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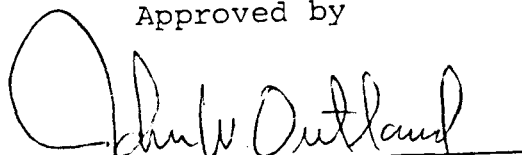
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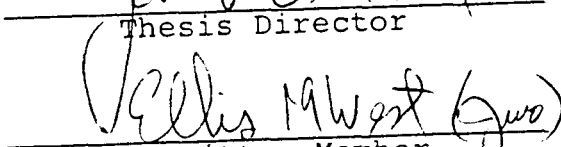
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AN ANALYSIS OF
THE LAW OF THE SEA AND OUTER SPACE LAW:
CLAIMS OVER THE NATURAL RESOURCES OF THE "COMMONS"

By

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B.A., Radford University, 1984

A Thesis

Submitted to the Graduate Faculty

of the University of Richmond

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in

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Preface

As new areas of the world and outer space have been discovered and explored, man has had to develop regulations to govern the use of these new areas. However, it was not until man possessed the technological means of extracting or using the resources of these new areas that there was an urgent need to develop regulations for the oceans and space. As nations attempted to meet this need, conflicts arose between the technically advanced nations and the not-so-advanced nations. These conflicts have hindered the development of the Law of the Sea and Outer Space Law.

Although some regulations have been established in regards to such areas as the deep sea-bed and remote sensing, there is still a need for the international community's acceptance of these laws. Under-developed nations view the resources discovered within these two areas as the common heritage of mankind. In other words, these natural resources should belong not to one country, but to all nations to be used and studied for the benefit of mankind.

As I began researching for this project, I discovered the need for a great amount of background information. It is for this reason I decided to incorporate the first three chapters into my thesis. International law provided the underlying principle for LOS and OSL, and I believe that it is necessary for the reader to have an understanding of this field before examining LOS and OSL.

Conflicting claims to sovereignty over the natural

resources have created many obstacles for LOS and OSL; therefore, I felt that a section dealing with acquisition of territory was warranted. Over the centuries nations have tried to acquire various territories and have faced opposition from other countries who viewed the claims as a threat to their national interests.

Because of their immensely complex nature, it is impossible to touch upon every debatable aspect of LOS and OSL. I have devoted my attention to the obstacles facing the common heritage of mankind principle. The conclusions that I have reached are by no means the final word on the subject; however, they can serve as a starting point for continuing research. Even at the time of this writing, negotiations continue within the United Nations.

The issues of the LOS and OSL will continue to receive ample attention for many years. Whether or not a solution can be agreed upon is uncertain. As the debate concerning the common heritage intensifies, scholars must begin to examine the issues in greater depth. At the present time one can only speculate what the future holds for the continual evolution of LOS and OSL.

I take this opportunity to express my gratitude to those who have done so much to assist in the completion of this project. The staffs of the Library of Congress and the libraries of the University of Virginia Law School, the Marshall-Wythe School of Law, College of William and Mary, and the University of Richmond assisted in painstakingly

guiding me through the extensive documentation relating to ocean and space law. I would particularly like to thank Isabelle Paul for the advice and guidance she gave me throughout my research. I was also fortunate enough to work with William Siapno, who guided me through the complicated terminology and scientific technology regarding deep sea mining. George Zahn provided important research materials which otherwise would not have been available to me. I am very grateful to James Hoell, Director of Tropospheric Research at NASA, who opened many doors at NASA's research libraries regarding present remote sensing research. I also appreciate the time Barry Sidney of NASA Research, took from his schedule to provide me with names who might assist me in my research. Regina Foor provided a most insightful critique of the entire manuscript. Glenith Whittaker listened patiently to my numerous questions concerning grammatical questions and read an early draft with great care. A special thanks is extended to the Librarians of Gloucester High School, who allowed me to use the computer facilities. Without their patience and understanding I would probably still be typing this thesis. I would like to recognize Ellis West and John Outland. Their advice and suggestions helped me throughout this paper. Finally, from the beginning to the end, my family has supported me with the patience and understanding needed to complete this project. They have shared with me the frustrations and satisfactions that accompanied a project such as this. Although the previously named persons contributed

to this paper in one capacity or another, any mistakes within
the manuscript are solely the responsibility of the author's.

Robin E. Lewis

Gloucester, Virginia
May, 1987

Chapter 1-Introduction to International Law

Man is a curious animal. This curiosity has led him to the ends of the earth and back. Throughout the generations, he has had a thirst for knowledge of the unknown. With the development of technology throughout the twentieth century, man became capable of exploring new untouched worlds. By the middle of the twentieth century, he had already uncovered and explored most of the areas available on land. Therefore, man redirected his attention to the two areas which have always been a mystery to him--the oceans and space.

The oceans and space presented new challenges and hope for twentieth century man. Man had traveled on the oceans for many centuries; however, what lay beneath the surface of the water was not known. For ancient man, the oceans represented a deep and dark danger which was controlled by an evil force. What ancient man did not realize was that the oceans possessed new forms of resources which could benefit all of mankind. Unlike the oceans, space remained completely untraveled up until recent years. Nevertheless, man sought knowledge about what lay beyond the earth's atmosphere.

As man developed the technology necessary to explore these two new frontiers, the need for legal systems to govern these areas arose. The founders of the Law of the Sea(LOS) and Outer Space Law(OSL) had the difficult task of developing basic principles which would serve as the foundation for these two fields of international law. Before one can fully comprehend the nature and evolution of these two new branches of international law, a thorough understanding of international law and its evolutionary process is needed.

International Law Defined

Over the centuries man has tried to develop an appropriate definition of international law. Despite the various opinions that have evolved over the years, there is still no perfect definition of international law. The irony of this fact is that, although there have been countless definitions, most are similar in form (the final products are very closely related). In his book Modern International Law, R.C. Hingorani defines international law as "a body of such rule which nation-states consider as legally binding upon them in their relations inter¹ se". Controversy arose over this definition for it left too much open for the states to decide on their own. Mr. Hingorani's definition allowed for uncertainty as to whether international law was law in the real sense of the word. It was believed that the nature of the definition would lead to unresolvable conflicts² between uncompromising nations.

Another definition with the same unrestricted nature as Mr. Hingorani's was a definition given by J.L. Brierly. In his definition Mr. Brierly stated that the Law of Nations or International Law should be defined as "a body of rules and principles of action which are binding upon civilized states in their relations³ with one another". Once again, the ambiguous nature of the definition would create a chaotic and unreliable situation throughout the international community. Oppenheim gives a similar definition that international law is the name for the " body of customary and treaty rules which are considered legally binding⁴ by states in their intercourse with each other". Although the previous definitions are not considered the 'official' definition of international law, they are in their own right accurate in the

way nations truly interpret the definition of international law.

A more lengthy and political definition of international law was proposed by Soviet Jurist, Y.A. Korovin. He wrote:

International Law can be defined as the aggregate of rules governing relations between states in the process of their conflict and co-operation designed to safeguard their peaceful coexistence, expressing the will of the ruling classes of these states and defended in case of need by coercion applied by states individually or collectively.⁵

The western nations do not accept this definition because of the strong political overtones it possesses. Western countries like to think that the political factor should not play a part in the definition of a legal concept. Moreover, international law is considered to be separate from the political game in which most nations are engaged. However, according to Mr. Korovin, international law is not less, but more political than any other type of law.⁶ International law may have been the victim of various definitions and interpretations, but all of the definitions are very similar in nature. Granted, some are more complex than others; however, the final result is the same: international law is a body of rules which attempts to regulate the behavior of the nations of the world.

Sources of International Law

The recognized sources of International Law are specified by the Statute of the International Court of Justice, Article 38.

Article 38 reads:

1 The Court, whose function is to decide in accordance

with International Law such disputes as are submitted to it, shall apply:

- a. International conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
- b. International custom, as evidence of a general practice accepted as law;
- c. the general principles of law recognized by civilized nations;
- d. Subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

2 This provision shall not prejudice the power of the court to decide a case *ex aequo et bono*, if the parties agree thereto.⁷

Article 59 reads:

The decision of the court has no binding force except between the parties and in respect of that particular case.⁸

The first type or source of international law is treaties.

According to Ronald Kirkemo, international law made up of treaty

law is called conventional international law, meaning thereby

that international law is based on conventions. The directive

under Article 38, a., confirms treaties as rules establishing

rights and obligations for those states having expressly

recognized the treaty. The statute avoids speaking of

conventions as "law", although their effect is very much the

same. The controversial question of whether treaties are

international law or whether the law is that treaties must be

carried out, but they themselves are not law, was also avoided

throughout the statute. International treaties take many forms;

however, the two most common are bilateral and multilateral

treaties. Bilateral or multilateral treaties bind only

those states consenting to them and generally do not relate to other states except as they may lead to customary behavior.

The second source of international law, international custom, is also the oldest source of international law. Before treaties developed as a source of international law, law was developed through passages and usages which were prevalent among nations in their relations 'inter se'.¹¹ Customary law evolved when the practices and usages were continuously observed so to create a stabilizing force between nations. In its terminology the instruction is clear that custom as such is not a legally binding precedent. Only when states engage in a general practice, "accepted as law", is the custom evidence of a legally binding norm.

The vagueness of the definition of customary international law made the concept an object of unending debate. To be called a custom and to become legally binding, practice had to exist over a certain period of time, although the amount of time was never established. For example, some communist international lawyers claimed that after the launching of the first Sputnik it took only a few hours to establish the customary norm that artificial earth satellites may fly unimpeded over any state's territory.¹² In order for customary law to be effective, a party must agree that a particular practice has become binding on other parties.

The third source of international law is the general principles of law which are recognized by civilized nations. The framers of the statute interpreted these rules as those commonly accepted in the domestic law of all civilized states,

e.g., principles of occupation, doctrine of estoppel,
 13
 servitudess and principles of contract. Others interpret these
 rules as rules of customary law which are based on existing
 international or municipal law. The Soviets argue that general
 principles of may be recognized as a source of international law
 if "...it was established either through the appropriate
 international treaties or by international custom, and are in
 effect a generalization of rules of law found either in the
 treaties or formed by custom."14

According to Article 38(1)d, the use of judicial decisions
 is subject to the provisions of Article 59. However, despite the
 fact that article 59 of the Statute of the International court
 provides that a "decision of the court has no binding force
 except between the parties and in respect of that particular
 case", practice has shown that courts frequently depend upon
 past judicial decisions for the determination of present legal
 15
 issues.

In addition to the use of judicial decisions, teachings
 of the most highly qualified publicists are given as a second
 subsidiary source. Oppenheim points out, "...it is as evidence
 of the law and not as a law-creating factor that the usefulness
 of teachings of writers has been occasionally admitted in
 16
 judicial pronouncements". The Soviet view follows those
 publicists who state that writings are useful only as
 17
 evidence of the law, and not as a source.

Due to the difficulty in achieving conventional agreement
 and controversies inherent in the development of international
 law, new sources are sought. Resolutions of the General

Assembly are favored the most, in particular, those which have declared, 'basic principles in the new field of law'. Resolutions alone are not binding, but a body of resolutions as a whole may provide a rich source of evidence of international law.

Effects of Custom on Space Law and The Law of the Sea

Of the many factors important in the evolution OSL and LOS, custom has had the greatest effect. Practice has shown that custom served as a source for the creation of a number of important general rules.¹⁸ The exploration and use of the oceans and space continues to produce new customary rules. If followed that international custom played a significant role in the evolution of space law and the law of the sea (1) when treaty regulation is absent for one reason or another and; (2) between states which are parties to a convention and states which are non-parties.¹⁹

Actual practice regarding space and the oceans shows that custom, as a source of legal rights and obligations of states, can be established within a short period of time even before concerned states can reach an agreement on provisions of a treaty aimed at governing their relations in a particular area. The practice of the international law of space and the law of the sea shows that states find it necessary to rely on rules of customary international law in developing regulations for these two new areas.

Similarities and Differences of the Evolutionary Process of OSL&LOS

International law in general developed over a long period of time. Because society developed at the pace that it did, the

need for international law grew slowly. Whereas it took centuries for international law to develop, it took less time for LOS, and just years for space law. Although each evolved over different lengths of time, there are similarities and differences in the evolutionary processes.

The major difference between the evolutionary process of space law and that of the law of the sea is the period of time necessary for the development of laws governing these two areas. The pace of the evolutionary process differed due to the needs of the society. The oceans had been open and available to man for many years; therefore, man could afford to develop rules at a pace he saw fit. The technology used for ocean research also developed at a pace which allowed for a slower evolution of regulations.

Unlike the LOS, space law has developed rather quickly. Space had always been out of man's touch; therefore, there was no need to have laws governing an area which one could not touch. Space became available to man very quickly, and the need for regulations to govern space became urgent. Because of the urgent need for laws to govern space, it was impossible for space law to develop slowly.

Another difference between space law and the law of the sea was the issue of boundaries. The founders of ocean law had an easier task in placing boundaries because the oceans were limited. The question of a nation's sovereignty played a vital part in deciding where the ocean boundaries would lie. The developers of space law were faced with the difficult task of deciding where "space" began. The openness of space has allowed for a great deal of controversy and debate between nations. It is this controversy which has hampered the evolutionary process of space law.

The evolutionary processes of these two new branches of international law also have many similarities. International custom lies deep within the development of the law of the sea and space law. Regulations which had evolved over years were a key part to the formation of the rules governing the oceans and space. Other similarities of the evolutionary processes included the interpretation of what constitutes military activities and peaceful uses, as well as who can claim sovereignty over these areas and the resources they possess. Although there are many more similarities, the above have been considered vital to the evolutionary process by the United Nations.

Theories of the LOS and OSL

As the LOS and space law developed, a number of theories common to both areas evolved. The theory which has received a considerable amount of attention from all the parties involved in the evolutionary process was the notion of the "Common Heritage of Mankind". The principle holds the notion that the oceans and space along with the resources they possess belong to all of mankind. The 'common heritage' principle has generated a great deal of debate among the technologically advanced nations and the non-technological nations. A major question raised by the "common heritage" principle is whether or not a country can claim national sovereignty over these areas.

This theories developed because disadvantaged nations were concerned that they would not receive an adequate share of the resources that the oceans and space have to offer. Ocean mining and

remote sensing, two new means of extracting the resources in question, have had a great deal of influence on the development of international law. Due to all the controversy over how this new technology should be used, the development of regulations dealing with ocean mining and remote sensing has slowed down dramatically. Unless regulations can be formulated and agreed upon, having the technology to reach the resources of the oceans and space is useless. In some cases, technological advances have hindered the legal process, rather than contributed to it.

The Acquisition of Territory

For centuries the rules of international law governing the acquisition of territory have been among the hotly contested problems of international law. The controversial nature of this issue is augmented by the fact that the conception of state territory in general has undergone tremendous changes ever since modern international law replaced the medieval concepts of *jus gentium*.²⁰ Accordingly, Oppenheim stated, "when Grotius laid the foundations of modern international law, state territory was still, as in the Middle Ages, more or less identified with the private property of the monarch of the state".²¹ Thus, it was not uncommon to sell the territory of one state to another, or to dispose of title at the will of the reigning monarch. Therefore, the rules of Roman law relating to the acquisition of private property were also applied to the acquisition of all types of territories.

Using Roman law as a basis for acquiring territory created difficulties. Although Roman law distinguished between *imperium* (modern concept of sovereignty) and *dominium* (antecedent of private

law ownership), its total implications were not completely
comprehensible.²² Unlike Roman law, modern international law has
not created a distinction between the acquisition of territory and the
acquisition of sovereignty. Roman law in this area of international
law can not be obliterated because of the terms used to indicate
various modes of acquiring territory (i.e. accretio and occupatio).²³
Despite common terminology, the notions of acquiring territory under
contemporary international law differs sharply from that of the private
and Roman law concepts.

Traditionally, international relations has revolved about the
possession of territory. The relationship between contemporary states
reached its most critical stage in the form of problems relating to
territory. Boundary disputes, conflicting claims to natural
resources ownership, and expansion into another nation's territory
have been leading elements in the causes of war. States have the
unconditional authority to exercise sovereign power over their
national territories. During the early periods of western society,
if a state could control and defend a territory, it allowed that
nation to lay claim to such territory. However, as the conflicts
grew, so did the need for additional title requirements for the
acquisition of territory.

A state's jurisdiction over specific parts of its territory is
complete and exclusive. It is complete for it extends to all parts
of the territory of the state and to all the people found within
those parts. This is expressed by Professor Charles de Visscher:

The firm configuration of its territory
furnishes the state with the recognized
setting for the exercise of its sovereign
powers....²⁴

Territory can be obtained by states through the transferring of land from one state to another, or through the acquisition of land not belonging to any particular nation. It is pertinent that modern international law recognizes five methods of acquiring title to territory: occupation, accretion, prescription, voluntary cession, and forced cession or conquest.²⁵

The oldest and most important method of acquiring title to territory is discovery. Until the eighteenth century, discovery was sufficient enough to establish a legal title; however, since then, discovery must be followed by effective occupation in order to be the basis of a title to territory. The acquisition of title to a territory through occupation means the settlement by a state of a territory which does not belong to any other state for the reason of adding the land in question to the nation's territory.²⁶ The settlement must be made if the broad claim based on discovery is to be transformed into a legal title. A state must declare its settlement within a reasonable time after discovery and it must assume a permanent character.

A second mode of acquiring title to territory develops through accretion. This mode of acquisition occurs through natural geophysical changes. Accretion is the "gradual deposit of soil by a river flowing past a shore or by an ocean along its coasts".²⁷ Therefore, an island can appear to be in the territorial waters of a state. Accordingly, changes in the course of boundary rivers may result in a change in the boundary; however, all this depends on whether the river formed the boundary naturally or only marked it.

Prescription, the third mode of acquisition of territory,

means that a state occupies a portion of territory claimed by another state, encounters no opposition from the 'owners', and practices its rights of sovereignty over an extended period of time. It is vital that prescription requires a de facto exercise of sovereignty over a portion of territory. Eventually, the original state loses its title to the territory.

A fourth mode of acquiring title to territory is voluntary cession. Cession can be defined as 'the transfer from one state to another of sovereignty over a definite territory'. Voluntary cession evolves through treaties which explicitly specify the area to be transferred along with the conditions under which the transfer is to be accomplished. The most common type of cession is that of a treaty of sale or through a purchase by exchange (as the U.S. purchased Alaska).

The fifth and final mode of acquiring territory is that of involuntary cession by conquest. This mode is usually carried through by means of a military takeover or conquest. If a country were defeated in war, then, it could be subjugated. Simply stated, subjugation is when the defeated nation's government and armed forces cease to exist and its territory is legally taken over by the victorious enemy. The victorious nation receives legal title to the territory of the defeated nation through the process of annexation. Early during the twentieth century, conquest or involuntary cession of territory by method of subjugation followed by annexation, no matter what the cause, was regarded or considered a lawful title to the owners of the territories in question. Although conquest followed by annexation once allowed a nation to acquire a title to

territory, this appears to be no longer legally acceptable. Article 2(4) of the Charter of the United Nations prohibits the use of force or threats, subjugation should no longer be considered a legal method of acquiring title to a territory.

Laying claim to a territory did not create problems within the international community until recent decades. National claims to the areas of the Arctic and Antarctic regions, along with the recent attempts in the fields of space and the oceans have developed new difficulties in acquiring territory. Acquiring title to territory is an ongoing process. There is uncertainty as to the direction or methods it will take in the future. However, it can be assumed that nations will continue to attempt to expand their territory, creating a need for peaceful methods of acquiring title to territory.

Conclusion

Since its birth, international law has gone through several stages. Once a body of general principles had been established, developers had to turn their attention to extensions of international law, such as space and the oceans. Whereas, international law has had centuries to evolve; the LOS, decades; space law has developed quickly over a number of years. Major sources, i.e., international custom, which played an important part in the development of international law, also were a vital part of the evolutionary process of the LOS. As the laws developed, differences and similarities of the processes began to become apparent to the international community.

Now that man has the technological means to explore these two new worlds, will he be denied them because of legal uncertainties?

Unless man can formulate laws to govern these areas which will satisfy all the nations of the world, then man may deny himself the benefits that the oceans and space have to offer. What the future holds for international law, the LOS, and space law is unknown. That each will continue to change and adapt to the needs of society appears clear.

Chapter 1-Endnotes

- 1 R.C. Hingorani, Modern International Law (Dobbs Ferry, New York: Oceana Pub. Inc., 1979), 7.
- 2 Hingorani, 8.
- 3 Robert Henry Farris, The Problem of Delimitation in Space Law (Ann Arbor, UMI: University of Notre Dame, 1974), 31.
- 4 Farris, 31.
- 5 Farris, 31-32.
- 6 Farris, 32.
- 7 Ronald Kirkemo, An Introduction to International Law (Chicago: Nelson-Hall Co., Pub., 1974), 2.
- 8 Kirkemo, 2.
- 9 Kirkemo, 3-4.
- 10 Hingorani, 22. Also see Werner Levi, Contemporary International Law: A Concise Introduction (Colorado: Westview Press, 1979), 36 and Kirkemo, 3.
- 11 Hingorani, 20.
- 12 Levi, 39.
- 13 Farris, 52. Also see Hingorani, 23.
- 14 Farris, 54.
- 15 Hingorani, 23-24. Also see Farris, 55.
- 16 Farris, 57.
- 17 Farris, 57.
- 18 Vladlen Vereshchetin and Gennady Danilenko, "Custom As A Source of International Law of Outer Space", Journal of Space Law 13, ns. 1 (1985), 23.
- 19 Vereshchetin and Danilenko, 24-25.
- 20 Yehuda Blum, Historic Times in International Law (The Hague, Netherlands: Martin Nijhoff, 1965), 1.
- 21 Blum, 1-2. Also see Oppenheim, International Law (8th edition, vol. I., 1955), 545.
- 22 Blum, 2.
- 23 N.A. Maryan Green, International Law-Law of Peace (Great Britain: MacDonal and Evans, Ltd., 1982), 164-165.
- 24 R.Y. Jennings, The Acquisition of Territory in International Law (Manchester: Manchester University Press, 1963), 1-2.
- 25 Blum, 3. Also see Jennings, 6, and Gerhard von Glahn, Law Among-Nations (4th ed, New York: MacMillan Pub., 1981), 315.
- 26 Green, 166.
- 27 von Glahn, 318.
- 28 The actual length of time required to lay a valid title claim has not been determined and is still in question.
- 29 Green, 167. Also see von Glahn, 321.
- 30 Green, 167. Also see von Glahn, 324.

Chapter 2 Development of the Law of the Sea

Unlike international space law, which has existed for only a few decades, the Law of the Sea (LOS) has evolved over several centuries. Contemporary law of the sea is a composite of "customary state behavior, recognized general principles of law, and, only fairly recently, multilateral treaty accords"¹. Past experiences hold valuable lessons for the present and the future developments of ocean policies.

Throughout its long history, a theme has continually recurred and dominated the law of the sea. This central and persistent theme is the contradiction between government authority over the sea and the idea of the freedom of the seas. This dichotomy has been reflected in the political, strategic, and economic circumstances of each particular age.² For example, when two great powers together dominated, the main thrust of practice favored freedom of navigation; in these periods the seas seemingly became more strategically than economically important. On the other hand, when power was distributed equally between a multiplicity of states, protection and preservation of maritime resources and the affirmation of local authority over the sea was favored.³ This attitude was exhibited in the early seventeenth century, when the Habsburg Empire began to decline and new local authorities asserted themselves, notably Great Britain and Sweden. During this time there was a great deal of concern about the marine resources and the need to conserve such resources. Today again this concern is very much in evidence. Ironically, after three hundred years of talks and negotiations, once again the attention is on the exhaustibility and ownership of resources.

The Origin and History of International Law of the Sea

It has been generally accepted that the modern law of the sea is a product of European or Western Christian civilization to which other non-western nations, especially Asian and African countries, have made little or no contributions. The development of the law of the sea is indistinguishable from the development of international law. The modern system of international law of the sea evolved after the disintegration of the Roman Empire and the emergence of independent states in Europe in medieval times. Customary international law⁴ divided the sea into two areas--the territorial law, which included internal waters, and the high seas.

The present day system of international law of the sea originated in the sixteenth and seventeenth centuries after the discovery of America in 1492 and of the sea route to India in 1498.⁵ At the onset of the sixteenth century, Spanish jurists, such as Francisco Alfonso deCastro, Francisco Vitoria, and Francisco Suarez pronounced the doctrine of the high seas, thereby resisting the right of a nation to exercise sovereignty over the seas. Early treatises on the law of the sea were regularly written in the context of particular disputes. For example, Hugo Grotius, the Dutch jurist published in 1609 *Mare Liberum* or "The Free Sea".⁶ Initially, Grotius set out to vindicate the claims to trade as a feature of the 'jus gentium' on the assumption that the seas are avenues of commerce and which, by their nature, are not capable of appropriation. The *Mare Liberum* is considered to be "the first, and classic, exposition of the doctrine of the freedom of the seas", the doctrine which is the foundation of the contemporary law of the sea.⁷

Another concept which developed within the seventeenth century was the twin doctrine of imperium and dominium. The doctrines of imperium--the power to rule--and dominium--ownership--combined in a single standard of jurisdiction which would dominate juristic thought for the next two hundred years. Imperium and dominium could exist only in conjunction; therefore, the power to rule and to legislate(imperium) could extend only to what the ruler and legislator possessed (dominium). Vessels were therefore beyond the authority of coastal states when they were outside the boundary of its territory; moreover, the seas would be either totally mare liberum or totally mare clausum, and the concept that the coastal state would have jurisdiction over the high seas was implausible.

Until the nineteenth century, the concept of freedom of the seas remained dubious because the practice of mercantilism discounted it. However, this changed with the development of the philosophy of free trade and the "open door" policy in China? The nineteenth century was a significant era in the evolution of the law of the seas. During this period the doctrine of freedom the seas acquired an absolute character that had never before existed.

The stability attained in the law of the sea during the second half of the nineteenth century initiated the desire to codify the rules. Various organizations were involved in attempts to codify the rules of customary international law applicable to the oceans. Until the establishment of the United Nations, most of the codification was undertaken by non-governmental societies. One such body which made notable contributions was the International Law Association(ILA). From the time of its inception in 1873, the ILA has produced various reports and resolutions on such topics as territorial waters, the sea-

bed and its resources, international waterways, and deep sea-bed¹⁰ mining.

In the twentieth century attempts have been made to codify the international law of the sea. Codification goals relating to sea laws resulted in the insertion in Article 23 of the Covenant of the League of Nations that "subject to and in accordance with the provisions of international conventions existing or hereafter to be agreed upon, the members of the League will make provision to secure and maintain freedom of communications and of transit and equitable treatment for the commerce of all members of the League"¹¹. The League's first official act toward codifying these rules was the establishment of a committee to list subjects for codification. These subjects included territorial waters, piracy, exploitation of marine resources, and the legal status of state-owned merchant ships.¹² Subsequently, a Preparatory Committee was established to consider three major issues for codification. The Preparatory Committee also circulated a 'Schedule of Points' to governments, and, after replies had been received, drafted 'Bases of Discussion' from which the codification¹³ conference could work.

When the League of Nations was superseded by the United Nations in 1945, it was hoped a body charged with the progressive codification of the law of the sea would be established. Such a body was indeed created--the International Law Commission(ILC)--and consisted of thirty-four eminent lawyers serving in individual capacities but nominated and elected by governments.¹⁴ Initially, the ILC worked on the preparation of draft articles about the high seas and territorial waters. The work of the ILC differed from that of the Preparatory Committee of the Hague Convention, for the commission's goal was to

codify not only existing customary international law but also to encourage its "progressive development". At the request of the U.N. General Assembly, the ILC produced a report in 1956 which covered all the important aspects of the contemporary law of the sea. This report laid the foundation for the first United Nations Conference on the Law of the Sea(UNCLOS I) held in Geneva in 1958.¹⁵ The objective of UNCLOS I was to develop a comprehensive text, but since the articles were submitted by subject-matter to various committees, four separate conventions emerged. These four conventions included: the Convention on the Territorial Sea and The Contiguous Zone; the Convention on the High Seas; the Convention on the Continental Shelf; and the Convention on Fishing and Conservation of the Living Resources on the High Seas.¹⁶ The first three of these conventions based largely upon customary international law have been ratified by a number of states. Moreover, it is these conventions which have formed the core of the generally accepted rules of the law of the sea. The major problem, the boundaries of the territorial seas, which had defeated the 1930 Hague Convention, became an obstacle also for the 1958 Convention.

Through Resolution 1307(XIII), the General Assembly requested that the Secretary-General convene a second conference on the law of the sea(UNCLOS II) for the purpose of considering (1) the delimitation of the territorial seas and (2) the question of fishery limits.¹⁷ The UNCLOS II, with representatives from eighty-eight states, met from March 17 to April 27, 1960. Despite its efforts, the conference failed to agree upon a compromise regarding the two topics of concern.

Even though the conference did not agree on the two issues, the UNCLOS II was a significant effort to codify the law of the sea.

Adoption of the four conventions represented the most recent enunciation of this law. Consequently, the Conferences of 1958 and 1960 can be regarded as major contributors to the eventual codification of the law of the sea. Nevertheless, with the closing of UNCLOS II, countries had to take the law into their own hand, for many key issues were left unsolved. In 1967, the attention of the U.N. General Assembly was focused on examining the question of the deep sea bed which lies beyond the limits of national jurisdiction. For this purpose, the Third United Nations Conference on the Law of the Sea (UNCLOS III) was held.

UNCLOS III and the Issue of the Deep Sea-Bed

UNCLOS III had its origin the Sea-bed Committee which was established in 1967 through the initiative of the Maltese Ambassador, Dr. Arvid Pardo. Pardo proposed the inclusion of the supplementary item on the agenda, entitled "Declaration and Treaty concerning the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor underlying the seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind".¹⁸ As the title suggests, this proposal was generated by the desire both to secure the demilitarization of the seabed and to prevent a land-grab for sea-bed minerals. When the General Assembly agreed to accept this item, the Latin-American delegates expressed misgivings concerning Pardo's proposal. It was important to Malta to retain the good will of the Latin-American states, who control over twenty votes within the U.N. Malta finally agreed to amend the item slightly to an 'Examination of the question of the reservation exclusively for peaceful purposes'.¹⁹ The proposal was referred to the General

Assembly's Political Committee which would work towards a solution of the problems about deep sea-beds. In 1968 this ad hoc committee was replaced by a larger permanent committee concerned with developing peaceful uses of the sea-bed and ocean floor beyond the limits of national jurisdiction.

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From the beginning of the sea-bed debate, it was clear that most industrialized states wanted the committee's work to move at a different pace and in a different direction from that sought by the developing states. The industrialized states wanted to build upon the 1958 Convention, however, the developing states preferred more rapid progress towards the establishment of an international organization with wide powers to regulate sea-bed mining. The views and arguments of the Third World countries were represented by an organization which called itself the "Group of 77".

Most developed states argued for a simple international registry for deep sea claims. On the other hand, developing states pressed for the creation of an international "Enterprise". Despite the continuing disagreement over the kind of regime envisaged for the sea-bed, it was possible to produce, in 1970, a 'Declaration of Principles which Govern the Seabed and Ocean Floor, beyond the Limits of National Jurisdiction'. The 'Declaration' stated that

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"1 The sea-bed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction... as well as the resources of the Area, are the common heritage of mankind.

2 The Area shall not be subject to appropriation by any means by States or persons, natural or juridical, and no State shall claim or exercise sovereignty or sovereign rights over any part thereof.

3 No State or person, natural or juridical, shall claim, exercise, or acquire rights with respect to the area or its resources incompatible with the international regime to be established and the principles of this Declaration.

4 All activities regarding the exploration and exploitation of the resources of the Area and other related activities shall be governed by the international regime to be established.²²

The Group of 77 regarded this resolution as a binding statement of law rendering unilateral sea-bed mining unlawful. The Group of 77 ultimately sought a means to compel transfers of wealth from the "West" by taxing individuals and institutions in the developed countries. Because the developed countries would not consent to this direct taxation, the Group of 77 had to find a less threatening means to tap the West's wealth. Despite the Group of 77's position, the Western states regarded their resolution as merely political.

Throughout the proceedings of the UNCLOS III, the divergence between the views of developed and developing states was evident. The Group of 77 wanted an international sea-bed authority with the power to engage in sea-bed mining itself and to control mining by other licensees, who would pay it royalties. These royalties, along with the Group's own profits, would be distributed among all the states as the "common heritage of mankind". The meaning of "the common heritage of mankind" has never been clearly agreed upon. The developed states defined it as meaning that the sea-bed belongs to no one but is subject to development by anyone.²³ The Group of 77 asserted that the resources on the ocean floor belonged to everyone and should be exploited and enjoyed by all. The industrial states proposed that the authority should be little more than a registry of national claims to seabed mining sites, having few if any powers to interfere with the exploitation of the area by various companies.²⁴

Within the U.N. there was a steady movement away from the position of the developed states and towards that of the Group of 77.

However, fearful that an international authority with extensive regulatory powers would interfere for purely political reasons in mining operations, developed and developing states compromised considerably upon the institutional arrangements. The Group of 77's view regarding the rights over the seabed determined the boundaries of the debate, and their numerical majority ensured that whatever international regime emerged from UNCLOS III would reflect the concerns of the Third World rather than the version favorable to the West. The seabed mining provisions of the draft treaty were based on ideology underlying the New International Economic Order (NIEO) demanded by the Group of 77. The proposed Treaty supported the goals of the NIEO by creating a supranational 'Authority'. This authority would regulate the distribution of the economic benefits of the "common heritage" provided within the draft convention of the LOS Treaty. The Authority is divided into an Assembly, a Council, and a Secretariat. The Authority would be allowed to conduct its own mining operations through the mining arm of the Enterprise. The Assembly, as "the supreme organ of the Authority to which the other principal organs shall be accountable," has the power to lay down general policies for the Authority, which must be consistent with the specific provisions set out in the convention".²⁵ The Authority could also contract to give mining rights to private and state corporations so that the two could operate together. In addition the Assembly was given specific tasks, in deciding the approval of the rules governing the exploitation and exploration of the area and the internal management of the authority and the establishment of a system of compensation for developing states whose economies suffer as a result of sea-bed mineral production.²⁶

The Council is responsible for the implementation of the convention regime within the limits set by the Assembly. The Council is a powerful body, for it is responsible for safeguarding the various interests of states. Because the Third World and the Eastern Bloc states would constitute the vast majority of the Assembly, they would also command a majority in the Council. Therefore, they could obstruct applications of nations or firms whom they found objectionable, and the developed states could not retaliate by blocking Third World applications. However, the significance of this power should not be overstated.

The Enterprise was a separate organ of the Authority, and was expected to engage in prospecting and mining. It would also undertake all activities relating to production, processing, and marketing of all the nodules extracted in ocean areas beyond the limits of national jurisdiction. The Enterprise would gain the necessary mining technology by buying it from commercial operators or entering into joint ventures with them. Its "profits" would be distributed, as part of the "common heritage of mankind", according to the Authority.²⁷

The Enterprise would be prevented from subcontracting exploitation exclusively to developed country mining firms and would be required to fix prices to help protect the developing countries. The financing of the Enterprise would come from two different parties: state parties would contribute half of the financing in the form of long-term interest-free loans, in accordance with a scale based on a U.N. budgetary scale; the rest of the amount would be borrowed by the Enterprise from capital markets or from international institutions.²⁸

Once mining activities began, the Enterprise could generate its own

funds, and any "net income" that remained after the operating costs had been paid, would be divided between the Authority and the reserves of the Enterprise. Developed countries and the private ocean miners strongly opposed the Enterprise concept. During the 1975 and 1976 sessions of the UNCLOS, debate became so rigorous that the entire conference was nearly destroyed.²⁹ Despite this opposition, the principles concerning the Enterprise were accepted by a majority of the states at the UNCLOS III.

From the onset of negotiations in 1974, the U.S. had expressed mixed reactions towards the UNCLOS III Treaty. American disillusionment and frustration towards the convention resulted in a proposal similar to the structured International Sea-bed Authority. The U.S. proposal was an International Licensing Authority which would have jurisdiction over seabed use beyond the simple registration of claims. The most striking feature of the U.S. proposal was the high cost of decision-making in the seabed authority.³⁰ Over a fourth of the members of the council would be from the most industrially advanced countries in the assembly and the council, much like the United Nations itself where there is a General Assembly in which every nation has an equal voice and a Security Council where voting is weighted by the veto.³¹ The draft Convention would tax ocean mining to generate the revenues to support the seabed authority. The convention proposed a one-time license fee that would capture for the authority a portion of the economic rents from ocean mining.³²

When this U.S. proposal was refused by the Third World nations, the U.S. delegation offered a compromise proposal, in 1976. Secretary of State Henry Kissinger proposed a "parallel system" that would create an International Enterprise and assure access to the same area

for state and private mining activities. Under this system, general searches for sea-bed resources, rather than the specific pre-production survey, were accepted as the definition of exploration. The Authority would only need to be notified of the broad areas in which a search was to be carried out. If a private firm wished to mine, it would have to submit its plan of work to the Authority for approval. Qualified applicants would be those whose entities are possessions of the states and are sponsored by these states. Applicants would also have to accept the control of the Authority over activities in the sea-bed and, most significantly, comply with the provisions on transfer of technology. In short, this proposal meant that the applicant would have to make available to the Enterprise any technology it used in sea-bed activities. Throughout the contract period, the Authority would supervise operations and could require operators to transfer to it any data necessary for the performance of its functions. The Authority would impose monetary penalties and in serious cases, suspend or terminate the contract.

Through the Enterprise activities, know-how, and technology would be acquired which would be passed on to the developing states, thereby exploiting the "common heritage of all mankind". One of the major obstacles in the acceptance of this proposal by the U.S. was the lack of protection for investments which had already been made in sea-bed mining.

At the end of the eleventh session, on April 30, 1982, at the request of the U.S. delegation, a vote was taken. It resulted in the adoption of the Law of the Sea Convention. The vote was 130 for, 4 against, and 17 abstentions. Thus, the Convention failed in that it

did not meet the goal which it had set for itself-to adopt the
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 convention by consensus. After the vote, the U.S. delegate stated
 that, even though the convention contained many positive features, the
 deep sea-bed mining provisions did not meet U.S. objectives. On July
 9, 1982, President Reagan announced that the U.S. would not sign the
 LOS Treaty. Reagan said:

"...Those voting "no" or abstaining appear small in number but represent countries which produce more than sixty percent of the world's gross national product and provide more than sixty percent of the contributions to the United Nations....Our review recognizes, however, that the deep seabed mining part of the convention does not meet United States objectives. For this reason, I am announcing today that the U.S. will not sign the convention as adopted by the Conference, and our participation in the remaining Conference process will be at the technical level and concerned with those provisions that serve United States interests".³⁷

In a final effort to find a compromise acceptable to all, the
 UNCLOS III prepared special rules for "pioneer investors". These rules
 are contained in two resolutions in the Convention. Resolution I
 provides for the development of a Preparatory Commission, made up of
 states which have signed the convention. The Commission was to prepare
 for the development of the International Sea-bed Authority and to
 undertake the study of economic problems arising from sea-bed
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 mining. Resolution II contains rules designed to accommodate the
 demands of the consortia, which consisted of companies from Western
 industrialized nations that had, by 1982, invested heavily in deep
 sea-bed mining. The establishment of this plan to protect the "pioneer
 investments" made by the consortia, would ensure that they would be

qualified to receive sea-bed mining contracts once the Convention became binding. This resolution also protects investments made by private consortia even before the Convention was accepted.

Throughout the 1970's, various committees of Congress had worked on seabed legislation while the UNCLOS III was under way. The authority for administering the Deep Seabed Hard Mineral Resources Act was given to the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce. Pursuant to this Act, regulations were developed for issuing to U.S. citizens licenses for exploration and permits for commercial recovery. The Act also provided for consultation with other seabed mining nations to develop an arrangement which would prevent conflicts among the seabed mining operations of these nations' citizens.

The U.S. government's actions were based on the impatience and frustrations felt by the Western States during the negotiation and ratification stages of the LOS. Faced with these delays, the Western States had decided to set up an interim regime which would permit but regulate mining until the Convention was ratified. The Western industrialized states continued to explore the possibility of establishing a "Reciprocation States Regime" or "mini-treaty", whereby each state would adopt similar and interlocking national laws so as to provide comprehensive regulation of sea-bed mining. In September, 1982, an agreement concerning Interim Arrangements relating to the deep sea-bed was made between France, the Federal Republic of Germany, the United Kingdom and the United States. This agreement provided for consultations in order to avoid overlapping claims under the national laws, and also for consultation between the parties before any of them

enter into any other international arrangements with respect to deep sea-bed activities. However, this agreement was not concerned with rules governing sea-bed exploitation. This agreement depended upon national laws that prohibited citizens and private companies from engaging in exploration and exploitation unless they are licensed by that state or by one of the reciprocating states.⁴² In the agreement there were no provisions made for the "banking" of reserved sites for the use of the Enterprise or developing states, nor were there any requirements concerning the transfer of technology.

Between these states, the legislation will award and protect exclusive rights of exploration and exploitation of deep sea-bed sites. However, while these states claim that they base their agreement upon the freedom of the high seas, they are unable to enforce any exclusive rights against any other state outside the reciprocating states regime. The industrial states insist that the Third World states retain many of the same rights to exploit the sea-bed licensed areas, and that they share in the exploration of unregulated high seas fisheries.

Despite its adoption in the U.N., the Convention of the UNCLOS III is still under considerable attack from the U.S.. Since the U.S did not sign the treaty, it is not obligated by the rules and regulations of the treaty. Although it adheres to those provisions other than the ones related to the sea-bed the obvious justification for a new law of the sea is the greatly intensified use of the seas by all the nations of the world; this intensified use generates new problems that must be considered constructively. The growing concern for a law governing the deep sea-bed has arisen from the assumption that the manganese nodules found on the sea-bed represent tremendous

riches and that, unless strict precautions are taken, only the wealthy and technologically advanced nations will profit from these new resources.

In conjunction with its ocean policy, the U.S. issued deep seabed mining exploration licenses to three of the four multinational consortia that had applied under the U.S. Deep Seabed Hard Mineral Resources Act. These three companies—Ocean Management, Inc., Ocean Mining Associates (Deepsea Ventures), and Ocean Minerals Company—⁴³ received their licenses to mine on August 29, 1984.

Also in August of 1984, eight industrialized nations signed an agreement which would avoid mine site conflicts in the issuance of national authorizations to explore and exploit the international seabed area. This news provoked critical reactions from the developing nations' Group of 77. The Group of 77 holds that the 1982 LOS Convention established the International Seabed Authority as "the only competent body to manage the deep sea-bed and authorize activities for exploration and exploitation therein..."⁴⁴ Thus, the August 3rd provisional understanding "...goes beyond the resolution of conflicts arising from overlapping claims, by including provisions regarding exploration and exploitation of the sea-bed resources, outside the LOS⁴⁵ Convention".

Accordingly, the Preparatory Commission's 1984 session was faced with the task of completing and adopting the rules governing registration of pioneer investors, including a timetable according to which overlapping claims would be resolved and applicants could be registered. By the end of the session, there was no time left for the Commission to revise and adopt the rules for the timetable and

registration. Therefore, it was decided that registration of pioneer investors would be the first order of business at the following meeting of the Commission.⁴⁶

By December 10, 1984, the deadline for signing the Law of the Sea Convention, there were 159 signatures and 14 ratifications. In an address to the U.N. General Assembly, Secretary-General Perez deCuellar said:

"I recognize that a few states, though supporting the Convention as a whole, find the deep sea-bed mining part of it not entirely satisfactory, In my capacity as Secretary-General of the United Nations, I would like to affirm that this organization will continue to work to promote the uniform and consistent application of the Convention...."⁴⁷

Despite the many attempts, a consensus has not been reached concerning the ratification of the LOS Convention. Although many nations seem to want the Convention ratified, ratification does not appear to be achievable at the present time.

Conclusion

The United Nations convention on the Law of the Sea was the first comprehensive convention covering all aspects of the uses and resources of the seas. Although the Convention was comprehensive, it did not achieve its goal, namely to adopt a fully acceptable constitution or a charter of the sea that would deal with every aspect of ocean space. The UNCLOS III not only codified existing international law, but also included new and innovative concepts of international law. These concepts were developed in response to the advance of technology, to the demand, especially by the developing

countries, for greater international equity, and to the new uses of the sea and its resources. Fifteen years of intensive negotiations by the LOS Convention still did not produce regulations that would meet the requirements of all the participating nations.

The United State dissociated itself from the Convention essentially because of disagreement with a number of its positions with respect to mining in the deep sea-bed. It has not disavowed the spirit and import of the Convention as a whole. It is in the interest of the United States to recognize the Convention as representing the interests of the states of the world at the end of the twentieth century. Except for the deep sea-bed mining provisions, the U.S. believes that the provisions of the Convention achieve a workable regime that would promote order at sea and satisfy the needs of different states and indeed reflect customary law to which we are prepared to adhere.

Deep sea-bed mining is still a distant prospect, and the future of such activity is uncertain. But it is crucial to the inception of sea-bed mining that a consensus be reached on the deep sea-bed provisions of the LOS Convention. Without an agreed-upon law governing sea-bed mining, mining enterprises, private or public, will not have the security of tenure necessary to prevent claim-jumping and will therefore be reluctant to make major mining investments.

The adoption of the UNCLOS III regime in 1982 brought about two interpretations of the legalities concerning deep ocean resources. The first is the 1982 Convention, which is supported by the developing nations around the world. The second involves more limited agreements by smaller numbers of states as well as appropriate domestic legislation. In order to resolve any conflicts which might arise in

the future, the law of sea will need to contain a treaty incorporating interpretations. If such an "interdomestic" consensus could be proposed, a possible bridge could be formed between industrial and developing nations. Such a resolution, adopted by the UNCLOS III and the U.S., could indeed bring about a convergence of the two separate regimes into one. Until an acceptable treaty can be constructed, however, the U.S. will continue to abide by its mini treaties and its domestic legislation.

The law of the sea will continue to evolve, for the interests of the international community compel it to do so. The vital question is: In what direction will the evolutionary process go? Although the future for the LOS is uncertain, it rests on whether or not governments are willing to make reasonable compromises for the sake of a more stable international community. The law of the sea is of vital importance to all states and will continue to be a salient subject of political-legal debate until the issues which surround it are fully resolved.

Chapter 2- Endnotes

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- 6 Churchill and Lowe, 5. Also see Anand, 2 and O'Connell, 9.
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- 34 Churchill and Lowe, 166.
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45 "Ocean Policy News", 1.

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Chapter 3 Development of Space Law

More than a quarter of a century ago, the first man-made object was successfully launched into orbit, and this marked the start of a new era, the space age. The rapid development of space science and technology not only opened far-reaching prospects but also created new requirements, especially that of space law. During the past thirty years, space law has come into existence and been recognized as a specialized branch of international law. As space science and technology advanced, it was necessary to formulate legal guidelines that states should follow. ¹ These guidelines would serve the purpose of averting conflicts among nations as well as providing rules designed to solve or mitigate problems. Throughout its short history, space law has kept abreast or even ahead of space science and technology as numerous applications have developed.

History of International Space Law

Although the international law of the sea took centuries to evolve and the international law of airspace, of necessity, developed over mere decades, international space law has come into being literally before our eyes. ² Though the initial development of space law covers the years from 1957 to 1967, the historic roots can be traced for several decades before 1957. Many legal articles were published before 1957, mainly because of the need to define the upper limit of sovereign airspace. ³ Also, during these early years, scientists made predictions regarding the practical benefits of outer space that would revolutionize the fields of communications and meteorology. ⁴

Between 1957 and 1963, space law principles were embodied in United Nations resolutions.⁵ The emergence of these newly viable international space principles was the result of several factors:

1 the need for negotiators to have a clear understanding of the scientific and technological facts that control mankind's access to and exploration, use, and exploitation of the space environment;

2 the circumstances within the space environment that would be used in the combination of legal and political practices;

3 the need to understand the requirements and desires of the states which might contemplate a presence throughout other states.⁶

On January 12, 1957, the U.S. proposed a memorandum to the U.N. General Assembly which included disarmament measures and called for controls to assure that space would be used exclusively for peaceful purposes. The dramatic launching of the first satellite, Sputnik I, by the Soviet Union on October 4, 1957—an event which stunned the world—brought forth demands for laws to ensure that outer space be used only for the benefit of all mankind.⁷ The U.S., concerned over the Soviet advances, began to press its disarmament proposals in the U.N. General Assembly. Eventually General Assembly Resolution 1148(XII), which called for a control over weapons within outer space, was passed on November 14, 1957, despite great opposition from the Soviets.

Six months after the launching of Sputnik, the Soviet government proposed that a permanent committee be set up within the U.N. framework to deal with the peaceful uses of outer space. During the XIV session of the U.N. General Assembly an eighteen member Ad Hoc Committee on Peaceful Uses of Outer Space (COPUOS) was developed to study the nature of legal problems which might

arise in the carrying out of programs to explore outer space.⁸ In December, 1959, a permanent twenty-four member Committee on Peaceful Uses of Outer Space was established. Through resolution 1721/XVI COPUOS increased its membership to twenty-eight on December 21, 1961.⁹ Resolution 1721/XVI laid the groundwork for two vital principles for the future development of space law:

- 1 International law, including the Charter of the U.N., applies to outer space and celestial bodies;
- 2 Outer space and celestial bodies are free for exploration and use by all states in conformity with international law and are not subject to national appropriation.¹⁰

Properly interpreted, Resolution 1721 holds that outer space is not a 'res nullius' (no man's land), but a 'res communis omnium' (community property).¹¹

COPUOS had the complicated and important task of coordinating the activities of U.N. specialized agencies and of governmental and non-governmental organizations dealing with space activities. The next major resolution--1802/XVII on December 14, 1962--requested that COPUOS continue to elaborate on the basic legal principles governing the activities of states in exploration and use of outer space, on the liability for space vehicle accidents, on assistance to and return of astronauts and space vehicles, and on other legal problems.¹² These first two major resolutions, 1721/XVI and 1802/XVII, confirmed the relevance of international law to man's penetration of space. These resolutions also asserted a definite international legal order to which states would be expected to abide in their space activities.

The next and most important step in the evolution of space law was the adoption on December 13, 1963, of the General

Assembly resolution 1962(XVIII) entitled 'The Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space'. This Declaration contained nine major principles and was regarded as the 'magna carta' of the international law of outer space. The resolution was a compromise between the Soviet demands for a temporary international agreement and the U.S. desires for a permanent treaty which would govern outer space ventures.¹³ On the same day, resolution 1963 (XVIII) on International Cooperation in the Peaceful Uses of Outer Space was passed with a recommendation that 'consideration should be given to incorporating in international agreement form, in the future as appropriate, legal principles governing the activities of the states in the exploration and use of outer space'.¹⁴

The next major milestone in the evolution of international space law was the adoption 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. Briefly it requests that the COPUOS continue two major functions:

1 its work on elaboration of an agreement on liability for damages caused by launching of objects into outer space and agreement on assistance to and return of astronauts and space vehicles;

2 its study of questions relative to definition of outer space and utilization of outer space and celestial bodies, including various implications of space communications.¹⁵

The 1967 Treaty, which entered into force on October 16, was the first major convention dealing solely with outer space. The 1967 Treaty is significant because it laid down the general principles and rules of the law of outer space. As of 1980, this treaty had

assembled 90 signatures and 82 ratifications, accessions or
16
notifications of succession.

The main thrust of the 1967 space treaty is the "the
exploration and use of outer space, including the moon and other
celestial bodies, shall be carried out for the benefit and in the
interests of all countries, irrespective of their degree of
economic or scientific development, and shall be the province of
17
all mankind". This principle has created the basis for the
whole international space law of the late twentieth century.

The formation of the 1967 Outer Space Treaty brought about
ten major achievements, most notably: (1) The recognition of the
common interest of all mankind in the exploration and use of
outer space for peaceful purposes; and (2) the acceptance that
such activities shall be carried out in the interest of all
countries, and that outer space, the moon, and other celestial
18
bodies are free for exploration and use by all state.

During the 1960's both superpowers directed their national
space programs towards landing a manned expedition on the moon.
The space treaty was a 'giant leap' in the development of a
regime of law for space, for it provided binding international
19
law as a basis for space management. President Lyndon Johnson
showed a great amount of enthusiasm for the treaty. He said,
"...it is the most important arms-control development since the
limited Test Ban Treaty of 1963...It guarantees free access to
20
all areas and installations on celestial bodies...." Nickolai
Federenko, the Soviet representative to the U.N., also hailed the
1967 treaty as an important symbol of progress towards peace in

21

outer space.

Although the U.S. and the Soviets had complete control over space technology when the treaty was being formulated, the practiced policies were based on international cooperation and an accepted prohibition against sovereign claims. The 1967 Outer Space Treaty was a fundamental starting point for national activities and for international cooperation in the exploration, use, and exploitation of space.

The 1967 Outer Space Treaty not only provided a comprehensive statement of legally binding rules for the conduct of space activities but also provided (like the 1963 Declaration) another basis for understanding the political and legal process of space law development.

Perhaps the most significant impact of the 1967 Outer Space Treaty on the evolution of international space law is that it laid the foundation for future treaties relating to space activities. After the 1967 Treaty, the next major treaty to take effect was the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space. This treaty, which developed from Article V of the 1967 Treaty, entered into force on December 3, 1968. The crux of this agreement was to give assistance to astronauts in the event of accident, distress, or emergency landing.

Following the 1967 treaty, five years elapsed before another major treaty was passed. Then on September 1, 1972, the Convention on International Liability for Damage Caused by Space Objects entered into force. This treaty, which evolved from the general principles found in Article VI and Article VII of the

1967 treaty, dealt with the international responsibility of states for their national activities within outer space. It also included the liability for damage to another state party to the treaty or to its natural judicial persons.²³ The main thrust of this treaty is to elaborate on the international rules and procedures already in effect concerning equitable compensation to victims of damage caused by space objects.²⁴ Technological advances in and multiple experiences with satellites have made it necessary to provide for a legal way to handle liability at the landing site if a satellite crashed, exploded, or otherwise did not land intact. This need became evident when the Soviet Union's Cosmos 954 in 1978 re-entered the earth's atmosphere and scattered radio active debris over northwest Canada.²⁵

The final agreement which has had a significant impact on the development on international space law is the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies.²⁶ The Moon Agreement was opened for signatures on December 18, 1979; however, it did not go into force until July 12, 1984. The U.S. and the USSR would not sign this agreement, thereby creating a highly controversial issue. The controversy lay within the declaration that "the moon and its natural resources are the common heritage of mankind and that states "undertake to establish an international regime, including appropriate procedures, to govern the exploitation of the natural resources of the moon as such exploitation is about to become feasible".²⁷ This agreement does not include outer space itself as an area, nor does it apply to space objects in orbit.

Eventually, however, the agreement was accepted by the five nations needed to ratify it, and after a five-year struggle it became binding. Beginning with the 1967 Outer Space Treaty and the four major agreements which followed, international space law was formulated.²⁸

International Space law also experienced growth and development outside the U.N. context. The first of the major treaties and agreements formulated by nations or groups of nations is the International Telecommunications Convention wherein the purposes of the International Telecommunication Union (ITU) were stated. The ITU developed as a major space instrument because a space craft of any nature requires communications to and from outer space. ITU, which became a specialized agency of the U.N. in 1947, strengthens international cooperation and allocates the registration of assignments in order to avoid harmful interference between different national stations.²⁹ TI ITU coordinates efforts to harmonize telecommunications facilities and improve networks. The geo-stationary orbit which is thought to belong to all mankind has been declared by the ITU to be a natural resource and that "first come first served" does not give any state the right to claim it as its own.³⁰

The major communications system for global coverage is the International Telecommunications Satellite Agency (INTELSAT). The INTELSAT agreement with Annexes and the operating agreement relating to INTELSAT, entered into force on February 12, 1973.

INTELSAT is administered by two international agreements. The first puts forth the basic provisions, principles, and structure of the organization agreed upon by the various

governments. The second is an operating agreement put forth to make financial and technical provisions for the organization. The INTELSAT agreements present practical precedents for solving other types of space problems, especially those which deal with equity. For example, Article 4 of the operating agreement decrees:

Each signatory shall make contributions to the capital requirements of INTELSAT, as determined by the Board of Governors in accordance with the terms of the agreement and this operating agreement, in proportion to its investment saved as determined pursuant to Article 6 of this operating agreement and shall receive capital repayment and compensation for use of capital in accordance with the provisions of Article 8 of this operating agreement.³¹

INTELSAT's aim affirmed the principle enunciated in the U.N. General Assembly's Resolution 1721 (XVI) "that communication by means of satellites should be available to the nations of the world on a global and non-discriminatory basis"³². Examination of these institutions, ITU and INTELSAT, would suggest that, if there is an need for a specific law to serve national and international purposes, then legal arrangements for representation and operations can be worked out.

Major International Space Organizations

On November 15, 1971, the nations of Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, and the USSR ratified the INTERSPUTNIK Agreement. The aim of Intersputnik is to ensure co-operation and co-ordination of efforts by member states in the design, establishment, operation,

and development of a communication system by using artificial
33
earth satellites.

Another major international organization, The Arab Corporation for Space Communications, is an example of the expansion and growth of international organizations concerned with the use of space. The ACSC was the result of an ITU survey of requirements of the Middle East and Mediterranean regions concerning communications, surveillance, and direct broadcasting.
34
This agreement was not ratified until July 15, 1976.

The major European agency, the European Space Agency, was established in Paris on May 30, 1975. The ESA evolved from its predecessor agencies, the European Space Research Organization (ESRO) and the European Launcher Development Organization (ELDO). The ESA has the power to make contracts and to be a party to legal proceedings as its members see fit. Under Article II of its convention, ESA will "provide for and promote cooperation among European states in space research and technology and their
35
applications for scientific purposes and operational systems". Since its inception the high degree of cooperation between ESA and NASA has proven that the growth of space technology brings with it the need for and possibility of cooperation on a global scale.

One of the last major international space agencies is EUTELSAT. Eutelsat, first envisaged by the European postal and telecommunications representatives, led to an agreement on the constitution of a Provisional Telecommunications Satellite
36
Organization. The constitution was opened for signature on May 13, 1977, and became effective on June 30, 1977.

Of all the major space organizations, it is the U.S.'s National Aeronautics and Space Administration which has contributed the most to international space law development. NASA was created through the National Aeronautics and Space Act of 1958. ³⁷ This act was a product of legislation sent to Congress on April 2, 1958, by President Eisenhower.

Under the 1958 NASA Act, Congress declared that "it is the policy of the United States that activities in space should be devoted to peaceful purposes for the benefit of all mankind". ³⁸ Since 90% of all U.S. space activities had been activated through the Department of Defense, the new civilian agency, NASA, was created to explore non-military space activities. The Defense Department remained responsible for activities dealing with the development of weapons, military systems and operations, or the defense of the U.S. ³⁹

The NASA Act successfully related national and international objectives for space activities. In accordance with these objectives, section 205 was written into the act, providing that "the administration, under the foreign policy guidance of the President, may engage in a program of international cooperation in work done pursuant to this act, and in the peaceful application of the results thereof, pursuant to agreements made by the President with the advice and consent of the Senate". ⁴⁰

The last major agency which has had an impact on international space law is COMSAT or the Communication Satellite Corporation. Comsat was formulated under the Communications Satellite Act of 1962. The act provided for the establishment,

ownership, operation, and regulation of a commercial communications satellite system.⁴¹ Because of legal difficulties in using outer space for communications and surveillance, the Comsat Act provided in section 102 the basis for international cooperation, in hope that it could solve these difficulties. Section 102 states,

"(a) The Congress hereby declares that it is the policy of the U.S. to establish, in conjunction and in cooperation with other countries, as expeditiously as practicable, a commercial communications satellite system, as part of an improved global communications network, which will be responsive to public needs and national objectives, which will serve the communication needs of the U.S. and other countries, and which will contribute to world peace and understanding."⁴²

The development of the COMSAT Corporation allowed for an effective means whereby the U.S. could play a major role in INTELSAT. On November 1, 1978, the Comsat Act was amended to provide for the establishment, ownership, operation, and governmental oversight and regulation of international maritime satellite telecommunications services.⁴³

Satellites-Legal Aspects of Remote Sensing

In the strictest sense, remote sensing simply means obtaining information about something from a distance. In present-day practice, however, the term describes ways by which information on objects or phenomena is located and is obtained from somewhere in the air or in outer space.⁴⁴

Two major types of remote sensing systems exist today--

civilian and military. Distinguishing between the two systems is not always easy. In many respects, the distinction lies in the use rather than the technical characteristics of the systems. The major objectives of civilian systems are continuous monitoring of crops and other vegetation, natural resources, e.g., mineral deposits, icecaps and draft courses of large icebergs, and hazardous weather phenomena. Major military objectives include area survey missions, close-look missions with high ground resolution, early warning missions, and ocean surveillance.

Of all the remote sensing satellites, LANDSAT contributed the most. The Landsat had civilian and military uses. Landsat 2-5 held tremendous military importance, for it photographed rockets and missile launching facilities within the USSR and China. Most civilian remote sensing programs were administered by national and international governmental institutions such as NASA, ESA, and INTERKOSMOS (USSR). No details of military space missions are available to the public; therefore, an accurate account of present military remote sensing systems is unavailable.

At the end of 1980, the USSR possessed a total of 1946 satellites. In recent years, both the U.S. and the USSR have invested a tremendous amount of time and money into their remote sensing satellites systems.

The legal aspects of remote sensing are twofold. Although no single treaty on remote sensing exists, some treaties have sections which apply to the topic. Remote sensing by satellites has been on the agenda of the U.N. outer space committee since 1971, when the U.N. General Assembly requested by resolution 2778 (XXVI), adopted during the twenty-sixth session of the General

Assembly, that the committee establish a working group.

Although the United Nations has been working towards a declaration of principles on remote sensing, the declaration will not be effective unless all countries with remote sensing capabilities become party to the treaty.

Remote sensing is legal under existing international law; but, as an element of the complete and exclusive sovereignty that a state has in the airspace above its territory, a nation may seek to prohibit or at least regulate remote sensing carried out within its jurisdiction. One of the major responsibilities of the working group was to study the sovereign rights of states as they might be affected by remote sensing activities. Under the General Assembly's instruction, the working group succeeded in formulating the text of five draft principles of the future agreement. For the next two years the formation of further draft principles on remote sensing was given high priority.

The 1978 session was significant in that it revealed the conflict between the two opposite approaches to the legal aspects of remote sensing. The first position, held by the U.S., was that free collection and dissemination of data obtained by remote sensing are in accordance with the Outer Space Treaty. In June, 1978, the U.S. reaffirmed its position through a Presidential directive outlining the U.S. policy towards space activities. Of all the issues discussed within the directive, two held major relevance to remote sensing:

- 1 The United States rejects any claims to sovereignty over outer space or over celestial bodies, or any portion thereof, and rejects any limitations on the fundamental right to acquire data from space.

2 Data and results from the civil space programs will be provided the widest practical dissemination to improve the condition of human beings on earth and to provide improved space services for the U.S. and other nations of the world.⁵³

In opposition to the U.S. point of view, several nations declared that the principle of freedom of outer space should be subject to certain restrictions so as to protect the sovereign rights of states concerning their natural resources. The legal argument for this position is that a state should have permanent sovereignty over its natural resources. The nations that held this belief argued that the sensing state must first obtain the consent of the state that is being observed. Thus far, all attempts to solve this conflict in beliefs have failed.

The main group working on the issue of remote sensing has been the Committee on the Peaceful Uses of Outer Space (COPUOS) which has been discussing the "Draft Principles on Remote Sensing".⁵⁵ The Draft principles in their current state exhibit many of the problems the committee had encountered during earlier negotiations. The conflict between the two approaches to the legal problems has caused endless problems with the language within the draft principles. For example, the committee has not decided whether a state 'shall' or 'should' conduct various activities.⁵⁶ The developers hoped to create a centralized body through which information could be deciphered and cohesion between the various enterprises could be achieved. Such a body has not yet been established.

Legal negotiations regarding remote sensing officially began in 1972, and, by 1984, remote sensing had high priority on the annual agenda of UNCOPUOS. During the fourteen years since 1972,

many proposals concerning remote sensing have been received, but a majority of them have not been accepted. Between 1976 and 1981, the principles were formulated and reformulated without much change in the final product. Again, the major problems were the questions of sovereignty and prior consent. Between 1981 and 1983 a UN COPUOS legal sub-committee could not achieve a consensus on the seventeen principles of the draft text. Using the 1981 text as a basis for a formal text on remote sensing, the legal sub-committee, during its 1983 session, returned to the draft principles. Accordingly, the 1983 text offered as a compromise the principle that the sensing state no longer needs to notify the sensed state. The sensing state must on request, however, notify the sensed state and, in all cases, the Secretary-General of the U.N..⁵⁷ Despite this effort, no agreement on a set of draft principles regarding remote sensing could be obtained in 1983. In fact, no consensus has been reached on a set of principles on remote sensing. The development of legal regulations to govern remote sensing activities is moving at an extremely slow pace and is rapidly falling behind the advances in space technology. Unless a tremendous change occurs among governments, remote sensing technology probably will continue to exist with no regulations except those within the 1967 Outer Space Treaty. When custom becomes firmly established, it will become even more difficult to obtain an agreement satisfactory to all member of COPUOS.

Conclusion

During the past thirty years the developers of space law have shown the needed foresight--if not political will--in handling the impact of space technology on society. The influence of these rules and regulations on space activities can be demonstrated only through the space treaties and declarations, which are the evidence of a new and expanding field of international law. Many lessons about space law have been learned in developmental process. All activities carried on in outer space are multifaceted and require one to possess the knowledge of all types of information--scientific, political, economic, and technological--in order to formulate the needed legal regulations. The direction that international space law will take is a best undetermined. The very short life of space law has been generally a healthy one. The existing treaties and declarations have given space activities a clearer and more cohesive framework that exists in many other areas of international law. As nations other than the U.S. and the USSR have acquired the necessary technology to explore space, the work of the space law developers has become more difficult. Like so many other aspects of international law, the future development of space law will depend upon several factors outside the realm of legal regulations. As space law continues to develop, man must reflect upon the past thirty years and continue to strive toward a peaceful international space environment.

Chapter 3-Endnotes

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- 3 Eilene Galloway, "Perspectives on Space Law", Journal of Space Law, 9 vol., ns 1 and 2 (n.p., 1981) 21.
- 4 Galloway, Perspectives, 21.
- 5 United Nations General Assembly Resolutions, 1348/XIII, December 13, 1958; 1378/XIV, November 20, 1959; 1472/XIV, December 12, 1959; 1721/XVI, December 20, 1961; 1884/XVIII, October 17, 1963; 1962/XVIII, December 13, 1963; and 1963/XVIII, December 13, 1963.
- 6 Carl Christol, The Modern International Law of Outer Space (Elmsford, New York: Pergamon Press, 1982) 1-2.
- 7 Galloway, History, 297. Also see Robert H. Farris, The Problem of Delimitation in Space Law, diss, University of Notre Dame, 1974 (Ann Arbor: UMI, 1974) 19 Also, Zhukov, 18.
- 8 Ogunsonla O. Ogunbanwo, International Law and Outer Space Activities (The Hague: Netherlands: Martinus Nijhoff P., 1975) 12. Also see Zhokov, 19.
- 9 Ogunbanwo, 12. This expanded to 47 in 1977, then to 53 in 1983.
- 10 Ogunbanwo, 13.
- 11 David R. Hager, Space Law, The United Nations, and the Superpowers: A Study of International Legal Development and Codification: 1957-1969, diss, University of Virginia, 1970 (Ann Arbor: UMI, 1970) 59.
- 12 Ogunbanwo, 13.
- 13 Farris, 26.
- 14 Galloway, History, 299.
- 15 Ogunbanwo, 16. Also see Farris, 175.
- 16 Vladimir Kopal, "The Question of Defining Outer Space", Journal of Space Law, 8 vol., no. 2 (n.p., 1980) 16. As to date, this treaty has not been updated.
- 17 United Nations, The 1967 Outer Space Treaty-Article I, (United Nations, October 10, 1967).
- 18 Galloway, History, 300-301.
- 19 Hager, 218.
- 20 Hager, 218. Also President Johnson considered the treaty as an indication of progress towards resolving the general problem of peace between the U.S. and the USSR.
- 21 Hager, 219.
- 22 United Nations. International Liability for Damage Caused By Space Objects, (24 U.S.T. 2389, T.I.A.S. 2762, U.N. GAOR. 26th sess. Suppl. no, 29, A/8429).
- 23 United Nations, "International Liability".
- 24 It took many years to gain a consensus on this treaty, but it is significant for it represented the second successful achievement by the legal sub-committee of COPUOS to work out specific rules from the general guidelines of the 1967 Outer Space Treaty.
- 25 J.E.S. Fawcett, International Law and the Uses of Outer

Space (Dobbs Ferry, New York: Oceana Publications and Manchester UP, 1968) 115-116. Also see Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launch into Outer Space(19 U.S.T. 7570, T.I.A.S. 6599,672 UN.T.S> 119).

26 United Nations, Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (U.N. GAOR, 34th sess., 1979, supp. no. 20, 2/34/20, UNGA Res. 34/68 Annex, of December 5, 1979, ILM vol. XVIII) 1434.

27 Galloway, History, 305. Also See Marietta Benko, Willem DeGraaft, and Gijsbertha C.M. Reijnen, Space Law in the United Nations (The Hague: Netherlands: Martinus Nijhoff, 1985) XIII.

28 Because COPUOS has been dealing with extremely hard core issues, it has been unable to conclude another space treaty.

29 Ogunbanwo, 37.

30 Future International Conferences will deal with these technical legal, political and economic problems. In order to avoid chaos in the field of space communications, authorities and agencies must become thoroughly knowledgeable about the ITU's Regional and National Organizations, i.e., Federal Communication Commission, The Department of Commerce and The Communications Satellite Corporation(COMSAT).

31 Galloway, History, 307.

32 Ogunbanwo, 38.

33 Ogunbanwo, 47.

34 Ogunbanwo. 48-49.

35 Galloway, History, 309-310.

36 Galloway, History, 309-310.

37 See the NASA Act, (72 Stat. 426, July 29, 1958).

38 The NASA Act, 1958, Section 102(a).

39 The NASA Act, 1958, Section 102(a).

40 The NASA Act, Section 205.

41 The Communications Satellite Act of 1962 (n.p.,. 76 Stat. 419, 1962).

42 COMSAT Act, Section 102.

43 COMSAT Act. 92 Stat. 2392, November 1, 1978.

44 Benko, DeGraaft and Reijnen, 3-4.

45 Benko, DeGraaft and Reijnen, 8.

46 Benko, DeGraaft and Reijnen, 8.

47 Benko, DeGraaft and Reijnen, 11.

48 As of 1984, the U.S. has a total of 1036 satellites of which 446 or 43% are military of this number, 363 are for general remote sensing, i.e., photographic and T.V. Reconnaissance.

49 Benko, DeGraaft and Reijnen, 16.

50 Due to the increased in security regarding Remote Sensing systems, adequate information could not be obtained; therefore, an in-depth discussion of the U.S. and USSR systems is impossible.

51 Benko, DeGraaft and Reijnen, 1.

52 F.Lyall, "Some Legal Aspects of Remote Sensing" Remote Sensing in Meteorology, Oceanography and Hydrology (New York: Halsted Press, 1981) 208.

53 Ivan Vlastic, "The Evolution of the International Code of Conduct to Govern Remote Sensing By Satellite: Progress Report", Annal of Air and Space Law 3 (Toronto: Canada, 1978) 563. Also

see "U.S. Space Activities-Announcement of Administration Review-
June 20, 1978", 14 Weekly Compilation of Presidential Documents
(June 26, 1978) 1135-37.

54 Lyall, 211.

55 Lyall, 208.

56 Lyall, 209.

57 Carl Christol, "Remote Sensing and International Law",
Annal of Air and Space Law 5 (Toronto: Canada, 1980) 421.

Chapter 4-Laying Claim to the Resources of the "commons": lessons to be learned

As the law of the sea and outer space law have developed, various issues and problems have arisen. One such issue has to do with who shall lay claim to or declare sovereignty over the natural resources? Developers of the LOS and OSL have been dealing this problem for several decades; however, a compromise solution has not been agreed upon. The valuable resources that lie beneath the seas and that may potentially exist in space have generated enormous pressure between the U.S. and the Soviet Union. This competition has delayed the process of forming satisfactory regulations for governing the resources of the seas and of space. The lack of effective means for settling disputes regarding the natural resources of these new frontiers was not too serious in the initial stages of codifying the regulations governing these resources. However, the exploitation and commercial uses of these resources during the twentieth century have given rise to serious legal problems.¹

State Jurisdiction Over the Natural Resources of the Deep Seabed

The function of state jurisdiction in any area is to maintain legal stability and order. The importance of regulations governing the exercise of state jurisdiction over space and ocean activities parallels the development of the exploitation of outer space and the deep sea-bed. It is normally the case that a state has jurisdiction to deal with any offense committed within its territory, regardless of the nationality of the offender. Conflicts arise because there is no general agreement as to what should be included within a state's territory and under what circumstances a state has jurisdiction outside

its territory. When such conflicts arise, rivalry develops between those nations seeking that jurisdiction. When asked about such rivalry within the space environment, Joseph G. Whalen stated:

"Rivalry is at the vital center of great power relationships. Rivalry could not, therefore, be kept out of the space environment. Indeed, the main thrust of space politics since the beginning of the space age has been bound up in competition. Space was made a component of the Cold War; prestige was to be won through Space; prestige was power".²

As technology has developed, man has moved closer to gaining power over the depths of the seas and the vastness of space. Throughout the development period, conflict has arisen over the problems of laying claims to and declaring sovereignty over natural resources. The conflicts which have developed concerning the oceans and space have varied from year to year, changing only when the political relationship of the superpowers changed. During the early stages of the development of space law, the Legal Advisor to the U.S. State Department, Loftus E. Becker stated, "...the U.S. government has not recognized any top or upper limit to its sovereignty".³ Accordingly, the U.S. government expressed the same attitude towards the vast territory under the seas. The oceans amount to 72% of the earth's surface, a vast territory by any standard. Since the U.S. has the capability of reaching the deep seabed, it is reluctant to give up its opportunity of declaring sovereignty over portions of the ocean floor. The U.S. is not alone in its desire to claim sovereignty over these new frontiers. The Soviet Union has argued that "the status of space and the oceans is extremely important regarding the extension of national sovereignty".⁴

The principle of state sovereignty is one of the oldest principles in general international law. At first, nations only claimed

sovereignty over the areas adjacent to their coastal states; then the natural resources connected with these territories began to be included. Therefore, it is not surprising that nations who have the means have the desire to declare sovereignty over the resources found on the ocean floor and within space. This attitude towards claiming natural resources created conflict and disputes between industrially developed countries and the developing nations.

When these conflicts developed, there grew the need to establish laws and regulations to settle disputes between the conflicting nations. The developers of the law of the sea faced numerous problems; however, the area which has created the most problems is the deep seabed. The 1958 and 1960 Geneva Conferences, although successful in codifying some definitions and concepts of the traditional law of the sea, failed in narrowing the limits to national jurisdiction over the seas. By the mid-1960's and early 1970's, coastal states had increased their claims to the areas of the territorial sea and continental shelves. Meanwhile, the Soviet Union suggested to the United States that a conference on the law of the sea be convened for the purpose of regulating claims over the seas and its resources. However, while the Soviets and Americans were negotiating for their conference, the Government of Malta submitted an agenda item to the United Nations suggesting that the seabed and its resources beyond the limits of national jurisdiction be declared "a common heritage of mankind". The Maltese Government also suggested that negotiations be initiated to implement this concept through the establishment of an international authority. The Maltese Government had become convinced that a complete division of ocean space among coastal states was ultimately unavoidable

unless the international community replaced the principle of freedom of the high seas with another universally accepted principle.

Accordingly, the division of ocean space evolved as part of the common heritage of mankind principle.⁶

Two categories of claims and counter-claims exist in connection with the regulation of the deep seabed's resources. The first invokes primarily the doctrine of freedom of the seas to conclude that there is a "freedom" of exploitation of deep seabed resources, just as there are other freedoms of the high seas, i.e., navigation and fishing. A second set of claims focuses around the specific design of international rules that may be entrusted with the regulation of ocean resources.⁷ The views expressed by the developing countries in connection with the United Nations debate on the law of the sea reveal their desire to minimize the effects of their geographical and technological disadvantages. One delegate from Czechoslovakia expressed the reasoning behind these countries claims over the ocean's natural resources:

"This area underlying the high seas, the seabed and the ocean floor beyond the limits of national jurisdiction is of interest to us firstly because we could deepen our knowledge in the respective scientific disciplines by learning about new aspects unknown to us, and so far remote to us, and secondly because, as a small landlocked country with a limited raw material basis, we see here an opportunity to participate, at least partially, in the exploitation of the rich deposits in the sea".⁸

The status of the deep seabed resources has been one of the major issues before the United Nations Seabed Committee. Y.A. Malik, representative of the USSR to the United Nations, stated:

"It was the view of this country that

in its study the Committee should above all take into account the existing international legal principles and standards relating to the sea-bed and ocean floor....In formulating the legal problems that required a further and thorough study one must proceed from the fact that the formulation of legal rules governing the activities of states with respect to the use of the sea-bed should be based on the existing principles of international law; it should not restrict the principle of the freedom on the high seas and other rights enjoyed by states under the international rules now in force".⁹

Japan was even more explicit in supporting the existing principles of international law towards governing the resources of the sea-bed. Japan and Denmark recognized that the seabed and the ocean floor should be used for the benefit of mankind; however, they believed that the committee should not discourage states from exploring or exploiting the ocean's natural resources.¹⁰

According to Ambassador Arvid Pardo of Malta, the traditional concepts of 'res nullius' and 'res communis' could not be regarded as applicable to regulation of deep sea-bed resources.¹¹ The Group of 77 countries feels that unorganized and inclusive access would allow the mineral resources of the deep ocean areas to be appropriated exclusively by the first comer and the technologically capable and would be inimical to the common interest. M. Vakil, the Iranian representative to the U.N. Seabed Committee, observed,

"...there must be no appropriation of the resources beyond the limits national jurisdiction,...all mankind must be the beneficiaries of the riches to be won from them,... research and investigation must be free..."¹²

Despite the differing opinions among members of the U.N. Seabed Committee on the status of the deep seabed and the regulations which

should apply to the exploitation of it, the U.N. General Assembly passed Resolution 2749 (XXV) on December 17, 1970, entitled Declaration of Principles Governing the Seabed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction.¹³

In a Senate hearing on the Declaration in the U.S., varying opinions were expressed regarding the lack of binding force of the U. N. resolutions. Northcutt Ely recommended:

"...that the U.S. Government... announce that it does not regard itself as bound by the Declaration, but, ... will continue to encourage the exploration and exploitation by its nationals of the seabed beyond national jurisdiction, under the international law applicable to the high seas, with due regard to the similar rights of all other nations..."¹⁴

All nations agree to the principle of 'Common Heritage of Mankind'; however, technologically advanced nations are not prepared to concede the resources of the deep seabed. By the time the Declaration of Principles was passed, many models for the regulation of deep ocean resources had been proposed by several states. Although there were similar concepts among the various proposals, there were also significant differences in the motivations that influenced them. The industrially advanced countries favored restricting the international authority which would regulate the exploitation of the seabed. These countries, although accepting the notion of common heritage, felt that if the international authority had too much authority, then they would be denied access to the resources. The reasoning behind the proposal by the Group of 77 was explained by Ambassador Andres Aquilar of Venezuela:

"A very important issue is at stake here. To developing nations the concept of common heritage implies not only sharing in the exploitation of the resources of the area but also, and above all, an effective and total participation in all aspects of the management of the common heritage...."15

Ultimately, the Group of 77, which has a controlling majority in the U.N.'s Seabed Committee, viewed the deep seabed as a battlefield on which to contest the technologically advanced nations. Therefore, they felt it was not only in their interest, but also in the interest of all mankind, that the resources of the seabed belong to all nations, not just those who possess the technological capabilities to reach them. Despite opposition from such countries as the U.S., it was determined that resources beyond the limits of national jurisdiction should be regulated through an international authority or regime. ¹⁶ The "common heritage of mankind" concept, as applied to the ocean floor, was considered to have five major implications:

- 1) the common heritage can be used but not owned;
- 2) use of the common heritage requires a balanced system of management;
- 3) the concept of common heritage implies an active sharing of benefits;
- 4) the concept implies reservation for peaceful purposes; and
- 5) the common heritage promises reservation for future generations. 17

Initially the Maltese Government suggested that the concept of common heritage be applied only to the seabed beyond "present" national jurisdiction; however, after several sessions of negotiations, it came to involve various other aspects of the law of the sea as well.

The LOS Convention indicates an essential change in the structure of the law of the sea. For the first time in history, a comprehensive

framework regulates man's activities in the deep seabed environment. Instead of state practice and the traditional process of claim and counterclaim, the LOS Convention established the principle that some resources are beyond national jurisdiction. Of course nations such as the United States opposed the Convention, for it did not meet their
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needs.

A major flaw in the LOS Convention is that there are no clear and definitive limits to national jurisdiction. Moreover, it overwhelmingly exhibits concern over the rights and interests of coastal states. Granted, the notion of the common heritage of mankind has gained considerable appeal with regard to the global commons (the oceans and outer space). However, this concept does not establish solutions to conflicts between developed and developing states over the resources. It remains problematic whether the principle that the seabed and its resources beyond the limits of national jurisdiction are a common heritage of mankind can be implemented under the Conference's terms. Although developed and developing nations support the introduction of the principle of common heritage of mankind into the law of the sea, problems have been generated over the fact that they do not specifically agree over how to implement it. The developers of the LOS were unable to define "boundaries" in which common heritage could actually be applied. The debate over the seabed's resources and the common heritage concept continues. Although the U. S. refuses to sign the LOS Convention, it cannot refuse to recognize that a majority of the international community accepts it and regards it as the "official" law of the sea. The debate is vital over the degree of national sovereignty which can be declared over the seabed resources. In order for common heritage to be implemented properly, all nations, developed

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and developing, must not only accept the idea, they must also practice it as law binding over every nation involved.

Claims within Outer Space

The deep seabed has not been the only controversial topic for the international legal community. While the developers of the LOS Convention were trying to solve the problems of the deep seabed, the developers of outer space law faced similar problems. The issue of the seabed concerns not only regulation but also ownership and control of the highly valuable resources. The conflicts and debates which developed over the deep seabed suggested to the developers of space law problems which they might encounter. Unlike the sea-bed, however, the "resources" of outer space, are quite problematic. Also, a major difference between claims made in outer space and those with respect to the seabed deals with the technology necessary to reach these
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resources.

Because the resources of outer space are highly questionable, it is difficult for the developers of Outer Space Law to establish regulations to govern such resources. As to date the obvious "resources" within outer space are those of an observative and communicative nature, such as communication satellites, remote sensing satellites and the geosynchronous orbit. Because highly advanced countries have the means and capability of exploiting outer space these nations have shown little interest in sharing their technology with developing countries. Developing countries have therefore pushed for greater international control of cooperation so that the revenues from space activities will be shared by all of mankind.

State Jurisdiction within Outer Space

During the early years in the space debate emphasis was on the concept of sovereignty; however, during the mid-1960's the emphasis was re-directed towards common heritage. Because of fears about national sovereignty over the potential natural resources of outer space, the Outer Space Treaty of 1967 was drafted. Despite the development of this Treaty, the principle of national sovereignty remained vital to the international community.

The concept of state jurisdiction in outer space law means "the right of a state to regulate or affect by legislative, executive or judicial measures the rights of persons, property, acts or events with respect to matters not exclusively of domestic concern".²⁰ The concept of state jurisdiction in space law is not the same as international law's concept of state jurisdiction; for example, the rules of territorial jurisdiction are not applicable to space territory, since Article II of the Space Treaty prohibited national appropriation of²¹ outer space and celestial bodies.

As on the High Seas, exercise of national sovereignty was necessary for outer space. The analogy of jurisdiction on the high seas is applicable to the concept to state jurisdiction in outer space. Brierly makes this point when he says,

"So far as concerns jurisdiction the freeing of the high seas from seas from the exclusive sovereignty of individual states did not leave them subject to no jurisdiction: The right of jurisdiction, like the rights of navigation and exploitation became vested in each and every state....the jurisdiction of each state was limited to its own vessels and nationals".²²

According to the High Seas Convention, a coastal state may exert jurisdiction over foreign vessels if such vessels threaten the "peace and good order" of that state. By a parallel principle, states may claim jurisdiction over space installations if their sovereignty or security is jeopardized. Article 2 of the High Seas Convention of 1958 says that many freedoms of the high seas must be practiced "with reasonable regard to the interest of other states in their exercise of freedom. Analogous evolution of space law suggests that the more intensified the uses and exploitation of space resources become, the more diversified the forms of state jurisdiction over such activities must be.

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The developers of outer space law gained considerable knowledge from the lessons learned from the developers of the law of the sea. The lessons learned enabled the developers of space law to by-pass many of the obstacles which had faced the developers of sea law. From the onset, the laws governing outer space recognized the principle of common heritage of mankind. Although the common heritage principle was first established in the OSL proceedings, credit for its introduction to the international legal community has been given to Pardo and the other LOS developers. Article I of the Outer Space Treaty provides that space activities shall be carried out for the "benefit of mankind", in the "interest of all countries", on the basis of equity, "without discrimination", and in accordance with international law.²⁴ Outer space has been declared the "province of mankind" and the moon and its natural resources "the common heritage of mankind". These principles place limitations upon the methods available for state jurisdiction within outer space. Referral in Article I to the principle of sovereign equality laid the framework that would shape

state practice towards claims within outer space. Based upon traditional International Law of the Sea, Article II of the space treaty provides that "outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty by means of occupation, or by any other means"²⁵.

This principle of non-appropriation grants that states retain jurisdiction over objects launched into outer space, but it prohibits territorial acquisition in space. In order to avoid eventual conflicts between the principle of non-appropriation and the practice of jurisdiction, the Space Treaty did not state where the limit of state jurisdiction should be drawn. Aware of the conflicts which had developed in the law of the sea over state jurisdiction, the developers of space law avoided placing strict limitations upon states regarding outer space activities.²⁶ By avoiding strict limitations, the developers of space law realized that the conflicts would not disappear. Instead, they were trying to postpone any difficulties which would interfere in the development of space law. However, the developers did have the foresight to realize that laws would be needed to govern the exploitation of the natural resources of space, partly because of the experiences of the LOS evolutionary process. Under this premise the notion of "common heritage of mankind" became the focus of all space law debates.

"Common Heritage of Mankind" as applicable to Outer Space

Although generally attributed to Arvide Pardo of Malta, the principle of common heritage was first introduced to the international to the international community by Aldo Cocca, who used this expression at the United Nations in 1967.

"Indeed, the paternity of the 'common heritage' concept is, more often than not, attributed to the permanent Mission of Malta to the U.N. in note Verbale of 17 August 1967 (recorded in Doc. A/6695 of 18 August 1967). Yet it is not quite exact. If one looks at the Archives of publications in the Library of the of the Palais des naitons at Geneva, it is easy to realize that it was in the U.N. Committee on Outer Space, and not in the Seabed Committee, that the expression 'common heritage' was first used and explained. In this connection resort has been made to Doc A/AC 105/C.2/SR 75 corresponding to the inaugural session of that year. 19 June 1967, at 3:15 p.m.".27

Accordingly, the common heritage principle provides guidance in effecting an orderly and equitable distribution of benefits derived from space and ocean resources so that a measure of global fairness may be realized.

From the common heritage principle in LOS development came six notable traits which transferred to the outer space negotiations:

- 1 An enlargement of the traditional international legal principle of *res communis*, thereby reflecting the *res nullius* perspective;
- 2 a commitment to benefitting mankind generally by protecting the physical environment against unnecessary degradation;
- 3 an attempt to conserve the world's resources for present and future generation;
- 4 an agreement to allocate such resources and benefits with attention to the needs of the less-developed countries;
- 5 an international regime containing rules;
- 6 a mandate to use only for peaceful purposes".28

These characteristics are important because of a worldwide awareness that natural resources are being rapidly depleted.

The OSL developers disregarded many of the problems which

had faced the LOS negotiators, Later negotiations involved a highly complex and interrelated set of policy-oriented considerations:

"1 =whether the principle should be applied only to the Moon and other Celestial bodies;

2 whether it should apply to natural resources;

3 the identification of the types of juridical persons which might engage in exploitative activities;

4 when the common heritage principle should become operative;

5 relationship between the common heritage of mankind principle applying to the Moon and other celestial bodies and the common heritage principle concerning the deep seabed and the ocean floor".²⁹

In support of common heritage, Argentina's delegate to the U.N. urged an equitable sharing of profits. Argentina and other developing nations observed that common heritage had been applied to the oceans in General Assembly Resolution 2749 (XXV). It was³⁰ therefore accepted as a legal aspect common to all states.

However, as in the debates over the deep seabed, the United States implied that its adoption of common heritage did not establish either an express or implied prohibition on the use and exploitation of the natural resources of the moon or other celestial bodies. The U.S. insisted that common heritage should not be used in such a way as to inhibit free scientific³¹ investigation.

Economic interests played a vital role in the positions that nations took regarding the common heritage principle. In support of the principle, Italy suggested that "the economic resources of the Moon, due to be (when) transferred on to the Earth, shall be dealt with as common heritage of mankind; all states shall have

an equal and unhindered access to them on an equitable basis".³²

While Italy was agreeing to the common heritage principle, other nations such as the Soviet Union, were saying it was not suitable for outer space, and that it revised international law³³ entirely, especially in respect for national sovereignty.

Ironically, the Soviet Union had accepted the common heritage principle as it applied to the seabed and ocean floor and the resources listed in article 136 of the Draft Convention on the³⁴ Law of the Sea.

On the other side of the globe, the U.S. was also hesitant about accepting the common heritage principle. Although the State Department presented the U.S. delegates with a positive assessment of the 1967 Space Treaty, the United states was still³⁵ apprehensive in fully accepting the treaty. The United States' position was greatly influenced by the occurrence of the common heritage principle in the Outer Space Treaty and in the 1982 draft of the Law of the Sea Treaty. However, after a careful review of the LOS Treaty, the country agreed to re-join the ocean negotiations. This deliberate stance by President Reagan caused the U.S. to re-consider the principle in relation to outer³⁶ space.

Under the LOS Convention, the Area and its resources, which are considered to be the common heritage of mankind, begin where national jurisdiction ends. The developers of LOS had realized the need to define the boundaries of the "international area". Unlike their counterpart, OLS developers, developers of LOS had the advantage of knowing that there were limits to the oceans,

such as physical boundaries. Although the LOS developers were faced with the challenge of placing limits on a state's jurisdiction, they were not faced with the vastness of outer space. Nations such as the U.S., therefore, do not wish to specify limitations until they know exactly how far jurisdiction may extend. Accordingly, finding an "international area" within outer space which can be declared the "common heritage of mankind" has created obstacles far surpassing the LOS experience. Even though the moon and other celestial bodies, and their natural resources, have been declared the common heritage of mankind, the exactness of boundaries will stifle the development of the common heritage principle among those concerned with international space.

Conclusion

As a whole, mankind has a tremendous amount to learn about and to gain from the oceans and space. States must control their desires and must learn how to deal with the new concept of common heritage. Problems, such as terminology or boundary placements, must be set aside so that these new frontiers can be explored and can benefit all. The benefits of the oceans and space are presently decreed to be available to all nations, regardless of their technological skills and ability. All nations have the right to share in the richness of the new areas of the oceans and space.

Despite the tremendous strides that the developers of both the LOS and OSL have made, much work still needs to be done. Although it originated within the development of space law, the

principle of common heritage did not gain considerable attention until the negotiations for a LOS Treaty began. As a result of its LOS popularity, the developers of outer space law were able to establish common heritage within the several space treaties, beginning with the 1967 Outer Space Treaty.

Even though the developers of LOS and OSL understood and accepted the rationale behind the concept of common heritage, to protect and evenly distribute the resources of the oceans and outer space, they were unable to establish states practice in regards to these resources. The common heritage concept defeats the freedom of states to exploit the natural resources of the oceans and outer space.³⁷ Further international agreements will be needed to implement the principle of "common heritage of mankind". Common heritage is not a new concept, but rather a reaction of the lesser-developed nations to guarantee the receipt and distribution of an equal share of the world's natural resources. The doctrine of common heritage recognizes the inequality of states within the international community and provides some legal strength for the weaker states against the technological domination of the industrialized states. It is impossible to completely analyze the over all influence of the LOS's common heritage principle upon space law. In both the LOS and OSL, only future developments can direct the refinement of the principle of common heritage throughout the international community.

Chapter 4-Endnotes

1 Karl-Heinz Bockstiegel, Settlement of Space Law Disputes, (South Hackensack, New Jersey: Fred B. Rothman and Co., Pub., 1980), 63.

2 Robert H. Farris, The Problem Delimitation in Space Law, (Diss., University of Notre Dame, Ann Arbor: UMI, 1974), 79.

3 Farris, 91.

4 Farris, 92.

5 Arvid Pardo, "Before and After" in Law and Contemporary Problems (Richard C. Maxwell and Horance B. Robertson, Duke University, 46 v. Spring, 1983), 95.

6 The concept of common heritage of mankind will be discussed in further detail later within this chapter.

7 Screenivasa P. Rao, The Public Order of Ocean Resources: A Critique of the Contemporary Law of the Sea (The Massachusetts Institute of Technology Press, Cambridge: Massachusetts, 1975), 76.

8 Rao, 1.

9 Rao, 81.

10 Rao, 81.

11 Rao, 82.

12 Ross Eckert, "The Wealth Distribution and Economic Efficiency Consequences of the New Law of the Sea", in Choon-ho Park, The Law of the Sea in the 1980's (Law of the Sea Institute, University of Hawaii, 1983), 255.

13 Refer to Chapter 3 to see the underlying principles of Declaration/Resolution 2749(XXV), 10.

14 "International Law Applicable to Deepsea Mining" (Law Offices of Northcutt Ely, November 14, 1974), 55 Also see Rao, 86.

15 Rao, 97.

16 For a further explanation of the International Authority see the 1982 Convention on the Law of the Sea.

17 Pardo, 96.

18 Refer to Chapter 3 for further explanation. 17. However, the U.S. did not object to the common heritage principle.

19 Evan Luard, The Control of the Seabed (London: William Heinemann Limited, 1974), 98.

20 Imre Anthony Csabafi, The Concept of State Jurisdiction in International Space Law (Martinus Nijhoff: The Hague Netherlands, 1971), 38-39.

21 Csabafi, 51. Also see 1967 Outer Space Treaty, Article II.

22 Csabafi, 62.

23 Nikos Papadaki, The International Legal Regime of Artificial Islands (H.W. Sijthoff International Pub. Co.,: The Netherlands, 1977), 124-125.

24 The 1967 Outer Space Treaty, Article I. Also see R. Arzinger, "Legal Aspects of the Common Heritage of Mankind", in Proceedings of the Twenty-second Colloquium By the Law of Outer Space, Munich, Germany, September 16-22, 1979 (New York: American Institute of Aeronautics and Astronautics, 1980), 89.

25 1967 Outer Space Treaty, Article II.

26 The developers of space law were extended a freedom which had been denied to the developers of the LOS. At the time of its

developmental process, space technology was not developed enough to create problems among states who might gain access to space. Therefore, the developers did not see the need to initiate conflicts during a critical evolutionary period of space law.

27 Aldo Armando Cocca, "The Advances in International Law Through the Law of Outer Space", in Journal of Space Law, 9 v., nos. 1 and 2., n.p., 1981, p.15.

28 Carl Christol, The Modern International Law of Outer Space, (Elmsford, New York: Pergamon Press, Inc., 1982), 286.

29 Christol, 290.

30 Christol, 294.

31 The U.S. also agreed to the Soviets Proposal whereby states or individuals could not have ownership rights over the moon and other celestial bodies.

32 Eckert, 248. Also see Christol, 296.

33 Christol, 314.

34 United Nations, "Informal Text of Draft Convention on the Law of the Sea, August 27, 1980, Article 136. The Soviets did not explain why they would accept the common heritage principle in one area and not another, however, their acceptance of the principle within the LOS Convention demonstrated their interests in accepting the basic principles of the 1967 Space Treaty.

35 Although the U.S. ratified the 1967 Space Treaty, it did so with some hesitancy.

36 Despite the U. S. refusal to sign the LOS Convention, it did not disregard the "goodwill feelings" of the U. S. participating in the negotiations of provisions of the commons.

37 H. A. Wassenbergh, "Speculations on the Law Governing Space Resources", in Annal of Air and Space Law (Nicloas M. Matte, vol. v. (Toronto: Canada, 1980), 623.

Chapter 5- Conclusion: The Future

Moving into the twenty-first century, developers of the LOS and OSL must commit themselves to establishing regulations which all nations can accept as laws to govern the oceans and outer space. For decades, men have attempted to solve the conflicts in the development of LOS and OSL. Although many of the obstacles have been overcome, the laws governing the oceans and outer space continue to meet opposition from the technologically advanced nations. Making predictions concerning the developments in the two fields is difficult for three reasons: First, technological advances in these fields are being made so rapidly; second the regulations depend on technical progress, the rate of which cannot be predicted; and third, the critical factor of political will which emerges during negotiations. The growing volume and variety of practical ocean and space activities is causing technicians and politicians to demand from the developers of OSL and LOS answers regarding the regulations that they would have to respect in order to engage in their activities without conflict. But the possibility of arriving at agreed upon space and ocean laws will depend very much on the political environment during that period. A prediction of such political developments would only be speculative. Those who have participated in the negotiations leading to the present status of LOS and OSL have identified one major obstacle—national interests. In the future, this obstacle will lead to continual conflicts, making the development of new regulations even more difficult.

A second major obstacle for LOS and OSL developers in the future will be that of agreeing upon the areas to be the common heritage of mankind. A third will be the establishment of an international

authority, to regulate the activities of natural resources of the oceans and outer space. Such an authority must be clearly respected as the governing agent. Still further, resistance to the very philosophy of common heritage will continue to plague the developers of LOS and OSL law. Finally, technological advances will force negotiators in both fields to surmount present-day conflicts. Man has found solutions in many other fields of international law and will undoubtedly do so in these two fields.

The issues of national sovereignty and the laying of claims to natural resources will develop into a more serious dilemma for negotiators in the future. Technology will advance, enabling man to further explore the resources on the deep ocean floor and in outer space; however, these advances will complicate the laws which negotiators have been trying for decades to enforce. Accordingly, state may wish to extend their sovereignty and claims, rather than agree to limitations that would restrict their future activities concerning the deep seabed and outer space. Before international cooperation can occur, nations must direct their ocean and space programs towards more combined research projects and greater participation among themselves. As activities within space and on the seabed increase, and more states are involved, legal disputes will have to be firmly and finally resolved. States cannot be allowed to persist in their own views and actions.

The developers of LOS and OSL have laid a strong foundation for future developments regarding activities within outer space and the seabed. However, if the developers of LOS and OSL are wishing for an easy road to treaties which will satisfy everyone's needs, they will be

disappointed. What the future holds for space and ocean law is uncertainty. Although the foundations and groundwork have been laid, no one can be sure what direction either field will take. However, both will almost certainly expand according to the technological and political developments during the given period.

In regard to common heritage, future developers must establish an effective means of equally distributing the natural resources. A possible means is the establishment of a central authority with complete power over such distribution. For such equal sharing to take place throughout the international community, the principle of common heritage must be accepted by the developed nations, who must also share their knowledge and skills with developing nations. Space and the oceans will continue to hold a special interest for mankind. Twentieth century technology has transformed dreams and ideas of the past into great accomplishments. Many of the benefits of these new frontiers are already being enjoyed; however, many more can be foreseen.

Present-day treaties provide for space and ocean activities a safer and clearer legal structure vital to future treaties. The future development of LOS and OSL will rest on many factors outside the law, such as technical advancement and the political atmosphere of that period. However, the developers will have the major responsibility. The past and the present, have proved that states may miss the excellent benefits and opportunities that these new frontiers have to offer if, out of fear, they refuse to relinquish some of their national sovereignty over these resources. Unless the technologically developed nations indicates a willingness to cooperate with other nations, international cooperation may be further down the road than

present-day developers expect. Every year that man continues his quest of formalizing regulations to govern the natural resources of the oceans and space, he takes another step forward in probing the mysteries of the universe. Developers of both LOS and OSL, must realize that what is impossible today becomes possible tomorrow. ² The entire history of the negotiations about ocean and outer space law has confirmed the validity of that observation. Although man can never be sure of the future, he can assume that, as areas change and develop, so will the laws that govern them. The oceans and outer space hold great promise for mankind; however, in order for man to benefit from the riches of these new "worlds", he must solve the legal problems that arise.

Chapter 5-Endnotes

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Biography

Robin Lewis attended Radford University and was graduated with a Bachelor of Arts Degree in political science in 1984. During her studies at Radford she had a concentration in international relations. She began her graduate work at the University of Richmond in the fall of 1984. Interested in International Law, Ms. Lewis decided to base her thesis work on the controversial area of Law of the Sea and Outer Space Law. In May, 1987 she will receive her Master of Arts Degree in political science.