THE PHILIPPINES AND THE DEVELOPMENT OF SPACE LAW*

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I. INTRODUCTION

Preliminary Statement. —

Space law is by no means settled. But certain principles in international law that affect the development of space law are now being evolved by international bodies, the writings of legal scholars, and the conduct of states. Thus, space law evolution bears watching since it does, in a very direct way, affect our nation as well as all other developing nations.

Statement of the Problem. —

Space law is by its very nature the most advanced of legal studies[1] and if the Philippines has not contributed to its development it may be attributed to the lack of awareness in the high councils of government or an attitude of indifference to the subject, or an impression that this nation is of meager consequence in the development of an important field of law.

The primary problem that faces us therefore is: what and how can the Philippines contribute to the development of space law and as a consequence enhance its national security; and secondly, in what fields of space activity should the Philippines participate.

Purpose of the Study. —

This study attempts to define and identify the areas of space law development and space activity where the Philippines may participate.

Significance of the Study. —

While this study is primarily law-oriented, it is hoped that with the present world involvement in scientific and technological developments in space and their consequences in the evolution of space law, the interest of the leaders of this country may be stirred to measure our contributive effort, if any, to space law and research and adopt measures for more par-

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* Editor's Note: On April 24, 1968, the Philippines signed the "Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched Into Outer Space."

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[1] *The Colloquia of the Hague (1958) and London (1959) on the Law of Outer Space*, REVIEW OF CONTEMPORARY LAW, December, 1960, p. 60.

ticipation, not only for prestige purposes, but principally because the defense of the country is at stake.[2]

Scope of the Study. —

This is a study on some aspects of space law which are believed to be relevant to our national security, particularly the sovereignty question; the benefits that may be derived from some space activities as well as prospective advantages of present space consciousness in relation to the economic, political, military, and psycho-social fields.

Assumptions. —

The Philippines does not have the capability to conduct its own space program. This field of activity appears to be exclusively available to the world's super powers or to those countries enjoying economic prosperity like France, England, Canada, etc. But the fact that the Philippines is economically poor does not mean that the Philippines cannot contribute to what now appears to be a united world effort.

This country is vitally interested in its own national security, and is competent to formulate its own program for the general welfare of its people.

II. THE THEORY OF SOVEREIGNTY

Concept. —

Sovereignty is defined[3] as "the supreme, absolute, and uncontrollable power by which any independent state is governed; supreme political authority; permanent control of the constitution and frame of government and its administration; the self-sufficient source of political power, from which all political powers are derived; the international independence of a state, combined with the right and power of regulating its internal affairs without foreign dictation; . . ." Stated otherwise, it is the ability of the state to impose its will within a definite sphere, i.e., its territory.

The definition speaks of the right and power of a state to regulate its internal affairs. And, if this be so, the sequential question would be: what is the area of 'internal affairs'? When does 'internal' cease to be such, and when does it become 'external'?

A resolution is important because sovereignty is subject to exercise if the affair is internal, but is not if the affair is external.

How then is sovereignty established and what are its limits?

A well known scholar in international law, Philip C. Jessup, writes:

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[2] See par. c, No. 3, Introduction, NDCP handout on Individual Research Program, 2nd Regular Course, p. 2.

[3] BLACK, LAW DICTIONARY (4th ed. 1951).

> "It is recognized that the use of the word sovereignty involves difficulties. But it is here used to denote that exclusive power of disposition and control which each nation *concededly* exercises over its own land territory. *It is limited by the restrictions of international law;* it is not an absolute concept. It implies that the nation possessing it may deal with the object thereof as if that object were its own. It is considered to be closely related to ownership in private law. As a man is restricted in the use of his property by national law, *so is a nation restricted by international law.* But within these limitations as against another individual non-owner, the owner in private law is entitled to the exclusive enjoyment of his property. So a nation may deal with national property to the exclusion of all other nations. Whatever rights, privileges, powers and immunities the law attaches to the owner, those are enjoyed by that nation which is sovereign of that object. *In this sense* it is believed that a State is sovereign over the territorial sea and over the air space."[4] (Italics supplied.)

From this commentary, it is clear that sovereignty is restricted by international law. The logical question to follow would be: how is international law created?

Hans Kelsen states[5] that "... the two principal methods of creating international law are custom and treaties," and that in the view of modern writers,[6] "... customary international law is created by the common consent of the states; and [when] there is no express manifestation of this consent, a tacit consent is assumed."

On the other hand, one writer, while commenting on 'sovereignty' over territorial waters (which principles are applicable to space, to a certain extent), believes that exclusive possession of any part of the vast ocean is impossible. Following this precept, the theory was formulated that "states have not a right of property over the territorial sea, but only a right of surveillance and of jurisdiction in the interest of their defense, or protection of their fiscal interest."[7] Hence, others[8] prefer the phrase "jurisdictional sea" to be more expressive of the true nature of things.

Application of Concept of Sovereignty. —

As far as any dimension in the territory of a state is therefore concerned, a state may be said to be absolutely sovereign internally. But, restrictions of international law operate upon a state as a delimiting factor on what would otherwise be an absolute exercise of sovereignty, and such delimitation, in effect, determines what should be considered as *internal.*

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[4] JESSUP, THE LAW OF TERRITORIAL WATERS AND MARITIME JURISDICTION, 116 (1927).

[5] KELSEN, PRINCIPLES OF INTERNATIONAL LAW, 2nd ed., 438 (2d ed.).

[6] HEFFTER, DROIT INTERNATIONAL PUBLIC, Sec. 74 (Bergsen's Translation 1866).

[7] 1 CALVO, DROIT INTERNATIONAL 479 (1896).

[8] 1 TWISS, DROIT LES GENS, Sec. 180, BONFILS, DROIT INTERNATIONAL PUBLIC, p. 3045, sec. 491 (6th ed.).

Therefore, by the principles of exclusion, what is not 'internal' is 'external'; and what is 'external' is dependent upon what is the subject of common consent of states.

In other words, international law (and therefore the law that restricts sovereignty) exists to the extent of what has been recognized by, or commonly assented to, by other states.

This principle finds support in the decision in the *Island of Palmas Case*,[9] pertinent portion of which states:

> "Sovereignty in the relation between states signifies independence. Independence in regard to a portion of the globe is the right to exercise therein, to the exclusion of any other state, the functions of a State. The development of the national organization of States during the last few centuries and, as a corollary, *the development of international law, have established the principles of the exclusive competence of the State in regard to its own territory* in such a way as to make it a point of departure in settling most questions that concern international relations. . . ."

Philippine Territory. —

Section 1, Article I of the Constitution provides that "The Philippines comprises all the territory ceded to the United States by the Treaty of Paris . . ." (of December 10, 1898). As to the present land mass of the Philippines, there is no question as to its identity. However, because the Philippines is an archipelago with more than 7,100 islands and other land formations, the boundaries of the said Treaty of Paris are so situated to include a large portion of the seas including the seas, passages and straits between the islands of the Philippine Archipelago.

In the Philippine Mission's Note Verbale dated March 7, 1955 to the Secretary General of the United Nations, the Philippine Government expressed its official position with respect to its maritime territory, as follows:

> "All waters around, between and connecting different islands belonging to the Philippine Archipelago, irrespective of their width or dimension, are necessary appurtenances of its land territory, forming an integral part of the national or inland water, subject to the exclusive sovereignty of the Philippines. All other water areas embraced within the lines described in the Treaty of Paris of 10 December 1898, the Treaty concluded at Washington, D.C., between the United States and Spain on 7 November 1900, and the Agreement between the United States and the United Kingdom of 2 January 1930, and the Convention of 6 July 1932 between the United States and Great Britain, as reproduced in section 6 of the Commonwealth Act No. 4003[10] and Article I of the Philippine Constitution, are

[9] The Island of Palmas Case (United States and the Netherlands), SCOTT, HAGUE COURT REPORTS, 2nd series, 83 (1932), 2 U.N. REP. INTL. ARB. AWARDS, 829, cited in BISHOP, INTERNATIONAL LAW, CASES AND MATERIALS, 345 (2nd ed.)

[10] Author's note: This is not a Commonwealth Act, but simply "Act".

considered as maritime territorial waters of the Philippines for purposes of protection of its fishing rights, conservation of its fishery resources, enforcement of its revenue and anti-smuggling laws, defense and security, and protection of such other interests as the Philippines may deem vital to its national welfare and security, without prejudice to the exercise by friendly foreign vessels of the right of innocent passage over these waters. . . ."

It is noteworthy from the foregoing official position of the Philippine Government that with respect to the seas that are national or inland waters, they are considered as "necessary appurtenances of the land territory", but all other water areas *although within the limits of the Treaty of Paris* may be used for innocent passage by friendly foreign vessels and are considered as maritime territorial waters for purposes of protection of fishing rights, conservation of fishery resources, enforcement of revenue and anti-smuggling laws, defense and security, and protection of such other Philippine interests.[11]

With respect to air space, or the third dimension of a state's territory, the rule, as established by the Convention Relating to the Regulation of Aerial Navigation (Paris),[12] is that every state has complete and exclusive sovereignty over the air space above its territory. The territory of the Philippines is explicitly defined in the Constitution of the Philippines, as well as other municipal laws.[13] Theoretically, the column of air above the land mass of the Philippines as well as over the seas within the limits of the Treaty of Paris is subject to exclusive Philippine sovereignty. However, if the principles applicable to the territorial seas of the Philippines are made to apply to the air space superjacent to the same territories (land and sea), then the column of air over the maritime territorial waters would be available for the innocent passage of friendly foreign aircraft.

However, the fact of the matter is that these principles applicable to the maritime territorial waters of the Philippines are not applicable to the air space above the territorial seas in view of the establishment of the Philippine Air Defense Identification Zone (PADIZ)[14] whose eastern and western limits even exceed the lateral boundaries of the Treaty of Paris.

In an article by Robert D. Hayton entitled "Jurisdiction of the Littoral State in the 'Air Frontier'",[15] which states that

"In the last analysis, toleration of the exercise of such jurisdiction flowed from universal, if troubled, acceptance of the proposition, stated in its classic form by Mr. Elihu Root, to the effect that every sovereign State

[11] See also Rep. Act No. 3046 (1961), as amended by Rep. Act No. 5446 (1968).
[12] 1919.
[13] Rev. Adm. Code, sec. 16.
[14] Adm. Or. No. 222, s. 1953, 49 O.G. 4746 (Nov., 1953).
[15] PHILIPPINE INTERNATIONAL LAW JOURNAL, Vol. III, Nos. 3 & 4, pp. 369-398.

> has a right to protect itself by preventing a condition of affairs in which it will be too late to protect itself."[16]

a justification is presented for the establishment of an air identification zone whose limits far exceed the maritime territorial waters.

III. SPACE

Where is Space? —

It is the general consensus amongst space law scholars that, as a rule space must begin where "air-space" ends.[17]

We again resort to the principle of exclusion. But, this method seems not suitable because of a lack of an official definition for "airspace". In an article published in the American Journal of International Law (1957)[18] entitled Legal Terminology for the Upper Regions of the Atmosphere . . . ," the question was asked, "what is Airspace," but after a lengthy discussion, the same was not completely answered. A dictionary of the U.S. Air Force was cited, but the definition des not actually define the term.[19] If we are to seek a strict definition of the term, no authority will accommodate us.

As a different approach to the problem on the identity of "airspace", many authors associate 'airspace' with 'sovereignty'.

To What Height Does Airspace Extend? —

By the terms of international conventions concluded at Paris (1919) and Chicago (1944), as well as various municipal legislation[20] of at least 50 countries, it is recognized 'that every state has complete and exclusive sovereignty over the airspace above its territory.'

The word 'airspace' invited several theories as to its perpendicular extent.

Briefly stated,[21] these theories are:

1. *The Unlimited Theory.* — Some writers in the field of air and space law contend that airspace is synonymous with atmospheric space and in-

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[16] Root, The Real Monroe Doctrine, 8 AM. J. INT'L. LAW, 427, 432 (1914).
[17] Catibog, (Article on) *Upward Extent of State Sovereignty and the Air Identification Zone*, p. 2.
[18] Hogan, *Legal Terminology for the Upper Regions of the Atmosphere and for the Space Beyond the Atmosphere*, AM. J. INT'L. LAW 362, et seq. (1957).
[19] U.S. AIR FORCE DICTIONARY (1956) defines "Airspace" as "Space in the Air, or space above a particular surface of the earth, esp. such space considered to have a particular shape and extent for a particular purpose."
[20] Haley, *Survey of Legal Opinion on Extraterrestial Jurisdiction*, PROCEEDINGS OF THE THIRD COLLOQUIUM ON THE LAW OF OUTER SPACE, 54-87 (Stockholm, 1960).
[21] See Catibog, *op. cit.*, pp. 3-8.

clude any space where air may be found. And since traces of air may be found up to an extent of 10,000 miles above the earth, then sovereignty extends to that height. This group's argument seems to find support in the French and Italian equivalents of the term airspace as 'espace atmospherique' and 'spazio atmosferico', respectively.

2. *The Limited Theory.* — This theory is premised on the assumption that sovereignty of a subjacent state cannot extend up to infinity. Considering that the Chicago Convention was intended to cover 'International Civil Aviation', then airspace could only mean that layer in the atmosphere where gaseous air is sufficiently dense to support instrumentalities which can derive support in the atmosphere from reactions of the air.

3. *Theory of Effective Control.* — This theory explains that the upper limits of sovereignty extend to whatever height which the subjacent state may control at any given time.

This theory is one of the most controversial on the subject.

4. *The Zone Theories.* —

a) This theory divides the air into several horizontal layers, but setting a maximum limit (about 400 miles) above which will be free.

b) Others have suggested the outer limits of the stratosphere (50 miles).

c) Others suggest a fixed linear distance (i.e., 300 Km. or 300 miles) above the earth.

5. *The Orbital Flight and Gravitational Force Theory.* — The limit of sovereignty is proposed at such height where the gravitational force of the earth ceases (about 161,000 miles); or at such distance where an artificial satellite may orbit by overcoming gravity combined with centrifugal force.

6. *Extent of National Interest Theory.* — A state may exercise sovereignty as far up as its interests warrant and require.

There are those who also believe that any theory would be premature; that the law of space must be in response to the facts of space.

Because of the divergence of views, no height limit on 'airspace' may as yet be made.

What should be of interest to many is the Russian[22] viewpoint that airspace comprises the atmosphere over the land and waters of the state

[22] See KOROVIN, INTERNATIONAL LAW, undated.

to an unrestricted height. Should this be the official position of the Russians, then all their satellite orbital flights have violated the sovereignties of countries over which their satellites passed.

The UN Role in the Definition of Space. —

On December 13, 1958,[23] the UN General Assembly established an *Ad Hoc* Committee on the Peaceful Uses of Outer Space composed of members from 18 nations. This *Ad Hoc* Committee was made a permanent committee on December 12, 1959.[24]

As a result of the deliberations of the permanent committee, a draft resolution on "International cooperation in the peaceful uses of outer space", sponsored by all the members thereof, was unanimously adopted by the General Assembly on December 20, 1961, as Resolution No. 1721 (XVI).[25]

Resolution No. 1721 (XVI) of the General Assembly established the following principles:

a. The exploration and use of outer space should be only for the betterment of mankind and to the benefit of states irrespective of the stage of their economic or scientific development;

b. International law, including the Charter of the United Nations, applies to outer space and celestial bodies;

c. 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.

On December 13, 1963, the General Assembly unanimously adopted Resolution No. 1962 (XVIII)[26] which was the "Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space."

This document enunciated the following principles:

a. The exploration and use of outer space shall be carried on for the benefit and in the interests of all mankind;

b. Outer space and celestial bodies are free for exploration and use by all States on a basis of equality and in accordance with international law;

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[23] Resolution No. 1348 (XIII).
[24] Resolution No. 1472 (XIV).
[25] Resolution No. 1721 (XVI).
[26] Resolution No. 1962 (XVIII).

c. Outer space and celestial bodies are not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.

These two resolutions of the UN General Assembly provide some measure of significant and meaningful determinations of the legal status of *outer space.*

But to go back to the original question — where does airspace end? The UN resolutions, aforestated, beckon additional questions. Since the UN resolutions deal with *outer space,* is there a layer called *inner space?*

The UN documents make mention of States launching objects into orbit,[27] to advance the state of atmosphere science and technology so as to provide greater knowledge of basic physical forces affecting climate and the possibility of large-scale weather modification,[28] or for allocations of radio frequency bands for outer space activities and the establishment of effective operational satellite communication,[29] all of which, it is submitted, refer to space or satellite activities or facilities which orbit the earth at any distance from 100 miles to thousands of miles.

As this writer sees it therefore, the phrase 'outer space' is not very accurate, and should actually be construed to mean 'space', to avoid the inference that the activities contemplated by the UN Resolutions may not be conducted in an area which might be classified as *inner* space.

Considering that 'outer space' as construed by this writer, actually means 'space' and over which no state may claim sovereignty pursuant to the UN Resolutions, *supra,* then the UN has inferentially resolved the boundary between 'airspace' and 'space'. Although the boundary between airspace and space may not be measuarble by lineal measure, such boundary may be assumed to be at such height where orbital flight is possible. (Theory espoused by John Cobb Cooper.[30])

IV. Space Law Development

The Necessity for Rules. —

The present development in space technology and science no longer make debatable the need for ordering rules in space.

International law has been traditionally defined as the rules prevailing in the relations among states;[31] and since space cannot be the subject

[27] Resolution No. 1721 (XVI), par. B, sub-par. 1.
[28] Resolution No. 1721 (XVI), par. C, sub-par. 1(a).
[29] Resolution No. 1721 (XVI), par. D.
[30] Former Director, Institute of International Air Law and Professor Emeritus, McGill University.
[31] Kelsen, Principles of International Law, 3 (2nd ed., 1966).

of national appropriation by claim of sovereignty, and space as well as celestial bodies are free for exploration and use by all states, then the necessity for order *among states* in this new realm becomes even more pronounced. On the other hand, there will always be a nagging fear among states, specially the developing nations, that the rules of international law now emerging in the realm of space may not be complied with by those states engaging in satellite or space vehicle launchings, in spite of the rules, because of the lack of established precedents, unlike the law of the sea.

In a well written note in the Harvard Law Review,[32] entitled "National Sovereignty of Outer Space", the following assuring comments were stated:

> "The system of international law has been variously characterized as decentralized, horizontal, and primitive. These terms point to the critical fact that the enforcement of international law rules is largely vested in the individual states that are conceived to be bound by them. This precludes a legal order built on force, the essence of which is a community monopoly of force. In addition, the international community as a juridical system lacks the moral homogeneity, constitutional framework, and popular control of government which makes noncoercible rules — those purporting to bind the sovereign — dependably obligatory in practice in advanced nations. The absence of such harmonizing elements may make it impossible for the members of the world community even to agree on what ought to be enforced; yet that a rule at least be regarded as enforceable is surely the minimum prerequisite to its being an obligatory rule. The question therefore arises whether, since the normal bases of legal obligation are lacking, there is any means by which a compulsion to obey may be attached to rules of international law. It may be that these rules are wholly descriptive rather than normative. If an international rule is merely expressive of an existing international relationship and is observed solely as a matter of policy, it is likely to be broken by any vicissitude in the relationship or momentary alteration of policy. In such a case the self-enforcement basis of international law would afford no means of maintaining the rule contrary to the self-interest of the nations supposedly bound. Many international law "rules" are in fact of this type. But it is clear that other rules are maintained in the face of occasional contrary inclinations of individual nations. Although rules of international law most frequently lack legal sanctions in the ordinary sense, the practical compulsion to obey a given rule may be considerable. The possibility of retaliation on any one of many levels, the pressure of world public opinion, and the force of national law where a nation decrees that rules of international law shall bind its citizens directly, may all have a potent deterrent and remedial effect. Moreover, nations recognize that the abrogation of a particular rule may have a generally deleterious effect on international order. The very existence of a rule indicates an original impulse to order in a particular area; its elimination thus invites a renewal of disorder in that area — possibly in a more dangerous form. The fact of breaking

[32] Vol. 74, pp. 1156-1157 (1961).

> a rule may exacerbate international tensions, encourage a general disrespect for the remaining rules, and undermine related or derived rules. Thus, while international law rules may originate entirely volitionally as generalizations of national policy and may frequently be preserved by the continuing mutuality of interests among nations, they may also acquire prescriptive force and be obeyed as positive laws — not adhered to as policies. This is not to say that a given rule is allocable to one of two mutually exclusive categories; the diversity and uncertainty of modes of enforcement — varying as they do from slight quavers of public opinion to the prospect of thermonuclear retaliation — entail a range of rules that differ in the degree to which they obligate nations. Also, it is clear that rules, however backed by the threat of sanctions, will not always be obeyed; where national survival is at stake, no rule is likely to deter a nation from acting. Nevertheless the remedial and deterrent effectiveness of the rule remains, insofar as any such violation will be punished by the variety of enforcement features behind the rule."

It is the author's belief that states will not attempt to abrogate any rule in space agreed upon precisely because the rules are new rules covering a new realm, and because an abrogation would produce a generally deleterious effect on international order. On the contrary, it is believed that states will bend back to observe the rules because of the absolute need for the existence of the rules.

Are the UN Resolutions Part of International Law? —

In an article entitled "The Growth of Space Law 1957-65; Achievements and Issues" by Prof. Ivan A. Vlasic,[33] it is pointed out that France, Australia, and the delegates of the Socialist bloc, led by the Soviet Union, refuse to admit any legally binding force on the resolutions of the UN, unlike those under a formal treaty. This position of France, etc., gave rise to a statement in the report of the Legal Sub-committee (of the Committee on the Peaceful Uses of Outer Space [COPUOS]), to wit: "An opinion was expressed that the Legal Sub-Committee should immediately start working out an international agreement containing legal principles governing activities of States in the exploration and use of outer space."

While Mr. Vlasic argues very forcefully that the UN resolutions have the force of international law, compliance by all States specially the Socialist bloc may not be obtained since they do not feel obligated to comply.

Therefore to insure unanimous compliance the safer course of action would indicate that all States should enter into an international agreement. This will likewise ensure compliance by all States who have not heretofore expressed any position on the matter, i.e., on the matter of whether an international agreement would still be desirable, but who

[33] YEARBOOK OF AIR AND SPACE LAW, 1965, pp. 365-405.

might entertain reservations on the acceptability of the UN resolutions as part of international law.

What was the Philippine Reaction? —

The question of whether a UN resolution forms part of international law has not been discussed by the Philippines in the UN. Since it is not yet clear as a "*generally* accepted principle" that a UN resolution is part of international law, the possibilities of the question should be of interest to the Philippine delegation to the UN.

In this writer's opinion, the position taken by France appears to be tenable. Moreover, the constraints of necessity and prudence dictate that we adopt the position of France because of the unpleasant consequence should we not do so, specially if a situation should arise where it would become necessary for the Philippines to file a claim against a country that believes that the UN resolutions lack binding effect.

The UN Response. —

On December 19, 1966, the UN General Assembly adopted Resolution No. 2222 (XXI) which recommended for signature and ratification of all states the first treaty[34] (hereafter referred to as the Treaty) governing states' activities in the exploration and use of space and celestial bodies. The Treaty was signed by 60 states on January 27, 1967, at Washington, London and Moscow. The Philippines is one of the signatories to this Treaty.

By February 27, 1967, 16 more states signed the Treaty. Thus, only 47 nations have not signed the Treaty as of February 27, 1967.

In the Annual Report of the Philippine Mission to the UN, 1 July 1966 — 30 June 1967, it is stated that "the Philippine delegation fully agreed with the fundamental concepts underlying the Treaty." However, as of the last week of January, 1968, the Treaty was still in the Department of Foreign Affairs and has not yet been transmitted to the President for indorsement to the Senate for ratification.[35]

The following observations, among others, on the Treaty are herewith submitted:

1. Article IV of the Treaty states that the moon and other celestial bodies shall be used exclusively for peaceful purposes. However, the word "peaceful" is not defined. While it is true that the same article states that it is forbidden to establish military bases, installations and fortifications,

[34] Copy of Treaty is hereto attached as Annex "C".
[35] Per information from the Treaties Division, Dept. of Foreign Affairs.

or to test any type of weapons and conduct military maneuvers on celestial bodies (this is similar in phraseology to the Treaty on Antartica of December 1, 1959), there are some matters which need clarification. Examples: Is the storage (not testing) of weapons allowed in celestial bodies? Is the establishment of military bases, installations and fortifications, or the testing and storage of any type of weapons and conducting of military maneuvers in the moon (not celestial bodies) permissible? And, a host of others.

2. There is no proviso in the Treaty for the return of space vehicles to a launching state. This may be incorporated in Article VIII of the Treaty.

3. The general liability for damages of a state that launches an object into space *and* the state from whose territory the object is launched under Article VII of the Treaty is not comprehensive enough and requires further clarification. Moreover, the procedure for the recovery of damages should also be spelled out because under present state practice, states regard the sponsoring of claims by nationals as entirely within their discretion.[36]

4. While Resolution No. 2222 (XXI) which recommended the Treaty requested COPUOS to study questions relative to the utilization of outer space, the Philippines should already anticipate that space will be used as a medium for travel on the earth. It is predicted that by the early 1980's a spacecraft that can carry about 170 passengers and 18 tons of cargo to any point on earth within 45 minutes at average speeds of 17,000 mph will be operational. Such a spacecraft, because of its cost, may only be built by the super powers, and if present allocation of air transit rights is any indication of space transit privileges, then the present underdeveloped nations will again be at a disadvantage should the latter attempt to establish national 'spacelines', when and if their economies make this possible. In any event, the establishment of national spacelines by the present underdeveloped nations will occur at a date when the present superpowers shall have already long established their own spacelines.

V. Philippine Initiative in Space Law Development

Motivations for Initiative. —

In a seminar on "System and Process of RP National Security Policy Formulation and Management" conducted by the National Defense Col-

[36] Prediction of Mr. Philip Bono, in charge of Douglas Aircraft Co., Advance Launch Vehicle Section; cited in Burns, *Legal Problems in the Exploration of Outer Space, infra.*

lege, one of the seminar-group[37] in the 2nd Regular Course defined "National Security" as "the ability of a nation for all time to secure and maintain the highest level of social and economic life for the people; to ensure political independence, domestic tranquility and national dignity."

Every Filipino should be national-security-conscious, for every activity that redounds to the benefit of our Republic or its people will enhance the national security of the Philippines. The path of least resistance in the deliberations in international bodies appears to have been established by submitting to the leadership of nations with established spheres of influence. While it might very well be that some nations lead because to do so would protect the interests of the nations that are led, yet the more realistic view should be that nations should lead because their own national interests dictate such a course of action. If the USA does this, it should not be blamed. It is of common knowledge that the USSR practices the same thing. The point is that Filipinos must act because such action is good for the Philippines. If the act of the Filipino is also good for another country, this is merely incidental.

In the family of nations, the Philippines needs the prestige of acting independently because of some accusations that we are US puppets and here, in the area of space law development, is our opportunity to rectify the misconception about the Philippines.

Our political independence alone should motivate our Foreign Affairs establishment to take the initiative for the protection of RP national security.

While UN Res. No. 1962 (XVIII), *supra,* and the Treaty state that "outer space and celestial bodies are free for exploration and use by all States on a basis of equality . . . ," the hard fact of reality is that only the affluent nations may explore and *use* outer space and celestial bodies. For example, the USA space program calls for the landing of a man in the moon within this decade. If the USA does so and vital energy-producing minerals are discovered in the moon and these are brought back to Earth, certainly the USA cannot be blamed if its main concern would be to use these minerals for their own protection and benefit, specially considering that the present energy resources of the US are being consumed at a tremendous rate.

What are the Alternatives? —

1. As already adverted to the formal establishment of the principles contained in Resolutions Nos. 1721 (XVI), 1962 (XVIII), and the Treaty

[37] Group III, then composed of Messrs. Honesto Mendoza, Potenciano Olalde, Antenor Roque, Gregorio San Agustin, Ricardo Siason, Francisco Alvarez, Mauricio Flores, and Antonio Habana III.

should occupy *first priority* by securing the signatures of all states. It bears emphasis that the Treaty contains a liability for damage clause, and all nations, specially those who do not engage in space activities, stand to benefit by any assurance of liability by any State that launches an object into space. If it is the position of France that it feels not obligated under the terms of the UN Resolution because a UN resolution is not legally binding (but an international agreement is), then it would be to the interest of all nations who stand to benefit from any such claim for damages that all persons who may become liable shall be legally obligated. And since France is not yet a signatory to the Treaty although it already has the capability to launch space vehicles, then it would be to our interest that she signs the Treaty.

Under these circumstances, the support of all developing nations to cause the unanimous signing of the Treaty is practically assured.

2. Philippine membership in the COPUOS will help a great deal.

3. An attempt to organize a convention outside of the UN forum or to amend the Treaty through the UN may also be resorted to.

Matters of Vital Interest to RP National Security. —

1. It may be recalled that before the launching of the first satellite[38] no question had been seriously raised on the sovereignty of a subjacent state over its superjacent space. Sovereignty over the superjacent space was always assumed, specially by virtue of the terms of the Chicago Convention of 1944 and the Paris Convention of 1919. The prevailing doctrine then was that of *usque ad coelum.*[39] But, after the launchings of space satellites by the US and USSR and the use of outer space by the super powers, the ceiling of the perpendicular sovereignty of states became lower, specially after the adoption of UN Resolutions Nos. 1721 and 1962.

In the meantime, while all States, including the USA and USSR, recognize state sovereignty over air Space (not outer space), yet it is likely that both the USA and USSR will continue to violate the airspace sovereignties of other States. This happens during launchings of space objects because of the deflection of the path of launching to attain orbit. But, violations of airspace sovereignty are more likely to occur during the recovery of space objects. It is reported that the re-entry flight path from an orbital altitude of about 100 miles of a US manned spacecraft traverses approximately 2,600 miles, the last 600 miles at an altitude of less than 50 miles. It is estimated that the space vehicles of project Apollo (US) will

[38] Sputnik I was launched on October 4, 1957.

[39] See Cobb Cooper, *Background of International Public Air Law,* YEARBOOK OF AIR AND SPACE LAW, 1965, p. 9; citing Sir Erle Richard (1912).

have an even more flat re-entry flight path at distances as great as 7,000 to 10,000 miles, at a height of 25 to 60 miles.[40] With a re-entry flight distance of 10,000 miles which is nearly one-half the circumference of the earth, one can imagine the number of airspaces over states the space vehicle passes through. And certainly a height of 25 to 60 miles is not outer space, considering that an aircraft with a ram-jet engine can operate at a height of 25 miles,[41] or that the X-15 can operate up to a height of 47 miles.[42]

It is hoped that no precedent was established by the effect of the launchings of orbital satellites on the perpendicular limitation of sovereignty of states, so that it may not be expected that launching paths and re-entry paths of spacecraft will constitute another limitation (this time State sovereignty over airspace will become even lower).

It may be recalled that one of the basic premises of any space scholars to the proposition that space is free from any claim of sovereignty and which later led to the adoption of the 3 UN Resolutions whereby the use and exploration of outer space shall be for all states and is not subject to national appropriation was the fact that not one State ever protested the launchings of satellites nor did any state protest that these satellites ever violated their respective airspaces.[43]

By the terms of the two UN Resolutions and the Treaty, *supra*, outer space shall be used for peaceful uses. While we might be too hopeful that states engaging in space activities will submit to pre-launch inspections of any space vehicle, an attempt to define "peaceful" should at least be made.

In an article by Crane, entitled "Soviet Attitude Toward International Space Law,"[44] he states:

> "Accordingly, the Soviets make no distinction between military and non-military uses of space by Soviet vehicles. It makes no difference that all Soviet space vehicles are sponsored by military organizations and are thus 'military', nor that Soviet rockets have served as delivery vehicles for systems testing nuclear weapons in outer space, because the Soviets contend that all of their space vehicles are 'peaceful'."

Thus, the necessity has become even stronger for the definition of the word "peaceful".

3. As pointed out above, the question of liability, specially the details thereof as well as the other observations in Chapter IV hereof, should

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[40] See Vlassic, YEARBOOK OF AIR AND SPACE LAW, 1965, pp. 380-381.
[41] See MCMAHON, LEGAL ASPECTS OF OUTER SPACE (1963); also, EMME, THE IMPACT OF AIR POWER (1959) p. 311.
[42] See McMahon, *op. cit.*
[43] *Id.*, p. 352.
[44] 56 AM. J. INT'L. LAW 685-723 (1962).

likewise be proposed. All these may be brought out in the UN conference to be held in Vienna on August 14, 1968,[45] if it is permissible to do so.

VI. Philippine Municipal Law

1. While some countries[46] specifically provide in their respective constitutions that their national territories include atmospheric space, the Constitution of the Philippines[47] merely recites that "The Philippines comprises all the territory ceded to the United States by the Treaty of Paris[48] concluded between the United States and Spain on the tenth day of December, eighteen hundred and ninety eight, ..." and makes no reference to air space.

However, in Republic Act No. 3931,[49] entitled "An Act Creating the National Water and Air Pollution Commission", the National Water and Air Pollution Commission (NWAPC) is empowered[50] to "make, alter or modify orders requiring the discontinuance of pollution of the waters and/or *atmospheric air* of the Philippines due to the discharge of sewage, industrial wastes and specifying the conditions and the time within which such discontinuance must be accomplished..." (underscoring ours.)

Paragraph j of Section 2 of Republic Act No. 3931 defines "atmospheric air" as follows:

> "Atmospheric air of the Philippines means the air within the Philippines or within its jurisdiction."

The definition of atmospheric air offered by Republic Act No. 3931 is not very clear, i.e., as to the extent of air in the atmosphere. Obviously, the atmospheric air of the Philippines could not be the air outside of the Philippines, nor to air outside of Philippine jurisdiction.

But Republic Act No. 3931 is significant (for our purpose) in the sense that the Republic of the Philippines possesses municipal legislation that asserts a claim over its atmospheric air, and that the extent of the claim of the Philippines over its atmospheric air may not be limited to the air that merely supports the aerodynamic lift of aircraft. Whether the altitude of atmospheric air for purposes of air pollution control is higher or lower than the altitude of air that will support aerodynamic lift is not here discussed.

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[45] See Manila Times, November 5, 1967 2, col. 407.
[46] Brazil and Chile.
[47] Phil. Const. art. I, sec. 1.
[48] The Treaty of Paris of December 10, 1898 would make an interesting study on the Sovereignty question considering that by Articles 1 and 2 of the said Treaty, Spain relinquished and/or ceded *Sovereignty* over Cuba and the West Indies, respectively, but by Art. 3, Spain merely ceded the land area of the Philippine Islands.
[49] 60 O.G. 7345-7352 (November, 1964)
[50] Sec. 6, par. 4, Rep. Act No. 3931 (1964), sec. 6, par. 4.

"Air" is defined as "that fluid of transparent substance which surrounds our globe,"[51] or "the atmosphere."[52] And, since the atmosphere (where there are traces of air) continues to about 10,000 miles, then this altitude would seem to be the limits of the 'atmospheric air of the Philippines' over which the Philippines claims jurisdiction for purposes of air pollution control.

Article 2 of the Revised Penal Code[53] reads—

> "Art. 2. *Application of its provisions.* — Except as provided in the treaties and laws of preferential application, the provisions of this Code shall be enforced not only within the Philippine Archipelago, *including its atmosphere*, its interior waters and maritime zone, but also outside of its jurisdiction, against those who: x x x." (Italics supplied.)

In this instance, the Philippines again makes manifest its claim over the atmosphere. The Revised Penal Code does not define "atmosphere", but the term is defined as "the whole mass of air surrounding the earth; — applied also to the gaseous envelope of any celestial orb."[54]

There is no indication in the Revised Penal Code whether the word 'atmosphere' is used in a technical sense or otherwise. Neither is there any similar indication of how the term 'atmospheric air' is used in Republic Act No. 3931. The rule in statutory construction of words capable of a technical or popular meaning is that where a word used in a statute has both a popular and a technical meaning, the court will give effect according to its popular signification.[55]

Applying this rule on interpretation therefore it would seem that 'atmosphere' or 'atmospheric air' should be interpreted according to its popular signification, i.e., the whole mass of air surrounding the earth (of couse laterally bounded by the boundaries set forth in the Treaty of Paris); or to the gaseous envelope.

The legal basis for a Philippine claim to its airspace, i.e., up to whatever altitude so long as air exists, is therefore established should we have then decided to assert such a claim.

However, a matter that should be considered is how to reconcile the provisions of municipal law with the provisions of the two UN Resolutions and the Treaty.

Firstly, the established rule is ". . whether in case of conflict between national and intenational law the one or the other prevails can be

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[51] BLACK'S LAW DICTIONARY, (4th ed., 1957).
[52] RADIN'S LAW DICTIONARY, (1955).
[53] Act No. 3815 as amended.
[54] WEBSTER'S NEW INTERNATIONAL DICTIONARY, 2nd ed.
[55] Oniel v. State, 115 Tenn. 427, 90 S.W. 627 (1905)

decided only on the basis of the national law concerned."[56] Therefore, it is Philippine law which determines whether the UN Resolutions[57] or the Revised Penal Code, Republic Act No. 3931, or any other local law, that should apply.

Secondly, the first phrase of Article 2 of the Revised Penal Code, *supra*, which states that "except as provided in the treaties and laws of preferential application," is meaningful in the sense that the reservation as to non-enforceability of the provisions of the Revised Penal Code is only in favor of the provisions of treaties or laws of preferential application which provide otherwise. It will be recalled that the Treaty has not yet been ratified.

Finally, this writer believes that since the two UN Resolutions do not constitute international law, which view is similar to the views shared by the delegations of France, Australia, and the Socialist blocs in the Legal Sub-Committee of the COPUOS, i.e., until an international agreement is entered into, then there is no occasion for conflict *yet* between the provisions of the Revised Penal Code or Republic Act No. 3931 and the two UN Resolutions or the Treaty because the Treaty does not bind the Philippines until it is ratified.

2. Before the launchings by the US of reconnaisance satellites, Russia accused the US of spying from the sky. The first occasion was in 1956 when large meterological balloons entered Russian airspace. The second was the notorious U-2 incident. After the launching of US reconnaisance satellites, the Russian jurist Korovin[58] classified reconnaisance satellites as *not* an act of war but served in international relations as expressions of mistrust, ill-will and similar cold-war consequences.

On the basis of the NDCP handout on Individual Research Program wherein it is stated that the research paper should be ". . . a study which will enable an interested agency to become fully aware of employing such actions," this writer invites attention to what is believed to be important in any deliberation on the use of outer space for reconnaisance, early warning, and military communications by a launching State, which use may not only be non-peaceful but which may be a violation of Philippine law.

Commonwealth Act No. 616[59] provides, *inter alia*, that it shall be unlawful for any person who, ". . . for purposes of obtaining information respecting the national defense with intent or reason to believe that the

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[56] Kelsen, *loc. cit.*, p. 566.

[57] Author's note: This is on the assumption that the 2 UN Resolutions are 'international law'.

[58] Korovin, INTERNATIONAL STATUS OF COSMIC SPACE, reprinted in LEGAL PROBLEMS OF SPACE EXPLORATION: A SYMPOSIUM, p. 1066.

[59] Approved, June 4, 1941.

informtion to be obtained is to be used to the injury of the Philippines . . . , or to the advantage of any foreign nation, goes upon, enters, *flies over, or otherwise* obtains information concerning any vessel, aircraft, work of defense . . . , or other place connected with defense . . . " which, in relation to Article 10 of the Revised Penal Code which provides that the Code shall be supplementary to special laws unless said special laws specially provide the contrary, may serve as a basis to oppose and/or protest the launching of reconnaisance satellites on the ground that it is violative of Philippine laws on national defense and is therefore a non-peaceful purpose.

3. J. F. McMahon[60] suggests three measures which might be taken against reconnaisance satellites, to wit:

a. *Retorsion* which consists of an unfriendly act or acts whereby one state answers objectionable conduct of another state in a retaliatory manner, although the retorsion itself must be a legitimate act and must not be contrary to international law.

b. *Reprisal* which includes any kind of forcible or coercive measure whereby a state seeks to exercise a deterrent effect or to obtain redress or satisfaction for the consequences of the illegal acts of another state.

c. Self defense.

VII. POSSIBILITIES FOR A PHILIPPINE POSITION

It has often been said that politics and logic do not necessarily agree. A Philippine position on the matter of outer space need not be logical but because it is one that involves a political decision such a position must certainly take into account the economic, cultural, military, and political aspects peculiar to the Philippines as determinative constraints to its position.

While the Philippines suffers from apprehensions that outer space may be used for non-peaceful purposes, the realities of the situation are that we do not have the means nor capability to ascertain whether such apprehensions are valid; and if we do ascertain that outer space is in fact being used for clearly non-peaceful purposes, again, we do not have the means nor capability to prevent or correct that situation. This should not, however, prevent us from considering the alternatives.

First alternative: we do not adopt any position, or we just wait and see, so to speak, until a choice of views so far presented by other states can be made.

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[60] McMahon, *loc. cit.*, p. 375.

The author proposes another alternative where accepted rules over existing reals, like the law of the sea,[61] may be applied as a basis for a Philippine position.

Basically, we must accept that even if the Treaty is not ratified, states will not claim sovereignty over outer space. This receipt is tenable not simply because no state can now actually control outer space but because even those states who are most likely to possess the means to actually control outer space also agree to inhibit themselves from asserting sovereignty over the same by the fact of their being signatories to the Treaty. This proposition is somewhat analogous to the principle of freedom of the seas.

On the other hand, the political independence of the Philippines must be protected. Likewise, security — including security against espionage — as well as Philippine customs, fiscal, immigration and sanitation laws must be enforced, and infringements thereof must be prevented. By the principles in the laws of the sea, the establishment of a contiguous zone provides for a device responsive to such requirements. While the establishment of a contiguous zone in outer space identical to a continguous zone over the sea may not be practical because of difficulties of measurements for the establishment of the same, a reservation should nevertheless be made in the treaty to insure the enforcement of measures on security, customs, fiscal, immigration and sanitation laws up to whatever height as may be necessary solely for the needs of these special purposes.

Paragraph 6 of UN Resolution No. 1962, does not quite cover situations where outer space activities actually cause harmful interference to other states.

While a spacecraft is on launch or on re-entry, it may be accorded the privilege of innocent passage provided it is not used for a non-peaceful purpose. This privilege shall continue to exist until such time when a straight re-entry (without glide) or launch path shall have been discovered to be operational. The matter of innocent passage, which is merely an accommodation or privilege, all the more emphasizes the need for pre-launch inspection (say, by an international body) to insure the peaceful mission of the space vehicle. Pre-launch inspection may be supplemented by pre-launch registration and notice of radio frequency bands.

VIII. Philippine Participation In Space Activity

PhilComsat. —

In January, 1967, the US launched the Pacific communications satellite called the 'Lani Bird II'.[62] With this, and the construction of the Phil-

[61] See Williams, *The Law of the Sea: A Parallel for Space Law*, 2 Military L.J. 33-50 (December, 1966).

[62] See Journal of the American Chamber of Commerce of the Philippines, 190 (May, 1967).

ippine ComSat station in Teresa, Rizal, the Philippines now enjoys modern satellite communication facilities. Our ground facilities are not yet complete, however, and full capability is awaited in the near future.

Other Fields. —

UN Resolution No. 1721 (XVI) envisions space activities for the advancement of (a) weather modification; (b) meterology; and (c) communications, through the World Meteorological Organization (WMO) and International Telecommunication Union (ITU), both UN specialized agencies. The Committee on Space Research (COSPAR) of the International Council of Scientific Unions, another UN agency, is primarily charged with providing the world scientific community with the means for cooperation and collaboration in space research.

It has been suggested[63] that space science is not restricted to those nations who have the capabilities for the launching of satellites and space probes, but the other countries should engage in otherwise potentially rich fields of research such as planetary astronomy, and the physics and chemistry of the upper atmosphere; also, the increased use of balloons and rockets for studies above the masking layers of the atmosphere represents a very large area of activity that merits the support of many more nations. It is further suggested that since much of the data from satellites and space probes may be acquired, either directly or indirectly, scientists may use the same for their own analytic and research purpose.

In the field of space medicine, the Philippines is a participant by its attendance at international conferences. The latest conference was the 16th International Congress on Aviation and Space Medicine.[64] However, the writer was informed[65] that on Space Medicine, the Philippine delegation merely acted as 'observers', as it had no paper to deliver on this subject.

The Philippines may engage in space research by participating in COSPAR activities and/or availing of its services. Or, by responding to the invitation of the United States[66] for transnational co-operation in space activities.

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[63] Odishaw, *The Challenges of Space,* lecture over Voice of America, reprinted in The Voice of America Forum Lectures (Space Science) pp. 1-8.

[64] Held at Lisbon, Portugal, on September 11-15, 1967. The Philippine delegation consisted of Dr. Manuel Olimpia, Jr. (CAA), Dr. Luis Mirasol (President of the Aero-space Medical Association of the Philippines), Dr. Vicente Javier (PAF), Dr. Fortunato Ledesma (Air Manila), and Lt. Col. Augusto Jocson (PAF).

[65] Telephone interview with Lt. Col. Augusto Jocson on January 2, 1968.

[66] See Lyndon Johnson, *International Control of Outer Space,* speech before the UN Political Committee, November 17, 1958, reprinted in Emme, THE IMPACT OF AIR POWER, pp. 719-723.

As of April 30, 1967,[67] the United States had working partnerships with about 70 countries in various space programs. Over 60 stations throughout the world read-out pictures from U.S. weather satellites aiding local forecasts, and a special communication link has been established between Moscow and Washington for the exchange of conventional and satellite weather data. On July 8, 1964, a Memorandum of Understanding was entered into between NASA and the European Space Research Organization (ESRO), which affirms a "mutual desire to undertake a cooperative program of space research by means of satellites," by virtue of which NASA and ESRO will exchange all scientific information resulting from the cooperative program and will make the results "freely available to the world scientific community." All these demonstrate the wealth of possibilities for any country desirous of participating in space activities under a trans-national arrangement.

It is essential that the Philippines participate actively in space activities. For the benefits of such participation, no matter how meagre, will return a hundredfold. The benefits of a space program to a cooperating participant in such a program are stated by Dr. Wernher von Braun, the rocket specialist, in an article,[68] as follows:

> "The space program, too, is producing technological fall-out with a vast potential for application to current national and world problems. Already we have used our weather satellites to detect dust storms in the Middle East, forest fires in California and water pollution at various places in the United States. Our surveys indicate that gains up to $83 billion a year can soon be available to humanity through knowledge spawned from space research. Potential fields include medicine, communication, food, mineral and water resources, map-making, geodesy, weather prediction and control, air pollution, air and sea traffic control, and a host of industrial and management applications."

It is emphasized in said article that in about two-thirds of a century from now the Earth will have a population of about 12 to 13 billion people, or approximately 4 times its present population. In such a situation, our own children and grandchildren will be engaged in a struggle for survival. While only 9% of the Earth's surface is now under cultivation, 21% is potentially usable but will require a high cost of initial investment.

An orbiting satellite with the proper equipment can tell us certain data necessary for food production, such as, the degree of soil moisture, salinity resulting from prolonged irrigation, inadequate fertilization, presence of certain crop diseases, and for the conduct of a worldwide crop

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[67] Robert Burns (Lt. Col., USAF), *Legal Problems in the Exploration of Outer Space*, paper delivered at Symposium on "Outer Space and the Law," at PNB Bldg., Manila, April 30, 1967.

[68] von Braun, *Space Technology and Progress*, 7 AM. JOURNAL 119-124 (June, 1967).

survey program. These data can be used for prospecting for oil and other minerals, detection of areas afflicted with tree diseases, flood prediction, ice movement, wildlife migration, map up-dating, beach erosions, lake and river pollution by cities and factories, fish habits, and a host of other useful purposes.

But, as Dr. von Braun states[69] "to be meaningful, a worldwide resources management system requires support on a world-wide basis. All nations that wish to benefit from "its enormous potential must participate in its operation. x x x The Earth resources system I have described here is, of course, not yet a reality. Many tasks remain to be done before we shall be ready to orbit an operational system."

With the certainty of overpopulation in the next six decades, it would indeed be reckless not to participate in any program that will assure the survival of the next few generations.

In the report submitted by President Johnson to the U.S. Congress last January 30, 1968, covering the calendar year 1967, it states that during the 10 years of space launchings, the U.S. launched 524 payloads compared to 284 for the Soviet Union. In the year 1967, the U.S. launched 10 vehicles on escape missions (bound for the moon or the planets) while the Soviets launched only 1.[70] It would therefore seem, on this basis, that the U.S. has in her possession more scientific data on space. What is more, the official attitude of the U.S. is to share her knowledge on space with other interested countries, and the Philippines should certainly avail of this privilege.

If the Philippines has the *technical* competence to produce an atomic bomb,[71] then certainly this country is not lacking in scientific brainpower to engage in select areas of space activity.[72]

IX. CONCLUSIONS AND RECOMMENDATIONS

Summation. —

Philippine sovereignty over its air space is recognized in international law. While the extent of this sovereignty is not officially established by the terms of the UN Resolutions, *supra,* as well as the Treaty, it would seem that air space extends to such heights immediately below the altitude where an artificial satellite may orbit.

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[69] *Id.*

[70] News item, Daily Mirror, January 31, 1968, p. 2.

[71] Interview with Dr. Lesaca of NSDB.

[72] Interview with Mr. Antonio Habana III of the NSDB; the opinion was expressed that there are Filipino scientists competent to engage in problems of the chemistry and physics of outer space.

The requirements of national security, security from espionage, and of the enforcement of the laws on customs, fiscal, immigration and sanitation (hereafter referred to as the right to self-protection) necessitate a Philippine position that will preserve the said right to self-protection. This proposition is not expected to be debatable — up to this point.

It is, however, suggested that the rights of a state may extend even in outer space, but only for specific or limited purposes, i.e., for the assertion of the right to self-protection, similar to the purposes for which a contiguous zone is established in the seas.

Such an attempt to assert the right to self-protection up to an altitude higher than the height of orbital flight may be exercised within specific lateral boundaries, say, the limits of a state's ADIZ boundaries, and in case of land-locked countries, their natural boundaries. This proposition is necessary to counter an anticipated justification by the superpowers that all their space activities, including those activities conducted within the air spaces of other states, are for the preservation of their own naional interests.

There may be objections to this proposition in that the lateral boundaries of the ADIZ of a state is hardly identifiable at heights of orbital flight; or, that a state asserting its right to self-protection may actually be in an area over another state.

In reply to these two objections, it may be stated that the lateral boundary is intended to identify a delineation where a state would be or would not be entitled to act legitimately in its right to self-protection, and the difficulty to identify the boundary should not be used as an argument to deny a state the power to protect itself. As to the second objection, if we are to grant for the sake of argument that the state which attempts to assert its right to self-protection is actually attempting to assert such right in an area beyond its lateral boundaries, it is not the state who attempts to violate the right to self-protection of another state who should object to the proposal, but the state over whose area there is an incursion by the state attempting to assert self-protection. In any case, the area where a state attempts to protect itself is outer space over which no claim of sovereignty may be asserted, unless the act of self-protection violates the right to self-protection of another state — a condition hardly conceivable to be possible.

The alternative or corollary to the proposal would be to submit all orbital flights to pre-launch inspection by all interested states, *not* merely in the manner contemplated in the second paragraph of Article X of the Treaty. After all, if a satellite or a space vehicle is to be launched into outer space which is to be for "the common interest of all mankind" and

"for peaceful purposes", then the launching state should be willing to submit to a pre-launch inspection.

It is then suggested that the Philippines initiate a movement among the members of the United Nations for the acceptance of the proposal for the recognition of the right of a state to self-protection hereinabove discussed, and/or to seek a consensus among states for pre-launch inspection of satellites and space vehicles.

It is further suggested, among others, that:

1. The word "peceful" to be defined in the Treaty.

2. The extent of liability for damage caused in the course of any space activity be clarified. Also, the responsibility of the owner-state of the satellite or vehicle and the stage from where the launch was made be defined.

3. The procedure for the recovery of damage should be spelled out.

4. An amendment proviso should likewise be inserted in the Treaty respecting the return of satellites or space vehicles to the owner-state, with or without a request for such return, and within a reasonable time.

5. A reservation should be made by the Philippine Senate upon ratification of the Treaty as to the non-establishment of transit/landing rights for travel on earth thru the medium of outer space.

6. The Philippine government should now undertake a survey of its scientists for the purpose of identifying their fields of specialization or interest to form a basis for the determination of the areas of space science where Philippine participation may be beneficial to the country, and where incentives to engage in select areas of space activity may be provided.

Indications for the future. —

Because of the importance of outer space, and considering that space law and space activity is a continuing process vital to national security and prosperity, a space desk should be maintained in each office concerned, even though remotely, with space activity; that Congress appropriate the sums needed for the purposes and recommendations aforestated. Verily, it is the responsibility of the Philippine leadership to insure the future of this country, and it is in the field of space activity where some form of assurance may be had for national progress. Financially, an investment in space activity will pay off a large dividend because the capital outlay in a space program will actually be borne by the U.S. if its invitation for cooperation is accepted.

In the international scene, the UN has provided the forum for states to deliberate and decide on matters of common interest in response to the demands of a pace set by technological development. Responding to the UN efforts, states have demonstrated their willingness to agree on basic rules on a new realm for the avoidance of conflict. States have manifested their capability to anticipate, and provide for, the contingencies of the future.

Outer space and space activity have provided the medium for transnational agreements for the sharing of scientific techniques and knowledge between the strong and the not-so-strong on a scale beyond parallel.

Indeed, outer space may even provide the catalyzing force to break down ideological barriers for the unification of all the nations of the world.