suggested provisions. 27 U.N. GAOR, Supp. (No. 1) 221, U.N. Doc. A/8701 (1972).

<sup>36</sup> 27 U.N. GAOR, Supp. (No. 20) 3-4, U.N. Doc. A/8720 (1972).

<sup>37</sup> N.Y. Times, July 4, 1979, at A4, col. 1.

<sup>38</sup> Moon Treaty, *supra* note 9, art. 11, para. 1.

<sup>39</sup> See 33 U.N. GAOR, Supp. (No. 20) 11, U.N. Doc. A/33/20 (1978).

<sup>40</sup> 33 U.N. GAOR, Supp. (No. 20) 26, U.N. Doc. A/33/20 (1978).

<sup>41</sup> 34 U.N. GAOR, Supp. (No. 20) 10-12, U.N. Doc. A/34/20 (1979).

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> N.Y. Times, July 4, 1979, at A4, col. 1.

<sup>45</sup> Galloway, *supra* note 10, at 44.



## II. GENERAL INTERPRETATION OF THE TREATY'S PROVISIONS

The stated purposes of the Moon Treaty are 1) "to promote on the basis of equality" the further cooperation among States in exploring the moon and other celestial bodies, 2) to prevent the moon from becoming an area of international conflict, and 3) to define and develop the provisions of existing legal instruments in relation to the moon and other celestial bodies.<sup>46</sup> The Moon Treaty is most specifically concerned with the benefits to be obtained from the exploitation of the moon's natural resources.<sup>47</sup> The more general benefits to be obtained from the exploration and use of the moon are the subject of the Outer Space Treaty.<sup>48</sup>

The scope of the Moon Treaty is set forth in Article 1. The question of whether or to what degree the instrument should apply to other celestial bodies besides the moon was the first of the treaty's three major issues.<sup>49</sup> The members of COPUOS finally agreed that Article 1 should read, "The provisions of this Agreement relating to the moon shall also apply to other celestial bodies . . . except in so far as specific legal norms enter into force with respect to any of these celestial bodies."<sup>50</sup> Article 1 also extends the scope of the treaty to include circumlunar space,<sup>51</sup> a provision that the Outer Space Treaty did not contain.<sup>52</sup> The agreement expressly provides that it does *not* apply to extraterrestrial materials that reach the earth by natural means.<sup>53</sup>

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<sup>46</sup> Moon Treaty, *supra* note 9, preamble.

<sup>47</sup> Galloway, *supra* note 10, at 46.

<sup>48</sup> *Id.*

<sup>49</sup> 27 U.N. GAOR, Supp. (No. 20) 3, U.N. Doc. A/8720 (1972). Some states within the Committee, particularly the Soviet Union and the German Democratic Republic, thought that the treaty should remain as originally drafted and pertain exclusively to the moon. The United States, Argentina, Belgium, Chile, Mexico, and Sweden were among the countries desiring a broader scope for the treaty. *See id.* at 25; Hosenball, *supra* note 21, at 99; Matte, *supra* note 2, at 257; Kopal, *Legal Questions Relating to the Draft Treaty Concerning the Moon*, PROC. 16TH COLLOQUIUM ON OUTER SPACE L. 180, 181 (1973).

<sup>50</sup> Moon Treaty, *supra* note 9, art. 1, para. 1.

<sup>51</sup> Circumlunar space is space surrounding the moon. SPACE AGE DICTIONARY 161 (rev. 2d ed. 1963).

<sup>52</sup> Moon Treaty, *supra* note 9, art. 2, para. 2. This provision was originally proposed in the Soviet draft, 26 U.N. GAOR, Annex (Agenda Items 33 & 92) 11, U.N. Doc. A/C.1/L.568 (1971).

<sup>53</sup> Moon Treaty, *supra* note 9, art. 1, para. 3. A meteorite, for example, would not be subject to the provisions of this agreement.

Like Article II of the Outer Space Treaty, Article 2 of the Moon Treaty requires that all activities on the moon be carried out in accordance with international law and, in particular, the Charter of the United Nations.<sup>54</sup> Many commentators regard this provision as a potential loophole for avoiding the prohibitions against military activities in outer space.<sup>55</sup> These commentators base their opinion on the fact that Article 51 of the Charter<sup>56</sup> essentially affirms the right of States to self-defense,<sup>57</sup> but does not define the nature of self-defense.<sup>58</sup> It is quite possible that a party to the treaty could interpret this provision in the Charter as an exception to the general prohibitions against military activity.<sup>59</sup> Article 3 of the Moon Treaty, however, helps to relieve this possible confusion. In addition to reiterating the prohibitions in Article IV of the Outer Space Treaty against the establishment of military facilities, the testing of weapons, the conduct of military maneuvers, and the orbiting or placement of nuclear or other weapons of mass destruction in outer space,<sup>60</sup> Article 3 explicitly prohibits "the threat or use of force or any other hostile act on the moon."<sup>61</sup>

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<sup>54</sup> Compare Moon Treaty, *supra* note 9, art. 2, with Outer Space Treaty, *supra* note 2, art. III.

<sup>55</sup> Matte, *supra* note 2, at 259; O. OGUNBANWO, INTERNATIONAL LAW AND OUTER SPACE 32 (1975).

<sup>56</sup> Article 51 of the U.N. Charter states:

Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security. Measures taken by Members in the exercise of this right of self-defense shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary to maintain or restore international peace and security.

U.N. Charter art. 51.

<sup>57</sup> *Id.* See note 55 *supra*, and authorities cited therein.

<sup>58</sup> For a discussion on whether a party is to await "an armed attack" before using self-defense or whether self-defense can be used anticipatorily, see S. BHATT, *supra* note 15, at 191-95 (1973).

<sup>59</sup> One commentator speculated that Articles 2 and 3 of the Moon Treaty, when read together, could lead to confusion because they contain contradictory terms. Matte, *supra* note 4, at 259.

<sup>60</sup> Outer Space Treaty, *supra* note 2, art. IV.

<sup>61</sup> Moon Treaty, *supra* note 9, art. 3, paras. 2-4.

Many commentators regard Article 3 as an improvement on the Outer Space Treaty for other reasons. First, it makes the prohibitions of the Outer Space Treaty against certain military activities<sup>62</sup> apply with equal force to the use of the moon.<sup>63</sup> Secondly, the Moon Treaty forbids states-parties<sup>64</sup> from using the moon for hostile acts or threats against the earth, the moon, or spacecraft and personnel.<sup>65</sup> Thirdly, Article 3 expressly prohibits the orbiting of nuclear and other weapons of mass destruction around the moon and within other trajectories to or around the moon.<sup>66</sup> In so providing, Article 3 responds to the criticism of Article IV of the Outer Space Treaty,<sup>67</sup> which, strictly interpreted, seems to permit the use of a fractional orbit bombardment system.<sup>68</sup> Article 3 does not

<sup>62</sup> Outer Space Treaty, *supra* note 2, art. IV, paras. 1 & 2. "States Parties . . . undertake not to . . . install such weapons on celestial bodies . . . ." *Id.* para. 1. "The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies shall be forbidden." *Id.* para. 2.

<sup>63</sup> Moon Treaty, *supra* note 9, art. 3, paras. 2-4. Because the exploration of space is so closely associated with a nation's military function, it is often difficult to separate the peaceful from the military uses of the moon. S. BHATT, *supra* note 15, at 196-97. The international community felt that it had been successful in making this distinction in the Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, T.I.A.S. No. 4780, 402 U.N.T.S. 71 which prohibits claims of sovereignty and non-peaceful activity in Antarctica, and used this treaty as a pattern for certain provisions of the Outer Space Treaty. See generally Staub, *The Antarctica Treaty as Precedent to the Outer Space Treaty*, PROC. 17TH COLLOQUIUM ON OUTER SPACE L. 282-87 (1973); Taubenfeld, *Seas, Poles and Outer Space*, 190 THE NATION 293-97 (1960). The moon, however, was not specifically included in several of the Outer Space Treaty's prohibitions against certain military activities. One of the stock phrases within the Outer Space Treaty is "including the Moon and Other Celestial Bodies." Spokesmen for the Soviet Union stated in deliberations over the Outer Space Treaty that it could not accept the United States proposal and that it would be better to speak in terms of "the moon and other celestial bodies" throughout the treaty for the sake of consistency. Fawcett, *Politics of the Moon*, 25 WORLD TODAY 357, 361 (1969). The delegate from Ceylon expressed concern that this omission would lead other parties to the agreement to interpret the Outer Space Treaty as allowing by implication these otherwise forbidden activities on the moon. S. BHATT, *supra* note 15, at 201.

<sup>64</sup> "States Parties" is the Moon Treaty's term for those nations which become parties to the agreement. Moon Treaty, *supra* note 9. The term "state-parties," "states" and "parties" will be used interchangeably throughout this article.

<sup>65</sup> Moon Treaty, *supra* note 9, art. 3, para. 2.

<sup>66</sup> *Id.* at para. 3. A trajectory is the path of any missile or projectile. SPACE AGE DICTIONARY 210 (rev. 2d ed. 1963).

<sup>67</sup> Outer Space Treaty, *supra* note 2, art. IV.

<sup>68</sup> Galloway, *supra* note 10, at 49. A fractional bombardment system is a bomb-carrying spacecraft that does not complete a full orbit of the earth or the moon. SPACE AGE DICTIONARY 25 (rev. 2d ed. 1963). Article 1 has the

address the issue of whether conventional weapons are also prohibited but implicitly forbids their use.<sup>69</sup>

Article 4 of the Moon Treaty re-emphasizes the principle that the exploration and use of the moon shall be carried out for the benefit of all nations.<sup>70</sup> It adds to Article I of the Outer Space Treaty by providing that due regard should be paid to the interests of present and future generations in terms of promoting higher economic and social standards.<sup>71</sup> The provision also can be interpreted to encourage the potential involvement of states that are not parties to the agreement<sup>72</sup> as it provides that "[i]nternational cooperation in pursuance of this Agreement should be as wide as possible . . . ."<sup>73</sup>

Article 5 commits states-parties to make thorough and timely reports on their scientific investigations.<sup>74</sup> While the Outer Space Treaty also requires its parties to share such data,<sup>75</sup> critics have complained that the United States and Soviet Union have been slow to do so in the past.<sup>76</sup> Under the new treaty parties have a duty to inform the United Nations Secretary General, as well as the public, of the time, purposes, location, duration, orbital parameters and results of each mission to the moon.<sup>77</sup> Some commentators have noted that, unlike the Outer Space Treaty,<sup>78</sup> the Moon Treaty does not require the Secretary General to disseminate this information.<sup>79</sup>

Although the members of COPUOS agreed on the *type* of information to be provided, the *timing* of the parties' dissemination of the information was the second of the three major issues that

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same effect as Article 3 in including circumlunar space within the scope of the treaty. S. BHATT, *supra* note 15, at 200; Matte, *supra* note 2, at 258.

<sup>69</sup> See Matte, *supra* note 2, at 259.

<sup>70</sup> Moon Treaty, *supra* note 9, art. 4, para. 1.

<sup>71</sup> *Id.* See Outer Space Treaty, *supra* note 2, art. I.

<sup>72</sup> Galloway, *supra* note 10, at 50. The report points out that the possible inclusion of states that are not parties to the agreement is a significant point to keep in mind because membership varies for each space treaty.

<sup>73</sup> Moon Treaty, *supra* note 9, art 4, para. 2.

<sup>74</sup> *Id.* art. 5, para. 1.

<sup>75</sup> Outer Space Treaty, *supra* note 2, art. XI.

<sup>76</sup> N.Y. Times, July 4, 1979, at A4, col. 1.

<sup>77</sup> Moon Treaty, *supra* note 9, art 5, para. 1.

<sup>78</sup> Outer Space Treaty, *supra* note 2, art. XI.

<sup>79</sup> Galloway, *supra* note 10, at 51.

arose in negotiating the treaty.<sup>80</sup> The United States proposed that parties intending to conduct activities on the moon be required to supply the required information no later than sixty days before launching.<sup>81</sup> The Soviet Union, on the other hand, did not want to commit itself to furnishing information that could be obsolete on the day of launching.<sup>82</sup> COPUOS members finally agreed that the initial information "shall be given as soon as possible after launching" and that information on the results "shall be furnished upon completion."<sup>83</sup> It was decided that any party who conducts a mission lasting more than thirty days must report periodically at thirty-day intervals.<sup>84</sup> The treaty, however, implicitly limits this obligation to provide information to a six month period,<sup>85</sup> since after this length of time parties need report "only significant additions" to the information already given.<sup>86</sup>

Article 7 requires that states-parties inform the Secretary General of the measures they have taken to protect the lunar and terrestrial environments.<sup>87</sup> Similarly, should any state or one of its citizens place radioactive materials on the moon, it is to notify the Secretary General in advance of the presence and purpose of such placement.<sup>88</sup> The article also calls for the public identification of areas of the moon having special scientific interest so that they may be set aside as international scientific preserves.<sup>89</sup> The treaty gives no particular procedure for setting aside a given area, but stipulates that the "arrangements are to be agreed upon in consultation with the competent bodies of the United Nations."<sup>90</sup>

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<sup>80</sup> Kopal, *Legal Questions Relating to the Draft Treaty Concerning the Moon*, PROC. 16TH COLLOQUIUM ON OUTER SPACE L. 180, 181 (1973).

<sup>81</sup> See Matte, *supra* note 2, at 260. In proposing advance notification the United States was hoping to encourage cooperative research in accordance with art. 4 of the Moon Treaty and to avoid unintentional interference with the activities of other states-parties in accordance with art. 8. *Id.* See note 99 *infra*, and accompanying text.

<sup>82</sup> See Matte, *supra* note 2, at 260.

<sup>83</sup> Moon Treaty, *supra* note 9, art. 5, para. 1.

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> *Id.* art. 7, para. 2.

<sup>88</sup> *Id.*

<sup>89</sup> *Id.* para. 3.

<sup>90</sup> *Id.*

The Moon Treaty also provides in Articles 8, 9 and 12 for specific freedoms that are available to parties in conducting their activities on the moon. States may place their personnel, space vehicles, equipment, and other facilities anywhere on or below the surface of the moon.<sup>91</sup> Article 9 encourages parties to establish manned and unmanned stations on the moon as long as the owners inform the Secretary General of the location and purpose of the station and do not use a larger area than they need for a given activity.<sup>92</sup> Under Article 12 each state retains full jurisdiction and control over the stations and other facilities it places on the moon.<sup>93</sup> Furthermore, Article 8 permits launching from the moon,<sup>94</sup> an activity that was not considered at the time the Outer Space Treaty was drafted.<sup>95</sup>

In addition to granting certain freedoms, the Moon Treaty imposes certain responsibilities on its parties. These responsibilities are discussed in Articles 8 through 13 and involve 1) the preservation of life, 2) the return of property to its rightful owner, and 3) the concurrent use of the moon by two or more parties. First, Article 10 requires that parties to the treaty adopt all practicable measures to safeguard the life and health of all persons on the moon, including the offering of shelter to persons in distress.<sup>96</sup> When a party places its facilities on the moon it is with the understanding that other parties may use those facilities in the case of an emergency.<sup>97</sup> Secondly, Articles 12 and 13 direct states-parties to return any property found outside of its intended location and to notify the Secretary General or the launching party of space objects that have crashed on the lunar surface.<sup>98</sup> Finally, under Articles 8 and 9 states-parties are not to interfere with the activi-

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<sup>91</sup> *Id.* art. 8, para. 2.

<sup>92</sup> *Id.* art. 9, para. 1.

<sup>93</sup> *Id.* art. 12, para. 1.

<sup>94</sup> *Id.* art. 8, para. 2.

<sup>95</sup> See Fawcett, *supra* note 64, at 359. One advantage to launching from the moon to other planets is that the moon's gravitational pull is one-sixth of the Earth's, which would make launchings easier and more economical. *Id.*

<sup>96</sup> Moon Treaty, *supra* note 9, art. 10, paras. 1 & 2.

<sup>97</sup> *Id.* art. 12, para. 3. Conversely, parties finding it necessary to use another party's facilities must promptly notify the owner or Secretary General of such use. *Id.*

<sup>98</sup> *Id.* arts. 12 & 13; see Rescue and Return Agreement, *supra* note 2, art. 5.

ties of another state or impede free access to the moon.<sup>99</sup>

Article 11 addresses the issues of national appropriation, property and ownership rights, and the exploitation of natural resources. Unlike the Outer Space Treaty where the moon and other planets are discussed in their entirety, the Moon Treaty distinguishes the lunar surface and subsurface from the natural resources of the moon.<sup>100</sup> Like Article II of the Outer Space Treaty, Article 11 of the Moon Treaty provides that the moon is not subject to national appropriation by any means.<sup>101</sup> The Moon Treaty explicitly states that "[n]either the surface nor the subsurface . . . or natural resources in place" shall become the property of any state, organization, or natural person.<sup>102</sup> This provision not only extends the non-appropriation principle to non-national entities,<sup>103</sup> but also implies that the non-appropriation principle is to be more strictly applied to the surface and subsurface of the moon than to the natural resources.<sup>104</sup> Natural resources are subject to this restriction only insofar as they remain "in place."<sup>105</sup>

Even with respect to the surface and subsurface of the moon, the non-appropriation principle is somewhat illusory.<sup>106</sup> During the negotiations of the Moon Treaty the French delegate to COPUOS

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<sup>99</sup> Moon Treaty, *supra* note 9, arts. 8 & 9.

<sup>100</sup> *Id.* art. 11.

<sup>101</sup> *Id.* para. 1. Compare Moon Treaty, *supra* note 9, art. 11, para. 2 with Outer Space Treaty, *supra* note 2, art. II. The Moon Treaty adds the word "any" in front of "claim" to say that "the moon is not subject to national appropriation by any claim of sovereignty." This language implicitly overrules the traditional modes of acquisition. For an excellent discussion of the non-appropriation principle, see Bhatt, *supra* note 6, at 38.

<sup>102</sup> Moon Treaty, *supra* note 9, art. 11, para. 3.

<sup>103</sup> After the Outer Space Treaty was ratified, critics became concerned that the specific prohibition against "national" appropriation would by implication permit "non-national" appropriation. Matte, *supra* note 2, at 264. This provision directly responds to that concern.

<sup>104</sup> See American Bar Association International Law Section, Report to the House of Delegates 5 (unpublished report with recommendation submitted to the House of Delegates at its 1980 meeting) [hereinafter cited as ABA Int'l L. Section Report].

<sup>105</sup> Moon Treaty, *supra* note 9, art. 11, para. 3. The two words "in place" were proposed by the United States in 1973 and "are intended to indicate that the prohibition against [the] assertion of property rights would not apply to natural resources once reduced to possession through exploitation." Hosenball, *supra* note 21, at 103.

<sup>106</sup> Gorove, *Property Rights in Outer Space: Focus on the Proposed Moon Treaty*, 2 J. SPACE L. 29 (1974).

explained that the Outer Space Treaty had created an anomaly, for "the same resolution that forbade the appropriation of celestial bodies encouraged their use."<sup>107</sup> He went on to say that "the Subcommittee would have to decide how far the principle of non-appropriation was compatible with effective exploration and exploitation."<sup>108</sup> This anomaly remains unresolved in the Moon Treaty. Compounding this problem is the fact that the Moon Treaty encourages the establishment of stations and other facilities<sup>109</sup> but imposes no limitation on time or duration. The treaty very clearly states that "the placement of . . . stations and installations on or below the surface of the moon, including structures connected with its surface or subsurface, shall not create a right of ownership over the surface or subsurface of the moon."<sup>110</sup> Yet the owner of established lunar facilities, with few exceptions,<sup>111</sup> is able to exercise dominion and control, to the exclusion of others, for an indefinite period of time over a well defined area of the moon,<sup>112</sup> the rights that are characteristic of and inherent in the concept of property.<sup>113</sup>

The provisions surrounding the lunar natural resources created the greatest controversy among the Committee members throughout the entire negotiating period. At first the members of the legal subcommittee could not agree whether provisions relating to natural resources should be included in the treaty.<sup>114</sup> The Soviet Union took the position that since the exploitation of lunar resources would not be practical or economically feasible for many decades, the inclusion of provisions concerning their use would be prema-

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<sup>107</sup> Bhatt, *supra* note 6, at 42.

<sup>108</sup> *Id.*

<sup>109</sup> Moon Treaty, *supra* note 9, art. 9.

<sup>110</sup> *Id.* art. 11, para. 3.

<sup>111</sup> These "exceptions" include the responsibility of states-parties to admit authorized visitors and persons in distress. *Id.* art. 15, para. 1; art. 12, para. 3.

<sup>112</sup> *See id.* arts. 8 & 9.

<sup>113</sup> Gorove, *supra* note 106, at 30. *See generally* CSABAFI, THE CONCEPT OF STATE JURISDICTION IN INTERNATIONAL SPACE LAW (1971). Dr. Csabafi has suggested a concept of jurisdiction which he calls "functional" jurisdiction, not unlike the functional sovereignty Dr. Bhatt discusses. Bhatt, *supra* note 6, at 40. Both involve the right to control.

<sup>114</sup> 27 U.N. GAOR, Supp. (No. 20) 18-19, U.N. Doc. A/8720 (1972); *see* Galloway, *supra* note 10, at 31-33.



ture.<sup>115</sup> The use of lunar resources, in the Soviet opinion, should be the topic of a separate treaty at a later time.<sup>116</sup> Taking a different approach, the United States favored the inclusion of such provisions<sup>117</sup> under the theory that it is better to develop international controls before there are any major conflicts and while the value of the resources is still uncertain.<sup>118</sup>

The most important provision<sup>119</sup> with respect to the lunar natural resources, and indeed the central concept of Article 11, is that "the moon and its resources are the common heritage of mankind."<sup>120</sup> The "common heritage" concept has no clear juridical meaning<sup>121</sup> and is not defined by the treaty. It is to be regarded in terms of the entire agreement<sup>122</sup> and especially paragraph 5, which provides for the establishment of an international regime to govern the exploitation of the lunar natural resources as soon as such exploitation becomes feasible.<sup>123</sup>

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<sup>115</sup> 27 U.N. G.A.O.R., Supp. (No. 20) 18-19, U.N. Doc. A/8720 (1972); Matte, *supra* note 2, at 266.

<sup>116</sup> Galloway, *supra* note 10, at 31-33.

<sup>117</sup> Matte, *supra* note 2, at 266.

<sup>118</sup> *Id.*; see Taubenfeld, *supra* note 63, at 297.

<sup>119</sup> See notes 166-80 *infra*, and accompanying text.

<sup>120</sup> Moon Treaty, *supra* note 9, art. 11, para. 1.

<sup>121</sup> Finch, 1979 *United Nations Moon Treaty Encourages Lunar Mining and Space Development*, PROC. 22D COLLOQUIUM ON OUTER SPACE L. 123 (1979); Rosenfield, *Article XI of the Draft Moon Agreement*, *id.* at 210. See also Cocca, *Mankind as the New Legal Subject: A New Juridical Dimension Recognized by the United Nations*, PROC. 13TH COLLOQUIUM ON OUTER SPACE L. 211 (1971). At first the "common heritage" concept seems to be a mere variation of the phrase "province of mankind," which was used in Article I of the Outer Space Treaty and Article 4 of the Moon Treaty. It becomes apparent upon closer examination, however, that the two concepts can be distinguished. First, the two concepts involve two different groups of people. The exploration and use of the moon is the "province of all mankind," but the moon and its natural resources are the "common heritage of mankind." Rosenfield, *supra* at 211. One commentator suggested that the absence of the word "all" in the phrase "common heritage of mankind" implies that "mankind" is limited, "at least in reference to the exploitation of natural resources of the moon, to that portion of mankind that is party to this agreement." *Id.* But see Galloway, *supra* note 10, at 58. Second, the concepts apply to different functions. The phrase "province of mankind" covers the entire range of activities associated with the moon, while the "common heritage" concept is so closely connected with the establishment of an international regime to regulate resource exploitation that it seems to apply exclusively to the moon's natural resources. *Id.* The Moon Treaty's critics are very concerned about the legal implications of the "common heritage" phrase. See notes 167-80 *infra*, and accompanying text.

<sup>122</sup> Moon Treaty, *supra* note 9, art. 11, para. 1.

<sup>123</sup> *Id.* para. 5.

The establishment of an international regime is the Moon Treaty's method of regulating resource exploitation.<sup>124</sup> Parties to the agreement are committed to "undertake to establish an international regime, including appropriate procedures," as soon as "such exploitation is about to become feasible."<sup>125</sup> There has been some question whether "regime" refers to a system of rules and regulations or to a new international organization.<sup>126</sup> Because the treaty stipulates that the creation of the regime is to include "appropriate procedures,"<sup>127</sup> the latter is generally accepted as the better interpretation.<sup>128</sup> The meaning of the phrase "undertake to establish" has also been questioned.<sup>129</sup> It is not clear whether the treaty would obligate its parties to conclude negotiations on a second treaty or whether it would simply impose a duty to negotiate in good faith.<sup>130</sup> In addition, the treaty does not give any factors for determining at what point the exploitation of resources is "about to become feasible."<sup>131</sup> The treaty merely provides that states-parties are to inform the Secretary General and the international community "to the greatest extent feasible and practicable" of any natural resources they may discover on the moon.<sup>132</sup>

The purposes of the regime are listed in paragraph 7 of Article 11.<sup>133</sup> These purposes are the orderly and safe development of the moon's natural resources, their rational management, the expansion of opportunities for their use, and an equitable sharing by all states-parties in the benefits derived from those resources.<sup>134</sup> "Equitable sharing"<sup>135</sup> within the context of the Moon Treaty does not mean sharing on an equal basis since special consideration is to be given to "the interests and needs of the developing countries, as

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<sup>124</sup> Moon Treaty, *supra* note 9, art. 11, paras. 1, 5, & 7; see 1979 *Hearings*, *supra* note 11, at 104 (statement of Leigh S. Ratiner on behalf of the L-5 Society).

<sup>125</sup> Moon Treaty, *supra* note 9, art. 11, para. 5.

<sup>126</sup> OTA Study, *supra* note 5, at 335.

<sup>127</sup> Moon Treaty, *supra* note 9, art. 11, para. 5.

<sup>128</sup> OTA Study, *supra* note 5, at 325.

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> See Moon Treaty, *supra* note 9, at art. 11.

<sup>132</sup> *Id.* para. 6.

<sup>133</sup> *Id.* para. 7.

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*

well as the efforts of those countries which have contributed directly or indirectly to the exploration of the moon."<sup>136</sup> The treaty does not define "direct" and "indirect" contributions,<sup>137</sup> nor does it explain what constitutes a "developing country."<sup>138</sup> Another significant aspect of this provision is that the "equitable sharing" is to be of "the benefits derived from" the resources and not the resources themselves.<sup>139</sup> This language implies that states-parties may be required to share the acquired resources "in some final usable stage of production"<sup>140</sup> or the cash proceeds from the sale of such resources.<sup>141</sup> The provisions surrounding the future regime will be developed in accordance with Articles 17 and 18, which provide procedures for amendment<sup>142</sup> and for a review of the treaty in ten years.<sup>143</sup>

Although the Moon Treaty contains provisions for the future regulation of lunar resource exploitation, it contains no guidelines for regulating the exploration of the lunar natural resources that may occur before those provisions take effect. Critics of the treaty are concerned that the absence of such guidelines implies a moratorium on lunar resource exploitation until an international regime

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<sup>136</sup> *Id.*

<sup>137</sup> Galloway, *supra* note 10, at 59. The author speculates that "direct contributions" would include launchings, but offers no theory as to what contributions would be considered "indirect." *Id.*

<sup>138</sup> *Id.* at 79. There is a problem with the definition of "developing countries" because "if the assumption is correct that it will be many years before exploitation is undertaken on the Moon . . . some countries now referred to as 'developing' will have become developed." *Id.*

<sup>139</sup> Moon Treaty, *supra* note 9, art. 11, para. 7.

<sup>140</sup> Galloway, *supra* note 10, at 59.

<sup>141</sup> *See id.*

<sup>142</sup> Moon Treaty, *supra* note 9, art. 17. Article 17 provides that any state-party may propose amendments to the treaty that "shall enter into force for each State Party . . . accepting the amendments upon their acceptance by a majority of the States Parties . . . and thereafter for each remaining State Party . . . on the date of acceptance by it."

<sup>143</sup> Moon Treaty, *supra* note 9, art. 18 states the following:

Ten years after the entry into force of the Agreement, the question of the review of the Agreement should be included in the provisional agenda of the United Nations General Assembly in order to consider, in light of past application of the Agreement, whether it requires revision . . . A review conference shall also consider the question of the implementation of the provisions of article 11, paragraph 5, on the basis of the principle referred to in paragraph 1 of that article and taking into account in particular any relevant technological developments.

is established.<sup>144</sup> The legislative history of the agreement indicates that such a moratorium was proposed by several of the developing countries but that the United States and the Soviet Union effectively prevented it from becoming a part of the treaty.<sup>145</sup>

There also has been discussion among the critics of the Moon Treaty whether Article 6 is a qualification of the apparent freedom to exploit natural resources.<sup>146</sup> Article 6 specifically grants to states-parties the right to "collect on and remove from the moon samples of its minerals . . . which . . . may be used . . . for scientific purposes."<sup>147</sup> States-parties may also use minerals and other substances "in quantities appropriate for the support of their missions" while conducting scientific investigations on the moon.<sup>148</sup> In no other place does the treaty discuss the use of lunar resources for a particular purpose.

Article 14 provides that "[s]tates-parties to this Agreement shall bear international responsibility for national activities on the moon . . . and for assuring that national activities are carried out in conformity with the provisions set forth in this Agreement."<sup>149</sup> Article 14 further stipulates that parties to the treaty recognize that it may become necessary to elaborate detailed arrangements concerning liability for damage caused on the moon.<sup>150</sup> Under Article 16 states-parties are also required "to take appropriate steps"<sup>151</sup> to ensure that the international intergovernmental organizations in which they are involved will bind themselves to the

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<sup>144</sup> 1979 *Hearings*, *supra* note 11, at 114-15 (statement of Leigh S. Ratiner); Letter from Senators Frank Church and Jacob Javits to Secretary Vance (October 30, 1979); reprinted in OTA Study, *supra* note 5, at 311-12; Remarks by Congressman John Breaux before the Center for Strategic and International Studies (February 19, 1980).

<sup>145</sup> 32 U.N. GAOR, Supp. (No. 20) 4, U.N. Doc. A/32/20 (1977). See Hosenball, *supra* note 21, at 103.

<sup>146</sup> OTA Study, *supra* note 5, at 327; see 1979 *Hearings*, *supra* note 11, at 115 (statement of Leigh S. Ratiner). See also Miklody, *Some Remarks on the Question of the Rights of Possession of Mineral Resources of the Celestial Bodies*, PROC. 22D COLLOQUIUM ON OUTER SPACE L. 179 (1979); Vassilevskaya, *Notions of "Exploration" and "Use" of Natural Resources of Celestial Bodies*, PROC. 20TH COLLOQUIUM ON OUTER SPACE L. 473, 475 (1977).

<sup>147</sup> Moon Treaty, *supra* note 9, art. 6, para. 2.

<sup>148</sup> *Id.*

<sup>149</sup> Moon Treaty, *supra* note 9, art. 14, para. 1.

<sup>150</sup> *Id.* para. 2.

<sup>151</sup> *Id.* art. 16.

principles of the Moon Treaty when conducting activities in outer space.<sup>152</sup>

The enforcement measures of the Moon Treaty are found in Article 15. First, in order to "assure itself that the activities of other States Parties . . . are compatible with the provisions of this Agreement,"<sup>153</sup> each state-party may visit any other state-party's facilities.<sup>154</sup> Advance reasonable notice must be given "to assure safety and to avoid interference with normal operations in the facility to be visited."<sup>155</sup> Secondly, "a State Party which has reason to believe that another State Party is not fulfilling the obligations incumbent upon it pursuant to this Agreement . . . may request consultations with that State Party."<sup>156</sup> Finally, if the consultations do not lead to a "mutually acceptable settlement," the parties are to "take all measures to settle the dispute by other peaceful means of their choice."<sup>157</sup> Each state-party has the right to request the assistance of the Secretary General in resolving the dispute.<sup>158</sup>

The final articles of the Moon Treaty stipulate that the agreement will not enter into force until it has been ratified<sup>159</sup> by five countries.<sup>160</sup> Any party who so desires may withdraw from the agreement one year after its entry into force by written notification to the Secretary General.<sup>161</sup> Such withdrawal will take effect one year from the date the notification is received.<sup>162</sup>

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<sup>152</sup> *Id.*

<sup>153</sup> *Id.* art. 15, para. 1.

<sup>154</sup> *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> *Id.* para. 2.

<sup>157</sup> *Id.* para. 3.

<sup>158</sup> *Id.*

<sup>159</sup> Ratification is "the adoption by one, as binding upon himself of an act done in such relations that he may claim it as done for his benefit, although done under such circumstances as would not bind him except for his subsequent assent." BLACK'S LAW DICTIONARY 1135 (5th ed. 1979). It should not be confused with signing Nations desiring to become a party to a United Nations treaty manifest their assent in a written document which they deposit with the United Nations Secretary General. See OTA Study, *supra* note 5, at 349.

<sup>160</sup> Moon Treaty, *supra* note 9, art. 19, para. 3: "This Agreement shall enter into force on the thirtieth day following the date of deposit of the fifth instrument of ratification."

<sup>161</sup> *Id.* art. 20.

<sup>162</sup> *Id.*

### III. IMPACT OF THE MOON TREATY ON THE SPACE ACTIVITIES OF THE UNITED STATES

While the Moon Treaty would unquestionably have its most substantial impact on the space programs of the United States and the Soviet Union,<sup>163</sup> American commentators cannot agree as to what *kind* of effect the Moon Treaty would have on the prospective space operations of the United States.<sup>164</sup> Those who oppose the Moon Treaty argue that its ratification would allow developing countries to deny the United States access to valuable lunar resources.<sup>165</sup> The proponents of the agreement maintain that ratification of the Moon Treaty would enhance opportunities for exploration, research, and resource exploitation.<sup>166</sup>

Several special interest groups within the United States oppose the Moon Treaty<sup>167</sup> on the grounds that its provisions are highly

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<sup>163</sup> The United States and the Soviet Union are the only two nations which have the current financial and technological capabilities to profit from the moon's numerous benefits. See Fawcett, *supra* note 63, at 357; see also Taubenfeld, *supra* note 63, at 296.

<sup>164</sup> Burnett, *Making Sure We Get Our Share of Space*, PARADE, Aug. 31, 1980, at 16. See State Department Informal Working Paper of October 17, 1979, reprinted in COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION, AGREEMENT GOVERNING THE ACTIVITIES OF STATES ON THE MOON AND OTHER CELESTIAL BODIES 363-65 (Comm. Print 1980) [hereinafter cited as State Dept. Rep.]; Memorandum of the L-5 Society, reprinted in COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION, AGREEMENT GOVERNING THE ACTIVITIES OF STATES ON THE MOON AND OTHER CELESTIAL BODIES 366-79 (Comm. Print 1980) [hereinafter cited as L-5 Memo].

<sup>165</sup> American Bar Association, Report, with Recommendation of the Section of Natural Resources Law to the House of Delegates (unpublished report submitted to the House of Delegates at its 1980 meeting) [hereinafter cited as ABA Nat. Resources L. Section Report] United Technologies advertisement. "Stranglehold on the Moon," Washington Post, Feb. 14, 1980 at A2, col. 2. [hereinafter cited as United Tech. ad]: "[The treaty] would frustrate the access of our nation and its people to space for purposes of industrialization . . . American inventiveness and enterprise would be shut off from the industrialization of space. The pace and scope would be dictated by the political will of other countries." *Id.*; 1979 Hearings, *supra* note 11, at 110-14 (statement of Leigh S. Ratiner). See Burnett, *supra* note 164, at 16; L-5 Memo, *supra* note 164, at 377.

<sup>166</sup> Burnett, *supra* note 164; State Dep't. Rep., *supra* note 164, at 364; see 1979 Hearings, *supra* note 11, at 86 & 96 (statement of S. Neil Hosenball).

<sup>167</sup> The Moon Treaty's opposition within the United States consists of the National Association of Manufacturers, the National Ocean Industries Association, the Law of the Sea Committee of the American Branch of the International Law Association, the Aerospace Industries Association, the Natural Resources Law Section of the American Bar Association, the L-5 Society, and individual companies, including United Technologies and Kennecott Copper Corp. Several current and former Senators and Congressmen have also become actively in-

detrimental to a free enterprise system and would therefore have an *adverse* effect on America's future in space exploration.<sup>168</sup> The Moon Treaty's American adversaries have made a concerted effort to prevent the United States from committing itself to the treaty's principles and have offered three reasons for the United States to withhold signature and ratification.<sup>169</sup> They argue that the Moon Treaty would 1) create a moratorium on the commercial exploitation of extraterrestrial resources pending the establishment of an international regime to govern such exploitation, 2) establish guiding principles for the regime's formation which are inimical to the interests of private enterprise, and 3) thereby give other countries tremendous political control in regulating or prohibiting commercial exploitation.<sup>170</sup>

The first concern of the critics is that the Moon Treaty, read in its entirety, can be interpreted to imply a moratorium on the exploitation of lunar resources prior to the establishment of an international regime to govern that exploitation.<sup>171</sup> More specifically, the opposition asserts that Article 11(1), which contains the "common heritage"<sup>172</sup> concept, read in conjunction with Article 11(5), which states that the future regime should be established when the exploitation of lunar resources is about to become feasible, can be interpreted to prohibit commercial resource exploitation *until* the international regime is established.<sup>173</sup> In addition, these opponents point out that Article 6 specifically authorizes the use of lunar resources for *scientific* purposes.<sup>174</sup> The right to exploit extraterrestrial resources for *commercial* purposes, the critics observe, is noted

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volved in opposing the Moon Treaty, including former Senators Church and Javits and six other members of the Senate Foreign Relations Committee, Senator Goldwater, Congressman John Breaux, and others. OTA Study, *supra* note 5, at 319.

<sup>168</sup> See note 165 *supra*, and authorities cited therein.

<sup>169</sup> OTA Study, *supra* note 5, at 318-19; see 1979 *Hearings*, *supra* note 11, at 109-17 (Statement of Leigh S. Ratiner).

<sup>170</sup> OTA Study, *supra* note 5, at 318; see 1979 *Hearings*, *supra* note 11, at 109-18 (statement of Leigh S. Ratiner).

<sup>171</sup> See note 165 *supra*, and authorities cited therein.

<sup>172</sup> Moon Treaty, *supra* note 9, art. 11, para. 1. See notes 119-23 *supra*, and accompanying text.

<sup>173</sup> OTA Study, *supra* note 5, at 337; see 1979 *Hearings*, *supra* note 11, at 107 (Statement of Leigh S. Ratiner).

<sup>174</sup> OTA Study, *supra* note 5, at 336.

only by its absence, making it ambiguous whether such exploitation is permitted.<sup>175</sup>

Aside from the textual interpretation of the Moon Treaty, commentators opposing the agreement base their conclusions concerning the potential moratorium on lunar resource exploitation on their observations of the Law of the Sea negotiations.<sup>176</sup> The common heritage concept is a significant aspect of the draft Law of the Sea Treaty and has been more fully developed in that context.<sup>177</sup> Although interpretations of the phrase "common heritage" vary from country to country,<sup>178</sup> there has been a general consensus among developing countries that common heritage is synonymous with common property or common ownership.<sup>179</sup> The parties negotiating the Law of the Sea Treaty have decided accordingly that a temporary moratorium on the exploitation of seabed minerals is necessary to protect the vested interests of all nations.<sup>180</sup> Thus opponents of the Moon Treaty are concerned that acceptance of the same common heritage language would force the United States to accept a similar moratorium on the exploitation of lunar resources.<sup>181</sup> Critics complain that the United States has felt compelled

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<sup>175</sup> *Id.* at 320; see 1979 *Hearings*, *supra* note 11, at 115 (Statement of Leigh S. Ratiner); ABA Nat. Resources L. Sec. Report, *supra* note 165, at 7.

<sup>176</sup> OTA Study, *supra* note 5, at 320; see 1979 *Hearings*, *supra* note 11, at 102-07 (Statement of Leigh S. Ratiner); ABA Nat. Resources L. Sec. Report, *supra* note 165, at 7. The United Nations is in the process of negotiating a treaty on the Law of the Sea which would define the rights of nations in navigating the high seas and exploring or exploiting the soil or subsoil of the high seas. See generally Biggs, *Deep Seabed Mining and Unilateral Legislation*, 8 OCEAN DEV. & INT'L L.J. 223 (1980).

<sup>177</sup> OTA Study, *supra* note 5, at 320; see ABA Nat. Resources L. Sec. Report, *supra* note 165, at 7; 1979 *Hearings*, *supra* note 11, at 102-07 (Statement of Leigh S. Ratiner).

<sup>178</sup> Gorove, *The Concept of "Common Heritage of Mankind": A Political, Moral or Legal Innovation*, 9 SAN DIEGO L. REV. 390, 400 (1972).

<sup>179</sup> See *id.* Some states see the concept of common heritage as consisting of three vital elements: "common wealth, common management, and common and just share of benefits." Others refer to common heritage as "an indivisible property with fruits that can be divided. The Soviet bloc interprets the concept to mean "common ownership," which in view of the "different economic and social systems" and "different forms of ownership [is] . . . completely unrealistic." *Id.* See notes 119-23 *supra*, and accompanying text.

<sup>180</sup> OTA Study, *supra* note 5, at 320.

<sup>181</sup> *Id.* at 334. During the negotiations of the treaty, developing country representatives demonstrated their intent to interpret "common heritage" in light of the Law of the Sea experience. The Mexican representative stated in the U.N. Special Political Committee: "Regarding the treaty on the moon . . . this agree-



to make concessions with regard to deep sea mining that it does *not* have to make with respect to resource exploitation in outer space;<sup>182</sup> yet the United States allowed the Law of the Sea experience to serve as a precedent for negotiating the Moon Treaty, an attitude which "diminished [its] bargaining leverage"<sup>183</sup> and "restricted [its] negotiating flexibility."<sup>184</sup> Therefore, it is highly unlikely, the critics contend, that the developing countries would retreat from an advantageous position to allow commercial exploitation of extraterrestrial resources before a regulatory regime is formed.<sup>185</sup>

The second reason given by opponents for the United States to withhold ratification is that the treaty's guidelines for the future establishment of an international regime are incompatible with American philosophies and an inhibition on free enterprise.<sup>186</sup> Critics say that these guidelines are so vague that they easily could be manipulated in a manner that would allow the Third World countries to impose controls and limitations, extract taxes, demand technology transfers, and obtain special rights and privileges.<sup>187</sup> The "equitable sharing" clause,<sup>188</sup> which provides that special consideration is to be given those countries whose efforts contribute directly or indirectly to the exploration of the moon, is of little comfort to the treaty's critics.<sup>189</sup> A regime-controlled "equitable

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ment provided that the resources of the moon were the resources of mankind, just like the 'historic decision' on the resources of the seabed." *Id.* See 1979 *Hearings*, *supra* note 11, at 107-08 (Statement of Leigh S. Ratiner).

<sup>182</sup> OTA Study, *supra* note 5, at 325; see 1979 *Hearings*, *supra* note 11, at 115-16 (Statement of Leigh S. Ratiner); ABA Nat. Resources L. Sec. Report, *supra* note 165, at 7. Mr. Ratiner said that the United States accepted the common heritage doctrine in the context of the Law of the Sea in order to obtain the guarantee of developing countries that there would be freedom of navigation for military vessels on the high seas. *Id.* at 110.

<sup>183</sup> OTA Study, *supra* note 5, at 325.

<sup>184</sup> *Id.*

<sup>185</sup> 1979 *Hearings*, *supra* note 11, at 117 (Statement of Leigh S. Ratiner); OTA Study, *supra* note 5, at 325.

<sup>186</sup> OTA Study, *supra* note 5, at 319; see 1979 *Hearings*, *supra* note 11, at 100-17 (Statement of Leigh S. Ratiner); ABA Nat. Resources L. Sec. Report, *supra* note 165, at 4 & 5; United Tech. ad, *supra* note 165.

<sup>187</sup> See 1979 *Hearings*, *supra* note 11, at 117; OTA Study, *supra* note 5, at 270, 334, 338; United Tech. ad, *supra* note 165.

<sup>188</sup> Moon Treaty, *supra* note 9, art. 11, para. 7.

<sup>189</sup> OTA Study, *supra* note 5, at 338; Congressman John Breaux before the Center for Strategic and International Studies (Feb. 19, 1980).

sharing"<sup>190</sup> is, they argue, still an inhibition on free enterprise.<sup>191</sup> The opponents realize that private investors will feel very uncomfortable about placing so much control over their economic futures in the hands of powerful and uninterested third parties, and that they will not be satisfied with the prospect of receiving only a portion of the return on their investment.<sup>192</sup>

Closely related to the second concern, the third principal reason given by the critics for the United States to oppose the Moon Treaty is that the establishment of a future regime would give other countries the power to regulate and direct commercial use of the moon as well as the power to prohibit such use.<sup>193</sup> The critics claim that the Third World, supported by the Soviet Union, is seeking to vest control in an international regime over all natural resources which lie beyond the limits of national jurisdiction.<sup>194</sup> The establishment of this regime is regarded by some commentators as "the first step towards a fundamental redistribution of the world's wealth."<sup>195</sup>

According to several of the Moon Treaty's critics, the fundamental issues do not place mining interests in conflict with principles of international equity,<sup>196</sup> but center on the differences that exist in socio-economic philosophies:

[T]he fundamental issues involve differences over types of political systems, and types of legal and juridical systems—all of which can be argued by their advocates to be the better servants of equity. Those who view the deep seabed debate as fundamentally dealing with these systemic types of issues, it seems to me, tend

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<sup>190</sup> Moon Treaty, *supra* note 9, art. 11, para. 7.

<sup>191</sup> 1979 Hearings, *supra* note 11, at 108, 112 (Statement of Leigh S. Ratiner).

<sup>192</sup> See 1979 Hearings, *supra* note 11, at 108 (Statement of Leigh S. Ratiner); United Tech. ad., *supra* note 165.

<sup>193</sup> 1979 Hearings, *supra* note 11, at 106 (Statement of Leigh S. Ratiner); OTA Study, *supra* note 5, at 170; Congressman John Breaux, before the Center for Strategic and International Studies (February 19, 1980).

<sup>194</sup> ABA Nat. Resources L. Sec. Report, *supra* note 165, at 3. See 1979 Hearings, *supra* note 11, at 162 & 110 (Statement of Leigh S. Ratiner). See generally Jain, *An Approach to the New International Economic Order*, 19 INDIAN J. INT'L L. 544-51 (1979).

<sup>195</sup> 1979 Hearings, *supra* note 11, at 102 (Statement of Leigh S. Ratiner); United Tech. ad., *supra* note 165.

<sup>196</sup> ABA Nat. Resources L. Section Report, *supra* note 165, at 5.

not only to be correct, but also tend . . . to argue their case more effectively.<sup>197</sup>

The Moon Treaty's opponents make a special effort to argue *their* case in accordance with this belief<sup>198</sup> and corporate America has joined them. One corporation's advertisement opposing the Moon Treaty concluded with the thought: "There are sound ways to help bring the benefits of space to all people. Socializing the moon isn't one of them."<sup>199</sup>

The L-5 Society,<sup>200</sup> perhaps the most adamant of the Moon Treaty's opponents, takes great pains to rebut even the slightest justification for ratifying the agreement.<sup>201</sup> In a memorandum responding to a State Department report favorable to the Moon Treaty, the Society asserts that most of the potential benefits are already contained in the other treaties dealing with outer space, and what little the Moon Treaty does add to the existing body of space law is not of real practical value to the United States.<sup>202</sup> The memorandum states: "In short . . . the marginal advances which might be made in a few provisions are far outweighed by the enormous sacrifice that would be required of our Nation's future economic interests in space development."<sup>203</sup>

Several American special interest groups are strongly in favor of the Moon Treaty.<sup>204</sup> These proponents of the Moon Treaty firmly

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<sup>197</sup> Testimony of Richard Darman, past Vice-Chairman of the United States Law of the Sea Delegation under Ambassador Elliot Richardson and now lecturer in Public Policy and Management at Harvard University, and Chairman of the Committee on Law of the Sea of the American Branch of the International Law Association, *reprinted in* the ABA Nat. Resources L. Sec. Report, *supra* note 165, at 5.

<sup>198</sup> See 1979 *Hearings*, *supra* note 11, at 110-17 (Statement of Leigh S. Ratiner); United Tech. ad., *supra* note 165.

<sup>199</sup> United Tech ad., *supra* note 165.

<sup>200</sup> The L-5 Society is a nonprofit organization that was formed to promote the development of space. Its approximately 3,500 members reside in every state of the United States and a number of foreign countries. The society was named for Lagrange Point 5, a spot that is an equal distance from the earth and moon and thought to be particularly suitable for a permanent space station. Burnett, *supra* note 165; see OTA Report, *supra* note 5, at 268.

<sup>201</sup> See L-5 Memo, *supra* note 164, at 366-79, a point-by-point rebuttal of a State Department Report that enumerated the benefits of the Moon Treaty.

<sup>202</sup> *Id.* at 366.

<sup>203</sup> *Id.*

<sup>204</sup> Among the proponents of the Moon Treaty are NASA, the State Depart-

believe that the United States should sign and ratify the treaty not only because its provisions would have a positive effect on the United States' prospective space programs,<sup>205</sup> but also because it would be detrimental to the United States to withhold signature and ratification.<sup>206</sup> Because the Moon Treaty is meeting such strong and unexpected<sup>207</sup> opposition in the United States,<sup>208</sup> its American supporters are being forced into a more defensive role in advocating their position.

The Moon Treaty's proponents recognize that the controversy surrounding the agreement arises primarily from the provisions of Article 11 that stipulate that the moon is the "common heritage of all mankind" and provide for the future establishment of an international regime "with appropriate procedures" for regulating lunar resource exploitation.<sup>209</sup> Responding to the critics of the Moon Treaty, the agreement's advocates maintain that Article II does not impose a pre-regime moratorium on the exploitation of extraterrestrial resources.<sup>210</sup> Even if the language of the treaty itself appears to be ambiguous, the agreement's supporters demonstrate that two factors lead to the conclusion that a moratorium was neither intended nor established. First, the supporters note that the right to exploit lunar resources was recognized in Article I of the Outer Space Treaty and may have existed prior to that treaty. Therefore, they assert that Article 11, paragraph 5 of the Moon Treaty cannot be the conditional grant of a new right,<sup>211</sup> and it

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ment, the United Methodist Law of the Sea Project, and the International Law Section of the American Bar Association. See notes 104 & 106 *supra* and note 209, *infra*.

<sup>205</sup> State Dept. Rep., *supra* note 164, at 363-65. See OTA Study, *supra* note 5, at 316-18.

<sup>206</sup> Letter from Barbara Weaver, Director of the United Methodist Law of the Sea Project, to Warren Christopher (June 23, 1980). See notes 234-36 *infra*, and accompanying text.

<sup>207</sup> Telephone interview with Mr. Ted Wilkinson, Political Officer at the United Nations Mission to the United Nations (July 8, 1980).

<sup>208</sup> See notes 209-29 *infra*, and accompanying text.

<sup>209</sup> Moon Treaty, *supra* note 9, art. 11, paras. 1 & 7. See Letter from Barbara Weaver, Director of the United Methodist Law of the Sea Project, to Warren Christopher, Deputy Secretary of State (June 23, 1980); Letter from Else M. Adjali, Executive Secretary UN/International Affairs, Women's Division, to Cyrus Vance, Secretary of State (Dec. 14, 1979); Letter from Lee Kimball to Cyrus Vance (Nov. 8, 1979).

<sup>210</sup> ABA Int'l L. Section Report, *supra* note 104, at 7; see 1979 Hearings, *supra* note 11, at 82 (Prepared statement of S. Neil Hosenball).

<sup>211</sup> ABA Int'l L. Section Report, *supra* note 104, at 17.

does not purport to be a limitation on an existing right.<sup>212</sup> Secondly, the advocates for the treaty's adoption stress that the history of the negotiations indicates that the issue of whether the treaty should impose a moratorium on the exploitation of lunar resources pending the establishment of a regulatory regime was thoroughly discussed.<sup>213</sup> As the advocates point out, both the United States and the Soviet Union were opposed to the placement of a moratorium on resource exploitation,<sup>214</sup> and it was not until the developing countries backed down on this point that a final consensus on the treaty as a whole was possible.<sup>215</sup> The supporters further note that during the negotiations the United States delegate specifically addressed the moratorium question in an uncontradicted statement:

[T]he United States is not prepared to accept an express or implied prohibition on the exploitation of possible natural resources before the international conference meets and agrees on appropriate machinery and procedures and a treaty containing them takes effect. In our view, the Moon agreement cannot reasonably seek to require that exploitation must await the establishment of a treaty-based regime.<sup>216</sup>

The Moon Treaty's proponents argue that although the treaty does not specifically define the term "common heritage of mankind,"<sup>217</sup> it clearly states that the meaning is to be drawn from the provisions of the treaty.<sup>218</sup> This language, the advocates contend, is an indication that definitions of the term in any other context have no application to the term when used in the context of outer space and the moon.<sup>219</sup> Therefore, the advocates state, acceptance of the

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<sup>212</sup> *Id.*

<sup>213</sup> *Id.*; See Hosenball, *supra* note 21, at 103.

<sup>214</sup> OTA Study, *supra* note 5 at 333. For a discussion of the history of the negotiations of the Moon Treaty, see Galloway, *supra* note 10, at 27-43.

<sup>215</sup> Hosenball, *supra* note 21, at 100; 1979 *Hearings*, *supra* note 11, at 84 (Statement of S. Neil Hosenball). See 34 U.N. GAOR, Supp. (No. 20) 11, U.N. Doc. A/34/20 (1979).

<sup>216</sup> Hosenball, *supra* note 21, at 103; 1979 *Hearings*, *supra* note 11, at 86 (Statement of S. Neil Hosenball).

<sup>217</sup> Moon Treaty, *supra* note 9, art. 11, para. 1; see 1979 *Hearings*, *supra* note 11, at 96 (Statement of S. Neil Hosenball).

<sup>218</sup> Moon Treaty, *supra* note 9, art. 11, para. 1. OTA Study, *supra* note 5, at 333; see 1979 *Hearings*, *supra* note 11, at 95-96 (Statement of S. Neil Hosenball); ABA Int'l L. Sec. Report, *supra* note 104, at 6.

<sup>219</sup> OTA Study, *supra* note 5, at 333; ABA Int'l L. Section Report, *supra* note

common heritage phrase in the Moon Treaty will not commit the United States to accept a regime for lunar resource exploitation with the same requirements and procedures as the regime contemplated in the draft Law of the Sea Agreement.<sup>220</sup> Furthermore, the common heritage term, according to these commentators, does not connote specific implementing criteria or procedures.<sup>221</sup> Such criteria and procedures are to be developed at a later time in accordance with the provisions of Articles 11 and 18.<sup>222</sup>

In addressing the issues surrounding the structure and powers of the future international regime, those in favor of the Moon Treaty argue that since the establishment of such a regime is so far in the future, any prediction as to the legal framework it may provide is mere speculation.<sup>223</sup> One commentator implies that by the time our culture has the technological capabilities to exploit lunar resources commercially, the world may be so altered that the United Nations itself is no longer necessary or employed.<sup>224</sup> Thus, the argument continues, by signing and ratifying the treaty the United States is committing itself only to the obligation to negotiate in good faith the criteria and procedures of the prospective regime.<sup>225</sup> According to the treaty's proponents, the only real danger to the United States is being excluded from those negotiations because of its refusal to become a party to the Moon Treaty at this time.<sup>226</sup>

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104, at 6; see 1979 *Hearings*, *supra* note 11, at 95-96 (Statement of S. Neil Hosenball).

<sup>220</sup> ABA Int'l L. Section Report, *supra* note 104, at 5-6.

<sup>221</sup> *Id.*

<sup>222</sup> Moon Treaty, *supra* note 9, art. 11, para. 7 and art. 18.

<sup>223</sup> Jasentuliyana, A United Nations Perspective of the Moon Agreement (February 19, 1980) (paper presented at a seminar on the U.N. Moon Treaty held at the Center for Strategic and International Studies, Georgetown University), *selected portions reprinted in* OTA Study, *supra* note 5, at 323-24 [hereinafter cited as Jasentuliyana]. Nondisiri Jasentuliyana is Deputy Secretary of COPUOS. ABA Int'l L. Sec. Report, *supra* note 104, at 7. See 1979 *Hearings*, *supra* note 11, at 96-97 (Statement of S. Neil Hosenball).

<sup>224</sup> See Matte, *supra* note 2, at 258-59.

<sup>225</sup> OTA Study, *supra* note 5, at 335; ABA Int'l L. Section Report, *supra* note 104, at 7.

<sup>226</sup> Letter from Barbara Weaver, Director of the United Methodist Law of the Sea Project, to Warren Christopher, Deputy Secretary of State (June 23, 1980). "Since the Moon Treaty is likely to become a reality with or without U.S. acquiescence . . . the U.S. would be in a better position in the subsequent resources regime negotiations had it signed and ratified the treaty." *Id.* See ABA Int'l L. Section Report, *supra* note 104, at 8.

Finally, the agreement's proponents find fault with the opposition's basic assumption that the Moon Treaty is slanted towards a socialist point of view.<sup>227</sup> They agree instead with the statement of the Deputy Secretary of COPUOS:

Independent of its origins, the Agreement now represents the expression of the common collective wisdom of all Member States of the United Nations . . . [T]he few restrictions it imposes are not relevant to the social system of states operating in outer space. It would be unfair, therefore, to maintain that the end result of many years of painstaking deliberations in which the United States itself has taken a leading part provides a slant towards any one country or any one social system.<sup>228</sup>

Furthermore, since the regime is to be developed by all the nations who are parties to the Moon Treaty, it cannot be considered an exclusive or monopolistic arrangement under Third World control.<sup>229</sup>

In addition to responding to the three major arguments of the Moon Treaty's adversaries, the advocates of the agreement offer some arguments of their own. First, they assert that the Moon Treaty is merely an extension of existing legal principles governing states' activities in outer space and must be viewed in the light of the other treaties.<sup>230</sup> The proponents contend that it is a meaningful advance in the codification of international space law.<sup>231</sup> Without the appropriate legal framework in which to conduct space exploration, these commentators contend that the moon could easily become the source of international conflict, thereby causing a highly unstable environment for public or private investment.<sup>232</sup> The advocates also contend that because the Moon Treaty repeats some of the principles contained in earlier treaties, it will bind parties who have not ratified the earlier space treaties to the important princi-

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<sup>227</sup> ABA Int'l L. Sec. Report, *supra* note 104, at 8. "Pure ideology—whether based on 'common heritage' principles or on free enterprise principles—has yet to prevail in any functional international agreement." *Id.*

<sup>228</sup> Jasentuliyana, *supra* note 223, at 324.

<sup>229</sup> *Id.*

<sup>230</sup> Burnett, *supra* note 164, at 16.

<sup>231</sup> OTA Study, *supra* note 5, at 314 (where a portion of a statement made by Ambassador Richard W. Petree, U.S. Deputy Representative to the U.N. Security Council in the U.N. General Assembly Special Political Committee has been reprinted); ABA Int'l L. Sec. Report, *supra* note 104, at 11.

<sup>232</sup> See Letter from Barbara Weaver to Warren T. Christopher (June 23, 1980).

ples established by those agreements.<sup>233</sup>

Secondly, the agreement's proponents are concerned that the failure of the United States to sign and ratify the Moon Treaty will cause United States delegates to the United Nations to lose all credibility in future negotiations.<sup>234</sup> Since the United States played such a strong role in formulating and negotiating the treaty, some advocates assert that it would be highly detrimental for the United States to withhold its signature and ratification.<sup>235</sup> The United States present lack of enthusiasm for the Moon Treaty is already the cause of great confusion within the international community.<sup>236</sup>

#### IV. THE UNITED STATES' ALTERNATIVES TO RATIFICATION

From the moment that the Moon Treaty was opened for signature and ratification, the United States has had three short-term alternatives available. It could 1) ratify the agreement, 2) issue a statement opposing its terms, or 3) postpone a decision on the treaty. Since the Moon Treaty met with such strong opposition from American special interest groups, President Carter decided to take no official action.<sup>237</sup> In order to advise the President and Senate on the issues of signature and ratification, the executive branch of the United States government has subjected the treaty to a review by an interagency task force.<sup>238</sup>

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<sup>233</sup> OTA Study, *supra* note 5, at 317.

[M]any countries which may not have ratified or acceded to the earlier treaties, if they intend to obtain the rights and benefits of the Moon Treaty concerning nonterrestrial resources by ratification or adherence, must also accept the restated basic principles drawn from the earlier treaties and included in the Moon Treaty.

*Id.* See Bakotic, *Some Questions (Without Answers) Concerning Consent of States to be Bound by Treaties Governing Activities in Outer Space*, PROC. 22D COLLOQUIUM ON L. OUTER SPACE 91, 92-94 for a chart of which states are bound by each agreement.

<sup>234</sup> See OTA Study, *supra* note 5, at 318 & 346.

<sup>235</sup> See *id.* at 318.

It will most certainly cost the U.S. Government some measure of goodwill and perceived consistency, reliability, and credibility if, after [seven] years of active participation in proposing and negotiating fundamental elements of the text of this treaty, the United States walks away from it without signing.

*Id.*

<sup>236</sup> Telephone Interview with Mr. Ted Wilkinson, Political Officer of the United States Mission to the United Nations (July 8, 1980).

<sup>237</sup> See OTA Study, *supra* note 5, at 346.

<sup>238</sup> *Id.* at 347. This interagency review may contain information of a sensi-



Congress is currently in the process of developing an institutional position based on a comprehensive record compiled from Congressional hearings and extraneous reports from space experts.<sup>239</sup> Since there is some distortion in the views presented by advocates on both sides of the issue, Congress is likely to undertake a careful review of the actual United Nations records, especially the history of the negotiations over the treaty.<sup>240</sup> In addition, Congress may decide to review the final report of the interagency task force<sup>241</sup> or to organize and host a panel of series with a printed record.<sup>242</sup>

The United States government has three basic approaches that it can take in the future.<sup>243</sup> It can 1) maintain a firm position in opposition to the Moon Treaty,<sup>244</sup> 2) request that the State Department take the initiative in proposing that COPUOS develop an early protocol to the Moon Treaty to clarify and define the problematic terms and ambiguities,<sup>245</sup> or 3) develop appropriate reservations, understandings, or declarations to be incorporated into the instrument of ratification.<sup>246</sup> Along the lines of this third alternative, the International Law Section of the American Bar Association has proposed four declarations and understandings which could

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tive, classified, or proprietary nature due to the foreign policy and long-term industrial interests in this matter and is presently unavailable for general publication. *See id.*

<sup>239</sup> *Id.* at 346. Only the United States Senate has the power to ratify a treaty which would bind the United States. U.S. CONST. art. 2, § 2.

<sup>240</sup> *See* OTA Study, *supra* note 5, at 347.

<sup>241</sup> *See id.* The interagency task force report, however, may be a classified document to which Congressional leaders cannot gain access. *Id.*

<sup>242</sup> *Id.*

<sup>243</sup> *Id.* at 348.

<sup>244</sup> *Id.* This alternative would be accomplished by refusing to sign the Moon Treaty or postponing any decision for an indefinite period of time. *See id.*

<sup>245</sup> *Id.* Although there have been no subsequent protocols associated with previously adopted space treaties, protocols have been added for purposes of clarifying or elaborating international treaties at the time of their negotiation or shortly thereafter. *Id.* at 349.

<sup>246</sup> *Id.* at 349. The provisions of the Vienna Convention on the Law of Treaties allow states to include reservations, understandings, or declarations as part of the instrument of ratification. A reservation "makes a substantive change in a treaty obligation, and most commonly takes the form of a refusal to be bound by a particular article or provision." *Id.* An understanding is an interpretation of an article or provision. A declaration is a statement of policy. These qualifications are binding in international law between the United States and the accepting or non-objecting parties and are binding in United States law. *Id.*

bring the Moon Treaty into closer alignment with the United States space and foreign policies.<sup>247</sup> These declarations provide that extracted resources will be considered the property of the extractor and limit the obligations assumed by the United States in negotiating an international regime for resource exploitation.<sup>248</sup> The govern-

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<sup>247</sup> ABA Int'l L. Section Report, *supra* note 104, at 2.

<sup>248</sup> *Id.* The full text of these reservations are as follows:

(a) It is the understanding of the United States that no provision in this Agreement constrains the existing right of governmental or authorized non-governmental entities to explore and use the resources of the moon or other celestial body, including the right to develop and exploit these resources for commercial or other purposes. In addition, it is the understanding of the United States that nothing in this Agreement in any way diminishes or alters the right of the United States to determine how it shares the benefits derived from exploitation by or under the authority of the United States of natural resources of the moon or other celestial bodies;

(b) Natural resources extracted, removed or actually utilized by or under the authority of a State Party to this Agreement are subject to the exclusive control of, and may be considered as the property of, the State Party or other entity responsible for their extraction, removal or utilization;

(c) Recognition by the United States that the moon and its natural resources are the common heritage of all mankind constitutes recognition (i) that all States have equal rights to explore and use the moon and its natural resources, and (ii) that no State or other entity has an exclusive right of ownership, property or appropriation over the moon, over any area of the surface or subsurface of the moon, or over its natural resources in place. In this context, the United States notes that, in accordance with Articles XII and XV of this Agreement, States Parties retain exclusive jurisdiction and control over their facilities, stations and installations on the moon, and that other States Parties are obligated to avoid interference with normal operations of such facilities.

(d) Acceptance by the United States of an obligation to undertake in the future good faith negotiation with other States Parties of an international regime to govern exploitation of the natural resources of the moon in no way prejudices the existing right of the United States to exploit or authorize the exploitation of those natural resources. No moratorium on such exploitation is intended or required by this Agreement. The United States recognizes that States Parties to this Agreement are obligated to act in a manner compatible with the provisions of Article VI(2) and the purposes specified in Article XI(7); however, the United States reserves to itself the right and authority to determine the standards for such compatibility unless and until the United States becomes a party to a future resources exploitation regime. In addition, acceptance of the obligation to join in good faith negotiation of such a regime in no way constitutes acceptance of any particular provisions which may be included in such a regime; nor does it constitute an obligation to become a Party to such a regime regardless of its contents.

*Id.*

ment's final decision on the Moon Treaty is not expected for several years.<sup>249</sup>

## V. CONCLUSION

While it is easy to applaud the spirit behind the Moon Treaty, it is unwise for the United States to become unconditionally committed to principles that are not clearly defined and that cannot be enforced. There are several problems with the Moon Treaty in its present form. First, the Moon Treaty contains many words and phrases that are left to the subjective interpretation of the parties. "Common heritage"<sup>250</sup> and "equitable sharing,"<sup>251</sup> for example, mean different things to different countries.<sup>252</sup> Since there is no consensus on the definitions of these terms, it will be important for those who want to limit the meaning of the terms to incorporate unilateral interpretations into their instruments of ratification.<sup>253</sup>

Secondly, the Moon Treaty's basic principles are somewhat illusory. The agreement prohibits national appropriation, but leaves states' property rights virtually intact.<sup>254</sup> The commercial exploitation of lunar resources is left to the supervision of a future regime, but the regime may never be established. Parties to the Moon Treaty are required only to "undertake"<sup>255</sup> the establishment of a regime.<sup>256</sup> It is quite possible that parties with such diverse socio-economic philosophies will never be able to reach a consensus on the issue of distributing the moon's wealth. Until the parties reach an agreement and an international regime is established, those nations with the financial and technological capacity to exploit lunar resources commercially will be able to continue doing

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<sup>249</sup> OTA Study, *supra* note 5, at 346. "It is clear that there is no compelling need for the U.S. Government to act on the Moon Treaty now or in the near future." *Id.* Many experts on the Moon Treaty contacted in Washington D.C. by phone would not make any sort of statement (or prediction) as to what action Congress and the Executive Branch would ultimately take or to the timing of that action. Those contacted wished to retain their anonymity for various security purposes.

<sup>250</sup> Moon Treaty, *supra* note 9, art. 11, para. 1.

<sup>251</sup> *Id.* art. 11, para. 7.

<sup>252</sup> See notes 178 & 179 *supra*, and accompanying text.

<sup>253</sup> See notes 246-48 *supra*, and accompanying text.

<sup>254</sup> See notes 106-13 *supra*, and accompanying text.

<sup>255</sup> Moon Treaty, *supra* note 9, art. 11, para. 5.

<sup>256</sup> See notes 129-30 & 223-25 *supra*, and accompanying text.

so without any regulation whatsoever.<sup>257</sup>

Finally, the Moon Treaty's enforcement measures are neither strong nor definite enough to effectuate the treaty's purposes.<sup>258</sup> Should the United States and Soviet Union decide to ignore the treaty, the initial consultations provided for in the treaty would be inadequate to resolve the ensuing dispute,<sup>259</sup> and the other peaceful means of resolving conflicts could prove to be equally ineffective.<sup>260</sup> Although there are other countries that have started to develop their space capabilities, the United States and Soviet Union are the only nations that have both the advanced technology to take advantage of the benefits of outer space and the military strength to engage in the exploration and exploitation of outer space without restraint.<sup>261</sup>

In light of the various policy considerations to be weighed, the United States decision to postpone signature and ratification of the Moon Treaty<sup>262</sup> is probably a good one. The American government is aware that the failure of the United States to adopt the Moon Treaty after proposing a substantial portion of the text and acting as one of its principal negotiators could have a significant impact on the credibility of the United States delegation in any future space-related negotiations.<sup>263</sup> Congress, however, seems to be particularly cognizant of the need to protect American interests in extraterrestrial resource exploitation.<sup>264</sup> The best way for the United States government to strike a balance between these two positions is to ratify the Moon Treaty subject to appropriate reservations and understandings.<sup>265</sup> Thus, it is advisable for Congress to take a closer look at the proposal of the International Law Section of the American Bar Association.<sup>266</sup>

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<sup>257</sup> See notes 145 & 212-16 *supra*, and accompanying text.

<sup>258</sup> See notes 153-58 *supra*, and accompanying text.

<sup>259</sup> *Id.*; See note 156 *supra*, and accompanying text.

<sup>260</sup> Author's opinion; see notes 157-58 *supra*, and accompanying text.

<sup>261</sup> See note 163 *supra*, and accompanying text.

<sup>262</sup> See notes 12-13 & 237 *supra*, and accompanying text.

<sup>263</sup> See notes 234-36 *supra*, and accompanying text.

<sup>264</sup> See 1979 *Hearings*, *supra* note 11, at 142-71 (Statement of John Breau); OTA Study, *supra* note 5, at 265 & 319.

<sup>265</sup> See note 246 *supra*, and accompanying text.

<sup>266</sup> See notes 247-48 *supra*, and accompanying text. See also OTA Study, *supra* note 5, at 348.

