THE EXTRA-TERRESTRIAL APPLICATION
OF INTERNATIONAL LAW

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The purpose of this paper is to find out whether and, if so, the extent to which international law is extra-terrestrially applicable to outer space and celestial bodies. It is proposed to examine first the position under international customary law and next the extent, if any, to which this position has been affected by two resolutions, both adopted unanimously by the General Assembly of the United Nations, resolution 1721 A (XVI) of December 20, 1961,1 and resolution 1962 (XVIII) of December 13, 1963,2 which, in themselves, are without binding force. The former "commends to States for their guidance," inter alia, the principle that "international law, including the Charter of the United Nations, applies to outer space and celestial bodies." The latter "solemnly declares that . . . States should be guided" by, among others, the principle that their activities in the exploration and use of outer space and celestial bodies shall be carried on in accordance with international law.3

Notwithstanding these resolutions, however, doubt, in one form or another, has sometimes been expressed on the subject, not least by various Members of the United Nations. Thus some "stressed that there was as yet no international law governing outer space,"4

2 GA OR Annexe (XVII) 28, p. 27; 58 A.J.I.L. (1964), p. 477; the text is partially reproduced below (see text after note 48).
3 For an analysis of the status of these two resolutions, see the present writer's "United Nations Resolutions on Outer Space: 'Instant' International Customary Law?", 5 Indian J.I.L. (1963), p. 23.
4 United Arab Republic, A/C.1/1342 (12.63), p. 163; France, ibid./SR.1345 (5.12.63), p. 183; "an international law of outer space had yet to be created."

In order to avoid repetition and save space, mention of the organ in which speeches are made in the United Nations will be omitted, as the origin concerned can be easily identified from the UN document reference: A/C.1/SR stands for the summary records of GA Committee I; A/AC.105/PV the reports verbaux of the Committee on the Peaceful Uses of Outer Space; A/AC.105/C.2/SR the summary records of its Legal Sub-Committee; S/PV the reports verbaux of the Security Council.
while others were "not sure that international law, as we know it on earth, can or ought, mutatis mutandis, to be extended to outer space." 6

This hesitancy towards the "extension" of international law to outer space is due sometimes to a romantic notion that is well illustrated by the following passage from a speech of the Indian delegate:

"My delegation cannot contemplate any prospect other than that outer space should be a kind of warless world, where all military concepts of this earth should be totally inapplicable. The limitative connotations inherent in the imperfections of our present-day international law should not be transported into outer space. . . . It seems to us that many of our concepts of international law and those based on national considerations which have necessarily become a part of the mental make-up and attitudes of men and nations should be radically revised. When the day comes that men of various nations, through international co-operative efforts, journey into outer space and celestial bodies, many old concepts will have to be forgotten and will, indeed, be out of place in outer space. There should be only one governing concept, that of humanity and the sovereignty of mankind." 7

But there are also more down-to-earth considerations.8 Among them is one which is of particular relevance to the present discussion. It has been referred to by several delegates.8 As another Indian delegate has put it, because resolution 1721 A (XVII)


6 A/AC.105/PV.3 (20.3.62), pp. 63-66 (see also text to note 9 below); Mexico, A/AC.105/PV.6 (23.3.62), p. 26 (see also text to note 7 below). Cf. M. S. McDougall and others, Law and Public Order in Space (1963), p. 46: "As matters stand today there is ample evidence that as we push out into the environment of the earth we are almost certain to carry the disoriented world arena with us."

7 See, further, Brazil (22.11.63), Schick, and Mankiewicz, loc. cit. in note 5 above; Mexico, loc. cit. in note 6 above.

equally commends to States the principle that outer space and celestial bodies are not subject to national appropriation, what is necessary is “to define to what extent international law would operate and to what extent sovereign rights have to be waived.”

Hence, as the United Arab Republic delegate has suggested, “a study should be made to determine precisely what rules of international law or practice were applicable to outer space.”

**Position under International Customary Law**

Since States are still the normal subjects of international law, and the attribution, delimitation and regulation of the competence of States in their mutual relations represent the most important function of international law, a discussion of the extra-terrestrial limits of the various types of State jurisdiction under international law will, it is submitted, afford a clear picture of the extent to which international law is *ipsa jure* applicable extra-terrestrially.

For this purpose, it appears convenient to make use of a classification of the notion of State jurisdiction which the present writer first adopted in a paper on “Crimes on Board Aircraft,” published in 1959 in the present series. This classification divides State jurisdiction into three types, namely, territorial, quasi-territorial and personal, and separates it into two distinct elements, for which two new terms had to be coined, namely, jurisdiction and jurisprudence. It is believed that this classification affords a clearer insight into the notion of State jurisdiction, which

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12 12 *Current Legal Problems* (1959), p. 177 et seq.
14 Cf. the American Law Institute, which in its *Restatement of the Law—The Foreign Relations Law of the United States—Proposed Official Draft* (1962), adopts a similar distinction between jurisdiction to prescribe and jurisdiction to enforce. Jurisdiction, however, covers more than mere law enforcement.
at present often appears to be highly complex and confused. Moreover, it is hoped that by means of a diagrammatic presentation of the various component elements of State jurisdiction in the Table on pages 138 and 139,\(^\text{15}\) the extent to which international law has been applicable to outer space, perhaps from even before the first sputnik, becomes readily apparent.

First, it would probably be helpful briefly to explain the essentials of this classification.

*Types of State jurisdiction*

*Territorial jurisdiction* is the sum total of the powers of a State in respect of a portion of *terra firma* under its governmental authority, including all persons and things therein, and the extra-territorial activities of such persons. It is generally derived from territorial sovereignty, but may also be derived from treaties, as in the case of mandated, trust or leased territories. It may also come from *occupatio pacifica* or *bellica*.

*Personal jurisdiction* is the sum total of the powers of a State in respect of individuals or corporate bodies or business enterprises havings its nationality or otherwise enjoying its protection or owing it allegiance, wherever they may be. *Pirates jure gentium* may also be said to come under the extraordinary personal jurisdiction of all States.

In between territorial jurisdiction and personal jurisdiction stands *quasi-territorial jurisdiction*. This is the sum total of the powers of a State in respect of ships, aircraft and spacecraft (to the extent to which they are also granted legal personality) having its nationality. Its powers over pirate vessels *jure gentium* come also under this heading. Quasi-territorial jurisdiction differs from personal jurisdiction in that it extends not only to the craft in question but also to all persons and things on board, including the activities of such persons, whether on board the craft or elsewhere.

\(^{15}\) Cf. the present writer's "*Inter Asta Silent Leges?—A Prolegomenon to Jural Cartography,*" *GLIM* (Michaelmas, 1961), p. 18.
Elements of State jurisdiction

By its nature, jurisdiction may be separated into two distinct elements, the normative element and the physical or formal element. *Jurisdiction*\(^{16}\) denotes the normative element of jurisdiction and represents the power of a State\(^{17}\) to adopt valid and binding legal norms and to concretise them with binding effect through its appropriate organs, whether judicial or otherwise. The spheres of validity or operative force of these norms may be delimited *ratione loci* (territorial), *ratione instrumenti* (quasi-territorial) or *ratione personae* (personal).

*Jurisdiction*, on the other hand, is the formal element of State jurisdiction and denotes the power of a State, at any given time or place, physically to perform the act of actually making, concretising or enforcing laws, such as holding a legislative assembly, setting up a tribunal or arresting a wanted person. From this point of view, the validity of jurisaction presupposes jurisaction, but it is possible to have jurisaction without jurisaction.

Attempts have sometimes been made to express the distinction underlying this division of State jurisdiction into jurisaction and jurisaction by differentiating between the *enjoyment* or possession of State jurisdiction and the *exercise* of State jurisdiction. Thus it is frequently said that a State *enjoys* concurrent personal jurisdiction over its nationals even when they are in a foreign State. It is then said that, as long as its nationals are in the latter State, the former State may not, or alternatively it is said that it simply cannot, exercise this personal jurisdiction over them. This description is, however, a hopeless confusion of words.

For, in the situation described above, the national State both *enjoys* and is entitled to *exercise* concurrently its *personal jurisdiction* over its nationals even while they are in a foreign country and, therefore, subject to the latter's territorial jurisaction as well as its territorial jurisaction. The national State may thus enact laws

\(^{16}\) If preferred, *jurisdiction sensu stricto* or, following the American Law Institute (see note 14 above), jurisprudence, though, on account of discrepancies in interpretation, the latter term may be a source of confusion.

\(^{17}\) This is so in the case of State jurisaction. It may otherwise be the power of any authority, in which case the power may be restricted merely to the concretisation of pre-existing legal norms.
making its nationals abroad liable to national income tax, requiring them to register with the local consuls or recalling them for military service. Its courts, moreover, have judicial jurisdiction over them: their judgments will be binding on them. In fact, the national State's personal jurisdiction over its nationals is limitless in its geographical, or one may say cosmographical, scope, and this personal jurisdiction may be exercised concurrently with the local State's territorial jurisdiction and jurisdiction.

But, on account of the exclusive character of jurisdiction and the hierarchy of different types of jurisdiction,\textsuperscript{18} while, and at the place where, an individual is under the territorial or quasi-territorial jurisdiction of another State, his national State does not enjoy, and may not exercise, personal jurisdiction over him, inasmuch as personal jurisdiction must cede precedence to territorial and quasi-territorial jurisdiction. It may not, for instance, attempt to arrest him or kidnap him. Any such attempt by a State to exercise personal jurisdiction at a place which is subject to the territorial or quasi-territorial jurisdiction of another State would normally be an infringement of the right of the latter and a violation of international law.

Such personal jurisdiction may, however, be exercised from outside spheres of territorial or quasi-territorial jurisdiction of other States. This has the effect, of course, of restricting such exercise of personal jurisdiction to only its legislative and judicial form, and of excluding executive jurisdiction. In practical terms, this means that a State may, in its own territory (or in territorium nullius), pass laws applicable to its own nationals who are in foreign countries, or on board foreign craft that are not in its own territory, and even try them \textit{in absentia}, but it may not send its officers to where they are in order to arrest them.

Moreover, when and where its nationals are not subject to the territorial or quasi-territorial jurisdiction of any other State, then the national State's personal jurisdiction comes fully into its own. For example, when they are in territorium nullius, the national State, if it wishes, is entitled to set up machinery there to enact

\textsuperscript{18} See below, text to note 22.
**STATE JURISDICTION**

<table>
<thead>
<tr>
<th>Type</th>
<th>Territorial</th>
<th>Quasi-Territorial</th>
<th>Personal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Object</strong></td>
<td><em>Terra firma</em> (terrestrial or extra-terrestrial) including adjacent maritime belt, subsoil and superjacent space</td>
<td>Ships, aircraft and spacecraft</td>
<td>Individuals, corporate bodies and business enterprises</td>
</tr>
<tr>
<td><strong>Material Scope</strong></td>
<td>In respect of the whole territory, including all its resources, all persons and things therein, and the extra-territorial activities of all such persons, whether individual or corporate</td>
<td>In respect of the craft themselves and all persons and things therein, including the activities of such persons, individual or corporate, whether on board the craft or elsewhere</td>
<td>In respect of individuals, corporate bodies and business enterprises, and all property, rights and legal interests belonging to them, wherever they may be</td>
</tr>
<tr>
<td><strong>Source</strong></td>
<td><em>International customary law</em>: sovereignty, law of war and <em>status mixtus</em>, including self-defence and reprisals. Treaty with, and recognition or acquiescence of, other international persons, e.g., protectores, leased, mandated and trust territories</td>
<td><em>International customary law</em>: State jurisdiction over flag-craft and pirate vessels <em>jure gentium</em>. Right to flag under <em>international customary law</em> may be based on nationality of owner or charterer, other &quot;genuine link,&quot; and registration. It may also be derived from consent, recognition or acquiescence of other international persons</td>
<td><em>International customary law</em>: State jurisdiction over nationals, including corporate bodies and business enterprises endowed with nationality, other persons owing allegiance, and pirates <em>jure gentium</em>. Treaties with, and recognition or acquiescence of, other international persons, e.g., jurisdiction over protected persons</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>Jurisdiction</th>
<th>Jurisdiction</th>
<th>Jurisdiction</th>
<th>Jurisdiction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hierarchy and Precedence</strong> (Jurisdiction)</td>
<td>On a par with other types of jurisdiction</td>
<td>On a par with other types of jurisdiction</td>
<td>On a par with other types of jurisdiction</td>
<td></td>
</tr>
<tr>
<td>Hierarchy (Jurisdiction)</td>
<td>First</td>
<td>Second</td>
<td>Third</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>Precedence (Jurisdiction)</td>
<td>In case of conflict, overrides quasi-territorial and personal jurisdiction</td>
<td>In case of conflict, gives way to territorial jurisdiction but overrides personal jurisdiction</td>
<td>In case of conflict, gives way to both territorial and quasi-territorial jurisdiction</td>
<td></td>
</tr>
<tr>
<td>Geographical Scope</td>
<td>Limitless (terrestrial and extra-terrestrial)</td>
<td>National territory of a State, other territory for the international relations of which it is responsible, and territory under its occupatio pacis or bellica</td>
<td>Limitless (terrestrial and extra-terrestrial)</td>
<td>Limitless (terrestrial and extra-terrestrial)</td>
</tr>
<tr>
<td>Relevance to Space Law</td>
<td>Extra-terrestrially applicable</td>
<td>Stresses the urgent need of clearly delimiting national space from outer space. Will also apply to extra-terrestrial territories, once sovereignty established and recognized in accordance with existing rules of international law</td>
<td>Extra-terrestrially applicable</td>
<td>Applicable to national spacecraft in outer space</td>
</tr>
</tbody>
</table>

Diagram © Bin Cheng 1985
laws to govern their conduct, arrest them for the purpose either of bringing them home for trial or trying them there and then by an ad hoc tribunal, and even to carry out the sentence there.

The legality and validity of acts of jurisprudence depend, therefore, not only on their nature and the person vis-à-vis whom they are carried out, but also, most important of all, on their locus.\(^\text{19}\) This factor is, however, sometimes ignored by those who belittle the importance and urgency of a clear-cut frontier between territorial space and outer space and who advocate the functional approach to the regulation of activities in and relating to outer space.\(^\text{20}\)

The above presentation of the concept of State jurisdiction allows, it is submitted, a more precise and accurate explanation of the notion of State jurisdiction. Indeed, only by distinguishing between jurisprudence and juridiction is it possible to bring out in their entirety the logical consequences of the judgment of the Permanent Court of International Justice in *The Lotus* case (1927).\(^\text{21}\) In that decision the World Court rejected the territoriality of criminal law as a binding rule of international law and affirmed in effect the universal scope of territorial jurisprudence and the overriding character of territorial jurisdiction.

Almost inevitably, therefore, jurisprudence is most of the time concurrent, while in respect of juridiction, at any given time and place, there must always be only one authority which prevails over all others. Once jurisdication is separated from jurisprudence, the hierarchical order of the various types of jurisprudence emerges in its full simplicity. In the absence of any treaty or other consensual arrangements whereby this state of affairs is modified,\(^\text{22}\) whenever a conflict arises, territorial jurisprudence overrides all other types of jurisdication, while quasi-territorial juridication overrides personal jurisprudence.

This distinction between jurisprudence and juridiction has been found helpful in elucidating the problems arising from potential negative and positive conflicts of criminal jurisdiction in relation

\(^{19}\) See below, note 46 and text thereto.

\(^{20}\) See below, note 52 in fine.

\(^{21}\) A 10.

\(^{22}\) e.g., in the case of extraterritorial rights and consular jurisdiction.
to offences on board aircraft. It will be seen from the accompanying diagram that, in conjunction with the classification of State jurisdiction into territorial, quasi-territorial and personal jurisdiction, it is also useful in answering many of the questions regarding the extra-terrestrial application of international law.

It is apparent from the diagram, for instance, why it would not be strictly correct to say that, because of "the total absence of any territorial sovereignty in outer space, it should be recognised that no State might exercise any kind of jurisdiction in outer space," for, even in the absence of territorial sovereignty, whenever their nationals or spacecraft are in outer space or have landed on celestial bodies, States are perfectly entitled to exercise either personal or quasi-territorial jurisdiction over them, as the case may be. Thus the seventh principle in General Assembly resolution 1962 (XVIII), at least in its first part, is merely an expression of existing international law when it says:

"The State on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and any personnel thereon, while in outer space."

Quite rightly, this principle recognises that the quasi-territorial jurisdiction of the State of registry extends not only to the vehicle, but also to all persons on board irrespective of their nationality, with quasi-territorial jurisdiction overriding personal jurisdiction. As a result of man's penetration into space, all the rules of international law governing the attribution and exercise of quasi-territorial and personal jurisdiction become fully applicable extra-terrestrially whenever spacecraft and nationals of members of the international society venture beyond the terrestrial airspace. They are also subject to the extra-terrestrial effects of territorial jurisdiction exercised from national territories on the earth.

As yet, only territorial jurisdiction is not found in outer space.

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23 See, in addition to loc. cit. in note 12 above, Report of the Royal Aeronautical Society Air Law Group Steering Committee to the Minister of Aviation on Crimes and Offences on Board Aircraft (1965), copies of which are obtainable by application to the Secretary of the Society; also Sir R. Wilberforce, "Crime in Aircraft," 67 J.R.Ae.S. (1963), p. 175.

or on celestial bodies. Consequently, the rules of international law governing the positive aspects of the exercise of territorial jurisdiction (that is to say, where, how and vis-à-vis whom it may be exercised) are, as a matter of fact but not law, not yet extra-terrestrially applicable, except those governing the acquisition of territorial sovereignty and jurisdiction. Rules such as those governing the expropriation of private property belonging to foreigners, for instance, would have no application on the moon, even when there is a fair-size population there, until territorial sovereignty has been established and recognised.

But, in addition to rules of international law governing the attribution and positive exercise of quasi-territorial and personal jurisdiction, all the rules governing the negative aspects of all three types of jurisdiction are already fully applicable to outer space and celestial bodies, that is to say, all the rules indicating when, where, how and vis-à-vis whom they may not be exercised. Thus, until and unless territorial sovereignty has been established and recognised in outer space or on celestial bodies, no State will be entitled to exercise territorial jurisdiction there. In the absence of territorial jurisdiction, quasi-territorial jurisdiction becomes supreme. None but the flag-State, however, is entitled to exercise quasi-territorial jurisdiction over any spacecraft, or persons and things on board them, extra-terrestrially. If such persons are not subject to the quasi-territorial jurisdiction of any State, then only the national State may normally exercise personal jurisdiction over them. Any attempt to exercise jurisdiction in outer space or on celestial bodies in excess of these limits will be an infringement of the right of either the flag-State or the national State of the individual, as the case may be, and a violation of international law.

What has been said above suffices to show why it would be difficult to subscribe to the view of the Austrian delegate when he was reported to have said that

"It was not known which part of international law applied to the moon; in his opinion none did." 25

RES COMMUNIS, RES NULLIUS, RES EXTRA COMMERCIUM

The Austrian delegate was quite correct, however, when he said:

"International law . . . nowhere defined the status of a res communis omnium." 26

But this was not for the reasons which he had given. The real reason is that under international customary law there is no res communis omnium, an object under the joint sovereignty of all subjects of international law. In addition to territories under the territorial sovereignty of recognised subjects of international law, only two other types of territory exist, namely, on the one hand, res nullius, that is to say, territory not subject to the territorial jurisdiction of any recognised subject of international law but susceptible of national appropriation, and on the other hand, res extra commercium, that is to say, territory not subject to national appropriation, like the high seas.

As regards the possible establishment of territorial sovereignty in outer space and over celestial bodies, the question therefore is whether outer space and celestial bodies constitute res communes omnium, res nullius or res extra commercium.

In discussions in the United Nations, many national delegates have referred to outer space and celestial bodies as res communes omnium, but only a few have drawn the logical consequences from the concept of collective sovereignty or joint dominium. Paradoxically, it was at the same meeting where the Soviet delegate had read into the minutes of the Legal Sub-Committee the statement of the Soviet Government issued on June 3, 1962, regarding the United States announcement of a programme of high altitude nuclear tests over the Pacific, that the Roumanian delegate, speaking of the danger of analogies, said:

"The concept of res communis usus might, if applied to outer space, be used to hinder the use of space for research by any State on the ground that it was common property." 27

Indeed, after the controversial United States high altitude nuclear test of July 9, 1962, over Johnston Island, delegates from the Soviet

26 Ibid.
bloc did not fail to invoke the concept of res communis as an ad hoc argument in order, on the one hand, to condemn the action of the United States and, on the other hand, to support the Soviet draft declaration of principles governing outer space submitted to the Legal Sub-Committee on June 6, 1962.\textsuperscript{28} The Soviet draft, inter alia, provided for prior consultation and co-ordination before any measure is carried out which might hinder other States in the exploration and use of outer space. Thus the Czechoslovak delegate said on September 14, 1962:

"The United States delegation is worried about a Soviet veto over national programmes of other countries. However, every State in the world and the international community as a whole has the right of veto over actions of a certain State which would violate the principle that outer space is res communis."\textsuperscript{29}

There is, however, no basis for considering that, under international customary law, outer space or celestial bodies are under such a régime where action by one State is subject to the veto of another. What, then, is the legal status of outer space and celestial bodies under international customary law? Here a distinction is necessary between celestial bodies on the one hand and outer space on the other.

Outer space

For reasons which the present writer has fully explained elsewhere,\textsuperscript{30} outer space, meaning the void between celestial bodies (including the earth and their atmospheric space), constitutes, under existing international customary law, res extra commercium in that it is not subject to national appropriation.

\textsuperscript{28} A/AC.105/C.2/L.1.
The question then arises as to the present limit between territorial space over which the subjacent State exercises territorial sovereignty and jurisdiction and outer space which is res extra commercium. In the absence of any express international agreement making such a demarcation, territorial space must be deemed to be at least conterminous with territorial airspace (i.e., atmospheric space) over which States undoubtedly exercise territorial sovereignty. At a time before space flights began, the present writer, on the basis of geophysical factors, had estimated the upper limit of airspace to lie at a height of between 500 and 1,000 kilometres (i.e., between 310 and 620 miles) above the surface of the earth. Since then, it appears that a general practice has grown up among States interpreting airspace as meaning space in which navigation by conventional aircraft is possible and outer space as space where artificial satellites are able to orbit, thus bringing the frontier down to approximately fifty miles, with a possible margin of twenty-five miles either way. This development may be regarded either as

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32 J. C. Cooper, who rightly believes in the importance of a frontier between national space and outer space, in 1951 estimated that the area of “air-lift” extended to a height of 60 miles (I.L.Q. (1951), p. 411). In 1956 (Proc. A.S.L.C. (1956), p. 89), he was of the view that atmospheric (and territorial) space coincided with the area of “air-lift” and proposed that sovereignty should be further extended to 300 miles to cover the area of “air-drag,” designating this area “contiguous space,” and that the space beyond should be declared free (see also his address before the British Branch of the Int. Law Ass., 7 I.L.Q. (1958), p. 82). In a letter published in The Times, September 2, 1957, he suggested that it might be necessary to raise the 300-mile limit to 600 miles.

A. G. Haley, in the late ’fifties adopted a line suggested by Theodore von Kármán in 1957, later termed the Kármán primary jurisdictional line, which divided the aeronomic from the astronomic regions. In the present state of technology, this line is said to be located at approximately 52 miles (see further Haley, Space Law and Government (1963), p. 75 et seq.).


L. Lipson and N. de B. Katzenbach, American Bar Foundation Report to NASA (1960), reproduced in Senate Symposium (1961), p. 779, at p. 794: frontier lies between 12 miles and 100 miles from earth surface. The authors support the conclusion of the UN Ad Hoc Committee (1959) that the boundary problem was not susceptible of priority treatment and its suggestion of a functional
the interpretation of an existing rule of international law by the
practice of States,\textsuperscript{33} or the emergence of a new rule of international
customary law modifying a previous one.\textsuperscript{34}

The evidence for saying that States now accept a fairly low
limit of territorial space is their attitude towards the problem of
the right of passage of orbiting satellites and, particularly, towards
reconnaissance satellites. A careful scrutiny of the discussions on
outer space in the United Nations reveals that States appear to be
in general agreement that orbiting satellites in their orbits never
enter airspace and, therefore, the problem of the right of passage
through foreign territorial airspace does not arise, except possibly
during launching and re-entry.\textsuperscript{35}

approach to the regulation of activities in space (p. 798). See the present writer's
comment on the \textit{Ad Hoc Committee's} conclusion in \textquotedblleft The United Nations and
G. P. Zadorozhnyi, \textit{"Osnovye Problemy Nauki Kosmicheskago Prava"}
sets sovereignty below the zone in which satellites orbit (cited in Hailey, \textit{op. cit.}
, p. 85, note 26).

David Davies Memorial Institute, \textit{Draft Code of Rules on the Exploration
and Uses of Outer Space: \"25 miles is probably the outside limit of effective
aerodynamic lift\", \"while 70 miles is indicated as the present limit of effective
orbiting.\" 50 miles suggested as \"the limit of sovereignty and the beginning
of outer space.\"}

J. C. Cooper in communications within the Int. Law Ass., published in the
Report of the Air Law Committee to the Tokyo Conference, 1964, indicated
his willingness to support either a 50-mile limit or a 25-mile boundary plus
a zone of 50 miles.

A. Meyer in the same correspondence was also willing to support a numerical
limit of 80 km. above sea level, though he did not believe that the frontier
problem called for priority consideration at present. These communications

McDougal et al., \textit{op. cit.} in note 6 above, prefer the functional approach and
call the attempt to seek boundaries \"a comedy of errorsichte; cf. the present
writer's comment in review in 16 \textit{Univ. of Toronto L.J.} (1965), pp. 210-213, and
the present writer's intervention in the Space Law Section in Int. Law Ass.,

\textit{Cf.} also C. W. Jenks, \"Le droit international des espaces célestes—\textit{Repr}
\textit{étinormal,\" in \textit{Institut de droit international, 50 (I) Annuaire} (1963), p. 128,
at p. 318 et seq., and comment by A. Meyer, \textit{loc. cit.} above.

\textsuperscript{34} See Mexico, \textit{loc. cit.} in note 35 below. On international customary law, see
\textit{loc. cit.} in note 3 above.
\textsuperscript{35} Canela, A/AC.105/PV.4 (21.3.62), p. 26: \"Under the concept of outer space
now being developed, as long as a spacecraft stays within outer space it is safely
proceeding in an area which we might describe as the 'high seas' of the air.\"
The Mexican delegate seemed to consider that this was the result of space
Powers and non-space Powers alike generally accepting a lowering of the previous
upper limit of territorial space, A/AC.105/C.2/SR.18 (18.4.63), p. 7. The
Mexican view may well be, strictly speaking, the more correct interpretation.
Furthermore, even when delegates from the Soviet bloc are at
their most vehement in their attack on United States reconnaissance
satellites, they never query the premise of Western delegations who
defend their use, that these satellites operate in outer space outside
the territorial space of any State. Their arguments are either
that espionage is itself contrary to international law and the
United Nations Charter, even if carried out from the high seas,
or that it is contrary to the friendly relations among nations.
Some have also made use of the ad hominem argument of the
existence of the United States Air Defense Identification Zones
(ADIZ) over the high seas. Although the Hungarian delegate
at one point spoke of such activities being “perpetrated in ‘zones’
which were unquestionably subject to the sovereignty of the
subjacent State,” it should be mentioned that these Identification
Zones are themselves established over the high seas and are only
lawful to the extent to which they do not violate the principle
of the freedom of the high seas. In any event, the existence of
ADIZ off the Alaskan coast did not seem to have prevented Soviet
reconnaissance aircraft from flying sometimes as close as five miles
from what is United States territory. The absence of serious

38 Their use is mostly probably not one-sided. Cf. a reported conversation between
Mr. Khrushchev and Mr. W. Benton, US delegate to UNESCO on May 28, 1964,
when the former was said to have spoken of the superiority of the photographs
Zhukov and Zadorozhni, loc. cit. in note 32 above; Gareev, op. cit. in note 29
above, p. 704 et seq.
40 Cf. USSR, A/AC.105/C.2/SR.17 (17.4.63), p. 7; Czechoslovakia, A/C.1/SR.1294
from the high seas, the analogy would hold good only for observing what
was taking place on the high seas and not for spying on particular countries.”
43 USSR, ibid.
44 ibid., p. 26.
45 Cf. the present writer’s “The Right to Fly,” 42 Grotius Society Transactions
(1956), p. 99, at p. 102, and the Soviet protest against the pursuit of, and
warning shot fired at, a Soviet aircraft (with the Soviet President on board),
by a French fighter aircraft in a French ADIZ off the Algerian coast on
Contiguous Air Space Zone in International Law (1969) probably need
qualification.
46 USA, during RB-47 debate, S/IP.883 (25.7.60), p. 30, at pp. 33-34, and see
Map I annexed thereto. See further the present writer’s “The United Nations
incidents in such cases, and the return of the two survivors from the RB-47 shot down off the Soviet coast in 1960, are largely due to the existence of well-defined outer limits of the territorial seas off the coasts of Alaska and of the Kola Peninsula.

A precise frontier between territorial space and outer space is equally important; for unless the frontier is clearly delimited, conflicts of jurisdiction can easily and legitimately occur which at all times would be difficult to resolve and in times of international tension may quickly escalate into major crises. The establishment of an authoritative frontier, which must be widely accepted in order to be of value, can only be achieved by means of a multilateral treaty; and this appears to be an eminently opportune juncture to seek such an international convention, inasmuch as there is already substantial agreement on a fairly low limit.

**Celestial bodies**

While outer space constitutes res extra commercium under existing international customary law, the same cannot be said of celestial bodies. They are terrae firmae and there is no reason why they cannot in law be brought under national sovereignty through effective occupation and foreign recognition, unless by international agreement States bind themselves not to do so.

Here arises the problem of the two resolutions of the General Assembly, resolutions 1721 A (XVI) and 1962 (XVIII).

**Resolutions 1721 A (XVI) and 1962 (XVIII)**

The former resolution of December 20, 1961, commends to States “for their guidance” not only the principle that international law...
applies to outer space, but also that “outer space and celestial bodies are . . . not subject to national appropriation.” As some delegates have not failed to point out, the second principle contradicts the first, at least in so far as celestial bodies are concerned.\textsuperscript{48} Inasmuch as it has already been established that the first principle embodied in resolution 1721 A is merely declaratory of international customary law, the question arises, therefore, whether the second principle is a valid and effective exception to the first, to the extent to which it contradicts it. There is, moreover, resolution 1962, which incorporates a Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space, of which there are nine. The introductory part and the first four principles of the Declaration are as follows:

"The General Assembly solemnly declares that in the exploration and use of outer space States should be guided by the following principles:

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

2. 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.

3. 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.

4. The activities of States in the exploration and use of outer space shall be carried on in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international co-operation and understanding."

The third principle of resolution 1962 raises, therefore, the same problem as the second principle of resolution 1721 A.

The answer in both cases depends on the legal force of these two resolutions. The present writer has elsewhere examined this question and arrived at, \textit{inter alia}, the following conclusions.\textsuperscript{49}

\textsuperscript{48} See notes 8 and 9 above.
\textsuperscript{49} See \textit{loc. cit.} in note 3 above.
Both resolutions are in themselves without binding force. The language they use is not such as would estop members of the United Nations from denying that the principles they incorporate are binding. The various undertakings of member-States to respect these principles have been given mostly on the very assumption that these resolutions are mere recommendations and appear to constitute, generally speaking, no more than mere statements of intention. Two or three States, having declared that they regard these principles as declaratory of international customary law, might perhaps be precluded from denying their binding character in their inter se relations. Finally, perhaps the only binding element attached to these principles is to be found in the prior agreements between the two super-Powers which made these two resolutions possible. These prior agreements represent modi vivendi between the super-Powers regarding outer space, and the one preceding resolution 1962 incorporates, it would appear, also a pactum de contrahendo to translate eventually the principles embodied in the Declaration into binding treaties.

Inasmuch as these two resolutions lack binding force, on the one hand, it may be said that the extra-terrestrial applicability of international law and the legal status of outer space and of celestial bodies under existing international customary law have not been affected by them. On the other hand, it may perhaps also be pointed out that, although celestial bodies remain in principle susceptible of appropriation, the modi vivendi between the super-Powers may lead them, and the two resolutions may lead others, not to recognise any claims to sovereignty put forward either individually by States or collectively through inter-governmental agencies.\(^{30}\) In view of the decisive importance of recognition, especially by the preponderant elements of international society, in titles to territory,\(^{31}\) this policy of the super-Powers, if

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adhered to in practice, may effectively prevent the establishment of territorial sovereignty on celestial bodies, in much the same way as the 1959 Antarctic Treaty has succeeded, for the time being at least, in freezing territorial claims to different parts of that continent. All this amounts, however, to no more than saying that the principle of non-appropriation of celestial bodies enunciated in resolutions 1721 A and 1962 may in time, if adhered to and upheld by members of the United Nations, including both super-Powers, become a rule of international customary law, but, as yet, cannot be considered as one of existing international law.

Conclusions
In brief, State jurisdiction may be divided into three types (territorial, quasi-territorial and personal) and separated into two elements (jurisdiction and jurisdiction). All three types of jurisdiction of States, whether with or without space capabilities, are already capable of being exercised with extra-terrestrial effect. In addition, States with space capabilities may actually exercise quasi-territorial and personal jurisdiction in outer space and on celestial bodies. As yet there is no territorial sovereignty in outer space or on celestial bodies and consequently there is no warrant for the extra-terrestrial exercise of territorial jurisdiction. All the rules of international law governing the attribution and exercise of all types and all elements of State jurisdiction are fully applicable extra-terrestrially. There is no reason to believe that outer space and celestial bodies are, under existing international law, res communes omnium implying joint sovereignty of all States and a right of veto to each. Outer space constitutes in fact res extra commercium, and only quasi-territorial, and perhaps in exceptional circumstances also personal, jurisdiction (both jurisdiction and jurisdiction) may be exercised there. This emphasises the importance and urgency of a clearly defined boundary between outer space and territorial space where the subjacent State is entitled to exercise exclusive territorial jurisdiction

55 Cf., however, Crane, loc. cit. in note 29 above, p. 699, especially note 49.
and where it would be unlawful for any other State to attempt to exercise any type of jurisdiction. Such delimitation can, however, only be carried out by means of an international agreement. Meanwhile the practice of States appears to have narrowed this boundary, if not to a line, at least to a zone of about fifty miles in height overlying a lower zone of approximately twenty-five miles of (it would seem) undisputed national airspace above the surface of the earth (or, perhaps more accurately, sea level). Notwithstanding resolutions 1721 A and 1902, however, celestial bodies constitute res nullius and for that reason no State, even if a landing has been made, is at present entitled to exercise territorial jurisdiction there; but there is in law no reason why territorial sovereignty may not be acquired on celestial bodies in accordance with ordinary rules of international law. But, in fact, claims to territorial sovereignty on celestial bodies may be frustrated by the refusal of the major Powers having space capabilities to recognise such claims. In order effectively to bar such claims in law, however, what is needed is another international treaty. Inasmuch as outer space and celestial bodies are of concern to all States, whether having space capabilities or not, it would seem to be in the interest of every State to seek the early conclusion of a general treaty on the boundary between national space and outer space and another on non-appropriation of celestial bodies, even though ultimate success must depend on their being acceptable to, and accepted by, the majority of space Powers and both super-Powers.