

VERBATIM RECORD OF THE NINETY-NINTH MEETING

Held on Thursday, 2 September 1971, at 10.30 a.m.

Chairman

Mr. WALDHEIM

(Austria)

## CONSIDERATION OF REPORTS (continued):

- (a) REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE (A/AC.105/95)  
 (b) REPORT OF THE LEGAL SUB-COMMITTEE (A/AC.105/94)

Dr. PHILLIPS (United States of America): This session of the Outer Space Committee is both clouded and brightened by the latest developments in manned space flight. We are still saddened by the tragic loss of the cosmonauts of Soyuz II, even as they were completing a flight which significantly expanded man's experience in prolonged space travel.

Even more recently, the United States has shared with the world deep gratification over the accomplishments of Apollo 15. This flight, which gave a new dimension to nobility on the moon, enabled, as members know, more extensive exploration of the lunar surface than in all previous Apollo flights combined. The analysis of the geological data provided by the flight is still, of course, in a very preliminary stage. Nevertheless, we already know that Apollo 15 has resulted in a major advance in our knowledge about the structure and dynamics of the moon. Indeed, we may hope to learn more of the earth as well. In keeping with past practice we are sharing the scientific fruits of the flight with experts from many countries.

I mentioned Apollo 15 and Soyuz II together to stress that the inevitable successes and failures of man's venture into space are shared by nations and peoples -- and by mankind. As Colonel Scott, the Apollo 15 commander, said of the cosmonauts and astronauts whose lives have been lost in the furtherance of space exploration and in whose memory he and Colonel Irwin placed a plaque on the moon -- all have contributed to the success thus far achieved. And all no doubt had within them the same driving motivation which Colonel Scott so briefly but eloquently summed up: "Man must explore".

Turning to the work before the Outer Space Committee, I should like first to discuss the Outer Space Liability Convention. The United States considers the Liability Convention to be a high achievement that does credit to the Outer Space Committee and its Legal Sub-Committee. We are happy to have with us the

(Dr. Phillips, United States)

Chairman of the Legal Sub-Committee, Dr. Wyzner of Poland, whose statement we listened to yesterday with very great interest. We would like to say to him, to the members of the Outer Space Committee and for the record, that the United States delegation greatly appreciates his role in helping bring the liability negotiations to a successful conclusion. He has made a number of helpful and significant contributions to this work since he became Chairman in 1967. He has pressed all sides to accommodate their views in order to achieve mutually beneficial results, and he has never departed from the highest standards of impartiality required by his office.

The United States has for a number of years wanted to negotiate a meaningful liability convention. We drew the attention of the international community to this common need as early as May 1959. We would not want to overdramatize the possibility of significant fragments of man-made space objects and launch vehicles coming down to Earth. However, given the increasing pace of space activities, we have long considered existing treaty law to be inadequate to the needs of our people and those of the community of nations for compensation for damage that might be caused by such an eventuality. Our needs are common even if different factors are involved; a space fragment, should it fall, is quite impartial in ignoring nationality.

The Liability Convention we negotiated during the June session of the Legal Sub-Committee represents a major contribution with regard to the problems with which it deals. It goes without saying that the Convention does not from every national viewpoint represent a perfect solution on every point. However, though like other works of man it is less than perfect, the Convention will afford a measure of protection for injured persons far beyond the generality of article VII of the Outer Space Treaty of 1967. The Outer Space Treaty quite naturally does not go deeply into the complex of problems inherent in liability situations, dealing as it does with such a great range of issues, including orbiting nuclear weapons, freedom of exploration and exploitation, co-operation in scientific investigations and limitations on specified military activities on celestial bodies.

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Under article VII of the Outer Space Treaty, a launching State whose space activity has caused damage to citizens of another State could seek to argue that it is not liable in the absence of proof that it was negligent in satellite fabrication or launch operations. The launching State could try to assert that the injured person or his heirs should first come to its national courts or administrative agencies to seek compensation in accordance with host-country legislation. It could seek to displace a claimant by asserting it had participated in the particular space project with a third country and that country was entirely responsible, or, that unless all participants were dealt with simultaneously, it would decline to regard itself as responsible to the claimant. The new Liability Convention eliminates all of these possibilities. By doing so, the Convention for the first time holds out a reasonable prospect of achieving just compensation without undue delay.

(Mr. Phillips, United States)

But the Liability Convention's most remarkable area of advance over existing law lies in its provisions for settlement of disputes. We are all aware that claims negotiations between States are typically prolonged and often result in the acceptance of a partial offer. There is no one to whom to appeal; no possibility of obtaining an opinion of an independent and objective third party, no option but to accept a partial offer -- often made after grave delay -- or to decline it. In contrast to this rather dismal picture, the liability convention provides a detailed arbitration procedure to which a claimant State may appeal in the event that diplomatic negotiations do not promptly resolve the claim. The claimant is entitled, on his own and without seeking the consent of the launching State, to turn to a three-member impartial tribunal for a recommended solution of the disputed claim. The convention further contains provisions that should help guarantee the success of an arbitration by making it more in the self-interest of those concerned to co-operate with the tribunal than to try to hinder it; and we think States will want to comply with awards that involve them, given the publicity provisions of the convention and the interrelated and co-operative character of outer space activities.

Many members of the Outer Space Committee would have been better satisfied had the Liability Convention established an arbitral process culminating in a legally binding award rather than a recommendation. While we understand that viewpoint, we have not in recent years thought it likely that all sides would agree to this. We have thought it far better to opt for a convention that we believe is satisfactory in all other respects than to delay beyond the foreseeable future the conclusion of an ideal convention.

In sum, we think that the Liability Convention is a good convention and that it ranks with the best achievements of the Outer Space Committee. We believe that the majority of the membership of the outer space Committee holds this view, and we hope that the Committee will recommend the Liability Convention to the twenty-sixth session of the General Assembly.

It is most appropriate that the Outer Space Committee should devote increasing attention to the intensifying activity and international interest in earth resource surveys. Since the Committee's last session a number of activities and projects have taken place pointing the way, we believe, to

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expanded international co-operation in this field. Given the current level of technology, attention must first be devoted to ascertaining possible beneficial applications of earth survey systems for countries with varying problems and in different stages of development.

The United States has taken a leading role in this educational process. A United States-sponsored International Workshop on Earth Resource Survey Techniques, held in May at the University of Michigan, attracted broad participation by representatives of fifty-six countries and international organizations. Also in May, we were pleased to be host to the first United Nations Panel on Remote Sensing. We feel that the panel obtained a broad view of the experimental applications of remote sensing and we hope that, as a result, the members came away with an increased awareness of possibilities which the various techniques may offer for their particular countries. I commend the panel's recent report to the attention of the Committee.

Also on the subject of earth resource surveys, I note the on-going preparation for next spring's launching of the experimental Earth Resources Technology Satellite (ERTS-A). As many of you are aware, the United States has invited broad foreign participation in the use of data to be obtained from this satellite. As of mid-August, 104 experimenters from 32 countries and 3 international organizations had responded to the invitation.

Mention of this experimental project brings to mind that this session of the Committee will witness the organizational meeting of the Earth Resources Working Group. In our view that Group can play a constructive role. It has been given terms of reference which emphasize United Nations possibilities and interests, and it should keep these terms clearly in focus. The Group will of course need to await the data from the first earth resource satellite before taking up its substantive work.

I should like to recall President Nixon's statement to the 1969 session of the General Assembly that it is the intention of the United States to make earth resource survey data available to the world community and to move toward more international participation. I think it is clear that in the ensuing two years the United States has done much to uphold that pledge even in the period before its first experimental earth survey satellite has flown.

(Mr. Phillips, United States)

In this connexion I wish to acknowledge the energetic leadership of Mr. Ricciardi, the Space Applications Expert, in providing United Nations Members with information on this subject. We believe that he has a constructive programme to advance and that panels, carefully organized for more extensive and detailed study, together with extensive stimulation and use of national "points of contact" can become effective mechanisms for disseminating information on both the potentialities and the limitations of earth surveys from space. The United States supports the continuation of the expert's position and programme at a reasonable budgetary outlay. We hope that a consensus can be achieved in the Committee in favour of this view.

Details on the United States international space programme are contained in our report to the Outer Space Committee (A/AC.105/L.60). I should like, however, to cite briefly some of the extensive co-operative programmes in which we are engaged with other countries in other areas of space activity. We are very encouraged by progress toward expanded co-operation with the Soviet Union, especially in furtherance of the agreement between NASA and the Soviet Academy of Sciences to develop compatible rendezvous and docking system for the manned spacecraft of both nations. The text of our most recent agreement on this subject was released publicly two days ago after confirmation by NASA and the Soviet Academy, and I am sure it will interest members of this Committee. In addition, in January of this year agreement was reached with the Soviet Academy to develop a number of specific co-operative activities in various space fields. This agreement has already led to an exchange of lunar samples.

We are also continuing co-operative satellite launchings with other countries. Since the Committee's last session we have launched such satellites with France, Italy and Canada. Italy, in addition, has conducted the launching of a United States satellite. New arrangements for such satellite projects have been negotiated with the Netherlands, the United Kingdom and Canada. A panel of seventeen foreign scientists from six countries has been selected to help plan a planetary exploration programme appropriately entitled the Grand Tour. Foreign scientists -- eighty-two prime investigators from eighteen countries and the European Space Research Organization (ESRO) -- have been chosen to help analyse lunar samples obtained from the Apollo missions. More than 200 additional

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foreign scientists have worked as co-investigators on lunar samples. Discussions with interested nations are also in process with regard to extensive foreign participation in key NASA post-Apollo projects such as a reusable space transportation system. Thus we believe that both bilaterally and multilaterally we are well embarked on the programme of widening international space co-operation in the 1970s.

(Mr. Phillips, United States)

I should like in conclusion to recall the moving words of Secretary-General U Thant on the occasion of the visit of the Apollo 15 astronauts to the United Nations. In his statement on that afternoon of 25 August, in this very room, the Secretary-General said:

"You saw our planet Earth from the moon as an indivisible entity, a small planet orbiting in space, without boundaries, without frontiers, without any indication whatsoever of which part is rich and which part is poor, which part is black and which part is white, and which part is yellow. This is a correct vision of this small planet ... your presence at the United Nations today has a very special significance for all of us who are striving to achieve the objectives set forth by the founding fathers twenty-six years ago: to achieve harmony, to achieve synthesis, with the realization that this little planet is indivisible on the basis of colour, creed or religion."

The Outer Space Committee at this session can continue to make important contributions to achieving that synthesis and harmony of which the Secretary-General spoke so eloquently a few days ago.

Mr. MIGLIUOLO (Italy): Mr. Chairman, I am taking the floor on behalf of the Italian delegation to review some aspects of the work accomplished by this Committee, under your able chairmanship, in the course of a year that has witnessed further momentous achievements in the field of outer space exploration.

Outer space activities are increasingly opening new and most fascinating horizons to contemporary science, and my delegation wishes to express its deepest admiration to those Member States that have more significantly progressed in this field, by means of their remarkable technological advancement as well as by the courage of their men who have dared to expand the frontiers of human presence in the cosmic depths.

It is, thus, a pleasant duty for my delegation to congratulate most warmly the six United States astronauts of Apollos 14 and 15 who this year have carried out an extensive exploration of the moon, in particular thanks to a technical jewel, the Lunar rover, and to the three Soviet astronauts who have opened a new and important path towards practical applications of space technology by manning the first orbital laboratory, the Salyut. But I think it is also a primary duty for all

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of us to pay a tribute to those space explorers who have lost their lives in the accomplishment of missions entrusted to their courage as well as to their skill. My thoughts go now with deep respect to the memory of Georgi Dobrovolski, Viktor Patsayev and Vladislav Volkov, the three astronauts who so dramatically lost their lives after completing one of the longest and most interesting experiences in outer space. We all know, through indisputable lessons drawn from the history of mankind, that no important page is turned in the progress of human research, no major break-through is achieved in science and technology, without brave men paying a toll in suffering and in death. That fact does not, however, diminish our deep sorrow at the destiny of three gallant men whose untimely passing has been sincerely mourned by the Italian people and Government.

Nowadays it is a self-evident fact, certainly recognized by the biggest as well as the smallest countries, that outer space activities are of direct concern to all mankind and that, therefore, they should not be carried out to the advantage of some States and to the detriment of others. It is for this reason and out of this concern for the legitimate interests of all the members of the international community that my delegation attaches great importance to the draft convention on liability for damages deriving from the launching of space objects, which yesterday the Chairman of our Legal Sub-Committee commended to this Committee for its approval.

My delegation would be less than frank, to say the least, if it expressed unconditional approval of the results of the proceedings of the Legal Sub-Committee. We regret that we are prevented from doing so, as we are aware of the untiring efforts made by an outstanding group of jurists during years of hard and sometimes unrewarding work. To them, as well as to the Chairmen of the Committee on the Peaceful Uses of Outer Space, Mr. Waldheim and Mr. Heymerle, and particularly to Mr. Wyzner, Chairman of the Legal Sub-Committee, we wish to reiterate our gratitude for their dedication to our common endeavour.

However, we feel obliged to state again that we had hoped, after so long a negotiation, to witness a new, significant step forward in the development of a progressive corpus juris on inter-State relations, particularly through a more general acceptance -- in keeping with Articles 33 and 36, paragraph 3, of the Charter -- of the main instrument for the peaceful settlement of international disputes, that is, arbitration.

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The position of the Italian Government was made quite clear during the last session of the Legal Sub-Committee. We have not objected to the provisions on applicable law contained in article XII, mainly having in mind the contents of the fourth paragraph of the preamble and the statements of clarification made by various delegations. We do maintain, however, our dissatisfaction with regard to article XIX, paragraph 2, for the failure to adopt the rule that awards are binding without qualification and in all cases, a rule which would be the most effective guarantee, for the benefit of the victim, that proper compensation would be paid.

The compromise worked out could hardly be considered a model of international law-making. Because of the reluctance, either overt or covert of some Member States, we are confronted with provisions whose effective implementation will largely rely on the good-will of launching States. Therefore, if the draft convention is eventually approved without improvements, we can only express the hope that the space Powers, and particularly the space super-Powers, will take it upon themselves to implement the said provisions in full good faith.

While reserving my delegation's right to express its views on the future work of the Legal Sub-Committee at a later stage, I should now like to turn my attention to the activities of the Scientific and Technical Sub-Committee.

My delegation is pleased to note that the Scientific and Technical Sub-Committee has attuned itself to the evolving requirements of the United Nations in regard to the peaceful uses of outer space: namely that, although always concerned with the consideration of scientific and technical aspects of international co-operation, the Sub-Committee has taken a growing interest in the promotion of the applications of space technology for the benefit of Member countries.

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Of course, when dealing with practical applications we are getting very close to economic and political realities and running into the danger of overlapping our work and recommendations with those of other United Nations bodies and agencies concerned with the same realities. My delegation, therefore, is very sympathetic with the view expressed by the Scientific and Technical Sub-Committee that our Committee "as the focal point for activities of the entire United Nations family in the field of the study and utilization of outer space and practical applications of space techniques, should endeavour to see that no unnecessary duplication occurs in this field between the activities of the agencies and organizations within the United Nations system".

This aim is indeed not easy to achieve, regardless of any existing or proposed co-ordinating mechanism within the United Nations, and we hope that the Secretary-General will be alert to the increased risk of duplications in this area and come forward with the appropriate suggestions to the competent bodies at the right time.

In this respect, my delegation considers that the work of the experts on application of space technology has been of great significance, not only because Professor Ricciardi, with commendable skill and dedication, has brought a new approach and a new dimension to the vital task of trying to meet certain needs of developing countries by means of practical application of space technology, but also because, in doing so, he has tried to act as a liaison man between this Committee and the other United Nations bodies concerned with these matters, and has provided a needed reference on the priorities and the urgency in meeting the aforesaid needs.

Consequently, we support the continuation of the work of Professor Ricciardi. We proposed the approval of his statement at the eighty-second meeting of the Scientific and Technical Sub-Committee and we are hopeful that in the course of our debate a fair and equitable solution can be found for the financing of the related expenditures.

May I add that in the past, whenever we have considered the problem of sharing the benefits of space technology among all countries, the prospects opened up by the satellites for communications, for meteorology and for aid to

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navigation have been the first to be scrutinized. Today, thanks to a higher degree of sophistication, we are swiftly moving towards satellite broadcasting for the advancement of education and training, towards monitoring by satellites of the global environment and, in general, towards remote sensing of the earth by satellite for various peaceful purposes.

This brings into focus the appreciation and gratification, which we fully share, expressed by our Scientific and Technical Sub-Committee at the progress made in preparation for the Satellite Instructional Television Experiment conducted in co-operation between India and the United States, which we consider a milestone in the application of space techniques to education. In the same field, I am pleased to state that my country, through its Telespazio Company, is co-operating with UNESCO, ITU and the Italian-Latin American Institute to bring about similar experiments in South America under the aegis of the UNDP.

Furthermore, my delegation would like to commend the Scientific and Technical Sub-Committee for its decision to establish and convene a working group on remote sensing of the earth perhaps by satellites. My delegation has been a staunch supporter of this proposal, originally presented with laudable foresight by the delegation of Sweden, and is ready to take an active part in the organizational meeting of such working group that our Chairman has announced will take place next week.

In this connexion, we would like to draw attention to the fact that the terms of reference of the group, debated at length within the Sub-Committee, will entail considerable background work on the subject-matter even before the results of the ERTS-A satellite are known. Furthermore, the report of the Scientific and Technical Sub-Committee contains several suggestions which will add to the workload of our new subsidiary organ the study of several specific documents on remote sensing that originated in other United Nations bodies.

While further comments on other aspects of the report of the Scientific and Technical Sub-Committee will be provided by my delegation during the forthcoming debate, at this stage I wish only to add that the Italian delegation concurs in the recommendation to continue the sponsorship by the United Nations of the Indian TERLS range and of the Argentinian Mar del Plata range, and that it shares the appreciation of all the members for the generous offers of space

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scholarships made by the United Kingdom and France. On our part, we are looking forward to welcoming at the Fucino ground station of Telespazio the first experts from developing countries who will specialize in space telecommunications.

Finally, as my delegation has already stated, we advocate the awarding to the International Astronautical Federation of observer status for the future meetings of the Scientific and Technical Sub-Committee.

I should like to conclude my statement by recalling that the Italian Government has long held the position that outer-space activities, far from becoming a field for blind competition among countries, should instead offer opportunities for international co-operation to flourish most fruitfully: co-operation among technologically advanced and developing countries, but also co-operation among the space super-Powers themselves. The Italian Government deeply appreciates the close co-operation established with the Government of the United States of America in this field, and between the respective state agencies. It is therefore gratified to learn about the promising developments in the recent talks between Soviet and American officials on the possibility of joint ventures, from which, we sincerely hope, all mankind will draw benefits. We do think that no better guarantee for an exclusively peaceful utilization of future orbital laboratories can be found than through the docking to them of space-ships bearing different national flags.

As far as the work of our Committee is concerned, we believe that in the next few days we shall have a chance of achieving further progress towards the goals and the mandate entrusted to us by the General Assembly during these past years. We are also confident that this opportunity, thanks to the valid contribution made by our two Sub-Committees, will not be missed.

You can be assured, Mr. Chairman, that in the effort to achieve such a purpose you will have the full co-operation of the Italian delegation.

Mr. LEE (Canada): The meeting of the Outer Space Committee is particularly timely this year since it closely follows the latest sessions of both the Legal and the Scientific and Technical Sub-Committees, and precedes by less than two weeks the twenty-sixth session of the General Assembly. As was the intention when the practice of convening September meetings of our Committee first developed, we are consequently in an excellent position to analyse the reports of the subordinate bodies, decide what recommendations should be made thereon and prepare our own submission to the General Assembly.

The Canadian delegation has always held the view that the principles by which we should be guided in carrying out these tasks are: the need to reaffirm the common interests of mankind in the exploration and utilization of outer space for peaceful purposes; the promotion of international co-operation to develop the role of law in relation to space activities; and the continuation of efforts to apply space technology and secure its benefits for all members of the world community, and in particular the developing countries. We have always attempted to keep to the path spotlighted by these principles in an endeavour to play a constructive role at the United Nations Outer Space meetings and we have always borne in mind the obligations which bodies of limited membership, such as this Committee, owe to the United Nations membership as a whole.

A major item before us this session is the Draft Convention on International Liability for Damage Caused by Space Objects, set out in the Legal Sub-Committee's report. The Sub-Committee, which met in Geneva, worked extremely hard at its tenth session to complete its work on this draft instrument. However, while my delegation believes that the members of the Sub-Committee merit a great deal of credit for their efforts in this regard, Canada is not able to give its support to the text adopted on 29 June.

Before I indicate why we do not find the current draft acceptable, my delegation would like to express its sincere appreciation to the Chairman of the Legal Sub-Committee for the manner in which he has conducted the Sub-Committee's deliberations. Professor Wyzner has always exemplified the best qualities of the competent chairman; he has at all times been considerate, impartial and fair in dealing with all members of the Sub-Committee irrespective



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of the particular views of the various delegations. I would therefore wish to record that any deficiencies which we find in the draft convention and any criticism we offer as to its provisions are in no way a reflection on the Chairman, who expended much energy in trying to resolve differences and secure the adoption of a generally agreeable draft instrument.

It will be noted that paragraph 24 of document A/AC.105/94 states as follows, and I quote this short paragraph because of its significance particularly to the Canadian delegation:

"When the Sub-Committee adopted the text of the proposed liability convention at the 166th plenary meeting, on 29 June, the delegations of Canada, Japan and Sweden did not object to having the Sub-Committee forward the text to the Committee on the Peaceful Uses of Outer Space for its consideration. They themselves, however, were unable to support it in the Sub-Committee because they believed it would have been preferable to have had incorporated in the text provisions on measure of compensation and especially on the settlement of claims more in accordance with those that they had earlier proposed together with other delegations in document A/AC.105/C.2/L.74. All three delegations therefore reserved their positions on the substance of the text of the convention."

The proposals referred to in document A/AC.105/C.2/L.74, which were co-sponsored by Canada and seven other delegations, related to two draft articles: one on the measure of compensation generally referred to as "applicable law"; the other on competence of the Claims Commission, generally referred to as the "settlement of disputes". These provisions would have enshrined the principle that the party suffering damage caused by objects launched into outer space should be fully compensated on the basis of the law of the place where the damage occurred, and relevant international law; and, secondly, stipulated that the decision of the Claims Commission should be final and binding.

(Mr. Lee, Canada)

Members of this Committee are well aware of the Canadian position on these key questions. It has remained constant over the past eight years during which time the Legal Sub-Committee has pursued the goal of securing agreement on an acceptable, effective liability convention. Nevertheless, it bears repeating that Canada's fundamental concern has been to ensure that any eventual international treaty on liability is sufficiently victim-oriented so that any person, natural or juridical, suffering damage from space objects could be assured that his legitimate right to full and fair compensation would be recognized and given effect. States parties could then, and only then, have confidence that their citizens and corporate bodies resident in their territory would receive adequate protection against the hazards of space exploration and utilization undertaken by foreign Governments and agencies. Unfortunately, in this connexion we are not in agreement, in all humility, with the remarks of the Chairman of the Legal Sub-Committee yesterday concerning the extent that the present draft is victim-oriented. For example, we wonder what Government could possibly hope to convince its Parliament or other legislature and its citizens who may be injured or suffer damage that some other law than their own would be applied as a major basis of determining liability and the amount of compensation?

It is indeed with regret that it is necessary for my delegation to record our view that the draft before us does not sufficiently meet this basic criterion of victim-orientation. Instead of a clear rule, followed by an easily ascertainable body of law, we are given only a reference to international law and the principles of justice and equity. Last year's General Assembly resolution stated that "full measure of compensation to victims" would be ensured in the Liability Convention. While Canada sincerely hopes the present text is in accordance with the clear intention of last year's General Assembly resolution, the concept of restoration in full is not stated explicitly. Professor Cappotorti of Italy, in his intervention in the Legal Sub-Committee on 11 June, did a great deal to amplify the possible content of the reference to international law, as also did Dr. Vranken of Belgium. Nevertheless, there is no general or agreed corpus of international law rules of a precise nature

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relating to the question of measure of compensation. As for the reference to justice, its content too is hardly certain or precise, as it appears to mean different things in different societies. Equity at least does have, a specific connotation in common law and also in certain continental legal systems. But whether, as a concept, it has meaning of substance in other legal fora is not at all clear. What is absolutely certain is that, even taken together, these three references are less precise and may therefore offer less protection to a victim of damage than did the formulation in document A/AC.105/C.2/L.74.

(Mr. Lee, Canada)

With reference to the settlement of disputes, we recognize that the current draft does represent an important degree of forward movement by many members of this Committee who had earlier taken the position that differences on the question of claims under the convention should be resolved by the parties directly concerned. Nevertheless, Canada still favours a procedure for compulsory, binding arbitration when claims cannot be settled by the claimant and the allegedly liable State themselves; otherwise a claimant Government may find itself involved in interminable negotiations with another Government, which might even bring into discussion matters not directly related to the particular incident which caused the damage. We have had exactly this experience in claims negotiation with a number of countries: many other factors have been brought into the negotiations--and this could easily be the case under the system set forth in the present draft.

What the co-sponsors of the settlement procedures in document A/AC.105/L.74 had wanted to provide was neither extraordinary nor unreasonable: we wanted the convention to be effective and we wanted settlement to be prompt and equitable, as is specifically stated in operative paragraph 5 of General Assembly resolution 2733 B (XXV). As at present set out, however, paragraph 2 of article XIX, by clearly categorizing the decision of a claims commission as recommendatory only --- except, of course, in the case of agreement between the parties --- seems to leave the implementation of an award, in the strict legal sense, to the unilateral goodwill of the State which has caused the damage and promises no legal recourse should that State eventually decide either that it will not pay up at all or that it will pay less than called upon to do by the decision of the claims commission. That is not, in the opinion of the Canadian authorities concerned, likely to ensure either effective or prompt payment in cases where there is a difference of view between the parties; indeed, it does not really give legal assurance of payment at all.

We would of course be interested in the comments of other members of the Committee on our proposals and we hope that they will still receive serious consideration. While recognizing and being most appreciative of the work of the Legal Sub-Committee, especially at its tenth session, we are convinced that this

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parent Committee has a duty and an obligation to consider proposals which are directed towards improving the draft liability convention, by making it more generally acceptable and capable of being signed and ratified by the largest possible number of States. As the Canadian representative stated in the General Assembly last year, we believe that sovereignty should be exercised by space Powers in the most constructive way possible, namely, by voluntarily accepting by means of a binding international agreement effective procedures for ensuring responsibility and full and fair compensation for damage caused by their space activities.

I turn now to the priorities for future work by the Legal Sub-Committee. With regard to the question of its future work, my delegation favours consideration next of matters relating to the registration of objects launched into space for the exploration or use of outer space. Canada attaches great importance to the conclusion of a treaty providing for the registration of objects launched into outer space. It was for that reason that in April 1970 the Canadian delegation submitted a paper on a proposed system of registration to the Scientific and Technical Sub-Committee. Whether or not the view is taken that outer space constitutes a common resource, a minimal step for purely practical reasons would appear to be the establishment of some system to assist in the harmonization of space activities through the registration of space objects.

A further reason why Canada has consistently favoured an effective international system for registration of objects launched into outer space is that such a system would be of great assistance in determining the identity of parties which may be liable in the event of damage caused by such space objects. This follows particularly logically from any conclusion of a liability convention. Some progress has been made on the general question by the report of the Scientific and Technical Sub-Committee and helpful information has been provided by the Secretariat in its paper on "Information on the technical aspect of registration of objects launched into outer space" (A/AC.105/L.52). However, the time has now come to go beyond the investigatory stage and actually to conclude an agreement. Accordingly the Canadian delegation would plan to have a draft convention on registration ready for consideration by the Legal Sub-Committee at its next meeting.

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With regard to questions concerning the moon and other celestial bodies and their natural resources, the Canadian delegation has noted with interest the draft international treaty concerning the moon which has been circulated by the Soviet Government (A/8391 and Corr.1). We realize that the disposition of that proposal -- in terms of which Committee will consider it -- has not yet been determined; however, we should like to refer to the treaty here for a moment because of its relevance to the work of this Committee.

Although many provisions of the outer space Treaty are repeated in the Soviet draft and several of the articles add interesting precision to the provisions of the outer space Treaty, certain new ideas are expressed which will require careful consideration. The most important of the new ideas, in our view, are those concerned with the creation of obligations governing ownership, resources and pollution on the moon. There are also, in comparison with the outer space Treaty, some evident weaknesses in that the Soviet draft treaty does not explicitly permit scientific research and it contains -- unfortunately -- liability provisions just as vague as those found in the outer space Treaty. The Soviet draft treaty also often seems to refer to possible consultations, but no procedure is provided for their implementation. We look forward to further discussion and examination of that proposal.

I turn now to the Scientific and Technical Sub-Committee's report (A/AC.105/95), in particular to the proposal for the establishment of a working group. Canada is pleased to agree to the establishment and convening of a working group on remote sensing of the earth by satellites and was pleased to have been a co-sponsor of that proposal. We are prepared to participate actively in NASA's ERTS experiment by modifying a ground station to read out data about Canadian terrain and by constructing facilities for processing and interpreting those data. Such developments have evolved from a fairly extensive review and planning operation that began in 1969. The latter studies have served to clarify objectives and focus planning for a Canadian programme of remote sensing that includes satellites, aircraft and field investigations.

While earth-oriented observations are of considerable scientific interest, the main motivation behind the Canadian programme for the next few years is the prospect of an operational information system that will enable more effective management of our environment and the optimum development of our resources.

(Mr. Lee, Canada)

Consequently, the Canadian programme is less concerned with space science per se and more concerned with the development of technologies for assessing the environment and its resources. A concerted effort is being made to achieve a proper balance between airborne, orbital and surficial data collection on the one hand and between hardware and interpretation on the other. It would appear, therefore, that many aspects of the Canadian Programme on Remote Sensing could be translated into a programme for remote sensing on a global or international scale.

During the course of the organizational meeting of the Working Group, which is to take place during our current session, my delegation will put forward some specific suggestions as to how we foresee the Working Group carrying out the tasks envisaged in the Sub-Committee's recommendation. We consider that the work of the Sub-Committee in the area of earth resource satellites has great significance for future utilization of outer space.

I turn now to the other items on the agenda of the Scientific and Technical Sub-Committee. We have examined carefully the deliberations of that Sub-Committee, as described in its last report, on the various other items which it had before it, namely: the assessment of the needs of developing countries and the ability of the United Nations to meet those needs, especially in the field of space applications; the use of satellite broadcasting for the advancement of education and training; the use of meteorological satellites and sounding rockets for improved weather forecasting; space technology and the environment; consideration of scientific and technical aspects of international co-operation including exchange of information, education and training, and international sounding rockets facilities. We would hope that any further detailed discussion in the Sub-Committee of those important matters could be carefully co-ordinated in order to avoid duplication within the United Nations family.

The significance of space technology and the potential uses of space systems are being viewed with increasing interest, particularly because of the expected benefits to be derived from the use of space for peaceful purposes.

(Mr. Lee, Canada)

While the ramifications of space science and technology per se are many, it is the application of space technology to world-wide systems which is of primary concern to the potential participants in those systems.

My delegation recognizes the necessary interests of many United Nations agencies, organs and committees in the application of space technology. Nevertheless, my delegation feels that there is still much to be done toward improving the co-ordination of those interests in order to avoid fragmentation of emphasis and to ensure an effective pursuit of the potential benefits to mankind of space technology not only in its application to space systems but also in possible non-space applications.

Those were our general views on the matters before us. We look forward to hearing the views of other delegations on these questions and we hope to participate actively in support of your rôle, Sir, as Chairman and in support of the important work of the Committee and its subordinate bodies.

Mr. DIACONESCU (Romania) (interpretation from French): Mr. Chairman, may I first of all express to you our gratification at finding ourselves here again and working under your chairmanship at this fourteenth session of the Committee on the Peaceful Uses of Outer Space. We have full confidence that under your guidance our work this year, just as in the past, will be crowned with success.

We believe that this session will mark an important stage in the activities of the United Nations directed at the development of international co-operation in the field of the exploration and the peaceful utilization of outer space. Indeed, the problems of space are of increasing interest to countries large and small. In addition to the outstanding recent successes of the Soviet Union, the United States and the People's Republic of China in the conquest of outer space, a number of important achievements have been recorded by countries acting jointly or severally in co-operative undertakings.

On this occasion also, we should like to express our deep grief at the tragic deaths of the three Soviet cosmonauts -- Colonels Dobrovolsky, Volkov and Patsayev -- after their successful completion of their mission to outer space.

(Mr. Diaconescu, Romania)

We in Romania are also deeply concerned with the peaceful applications of space techniques and international co-operation activities in this field. The Romanian Commission for Space Activities, which was set up in 1967, has worked out a programme of space research activities which is consistent with the requirements and outlook for the development of the national economy. It is also responsible for the co-ordination of Romania's co-operative activities on the national as well as the international level, on the bilateral level or through the agency of international bodies.

Without wishing to dwell on this at undue length, I should like to refer to some of the concerns of my country in this area, such as the experiments that are now under way to improve weather forecasts by probes of the upper atmosphere by means of sounding rockets; the continuation of observation and study on earth; cosmic radiation; artificial satellites, and others. All of these activities are carried out often through bilateral or multilateral international co-operation with a view to assimilating space techniques into the various branches of the economy.

With respect to international co-operation, aside from its programme of co-operation with other socialist countries concerning the exploration and utilization of outer space for peaceful purposes in the areas of telecommunications, meteorology, physics and biology, and its attendance at meetings of COSPAR, Romania intends to participate fully, within the limits of its potential, in United Nations activities in this sphere.

May I now refer to the remarkable activities undertaken this year by the two Sub-Committees of the Committee, the reports of which are the subject-matter of our debate. The record of achievements that we are now drawing up appears to be particularly favourable for the year 1971. Undoubtedly, the most significant achievement is the fact that the Legal Sub-Committee was able, after lengthy efforts, to come to an agreement on submitting to this session a draft convention on international liability for damage caused by space objects.

(Mr. Diaconescu, Romania)

We are convinced that a spirit of co-operation and mutual understanding prevailed at the last session of the Sub-Committee and that broadly acceptable compromise solutions were found to the two primary questions which had been pending for such a long time, namely, the applicable law and the settlement of disputes.

I should like to avail myself of this opportunity to congratulate the members of the Sub-Committee for the work that they have done, and also its Chairman, our friend Mr. Eugeniusz Wyzner of Poland for the devotion with which he has dedicated himself to the activities of the Sub-Committee and, in particular, to the achievement of the draft convention, which he introduced so brilliantly to the Committee yesterday.

We believe that the draft as it stands has achieved its objective, which is that of ensuring the effective defence of the interests of any possible victim, thus ensuring the principle of total compensation for any damage caused. Since Romania has always been in favour of equitable compensation for damages as a basic element of the convention, it goes without saying that the delegation of Romania to this session of the Committee would favour submitting the draft that has been drawn up by the Legal Sub-Committee to the twenty-sixth session of the General Assembly.

Referring now to the future work of the Legal Sub-Committee, we are of the opinion that it should pursue even more vigorously its tasks to contribute to the development of the law of outer space. Of course we agree with the recommendation of the Sub-Committee contained in its resolution concerning the problems to be included in the agenda of the forthcoming session of the Sub-Committee as important issues.

Among those questions there is included the question on the definition of outer space. My delegation considers that efforts should be continued to define this concept, which would be particularly useful. Romania is ready to make its contribution, both within our Committee as well as in the Legal Sub-Committee, to the study and elucidation of this problem. In this connexion, it is essential that we should take account in working out this definition of the need for

(Mr. Diaconescu, Romania)

strict observance of national sovereignty over air space and to ensure that all States have access to outer space through the strengthening and broadening of international co-operation in this field, which is designed to deal with research and to promote the utilization of that space for peaceful purposes.

The Scientific and Technical Sub-Committee has also engaged in very positive work this year. It decided to establish and convene a Working Group on Remote Sensing of the Earth by Satellites, which will hold a meeting to organize its work during the present session of our Committee. Obviously, Romania will participate with interest in that Working Group which, in our opinion, ought to start its activities just as soon as the definitive experiments concerning the feasibility of remote sensing of the earth from space platforms, which are scheduled for next year, will have been evaluated. Thus, the delegation of Romania considers it necessary to publish the results of those experiments on the widest possible scale at the international level.

With respect to the other questions discussed by the Sub-Committee, we should like to note the encouraging progress made by UNESCO in the use of satellite radio broadcasting to promote education and training. In this connexion and in full accord with the special attention that Romania has devoted throughout the years in the United Nations to the problems of youth, and having taken the initiative in the adoption of the Declaration concerning the promotion among youth of the ideals of peace, mutual respect and understanding among peoples, we should like to draw attention to the necessity of ensuring that use of satellites for radio broadcasting and television should be done to encourage the ideals of peace, friendship and co-operation among peoples, to promote social progress and education of the broad masses and, above all, of the youth, in the spirit of those ideals.

Other problems, such as international installations for rocket-launching facilities -- and here we should like to see the sponsorship of the United Nations extended to other facilities as well -- the question of education and training, the use of weather satellites and sounding rockets to improve weather forecasting, are matters which also are of interest to us.

(Mr. Diaconescu, Romania)

To sum up, I am duty bound to emphasize that we are in favour of an even more active role by the United Nations in the advancement of international co-operation in the field of the applications of space technology. I should like to assure you, Mr. Chairman, that my delegation will try to make a positive contribution to the achievement of that goal and to ensure the success of the work of our Committee.

## ORGANIZATION OF WORK

The CHAIRMAN: I should like to draw members' attention to the fact that we do not have much time left in which to complete our work. Monday, 6 September, is a holiday. We have also been asked by the Secretary-General not to hold a meeting on Friday afternoon because of the activities connected with United Nations Staff Day. Furthermore, as I said in my introductory remarks, we must have one organizational meeting of the Working Group on Remote Sensing of the Earth by Satellites. Hence, there remain only four days on which this Committee may hold meetings -- that is, tomorrow and Tuesday, Wednesday and Thursday of next week.

As members are aware, we have before us a number of important questions on which we must take decisions. The Legal Sub-Committee has asked this Committee to consider the desirability of establishing an order of priority for a number of questions referred to in its report. That report also deals with a number of other suggestions and problems which we must consider and decide upon.

In connexion with the report of the Scientific and Technical Sub-Committee, we must take a decision on the observer status of the International Astronautical Federation. We must also take a decision on the programme for the expert on space applications. That is a very important matter, with financial implications, and our deliberations on it will take some time. As I have already said, we shall need half a day for the organizational meeting of the Working Group on Remote Sensing of the Earth by Satellites.

Finally, we must prepare the report of this Committee to the General Assembly and decide the time-table for the sessions of the main Committee and the two Sub-Committees. Past experience indicates that difficulties do arise in deciding on the dates and places of the various sessions, and we must therefore have sufficient time to consider the matter.

I thought it important to call those points to the Committee's attention, as a reminder that we must get on with our work as quickly as possible.

I would appeal to delegations that wish to take part in the general debate to inscribe their names on the list of speakers as soon as possible. My hope would be that we could end the general debate tomorrow afternoon so that on Tuesday we could start consideration of the other matters before us.

(The Chairman)

The name of only one delegation -- Sweden -- is on the list of speakers for this afternoon, and I am informed by the Secretariat that that delegation is prepared to speak tomorrow morning instead. This afternoon's meeting will therefore -- regretfully -- be cancelled, and we shall hold two meetings tomorrow, one at 10.30 a.m. and the other at 3 p.m.

The meeting rose at 12.15 p.m.