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State Sovereignty in Airspace

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This article concentrates on the overall development of the historical air sovereignty concept since the time of Socrates/Plato, Ptolemy, Copernicus, Galilei-Galileo, Einstein and Stephen Hawkings. In 1944, finally, this air sovereignty concept was strongly embedded in Article 1 of the Chicago Convention 1944, after being analyzed/regulated at the Diplomatic Conference 1910 and The Paris Convention 1919.

Keywords: State Sovereignty, airspace law, Chicago Convention

I. Introduction

A clear picture of the development of Air and Space Law (not to mention the development of air and space sciences and technology) should be considered necessary, based on the history of the earliest flight, if we intend to understand the importance of State's sovereignty in airspace.

For many years man had studied the possibilities of human flight and whether such flight could be practically controlled. Development proceeded along divergent paths towards a single hoped-for objective. A group of people sought success through the use of various devices which might be called "airships" (including what we now termed balloons, both free and dirigible). They hoped that such devices, being lighter than the air through which they moved, would rise by buoyancy. Another group was inspired by the mechanics of the flight of birds and believed that a machine could be developed which, though heavier than the air it displaced, would fly through the reactions of the machine to the gaseous air in which it moved. Both approaches to the problem assumed the necessity of "air" to make flight possible. Both assumed that the area in which

¹⁾ Penulis ada seorang pengajar Hukum Udara dan Hukum Ruang Angkasa (Air Space Law) di dalam dan luar negeri, serta seorang veteran pejuang kemerdekaan Republik Indonesia. Beliau merupakan Honorary Director, Institute of Space Law Paris-France, Panel of Legal Expert, ICAO, Montreal - Canada, dan Panel of Legal Expert, INTELSAT, Washington DC, USA. Selain itu beliau juga aktif di Badan Arbitrase Nasional Indonesia (BANI) dan termasuk dalam Tim Pakar Hukum Departemen Kehakiman dan HAM RI.

flight could take place was an atmospheric one composed largely of this gaseous air.

Until human flight became subject to some degree of control, little need existed for legal regulations. Such regulations did not begin to emerge until goal of control of flight, which had been long sought for, had been achieved. As one early writer LYCKLAMA à NIJEHOLT, said in 1910:

“Whilst the technical expert from one century to another was engaged in investigating the problem of navigation of the air, the jurist could afford to look on calm and unmoved as one experiment after another failed. . . . So long as there were available only undirigible balloons, dangerous and expensive, absolutely unfit for the regular traffic, aerial navigation was therefore necessarily confined to some very infrequent ascents, such as attractions at exhibitions, for pleasure trips of scientific excursion and most occasionally for military purposes; it did not create situations and relationship demanding the immediate attention of the legislator Recent years have proved such a splendid success for aeronautics that really it seems justifiable for law to begin to take its share in the aerial labor”.²⁾

The progress in technology finally produced machines which first were lighter than air and later machines which were heavier than air.

After all these developments, people felt the need for regulations to control all flights by those kinds of machines. These regulations are called by Ernest NYS “Droit Aérien”³⁾ or “Air Law”. What is meant by Air Law are regulations applicable to all kinds of flights and the use of the area called “airspace”. However, the term “airspace” itself was never defined. Some said that airspace was the area in the air where flying machines were able to rise and move because there were reactions of air to the machines. And the boundary of the height of the airspace was the line above which the machines were no longer able to move, because there was not sufficient air to support them.

Finally, this term was put into a convention, viz, the Paris Convention of 1919 in which article runs as follows:

²⁾ Lycklama à Nijeholt. AIR SOVEREIGNTY, The Hague, 1910.

³⁾ Ernest Nys, “Droit et aérostats”, REVUE DE DROIT INTERNATIONAL ET DE LEGISLATION COMPARÉE, Vol. 34, 1934

“The High Contracting States recognize that every Power has complete and exclusive sovereignty over the air space above its territory. For the purpose of the present Convention the territory of a State shall be understood as including the national territory, both that of the mother country and of the colonies, and the territorial waters adjacent thereto”.⁴⁾

The principle of this article is inserted also in article 1 of the Chicago Convention of 1944, which says:

“The Contracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory”.⁵⁾

However, this convention too lacks definition of airspace. It seems that the definition is left to those concerned.

Finally we come to the core of the subject matter:

1. Is it necessary to define the boundary of state sovereignty over the airspace above states' territory?
2. If so, is it possible to define the sovereignty rights of such state over its airspace? And then we still face:
 - a. how do we define or decide this boundary in airspace?
 - b. in connection with outer space, does the airspace boundary necessarily have to be on one line with the boundary of outer space, and if it does not coincide, how are we to define it further?
3. Facing the problems mentioned above, particularly in connection with the airspace above countries which has specific land and water areas, we need a special system for measuring the airspace.

II. Definition and scope of Air and Space Law, and its relationships with other branches of science are also notably:

1. The nature and extent of the area in space where Air Law (and Space Law) is applicable.
2. The form of human activities to be regulated in that area.
3. The flight instrumentalities involved.

⁴⁾ Convention Relating to The Regulation Of Aerial Navigation, Signed At Paris, October 19, 1919.

⁵⁾ Convention on International Civil Aviation, Signed At Chicago, December 1, 1944.

Air and space law is usually divided into Air Law and Space Law (or Outer Space Law).⁶⁾ COOPER put both in a single branch of the law and he named it AEROSPACE LAW.⁷⁾ Since the problem we face is state sovereignty in airspace, and Air Law is the law applied in airspace, we are only to discuss Air Law.

Many scholar have given different definitions of Air Law. There are definitions given by DIEDERIKS – VERSCHOOR,⁸⁾ KATSENBACH, SHAWCROSS and BEAUMONT, GOEDHUIS and PÉPIN. PÉPIN said that Air Law is:

“The regulation of circulation, the navigation and the use of aircraft and also the legal right and obligation which may arise there from”.⁹⁾

From all the definitions given mentioned above, the writer concludes that Air Law comprises:

All kinds of law, regulations and customs connected with flight and all rights and obligations of human being as its executive, which are based on Treaties, Conventions and customs valid amongst nations concerning flight and the use of airspace.

All this type of activities have to be considered from the international, national, public and private points of view.

1. The nature and extent of the areas in space where Air Law (and Space Law) is applicable.

By “airspace” is meant the area where Air Law is applicable. This area is mentioned by the Chicago Convention of 1944, article 1, as “airspace”. However, this convention never explained nor defined further what is exactly meant by airspace. So, the problem faced by the writer concern the definition of airspace, i.e. where and what are the boundaries of the airspace of a state.

⁶⁾ The Institute of Air and Space Law, McGill University, Montreal, A Brief History And Bibliography 1951 – 1970, Montreal, 1970.

⁷⁾ J.c. Cooper, Aerospace Law – Subject Matter And Terminology, 29 Journal Of Air Law And Commerce. 89 (1963).

⁸⁾ I.h. Ph. Diederiks Verschoor, Inleiding Tot Het Luchtrecht, Haarlem, 1960.

⁹⁾ E. Pepin, Institute Of Air And Space Law, McGill University, Montreal, Canada.

2. The form of human activities to be regulated in that area.
Man is a human being and prefers to live in a community which is regulated by law. The life of a human being is always connected with the many branches of science, e.g. psychology, economics, politics, sociology, culture and law.
3. The flight instrumentalities involved.
The history of flight instrumentalities can be divided into five stages, where the flight instrumentalities are:
 - a. lighter than air,
 - b. heavier than air,
 - c. the combination of both a and b,
 - d. the combination of a, b, and c, and also those which can move not only in the atmosphere, but in the area empty of air, e.g. the X-15 flight craft and space shuttle,
 - e. those which can fly outside the atmosphere and do not need support and reactions from the air, e.g. rockets and satellites.

III. The Air Sovereignty Concept

In ancient time Roman Law recognized the exclusive rights of the landowner. We can find the basis for this practice in the maxim: "**Cujus est solum, ejus est esque ad coelum**"¹⁰⁾ It means that "he who owns the soil, owns up to the heavens and down to the depths of the earth!". These rules are to be found in the **CORPUS JURIS CIVILIS**,¹¹⁾ which in many of its laws used the words "**aer res communis**". The influence of this maxim is still to be seen in various laws of several countries.

To understand the development and influence of this maxim in the field of Air Law, we have to look its history, which is divided into three periods:

1. The International Conference on Air Navigation of Paris in 1910.
2. The Versailles Peace Conference in 1919.
3. The International Commission for Aerial Navigation ICAN, Paris 1929.

¹⁰⁾ E.g. Sweeney, Adjusting The Conflicting Interest Of Land Owner AND AVIATOR IN **ANGLO AMERICAN LAW**, 3, *Journal of Air Law and Commerce* 368 (1932).

¹¹⁾ Sohm, **INSTITUTE OF ROMAN LAW**, 3rd edition, London, 1907, p. 303.

1. **The International Conference on Air Navigation of Paris in 1910.**
The writer finds in this period, two schools of thought:
 - a. That which maintains that airspace is by its very nature free (the Air Freedom theory).
 - b. That which maintains the theory of sovereignty of subjacent state over the airspace above its territory (the Air Sovereignty theory).
The first school may be divided into:
 - 1) Air freedom without restriction.
 - 2) Air freedom restricted by some special rights of subjacent state.
 - 3) Air freedom restricted by a territorial zone.The second school may be divided into:
 - 1) Full sovereignty up to a limited height.
 - 2) Full sovereignty restricted by the right of innocent passage for aerial navigation.
 - 3) Full sovereignty without restrictions (up to the sky – *ad infinitum*).
2. **The Versailles Peace Conference.**
For the first time in the history of flight a sovereignty concept was put firmly into an international convention, namely the Paris Convention of 1919. The convention says that a state has complete and exclusive sovereignty over the airspace above its territory. This sovereignty, however, is limited by the right of innocent passage by foreign aircraft.
3. **International Commission of Aerial Navigation – ICAN – PARIS 1929.**
The Paris Convention of 1919 was concluded in the spirit and domination of the Treaty of Versailles of 1919. This appears very clearly in the original wording of article 5 which prescribes that no contracting State should admit, except by special and temporary authorization, the flight above its territory by aircraft not possessing the nationality of the contracting States. Another discrimination was that according to article 34 of the Paris Convention, two votes each were given in the ICAN to the USA, Great Britain, France and Japan, whereas the other members were given one vote each. Therefore, many states did not adhere to or become members of this convention. They were unanimous on one issue, that each state has complete and exclusive sovereignty over the airspace above its territory. However, relevant to this air sovereignty concept was the presence of two opposing groups of

opinion. One group, led by Great Britain, maintained that air sovereignty was limited by the principle of innocent passage, so that an international air service passing through the airspace of another country did not need any permission from the country flown over. Another group maintained that an authorization had to be granted. This question of prior permission was later discussed at the air conference of 1929, and it was at that conference that the principle of freedom of air traffic, at least for regular services, was completely abandoned by a great majority of States. In addition to this, amendments were made to the old Paris Convention of 1919, especially to article 3, 5, 15 and 34.

IV. The Air Sovereignty Concept after the Chicago Convention of 1944.

There are two periods:

1. The International Civil Aviation Conference of Chicago on 1944.
2. The period after the launching of Sputnik by the Soviet Union in 1957.

1. The International Civil Aviation Conference of Chicago on 1944.

The air sovereignty concept has been firmly established in the International Air Conference, which restates the wording in article 1 of the Paris Convention of 1919. This sovereignty concept is not limited by any innocent passage by foreign aircraft. However, there emerge other problems concerning this and it involves among others the terminology used in article 1 of the Chicago Convention of 1944. This terminology includes the terms "complete and exclusive", "territory" and "airspace". Some writers maintain that the words "complete and exclusive" mean that the air sovereignty is unlimited in height and is therefore "up to the sky" or "ad infinitum". Thus what is meant by the term "airspace" is the unlimited area in space. However, the question that arises now is, is it possible to maintain unlimited air sovereignty?

Article 2 of the Chicago Convention of 1944 defines the territory of a state as the land and waters areas. It does not further describe the contemporary opinion as to the territorial water limits of a state.

Now what is the definition of airspace? As was stated earlier the convention never explains nor defines the term "airspace". It seems that the interpretation is left to the state concerned. Some states maintain that because of the absence of an exact interpretation, they turn to the term "aircraft". But neither is

the definition of "aircraft" to be found in the convention. The definition is to be found in Annexes 6, 7, and 8 to the convention, which states that "aircraft" are machines which derive support in the atmosphere from the reaction of the air. Therefore, "airspace" is that part in space where air (gaseous air) is to be found and is still sufficient to support an aircraft. Again, however, this interpretation is not entirely satisfactory. Finally there emerge three leading interpretations or theories:

- a. the logical-juridical interpretation,¹²⁾
- b. COOPERS's Control theory,
- c. SCHACTER's Airspace theory.

- a. the logical-juridical interpretation.

According to this interpretation the term "airspace" must be analyzed from its source as found in the Chicago Convention of 1944, which is the exact wording of article 1 of the Paris Convention of 1919. Also we have to understand what is meant by the term "aircraft" according to Annexes 6, 7, and 8 of the Chicago Convention. The Paris Convention of 1919 was signed and ratified in French and Italian as well as in English. The term "airspace" appears in the French version as "espace atmosperique" and in the Italian as "spazio atmosferico". It is apparent from this that term "airspace" in the English version meant, without question, "atmospheric space".¹³⁾

In many other articles of the convention, the flight instrumentalities to be regulated are described as "aircraft", and their nationality is recognized. Under the system of the Paris Convention, the annexes to the convention, which were adopted subsequently, became part of the convention itself. In these annexes, "aircraft" is defined as follows:

"The word "aircraft" shall comprise all machines which can derive support in the atmosphere from reactions of the air". In Annex A various classes of "aircraft" included balloons, airships, landplane, seaplane and helicopter are mentioned".

12) Writer's view.

13) J. C. Cooper, *Legal Problems Of The 50th Annual Meeting Of The American Society Of International Law*, 1956.

Considering the assertion of state sovereignty in Article 1 with this definition of "aircraft", it may be said that the Paris Convention declared that each state was sovereign in those areas of space where sufficient gaseous atmosphere exists to lift and support balloons, airships, and airplanes, as well as any other type of flight instrumentalities which could "**derive support in the atmosphere from reactions of the air**". Man had not yet conceived the possibility of any other type of flight instrumentality, nor had he had occasion to regulate areas of space other than those used by "aircraft". The Chicago Convention of 1944, in which most of the states engaged in international aviation are participants, restate in Article 1 the provision of the Paris Convention concerning airspace sovereignty in this manner: "The contracting State recognize that every State has complete and exclusive sovereignty over the airspace above its territory".

Again, as in the Paris Convention, this is a statement of customary international law and not an exchange of privileges between the states concerned. The Chicago Convention also deals with the regulation of "aircraft" which are given the attribute of nationality. But neither "airspace" nor "aircraft" is defined.

Under the Chicago Convention, the technical standards, called annexes, do not become parts of the convention. These standards are prepared by the international Civil Aviation Organization, and are then submitted to the member states for acceptance. Any state finding it impractical to comply in respect with such standards, must advise the International Civil Aviation Organization.

During the Chicago Conference suggestions for future annexes were submitted, including the definition of aircraft, but the Chicago Conference inserted in the tentative annexes the definition of aircraft as it had already existed in its narrower form in the Paris Convention annex. Subsequently, the International Civil Aviation Organization, when formally adopting the present Annex 7, dealing with Aircraft Nationality and Registration Marks, defines aircraft as "any machine that can derive support in the atmosphere from the reaction of the air". This is almost exactly the Paris definition adopted many years earlier. In the same annex, the term "aircraft" is defined to include balloons, airships, airplanes and helicopters, and other similar instrumentalities requiring support in the atmosphere from reactions of the air in order to maintain flight.

b. COOPER's Control Theory¹⁴⁾

In his theory, COOPER maintains that in the absence of an international agreement, the territory of every state extends upward as far into space as it is physically and scientifically possible for any one state to control the regions of space directly above it.

COOPER's theory was objected to by many scholars, among others by SCHACHTER, JESSUP and TAUBENFELD, COX and STOIKO and also GOROVE¹⁵⁾ who maintained that COOPER must face a barrage of criticism, ranging from the utter indefiniteness and impracticability of his theory to the tangibility of scientific progress permitting control, and the implications of might makes right. Therefore, in 1956 Professor COOPER, advances a substitute for his earlier, tentative suggestion. COOPER then submitted another solution which comprises:

- (1) Reaffirm Article 1 of the Chicago Convention, giving the subjacent state full sovereignty in the areas of atmospheric space above it, up to the height where "aircraft" as now defined may be operated, such areas to be designated "territorial space".
- (2) Extend the sovereignty of the subjacent state upward 300 miles above earth's surface, designating this second area as "contiguous space" and provide for a right of transit through this zone for all non-military flight instrumentalities when ascending or descending.
- (3) Accept the principle that all space above "contiguous space" is free for the passage of all instrumentalities¹⁶⁾

Now the following arises: How can this zone, the "contiguous space", be efficiently controlled by the subjacent state?

¹⁴⁾ Donald Cox and Michael Stoiko, *SPACE POWER*, Toronto, 1958, p. 162.

¹⁵⁾ Stephen Gorove, *ON THE THRESHOLD OF SPACE: TOWARD A COSMIC LAW PROBLEMS OF THE UPWARD EXTENT OF SOVEREIGNTY*, First Colloquium, The Hague, 1958, p. 72.

¹⁶⁾ J.C. COOPER, *THE RUSSIAN SATELLITE LEGAL AND POLITICAL PROBLEMS*, 24 *Journal of Air Law and Commerce*, 379 (1955).

c. SCHACHTER's Airspace Theory.¹⁷⁾

SCHACHTER said that national sovereignty upward is limited to navigable airspace, with the limit of sovereign control being the ceilings to the highest "lift" of present manned aircraft (20 miles) reaching up to maximum of 40 miles tomorrow. Evidently the previous "airspace" theories failed to cope with the problems which have emerged pertaining to cases connected with "airspace". These are to be seen in many occurrences, for instance:

- (1) The flight by free-balloons from the territories of West Germany and Turkey by the United States of America.
- (2) The U-2 aircraft flights.
- (3) The United States air force RB-47 aircraft reconnaissance.

2. The period after the launching of Sputnik by the Soviet Union.¹⁸⁾

After the launching of Sputnik by the Soviet Union, two problems have arisen connected with:

- a. Legal problems created by the Sputnik.
- b. New and prominent views concerning state sovereignty in airspace.

a. Legal problems created by the Sputnik.

Two problems have come into being by the launching of Sputnik by the Soviet Union:

- (1) problems connected with customary law.
- (2) The existing convention i.e. the Chicago Convention of 1944 which regulates flight in airspace by aircraft.

In the first case a prominent scientist and lawyer A.G. HALEY¹⁹⁾ offers a view which in short can be presented as follows:

Within the activities of the International Geophysical Year (IGY) the U.S.A.

¹⁷⁾ C.W. Jenks, *SPACE LAW*, New York, 1965, p. 97.

¹⁸⁾ E. Pepin, *LEGAL PROBLEMS CREATED BY THE SPUTNIK*, Institute of International Air law, Montreal, 1957.

¹⁹⁾ Andrew G. Haley, *RECENT DEVELOPMENTS IN SPACE LAW AND INTERNATIONAL LAW*, Work of International group, symposium, Washington D.C., 1961, p. 93.

has expressed many times its intention to launch artificial satellites, as has the Soviet Union. HALEY maintained that many states supported and joined in the activities of the IGY, one of which was the launching of man-made satellite for research purposes in space. As a result of this support to the activities, the states concerned were aware of the outcome and of the responsibilities they would have to take in connection with the launching of these satellites.

Said HALEY: "By agreeing to support actively the satellite program the fore going nations also agreed to the legal validity of the project. On the basis of sound principles of international law which we will now discuss, the nations of the world may not protest the flight of a non-military artificial over their territories".

Up to that time none of the States ever complained and they kept silent about these activities. Referring to this attitude HALEY concluded that all states had agreed and supported the above mentioned activities.

If we further view this matter and based on the existing convention (and the author concludes that the only convention in force is the Chicago Convention of 1944, which regulates the flight of aircraft in the air which is to be found in the atmosphere only) it is clear that rockets, satellite and guided missiles do not fit into the definition of aircraft as mentioned in the annexes of the Chicago Convention which defines as aircraft any machine which can derive support in the atmosphere from the reaction of the air, and since the flight of rockets and satellites does not require reaction of the air, but relies on thrust.

b. New and prominent views concerning state sovereignty in airspace
The launching of the earth satellites, rockets and guided missiles, which were then followed by flights to the moon and Mars by spacecraft if the USA and the Soviet Union created new concepts concerning the existing air sovereignty theories. According to a well-established international rule, (which is later strongly regulated in the space Treaty of 1967, namely "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies") outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means. In addition, outer space has been decided upon, the problem of a definition of airspace has

not yet been solved. There is no convention which has defined the boundary of airspace or national air space. Faced with this problem, which is how to define airspace (national airspace) some prominent air lawyers and scientist offer their solutions and definitions.

BEVILACQUA²⁰⁾ maintains that airspace is defined as that altitude in which the craft remains dependant upon the atmosphere.

JASTROW²¹⁾ defines airspace as the altitude at which the density of the atmosphere is sufficiently low to permit the completion of one circuit by an orbiting vehicle, without destruction by atmospheric friction.

Bin CHENG²²⁾ divides flight space into airspace and outer space. Airspace is that part of space where air is to be found (that is, the atmosphere). And outer space as that part of space between the planets which is empty of air.

COOPER suggested three zone divisions as mentioned before.

PÉPIN²³⁾ suggested, and considered, from a legal point of view that there are only two zones: one, the air or atmosphere which has a legal status already defined in an international agreement, and the other, space of a still undefined status. He maintains further that we should abandon such terminology as "upper space", "outer space", "upper atmosphere" as well as "territorial space" or "contiguous space" because such expressions do not correspond to any scientific or legal concept. It should be granted that over and around the surface of the earth (land and sea areas) there is what the scientists call atmosphere, over certain parts of which national sovereignty is extended; and above the atmosphere there is space.

²⁰⁾ Luiz de Gonzaga Bevilacqua, *A Contribution To The Problem Of Space Law, Establishing A Technical And Practical Limit To Political Sovereignty In Space*, 1st Colloquium, The Hague, 1958, p.33.

²¹⁾ Robert Jastrow, *DEFINITION OF AIR SPACE*, 1st Colloquium, The Hague, 1958, p. 82.

²²⁾ Bin Cheng, *INTERNATIONAL LAW AND HIGH ALTITUDE FLIGHT: BALLOONS ROCKETS AND MAN-MADE SATELLITES*, A Symposium, Washington D.C. 1961, p. 141.

²³⁾ E. Pepin, *SPACE PENETRATION*, American Society of International Law, Annual Meeting 1958.

V. Conclusion.

As a conclusion the writer considers that the various problems which have arisen in connection with state sovereignty over airspace have resulted from formal (valid) regulations in force principally the Chicago Convention of 1944 which never defines what is meant by the term "airspace". Furthermore, the Space Treaty of 1967, which regulates the uses of outer space, lacks the definition of outer space, as to where precisely in space does (outer) space begin. But if we read Article 1 of the Chicago Convention, it states that every state has complete and exclusive sovereignty over the airspace above its territory. Furthermore, if we read Article 7 of the (Outer) Space Treaty 1967 which states (among other things) that "... is internationally liable for damage to another State party to the Treaty or its national or juridical persons by such object or its component parts on the earth, in airspace or in outer space, including the moon and other celestial bodies". Looks like, we get the impression, erroneously, that there is a boundary between airspace and (outer space).

The Chicago Convention of 1944 which never classified exhaustively the term aircraft, except in Article 3. This Article divides aircraft into State aircraft and civil aircraft. What is meant by State aircraft are military, customs and police aircraft. Thus aircraft owned by the state but used for purposes other than the above mentioned are not classified as State aircraft, as is meant by Article 3 of the Chicago Convention.

As there is no conformity of opinion concerning the above mentioned matters, there arise different interpretations which are based upon each state's personal interest.

With these problems in mind, and in order to offer solution concerning the aforementioned facts, the writer presents his analyses and views, which in short are as follows:

1. Problems concerning "airspace" under state sovereignty.
2. Classification of aircraft.

1. Problems concerning "airspace" under state's sovereignty.

Article 1 of the Chicago Convention of 1944 does not define what is meant by the term "airspace". This indefiniteness has caused much misunderstanding among state concerning their national airspace. To minimize all this misunder-

standing, it is necessary to define the term, and in defining it, we should reconsider Article 1 of the Chicago Convention of 1944, by an international convention, especially the parts relevant to "distance" and the definition of "national airspace". In relation to this, what is meant by "a state's territory" in Article 2 of the Chicago Convention of 1944 also need reconsideration.

2. Classification of aircraft.

The classification of aircraft is mentioned by FAUCHILLE²⁴⁾ in his concept concerning the air navigation regulation which was submitted to the conference of air navigation of 1910 in Paris. This classification is mentioned again in the concept of the Air Warfare Rules of 1923 and later in the Chicago Convention of 1944. All these classifications are based on the aims of the use of the aircraft. However, they have resulted in much misunderstanding between nations, so that the writer suggests the following:

- a. It is not necessary to extend the meaning of "aircraft", and to what is stated in Annexes 6, 7, and 8 must be added the wording "...other than the reaction of the air against the earth's surface". Extending the meaning by adding the term "contrivance" will only create new conflict in that each state will be able to prevent flight by other state's flight instrumentalities, such as rockets, earth satellites, etc., performed for peaceful purposes.
 - b. Article 3 of the Chicago Convention of 1944 needs reconsideration by an international convention. An extension of the classification of aircraft should be made with reference to:
 - 1) The status of the aircraft, whether it is owned by a state, by an individual, or by a private organization.
 - 2) The purposes of the activities of the aircraft.
 - 3) The aims of the activities, whether it is used for the interest of the state involved or for the interests of an international organization.
 - 4) The use being made of the aircraft, whether peaceful or otherwise.
3. Problems of "airspace" above the territorial waters, zones, and also the state's security and preservation zones have been resolved fully by the

1982 Convention on the Law of the Sea.

According to this Convention Law of the Sea the airspace above every country's land and water areas becomes the right of each country's sovereignty. Article 1 of the Chicago Convention contains this principle supports the three dimensional political unit of a state. In connection to this principle COOPER²⁵⁾ said:

"The basic rules of International Air Law, Fixing the legal status of airspace over the earth's surface may be states as follows:

"If an area on the surface of the earth, whether land or water, is recognized as part of the territory of a State, then the airspace over such surface area is also part of the territory of the same State. Conversely, if an area on the earth's surface is not part of the territory of any State, such as the water areas included in the high seas, then the airspace over such surface areas are not subject to sovereign control of any State and are free for the use of all States. This is another way of saying that the old concept of national territory as a two dimensional area on the earth's surface can no longer be accepted. National territory is three dimensional. The surface of the earth and the airspace above cannot be separately treated. Together they must be considered as a singly political unit. Entry into the airspace over such surface areas constitutes equally entry into the territory of the State".

PÉPIN stressed the three-dimensional shape of state's territory where its sovereignty rights can be executed. Whereas Spencer M. BERESFORD²⁶⁾ in this relations quotes the opinion of KELSEN who said:

"The territory of a State ... is not a plane, but a space of three dimension ... an inverted cone. The vertex of this cone is the center of the earth... What traditional theory defines as "territory of the State", that portion of the earth's surface delimited by the boundaries of the State, is only a visible plane formed

²⁵⁾J.P. HONIG, *THE LEGAL STATUS OF AIRCRAFT*, The Hague, 1966, p. 36. See also Imre Anthony Csabafy, *THE CONCEPT OF STATE JURISDICTION IN INTERNATIONAL LAW*, The Hague, 1971, p. 12. The definition to aircraft as contained in annexes of the Chicago Convention 1944 is added additional words as follows, ...other than the reaction of the air against the earth's surface".

²⁵⁾ J.C. Cooper, "Airspace Rights over the Arctic", *AIR AFFAIRS*, Vol 3, 1950.

²⁶⁾ Spencer M. Beresford, *THE FUTURE OF NATIONAL SOVEREIGNTY*, 2nd Colloquium, London, 1959, p.5.

by a transverse section of the State's conic space. The space above and below this plane belongs legally to the State as far as its coercive power extends".

As an example, the Soviet Union maintains in Article 1 of Ordinance concerning the Air Navigation:

"The complete and exclusive sovereignty over the airspace of the USSR shall belong to the USSR. Airspace of the USSR shall be deemed to be the airspace above the land and water territory of the USSR including the space above the territorial waters as determined by the laws the USSR and by international treaties concluded by the USSR".

The words "...as determined by the laws of the USSR" in fact contains possibilities if the interest of the USSR so requires".

From the above mentioned analysis finally the writer brings forward the following conclusions:

1. In answering the questions as to whether or not it is necessary to determine the boundary of the state sovereignty in airspace above its territory, it can be stated that in order to avoid misunderstanding and misinterpretations as far as the interests of each individual party are concerned, it would be advisable to approve through an international convention that Article 1 of the Chicago Convention of 1944, be added with an additional fixed definition as to what is meant by "airspace". In determining the definition, the use of terms other than "atmosphere" has to be avoided, "atmosphere" where party or wholly a state has sovereignty and where airspace forms the third dimension of its territory. The distance has also to be agreed upon by all states through an international convention.
2. As a consequence of what has been stated in point 1, it is advisable to avoid using different terminology for "airspace" in the atmospheric part of the earth over which a state has its sovereignty. Then the remaining space in the atmosphere will be stated to be free the peaceful purposes.
3. The three dimensional territory of a state and the shapes of the dimension have to be geographically and nationally practical since a state constitutes one political unit, and hence each unit can not be separately treated.