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INTERPRETING ARTICLE II OF THE OUTER SPACE TREATY

by

Wayne N. White, Jr.
Attorney at Law
1739 University Ave.
Oxford MS 38655
662-801-4515
wn_white@earthlink.net

Abstract

For many years, space lawyers have debated the meaning of Article II of the Outer Space Treaty. In particular, space lawyers have disagreed as to whether this provision prohibits "private appropriation" and private-entity ownership of real property rights. Various authors have also discussed the legality of *in situ* resource appropriation. In this article, the author analyzes these issues and offers his opinions on the legality of such activities under the terms of the Outer Space Treaty.

Introduction

98 nations are currently party to the 1967 Outer Space Treaty,[1] including the following spacefaring nations: Brazil, China, India, Japan, Russia, the United Kingdom, the United States, and the nations of western Europe.[2] Article I of the Outer Space Treaty says, among other things, that "Outer Space, including the moon and other celestial bodies, shall be free for exploration and *use* by all states without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies" (emphasis added).[3] Article II of the Outer Space Treaty says that "Outer Space, including the moon and other celestial bodies, is not subject to *national appropriation* by claim of sovereignty, by means of use or occupation, or by any other means" (emphasis added). For many years, space lawyers have debated whether Article II prohibits "private appropriation" and private-entity ownership of real property rights. Taken together, Articles I and II have implications regarding the legality of use and appropriation of extracted resources.

In recent years several private organizations have been selling deeds to real property on the Moon and other celestial bodies,[4] while the Archimedes Institute has established a registry of claims to property in outer space on an internet web site.[5] Two other internet sites promote legal initiatives for the award of property rights or the recognition of property claims beyond the limits of national

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jurisdiction.[6] None of these commercial endeavors or legal initiatives require claimants to actually establish a permanent human presence or facility in the area claimed prior to the time when "title" is granted.

These real property endeavors and initiatives have generated controversy regarding the meaning of Article II. In this paper, the author interprets Articles I and II with respect to public and private-entity use and appropriation activities, including real property rights, and public and private use of *in situ* resources.

Real Property Rights

This author has written three previous articles concerning real property rights: *Real Property Rights in Outer Space*,[7] *Implications of a Proposal for Real Property Rights in Outer Space*,[8] and *Proposal for a Multilateral Treaty Regarding Jurisdiction and Real Property Rights in Outer Space.*[9] Other IISL members who have written about real property rights include Virgiliu Pop[10] and co-authors Patricia Sterns and Leslie I. Tennan.[11]

Clearing Up Some Misconceptions

The most prominent seller of real property deeds and titles is the Lunar Embassy, which was founded by Dennis Hope. The Lunar Embassy's web site states that "Well, in 1980, a very bright, young and handsome Mr. Dennis Hope, went to his local US Governmental Office for claim registries, the San Francisco County Seat, and made a claim for the entire lunar surface, as well as the surface of all the other eight planets of our solar system and their moons (except and the sun). Obviously, he was at first taken for a crackpot, until, 3 supervisors, 2 floors and 5 hours later, the main supervisor accepted, and registered his claim."[12]

Mr. Hope's narrative cannot be correct, however, because there is no such thing as a "US Governmental Office for claim registries." To the best of the author's knowledge, local government offices in the United States have no authority whatsoever to perform official services or render opinions on behalf of the United States federal government. The author believes that Mr. Hope probably prepared a written claim over the Moon and other celestial bodies in the solar system and then had the *County Recorder* for San Francisco County *record* that document. The discussions Mr. Hope had with various supervisors were undoubtedly because their office was not sure whether the claim document was the type of document that they could accept for recordation.

In the United States, the only purpose of recording a document at a county recorder's office is to prove that a document was prepared and executed on or before the recordation date, and to provide a permanent, public copy which the recorder can subsequently duplicate and certify as authentic upon payment of a fee. If the supervisor of the County Recorder's office agreed to record the document, it does not mean that either the US federal government or the San Francisco County government has decided that Mr. Hope's claim is valid. In the United States, only the courts can determine whether an interest in property is valid.

It follows from the preceding discussion that, to the best of the author's knowledge, United States federal, state and local governments have not taken any action which could be considered as an endorsement, approval or

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determination that Mr. Hope's claims have any legal validity or legitimacy under US law. Note also that the Lunar Embassy site does not cite any United States federal, state or local laws which would authorize sales of real estate in outer space or on celestial bodies, or which would establish a US registry of claims to areas of outer space. The author is not personally aware of any such laws in the United States or any other nation.

Does Article II Prohibit "Private Appropriation"?

In a private communication with the author, some space lawyers have asserted that many COPUOS delegates did not consider private participation in space activities to be feasible at the time when the Outer Space Treaty was drafted, and hence largely irrelevant to the drafting of the treaty. They say that the absence of any reference to private appropriation in Article II was just one manifestation of an absence of references to private parties, and not a specific exception to the general non-appropriation rule. They believe that private participation in outer space activities was not considered at all during Treaty negotiations.[13]

For several reasons, the author disagrees with these assertions. First, members of professional organizations clearly considered private space activities foreseeable at the time when the Outer Space Treaty was negotiated. In a draft treaty prepared in 1965-66, the International Institute of Space Law recommended that Article II specifically include a prohibition against "private appropriation": "Celestial bodies or regions on them shall not be subject to national *or private appropriation*, by claim of sovereignty, by means of use or occupation, or by any other means"(emphasis added)[14] One must assume that this draft treaty was transmitted to the COPUOS Legal Subcommittee, as the preamble says: "Intending to assist the general codification aims of the UN Charter and the efforts of the UN Committee on the Peaceful Uses of Outer Space concerning Celestial Bodies."[15] The Institute de Droit International also prepared a draft treaty which recommended prohibition of "any kind of appropriation."[16] This draft, along with two other draft treaties prepared by the International Law Association and the David Davies Memorial Institute of International Studies were apparently considered by the COPUOS Legal Subcommittee as well.[17]

Secondly, the Outer Space Treaty *does* specifically refer to private activities. The Soviet Union initially argued that space activities should "be carried out solely and exclusively by states,"[18] but the U.S. refused to accept that provision.[19] As a compromise, the United States proposed,[20] and the U.S.S.R. accepted,[21] the clause in Article VI which says that "[s]tates... shall bear international responsibility for national activities... whether such activities are carried on by governmental... or... *non-governmental entities*" (emphasis added).

Finally, the negotiating history of the Outer Space Treaty indicates that the United States, Great Britain, France, and Canada considered private activities both foreseeable and important, as reflected in their delegates' statements. In fact, private companies had already been formed to exploit the commercial facets of outer space when the treaty was negotiated. The best recitation of these facts is set forth in an article by J. F. McMahon, a fellow of Hertford College, Oxford, who, in

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1963, wrote the following regarding the Soviet Union's Draft Declaration of the Basic Principles Governing the Activities of States Pertaining to the Exploration and use of Outer Space:

"Another basic and vital division of opinion concerned the question whether private corporations and international organizations, as well as States, might launch satellites and conduct activities in space. Paragraph 7 of the Soviet draft declaration of basic principles regulating outer space stipulated that: 'All activities of any kind pertaining to the exploration and use of outer space shall be carried out solely and exclusively by states . . . .'"[22]

"It is hardly surprising that Great Britain, France, Canada and America were vigorously opposed to such a provision. In Great Britain and America private companies have already been formed to exploit the commercial facets of outer space. The same countries, in order to facilitate a solution to the liability problem, would also seem to favour some system of licensing between States and private companies. International organizations, for example, the European Launcher and Development Organization and the European Space Research Organization, have already been established to achieve in a corporate manner what might be difficult for each State individually "[23]

Omitted footnotes in Dr. McMahon's article include specific quotes of the British, French and United States' delegates explaining their opposition to Paragraph 7 of the Soviet draft with citations to the United Nations documents in which they are recorded.[24]

On the basis of these facts, the author believes that the delegates that negotiated the Outer Space Treaty either deliberately chose to not include the phrase "private appropriation" in the language of Article II, or were unable to arrive at a consensus that such language should be included, perhaps because inclusion of the phrase might call into question the legality of private appropriation of extracted resources. This later interpretation is supported by the following quotes: "[i]n the discussions leading to the conclusion of the [Outer Space] treaty, France indicated more than once that she was not altogether satisfied with the wording of Article II . . . ." France's representative was "thinking in particular of the risks of ambiguity between the principle of non-sovereignty-- which falls under public law-- and that of non-appropriation, flowing from private law."[25]

In the original (long) version of the author's article *Real Property Rights in Outer Space*, he interpreted Article II as follows: "Outer space, including the moon and other celestial bodies is not subject to national [excluding private] appropriation, by claim of [territorial and not functional] sovereignty, by means of use or occupation or by any other means.[26] Twenty years later, his interpretation remains the same.

Are Space Deeds Valid? Are Real Property Rights Prohibited by Article II?

Because the language of Article II only refers to "national appropriation" and not private appropriation, this raises the question whether Article II prohibits private appropriation of territory and the more formal legal institution of real property rights. As the author explains in his article *Real Property Rights in Outer Space*, the Outer Space Treaty only permits

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states to exercise jurisdiction over their space objects, personnel, and arguably, zones of safety in the vicinity of their space objects and in areas where their citizens are conducting ongoing, significant activities. States have no jurisdiction or authority over any other areas of outer space or celestial bodies,[27] and therefore cannot grant or recognize permanent, immovable property rights in those areas. Granting or recognizing such rights beyond the limits of national jurisdiction, and thereby subjecting said areas to national jurisdiction, would violate Article II of the Outer Space Treaty because it would constitute "national appropriation . . . by any other means."[28] Depending on the size of the claimed area, granting or recognizing such property rights might also violate Article I, paragraph 2 of the Outer Space Treaty, which says that "Outer Space and celestial bodies shall be free for exploration and use by all states . . . ."

In the author's opinion, Treaty drafters intended that Article II would prohibit claims and exercise of territorial sovereignty by states party to the Treaty. Many prominent space lawyers who belong to the Institute have expressed the same opinion.[29] From a US perspective, one other authority on this point provides particular insight. Arthur J. Goldberg, then U.S. Representative to the General Assembly and principal U.S. negotiator of the Outer Space Treaty, made the following statements in United Nations Committee I (Political and Security) and in plenary session:

"[Outer Space Treaty Article I] goes on to make clear that the exploration and use of outer space shall be the right of all states without any discrimination and on a basis of equality. This and other provisions, *particularly that which prohibits claims of territorial sovereignty*, make clear the intent of the treaty that outer space and celestial bodies are open not just to the big powers or the first arrivals but shall be available to all, both now and in the future. This principle is a strong safeguard for the interests of those states which have, at the present time, little or no active space program of their own". (emphasis added).[30]

This quote enunciates what the author believes is the primary concern of those members of the Institute who insist that Article II of the Outer Space Treaty prohibits private appropriation as well as national appropriation: a concern that private appropriation of territory will result in *de facto* control of outer space by those nations that have the capability to develop and settle outer space first. The author believes that these fears are unfounded. He is not aware of any serious, informed lawyers from any nation who argue that states party to the Outer Space Treaty have a right to confer or recognize real property rights which involve any exercise of national jurisdiction over extraterrestrial territory. The only people who make such assertions are uninformed individuals who are neither trained in nor adequately knowledgeable about international space law.

In his article *Real Property Rights in Outer Space*, the author proposes a form of quasi property rights based upon the jurisdiction and control conferred by the Outer Space Treaty. The author further developed this proposal in *Implications of a Proposal for Real Property Rights in Outer Space* and *Proposal for a Multilateral Treaty Regarding Jurisdiction and Real Property Rights in Outer Space*. The author's principal purpose in developing this proposal was to bring the economic efficiency and benefits of real property rights

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to outer space while retaining the prohibition of territorial sovereignty in Article II of the Outer Space Treaty. The result is a new form of quasi property rights which are in reality a delegation of jurisdictional authority from Treaty parties to their national citizens. "Traditional" property rights, on the other hand, flow from and are based upon territorial sovereignty. Because they are based upon national jurisdiction over space objects and personnel, the author's proposed quasi property rights are moveable, as opposed to "traditional" property rights, which are immovable because they are tied to territory.

Some space lawyers believe that neither the US laws on private ownership of immovable property, nor any other national laws on such issues could ever apply to the moon or other celestial bodies.[31] However, many national property laws could be adapted to movable, non-permanent "property rights" such as those which the author has proposed, without requiring or providing a legal basis for permanent, immovable property rights. The author would therefore conclude that states party to the treaty cannot apply their laws on private ownership of real property, or any other national laws on such issues, to the moon and other celestial bodies, *to the extent that said laws would either explicitly or implicitly grant or recognize permanent rights in immovable property.* The terms of the Outer Space Treaty *do not* prohibit adaptation and extension of terrestrial property laws to *moveable* space objects, personnel and associated safety zones.

Does Sale of Space Deeds Constitute Fraud?

The fact that states party to the Outer Space Treaty cannot confer or recognize "traditional" real property rights leads one to question the validity of space property deeds. Do private entities that sell such deeds perpetrate a fraud upon purchasers? The author would submit that sales of such deeds may well constitute fraud, to the extent that the deeds convey title to territory beyond the limits of national jurisdiction, which the sellers represent as valid under national and international law.

The Lunar Embassy's main web site says that sale of Lunar Embassy deeds do not constitute fraud, and cites the silence of the United States and Russian governments, and the United Nations, as evidence that their deeds are valid. However, the web site, and possibly the deeds that the Lunar Embassy issues, state that the deeds are a "novelty gift." The web site says that their lawyers explained to them 23 years ago that labeling the property deeds as novelty gifts "can help avoid any frivolous lawsuits from a foreign country." However, the same section goes on to say that "this does not diminish the value of the property that you purchase in any way, as every deed is recorded and registered in the Lunar Embassy's registration database and every owners information is listed with that registration. *You own this property*" (emphasis added).[32]

Note that the main (US) Lunar Embassy web site does not prominently display an explanation that the deeds are only intended as novelty gifts. A person viewing the web site would have to search for and read the "General FAQ" (Frequently Asked Questions) to find that statement. The author questions

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whether a single statement that the deeds are novelty gifts, on a single web page, on a web site comprised of many web pages, constitutes adequate notice to purchasers of the true nature of their deeds. The adequacy of that notice is even more questionable given the statement *"You own this property."*

Because the Lunar Embassy deeds purportedly convey title to immovable real property, because states party to the Outer Space Treaty have no jurisdiction to confer or recognize such titles, because neither the United States nor any other nation has enacted laws regarding real property rights in outer space, and because private entities are not subjects of public international law, the Lunar Embassy has no authority to issue deeds or convey title to territory on celestial bodies or in outer space. The mere fact that Article II of the Outer Space Treaty does not prohibit "private appropriation" does not give private entities authority to confer or recognize titles to immovable real property. Furthermore, despite the Lunar Embassy's assertions, the silence of national governments and the United Nations cannot provide a legal basis for Dennis Hope's claim that he owns celestial bodies.[33]

Given the statement that its deeds are novelty gifts, and the differing definitions of fraud under various nations' legal systems, the author cannot conclusively say that the Lunar Embassy has perpetrated a fraud upon its customers. Other sellers of space deeds are more likely guilty of fraud, because several of those do not have "novelty" or other disclaimers.

What Action, If Any, Should Authorities Take?

Owners of space deeds, people who have registered claims on the Archimedes registry, and people asserting historical claims cause a certain amount of legal risk and uncertainty for prospective space entrepreneurs and their investors, and for prospective space settlers. Until such time as the law is clarified through national legislation and/or treaty law, there will always be a threat that deed owners and other claimants will file administrative claims and lawsuits against other entities that conduct activities or place space objects in outer space or on celestial bodies.

In fact, claimants have already sought administrative remedies and filed lawsuits. In 1997 three Yemeni gentlemen filed suit in a Yemen court alleging that Mars had belonged to their ancestors for 3000 years. They sought redress against NASA for trespassing on their property during the course of a Mars mission. The Yemeni men dismissed their suit when the prosecutor general threatened them with arrest. In another case, an Italian woman discovered that the Lunar Embassy had sold the same two plots that she purchased from a company called Celestial Gardens, and in September 2000 she reportedly sued for fraud and petitioned the White House and the United Nations.[34] The author does not know the outcome of that case.

In a more recent lawsuit, US citizen Gregory Nemitz sued NASA and the US State Department based upon a claim over the asteroid Eros, which Mr. Nemitz registered with the Archimedes Institute registry.[35] In the suit, Mr. Nemitz seeks a parking/storage fee from NASA for landing the NEAR

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spacecraft on the asteroid. He also seeks a declaratory judgment, alleging that NASA and the State Department unlawfully denied him property rights guaranteed by the United States Constitution.[36] The outcome of that case is still pending as this article is written, but the author would expect the US District Court to dismiss the case at an early stage of the proceedings.

Of particular interest in this case are the NASA and State Department responses to Mr. Nemitz' requests for administrative remedies prior to filing the lawsuit. In a letter dated April 9, 2001, then General Counsel of NASA Edward Frankle said the following:

"Your individual claim of appropriation of a celestial body (the asteroid 433 Eros) appears to have no foundation in law. It is unlike an individual's claim for seabed minerals, which was considered and debated by the U.S. Congress that subsequently enacted a statute, The Deep Seabed Hard Mineral Resource Act, P.L. 96-283, 94 Stat. 553 (1980), expressly authorizing such claims. There is no similar statute related in outer space.

Accordingly, your request for payment of a 'parking/storage fee' is denied. In taking this action NASA does not need to and does not take any position on whether the requirements of the Outer Space Treaty of 1967 apply to private individuals, or whether the Treaty should be amended for this purpose. Your claim depends on the establishment and validity of your ownership of asteroid 433. On the basis of the evidence provided, including your admission that the Archimedes Institute does not have legal authority to confer property rights, you have not established a legal right to any payment. Therefore, NASA has no authority to use its appropriated funds to pay your claim."[37]

In a letter dated August 15, 2003, Ralph L. Braibanti, the Director of Space and Advanced Technology in the Department of State's Bureau of Oceans and International Environmental and Scientific Affairs, wrote: "We have reviewed the 'Notice' dated February 13, 2003, that you sent to the U.S. Department of State. In the view of the Department, private ownership of an asteroid is precluded by Article II of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty of 1967). Accordingly, we have concluded that your claim is without legal basis."[38]

The preceding quotes seem to indicate that the views of NASA and the US State Department are consistent with the author's analysis. In light of what appears to be an international consensus regarding the illegality of "traditional" property rights, it seems unlikely that any informed national court would ever declare space deeds or other claims to immovable property valid. Nonetheless, administrative claims and lawsuits are a nuisance, entail defense costs, and may deter investment. What action should national authorities take in order to ameliorate or eliminate these impediments to space activity? Do the terms of the Outer Space Treaty obligate state parties to take action?

One course of action would be for state parties to file lawsuits against sellers of space deeds, educating the judiciary and establishing legal precedents in the process. Because space deeds and other property claims present the prospect of nuisance, defense costs and deterred investment, some may argue that

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state parties have an obligation to take legal action against purveyors of space deeds. That obligation would flow from Article VI of the Outer Space Treaty, which makes state parties internationally responsible for any activities of their citizens or other non-governmental entities in outer space and on celestial bodies, and requires state parties to authorise and continuously supervise those activities.

However, the author believes that nations which prosecute fraud suits will either be unsuccessful or find the cases not worth the cost of prosecution. Prospective fraud suits suffer from several possible infirmities. Because space deeds generally cost very little, the author suspects that most purchasers know that they are buying a mere novelty, and expect that the deeds will be nothing more than an interesting conversation item. The United States Lunar Embassy sells its space deeds for US $19.99 ("Normal Deed") and US $22.49 ("Deed with your name printed on it").[39] Other purveyors sell their deeds for small sums of money as well. Note that in the one instance where a citizen of the Netherlands sold space property for exorbitant amounts with no disclaimer, the perpetrator was promptly prosecuted for fraud.[40] The author does not know the outcome of that case or whether the court addressed issues of international space law.

Another weakness of prospective fraud suits is that victims of the allegedly fraudulent sales only suffer limited damages. The author would not expect courts to grant any remedy other than refund of the amounts that claimants spent on their deeds, and possibly, if requested, an injunction stating that the seller was prohibited from further sales of deeds until such time as their web site and other promotional materials prominently and unequivocally state that the deeds are sold as novelty gifts only. Because the prospects of succeeding in lawsuits against deed sellers are doubtful, and because the practical outcome of such suits might not produce any result other than limited monetary damages and a change of language on their web sites, the author does not believe that nations have been remiss in failing to take legal action. In the author's opinion, the best justification for such suits would be to clarify the law and establish a legal precedent. In the United States, Mr. Nemitz' suit may accomplish that purpose.

Aside from the issue of fraud, one might argue that deed owners and other claimants prospectively interfere with space activities such that Article IX of the Outer Space Treaty is invoked. Article IX says that "States Parties to the Treaty shall be guided by the principle of co-operation and mutual assistance . . . .," and also says "A State Party to the Treaty which has reason to believe that an activity or experiment planned by another State Party in outer space, including the moon and other celestial bodies, would cause potentially harmful interference with activities in the peaceful exploration and use of outer space, including the moon and other celestial bodies, may request consultation concerning the activity or experiment." In the author's opinion, consultations pursuant to Article IX, with the aim of amicably resolving mutual issues of concern, would be a productive way for states to proceed. Consultations might result in statutory language which states parties to the Treaty could enact uniformly, and possibly even a treaty which would expand upon Articles II and VIII of the Outer Space Treaty. This would be a very positive result for all concerned.

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Resource Appropriation

If the terms of the Outer Space Treaty effectively prohibit immovable real property rights, what is the relevance of the term "private appropriation" with respect to Article II? Is it even necessary to determine whether Article II prohibits "private appropriation"?

First, the author believes that it is very wrong for academics to assert that the negotiators of the Outer Space Treaty intended to prohibit private appropriation, or did not even consider including the term, when the facts undeniably indicate otherwise. Academics should not attempt to rewrite history in order to support their views. Secondly, any conclusion regarding inclusion or exclusion of the term "private appropriation" in Article II has important implications with respect to resource appropriation. Analysis of those issues follows.

Is Private Resource Appropriation Prohibited by the Outer Space Treaty?

A broad interpretation of the term "private appropriation" would include both private appropriation of territory and private appropriation of extracted resources. However, the overwhelming majority of space lawyers regard private appropriation of extracted resources as permissible under the terms of the Outer Space Treaty. Ogunsola Ogunbanwo and Stephen Gorove are two prominent space lawyers that have expressed this opinion, in addition to other authors.[41] Another prominent space lawyer, D. Goedhuis, had the following to say in this regard:

"Art. II of the Treaty provides that outer space, including the moon and other celestial bodies, is not subject to national appropriation. Whereas this article has prohibited the appropriation of areas of outer space it is silent on the appropriation of resources. Although a number of commentators have contended that the appropriation of resources by a State would violate the 'benefit clause' contained in Art. I (1), the great majority of States, including the two Space Powers, consider the *de lege lata* appropriation of the natural resources of outer space, by analogy with the present rules underlying the freedom of the seas, merely forms part of the freedom of that space for exploration and use, a freedom which has been confirmed by the Treaty. Nothing has been said in the Treaty about the sharing or management of these resources.[42]

In his book THE MODERN INTERNATIONAL LAW OF OUTER SPACE, Professor Carl Christol sets forth the results of his detailed research regarding "the terms of Article 1, the meaning accorded to the words of the agreement at the time of its negotiation, the meaning assigned by publicists both contemporaneously with the negotiation of the agreement and recently, the practices of the space-resource States both prior to and following the entry into force of the Treaty, and the denials addressed to the claims put forward in 1976 by eight equatorial States. . ." [43] Because of the length of the analysis, that passage is not reproduced here. Fortunately, Professor Christol has provided us with a more succinct statement of his conclusions in another publication:

"In a larger context it is relevant to observe that international law does contain specific prohibitions against certain forms of conduct, but that in the absence of such prohibitions

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both States and other juridical and natural persons are entitled to engage in conduct without its being described as unlawful. Since Article 2 of the Principles Treaty did not prohibit the private use and exploitation of natural resources, and since one of the purposes of Article I was to allow for the sharing of benefits derived from the exploration and use of the space environment, it may be concluded that private persons were in effect encouraged to engage in private space activities. Such conduct would fit into the expectations fortified by the *res communis* concept in its joint application to the conduct of States, international organizations, and private natural and juridical persons. The absence of any prohibition on the private use and exploitation of the natural resources of the moon and other celestial bodies in the Principles Treaty must, therefore, allow such space activity to take place, unless such activity is prohibited under other norms of international law. None appear to exist.

The terms of Article 2 of the Principles Treaty restrict only national appropriation of spatial areas. Thus, to the extent that states, pursuant to Article 6 of that Treaty, authorize private legal persons to engage in exploitative activity regarding the natural resources of such spatial areas, such private activity would be permissible under both municipal laws and international law. If the drafters of the Principles Treaty had wished to bar the exploitation of the natural resources of the moon and other celestial bodies by private legal persons, or if they had wished to prevent the acquiring of private property rights in such materials, they could have done so. The fact that such rights to exploit and to establish property rights in such natural resources were not specifically granted to private persons cannot serve to deny such claims when they are put forward. Nonetheless, in the search for legal security it is always preferable to have reliance on specific grants of authority. This fact influenced the governments holding membership in COPUOS to begin the preparation of an international agreement on this subject in 1970."[44]

As most readers are well aware, the international agreement that Professor Christol refers to was eventually finalized as the 1979 Moon Treaty.[45] That agreement specifically prohibits real property rights, except perhaps under the auspices of the "international regime" established by the treaty, and mandates "an equitable sharing by all States Parties in the benefits derived from those resources, whereby the interests and needs of the devloping countries, as well as the efforts of those countries which have contributed either directly or indirectly to the exploration of the moon, shall be given special consideration."[46] The overwhelming majority of the world's nations decided not to become party to that treaty, including all of the spacefaring nations.[47] In light of the fact that there is no widely-accepted international agreement which governs resource appropriation any more specifically than the Outer Space Treaty, the author concludes that for all nations which are not party to the Moon Treaty, private and commercial appropriation of natural resources is permissible in outer space. The author bases this conclusion on the terms of the Outer Space Treaty, the previously-cited authorities, and in particular the detailed research and analysis performed by Professor Christol.

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Is Public Resource Appropriation Prohibited by The Outer Space Treaty?

The analysis with respect to public appropriation of resources is slightly different. In this instance, there is a tension between the Article II prohibition of "national appropriation," and the Article I agreement that state parties may "use" outer space and celestial bodies. Does "use" of resources ever rise to the level of "national appropriation"? The language and terms of the Outer Space Treaty provide no real guidance.

The quotations from the work of Prof./Dr. Goedhuis and Professor Christol in the preceding section do assist us in this regard, however. Prof./Dr. Goedhuis says: "Whereas [Article II] has prohibited the appropriation of areas of outer space it is silent on the appropriation of resources."[48] Similarly, Professor Christol says: "The terms of Article 2 of the Principles Treaty restrict only national appropriation of spatial areas." These statements are consistent with the opinions of other prominent space lawyers,[49] including the author's opinion above that "Treaty drafters intended that Article II would prohibit claims and exercise of territorial sovereignty by states party to the Treaty."

Because Article II only prohibits national appropriation of spatial areas and the exercise of territorial sovereignty over such areas, one must conclude that public entities can appropriate natural resources in outer space and on celestial bodies, so long as their activities do not involve any permanent claims to, appropriation of, or exercise of authority over the areas in which resources are appropriated. Note that space objects and personnel occupy locations in outer space and on celestial bodies on a first-come, first-served basis,[50] and Article IX prohibits other nations and their private entities from interfering with activities at that location. Thus, public entities can appropriate resources without interference from other entities, but once a public entity ceases resource appropriation activities and removes facilities from the area, the entity loses all rights with respect to the area in question (*i.e.* it has no permanent rights). The same rules would apply to private resource appropriation.

Conclusion

In the author's opinion there are sufficient facts to support a conclusion that Article II of the Outer Space Treaty does not prohibit private appropriation. However, the Outer Space Treaty only permits states to exercise jurisdiction over their space objects, personnel, and zones of safety in the vicinity of their space objects and in areas where their citizens are conducting ongoing, significant activities. States have no jurisdiction or authority over any other areas of outer space or celestial bodies, and therefore cannot grant or recognize permanent, immovable property rights in those areas. Granting or recognizing real property rights beyond the limits of national jurisdiction, and thereby subjecting said areas to national jurisdiction, would violate Article II of the Outer Space Treaty because it would constitute "national appropriation . . . by any other means."

States party to the treaty cannot apply their laws on private ownership of real property, or any other national laws on such issues, to the moon and other celestial bodies, to the extent that those laws would either explicitly or implicitly grant or recognize permanent rights in immovable property. The terms of the

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Outer Space Treaty do not prohibit adaptation and extension of terrestrial property laws to *moveable* space objects, personnel and associated safety zones.

To the best of the author's knowledge, United States federal, state and local governments have not taken any action which could be considered as an endorsement, approval or determination that space deeds or other claims to celestial bodies have any legal validity or legitimacy under US law. Sales of space deeds may well constitute fraud, to the extent that the deeds convey title to territory beyond the limits of national jurisdiction, which the sellers represent as valid under national and international law. Because the prospects of succeeding in lawsuits against deed sellers are doubtful, and because the practical outcome of such suits might not produce any result other than limited monetary damages and a change of language on their web sites, the author does not believe that nations have been remiss in failing to take legal action.

Consultations pursuant to Article IX of the Outer Space Treaty, with the aim of amicably resolving mutual issues of concern, would be a productive way for states to proceed with respect to real property rights. Consultations might result in statutory language which states party to the Treaty could enact uniformly, and possibly even a treaty which would expand upon Articles II and VIII of the Outer Space Treaty. This would be a very positive result for all concerned.

The overwhelming majority of space lawyers regard private appropriation of extracted resources as permissible under the terms of the Outer Space Treaty. There is no widely-accepted international agreement which governs resource appropriation any more specifically than the Outer Space Treaty, so the author concludes that for all nations which are not party to the Moon Treaty, private, commercial appropriation of natural resources is permissible in outer space.

Public entities can appropriate resources so long as their activities do not involve any permanent claims to, appropriation of, or exercise of authority over the areas in which resources are appropriated. Public and private entities can appropriate resources without interference from other entities, but once an entity ceases appropriation activities and removes facilities, the entity loses all rights with respect to the area in question. Although entities have no permanent rights with respect to any area of outer space or celestial bodies, quasi property rights based on jurisdiction could provide a market mechanism which would operate in a manner substantially identical to "traditional" property rights, with all the economic efficiencies of that institution.

The opinions expressed by the author herein do not constitute legal advice or representation. If any individuals or other private entities have any question about the legality of their business activities, they should consult an attorney or other properly licensed legal professional and obtain formal representation if necessary.

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27. *E.g.* Bin Cheng, *The Extra-Terrestrial Application of International Law*, 1965 CURRENT LEGAL PROBS. 132, 142 (1965). Therein Professor/Dr. Cheng said:

"Thus, until and unless territorial sovereignty has been established and recognised in outer space or on celestial bodies, no State will be entitled to exercise territorial jurisaction there. In the absence of territorial jurisaction, quasi-territorial jurisaction becomes supreme. None but the flag-State, however, is entitled to exercise quasi-territorial jurisaction over any spacecraft, or persons and things on board them, extra-terrestrially. If such persons are not subject to the quasi-territorial jurisaction of any State, then only the national State may normally exercise personal jurisaction over them. Any attempt to exercise jurisaction in outer space on celestial bodies in excess of these limits will be an infringement of the right of either the flag-State or the national State of the individual, as the case may be, and a violation of international law."

28. Virgiliu Pop agrees with the author in this respect. He says that "State endorsement of private appropriation [of spatial areas] would be a form of national appropriation." Virgiliu Pop, *supra*, note 4, at 199.

29. *E.g.* Manfred Lachs, THE LAW OF OUTER SPACE 42-43 (1972)(interpreting the language of Article II as referring to the various methods of perfecting a claim of territorial sovereignty); Cestmir Cepelka and Jamie H. C. Gilmour, *The Application of General International Law in Outer Space*, 36 J. AIR L. & COMMERCE 30, 35 (1970) ("Since article II of the Treaty clearly means nothing more than non-acquisition of territorial sovereignty, there can be no territorial

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jurisdiction over any part of outer space, including celestial bodies."); Stephen Gorove, *Sovereignty and the Law of Outer Space Re-Examined*, 2 ANNALS OF AIR & SPACE L. 311, 321 (1977) ("As a final thought one would perhaps - with some caveat - draw the conclusion that the traditional aspects of territorial sovereignty are the ones that have been abolished in relation to outer space but the functional aspects of sovereignty, the exercise of sovereign rights and similar manifestations continue to be recognized. The one caveat to the preceding statement appears to be the state's exercise of its exclusive authority over a station (settlement, habitat) built in free space, particularly out of materials originating from the Earth."); *see* Martin Menter, *Commercial Participation in Space Activities*, 5 J. SPACE L. 53, 65 (1981) ("Disclaimer of sovereignty over the moon and other celestial land masses was intended to obviate possible conflicts over 'territorial claims' . . . .").

30. DEPT. OF STATE BULLETIN, January 9, 1967, p. 81.

31. *Supra*, note 13.

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33. Virgiliu Pop, *supra*, note 4, at 200 (and citations therein).

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35. Nemitz v. US Dept. of State, NASA, US Dist. Court for the Dist. of Nevada, Case No. CV-N-03-0599-HDM-RAM (filed with the Court Nov. 6, 2003).

36. http://www.erosproject.com/legal.html?source=ErosProject (and links therein) (accessed Nov. 11, 2003).

37. http://www.orbdev.com/010409.html (accessed Nov. 11, 2003).

38. http://www.erosproject.com/030824.html (accessed Nov. 11, 2003).

39. http://www.lunarembassy.com/ (select country, then click on "buy now" at top of page) (accessed Nov. 12, 2003).

40. The Netherlands ambassador of the Lunar Embassy was selling deeds for US $1,600.00 and failed to deliver deeds to purchasers. http://www.cbsnews.com/stories/2003/02/03/national/main539148.shtml (look for item entitled "Lunar Real Estate Agent Jailed")(accessed Nov. 11, 2003).

41. Stephen Gorove, *Implications of International Space Law for Private Enterprise*, 7 ANNALS AIR & SPACE L. 319, 323 (1982) ("Article II of the Outer Space Treaty places a ban on national appropriation of outer space, including the moon and other celestial bodies, by any means. While

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the sweeping language of this article could have been interpreted to relate both to area as well resources, the United Nations Committee on the Peaceful Uses of Outer Space has not regarded Article II as a ban on appropriation or exploitation of natural resources. If it had, then the long debated issue whether the Moon Agreement would place a moratorium on the exploitation of natural resources would have been meaningless."); Alan Duane Webber, *Extraterrestrial Law on the Final Frontier: A Regime to Govern the Development of Celestial Body Resources*, 71 GEO. L. J. 1427, 1429, n. 22 (1983) ("Although the treaty refers only to free exploration and use, its legislative history demonstrates that article one applies also to exploitation of natural resources").

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49. *Supra*, note 29.

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