

VERBATIM RECORD OF THE SIXTY-FIRST MEETING

Held on Monday, 8 September 1969, at 3 p.m.

Chairman:

Mr. HAYMERLE

(Austria)

DISCUSSION OF AGENDA

The CHAIRMAN: Distinguished representatives: I take great pleasure in welcoming you to the twelfth session of the United Nations Committee on the Peaceful Uses of Outer Space.

The provisional agenda for this session is before you in document A/AC.105/L.47/Rev.1. Before making my introductory remarks, I understand that there are certain problems in connexion with the agenda and concerning the distribution of documents for this session, and I believe there are some delegations that wish to take the floor on this point.

Mr. DENORME (Belgium) (interpretation from French): Mr. Chairman, allow me first to tell you how pleased my delegation is to see you in the Chair, assisted by our conscientious Vice-Chairman, Ambassador Diaconescu. My delegation is confident that your tactful but effective leadership will enable us to carry out our work in orderly fashion and conclude it successfully.

Our gathering is overshadowed by the fact that our loyal Rapporteur, who held his post from the very start of the Committee, is today no longer with us, and I should be very much obliged, Mr. Chairman, if you will convey to Ambassador Carvalho Silos of Brazil our esteem and gratitude for his years of service in this Committee. The question of his successor will be included as another item on our agenda.

At this time when the Committee is called upon to take a decision on the provisional agenda submitted by the Secretariat, the Belgian delegation feels somewhat hesitant in giving its unreserved support to that agenda. In fact, we should like first to have some clarification on document A/AC.105/58. That document does not seem to have been distributed to the permanent delegations, even though it involves a report prepared by the Legal Sub-Committee in the month of June. It seems surprising indeed that that report, which was adopted on 5 July 1969, has not yet been distributed as an official document, though it is now 8 September.

(Mr. Denorme, Belgium)

I am aware that it has become customary to consider the Outer Space Committee as a kind of rubber-stamp for endorsing the recommendations worked out by its Sub-Committees and other subsidiary bodies. I have no intention at this time of going into the disadvantages of such a loose approach, which doubtless explains why the third item on the provisional agenda is entitled "Report of the Committee to the General Assembly" and not "Consideration of the Reports of the Sub-Committees and of the Working Group". My delegation would have preferred to see the third item devoted to the consideration of the reports submitted by our subsidiary bodies, with a separate item, a new item 4 on the agenda, relating to the adoption of the Committee's report to the General Assembly.

I shall not go into the details of the aggravating circumstance that the Legal Sub-Committee seems not to have been able to arrive at concrete recommendations and that its report seems to be a declaration of failure. Consideration of this report will be a matter all the more important in that it can be foreseen that the General Assembly will judge severely the fact that the Sub-Committee has not been able to reach agreement on the matter of responsibility.

It will be recalled that in resolution 1802 (XVII), adopted on 14 December 1962, the General Assembly noted with regret that the Committee had not yet submitted recommendations on the legal questions involved in the peaceful uses of outer space. An analogous situation may very well arise again this year. I shall come back to these matters during our discussion. At this point I should like merely to point to the unprecedented -- we might even say paradoxical -- situation in which the Committee finds itself in being asked to adopt an agenda which includes consideration of a report the text of which is not yet available to it. I doubt that such consideration can begin today, unless some favoritism has been shown to certain delegations and they have managed to obtain, before others have been able to do so, a document which all would doubtless wish to study carefully before they intervene in the discussion.

The CHAIRMAN: May I suggest that we allow the Secretary of the Committee to comment on the statement that has just been made by Mr. Denorme.

Mr. ABDEL-GHANI (Secretary of the Committee): I would ask Mr. Rutledge, from the Department concerned with the documentation, to explain the status of the documents before the Committee.

Mr. RUTLEDGE (Director, Editorial and Official Records Services): I shall try not to take too much time with details.

The standing arrangements for the reproduction and distribution of documents initially prepared and reproduced in Geneva are such that, for reasons of economy, the English versions, which are required in larger numbers of copies, are rerolled at Headquarters and distributed to the Permanent Missions here and to addresses in the Western Hemisphere; copies of other language versions are sent to Headquarters by sea for similar distribution. The Geneva Office itself makes full distribution of such documents to recipients in what is called the Geneva perimeter, which consists of the Permanent Missions in Geneva and the foreign ministries, and others in Europe, Africa and Asia that have requested those documents. The distribution is all based on requests.

The document in question, the report of the Legal Sub-Committee, was handled, in the absence of any special instructions, in this way, and the versions in the various languages other than English were sent, in accordance with those arrangements, in bulk shipments by sea. When it became apparent that the bulk shipments might not arrive in time, a cablegram was sent to Geneva. A limited number of copies in the four working languages of the Committee were obtained and they are available. The English version has been rerolled and is available. I might also add that copies of the report of the Legal Sub-Committee were made available to members of the Working Group on Direct Broadcast Satellites in Geneva.

Mr. DENORME (Belgium) (interpretation from French): My delegation has noted the explanations that were just given on the procedure that is usually followed; it would seem that that procedure has not been satisfactory and I hope that it will be changed so that all the documents will be available at least on the eve -- I believe that is the minimum -- of the date on which the Committee meets in regular session. There is only one session a year and it is not very long.

The CHAIRMAN: I think in view of the fact that all delegations present here have participated in the session of the Legal Sub-Committee in Geneva and the session of the Working Group on Direct Broadcast Satellites, they will, I am sure, be aware of the contents of the report. So I hope that we can proceed with our work. The comments which have been made by the representative of Belgium will be contained in the records of this meeting.

OPENING STATEMENT BY THE CHAIRMAN

The CHAIRMAN: It has become a pleasant tradition for the Committee to review, at the outset of its annual meeting, the progress achieved over the past year in the exploration and peaceful uses of outer space. We have thus been able each year to take note of further impressive achievements in the science and technology relating to the exploration of outer space.

Never before, however, have we been able to look back at the past year with such pride, with such excitement.

The successful completion by the United States of America of the Apollo 11 mission, the first landing of man on another celestial body and the perfect return of the astronauts to Earth, is indeed a milestone not only in the exploration of outer space, to which the work of this Committee is devoted, but, beyond that, a milestone in the history of man itself.

(The Chairman)

In the six weeks that have passed since that historic event, tribute has been paid to this outstanding achievement, and to the men who made it possible, by the leading personalities of all nations, and by the spontaneous and unparalled enthusiasm of hundreds of millions of ordinary people all over the world who were able, through satellite TV broadcasts -- which by the way is another achievement of outer space technology -- to take part in this great venture of man beyond the limits of his own planet.

To all those let me now add, on behalf of the United Nations Committee for the Peaceful Uses of Outer Space, the expression of our admiration and appreciation. I wish to convey our congratulations not only to the three astronauts whose names will be inscribed for ever in the hall of fame of the exploration of outer space. I wish to say these words also to all the technicians and engineers who have made this mission possible, and to all scientists and researchers who, in so many countries and over so many years, have laid the intellectual groundwork for man's entry into outer space.

May I add to this a few personal remarks. Through the kind invitation of the United States space programme authorities I was able to be present at the Mission Control Center in Houston during the Apollo 11 mission. To anyone who was in that fortunate position it will remain an unforgettable experience. And part of that experience will be the realization of how many thousands of unknown technicians, scientists and workers were involved in the Apollo 11 mission and made its success possible.

In saying these words of praise and congratulation, I wish to pay a tribute also to all the astronauts who in previous missions had prepared the final operation. I wish to pay a very special tribute to the memory of all astronauts, American and Soviet, who during the past years in the great venture of man into outer space made the ultimate sacrifice.

The first men who landed on the moon came, as recorded on the plaque they left behind, "in peace and for all mankind". In those words they underlined the two aspects which have also guided the work of this Committee since its inception: that man's conquest of outer space should be the joint venture of all nations and for the benefit of all mankind, and that it should be for peaceful purposes. The historic event of 21 July 1969 will thus, I am sure, give new impetus to the work of our Committee.

(The Chairman)

It is understandable that in reviewing the past year's activities, our primary attention is focused on the first lunar landing. That was, however, by no means the only achievement in the exploration of outer space during 1969. The Apollo 11 mission itself was, of course, preceded by a number of manned space flights.

On 3 March the United States launched Apollo 9, the first manned flight of the Apollo spacecraft lunar module, followed on 13 May by Apollo 10, the first flight of the complete Apollo spacecraft in orbit around the moon. During that mission the spacecraft's crew accomplished in sequence all the necessary steps leading to a landing on the surface of the moon, with the exception of the actual touch-down.

The Soviet Union on 14 January launched Soyuz 4 and on 15 January, Soyuz 5, a group space flight which tested preconditions for carrying out such operations in outer space as the rendezvous and docking of two spacecraft and thus the construction of an experimental space station, and the rotation of its crews. Important scientific, technical and medical-biological research was also accomplished by that mission.

As early as 5 and 10 January the Soviet Union launched two unmanned spacecraft, designated Venus 5 and 6. Those launchings continued the series of earlier Venus probes designed for research into physical phenomena both in transit and on the surface of the planet. With those launchings, new information on local temperatures, temperature patterns, and pressure distribution was obtained. Prior to entry into the planet's atmosphere, each probe ejected an instrumented capsule, which descended by means of a parachute system, transmitting information on temperature and pressure distribution, as well as the chemical composition of the planet's atmosphere.

The United States on 25 February launched Mariner 6, and on 27 March, Mariner 7, on two missions towards Mars. Both unmanned probes were equipped to carry out measurements on the atmospheric pressure and temperature surrounding Mars, and transmitted television pictures to Earth covering different areas of the planet's surface.

(The Chairman)

Further spacecraft were launched by the Soviet Union: on 15 July, Luna 15, in a mission designed to investigate the lunar surface with transmissions of moon pictures, and to collect additional technical and physical data for carrying out circumlunar flights, followed on 3 August by Zond 7, photographing the moon's surface and checking improved on-board systems necessary for missions to the moon.

(The Chairman)

We should also take note of an important number of launchings of technological satellites, such as that of Meteor by the Soviet Union on 26 March, of Molniya 1 by the Soviet Union on 11 April, and of Nimbus 3 by the United States on 14 April; of several scientific satellites; and of internationally launched satellites, such as, on 30 January, of Isis 1 in a programme conducted jointly by Canada and the United States.

It is indeed another impressive record of achievement by the two great space Powers, the Soviet Union and the United States.

These programmes of space exploration were complemented by continued scientific research and studies of the application of space technology in an ever increasing number of nations.

I wish to take this opportunity to extend to all nations engaged individually or collectively in the exploration of outer space or in the science and research of outer space and their application my very sincere congratulations on the achievements during the past year.

Progress in the technology and exploration of outer space thus proceeded in a spectacular way. During the same time, our Committee and Sub-Committees proceeded with the work entrusted to them by the General Assembly. As in the past, this work was focused on two aspects: on the one hand, the scientific and technological questions and the application of space technology to our daily life and, on the other hand, the continued effort to elaborate legal rules for the exploration of outer space. Particular attention was given during the past year to the problem of direct broadcast satellites and all its implications.

At its present session the Committee will have before it three reports: the report of the Scientific and Technical Sub-Committee (A/AC.105/55), the report of the Legal Sub-Committee (A/AC.105/58) and the report of the Working Group on Direct Broadcast Satellites (A/AC.105/51 and A/AC.105/66 and addenda). These reports contain a considerable number of recommendations and observations, and the Committee will have to make an appropriate report concerning all these questions to the forthcoming session of the General Assembly. Delegations will have the opportunity during our present session to comment on all aspects of the reports by the Sub-Committees and the Working Group. It is not for the Chairman to go into the substance of the reports before us, but I wish to take this

(The Chairman)

opportunity to thank the Sub-Committee and the Working Group and their excellent respective Chairmen for the work they have achieved during the past year.

If the Committee agrees, and if there are no observations on the agenda, we shall consider the agenda before us adopted.

It was so decided.

Mr. ASTROM (Sweden): I should like to make a brief statement on behalf of the Group of Western European Countries and Others.

The landing on the moon by two Americans, members of the Apollo crew, is clearly of historic importance. It is the spearhead achievement of an accelerating development in science and technology carried forward by the efforts of many nations. This achievement has now enabled man for the first time to move outside the gravitational pull of our planet and to return safely to mother earth. This is in itself a dramatic event that inspires admiration mingled with awe. It is the first step by man into outer space proper, and it opens up the perspective of further exploration and of visits to other parts of the solar system and perhaps to galaxies outside our own system.

During a very short span of time man has penetrated into the least accessible parts on earth. It was only sixty years ago that the North Pole was reached; it was only sixteen years ago that Mount Everest was climbed; and only in the past few years has it become possible to reach the depths of the great oceans. There is a relentless, cumulative, escalating force behind this human urge to expand human knowledge and to penetrate into unknown places. One particular feature which characterized this achievement was that it could be witnessed by people everywhere with their own eyes. It is rather as if the contemporaries of Hannibal could have seen the elephants cross the Alps or the contemporaries of Columbus could have seen him set foot on the new continent.

The technical and scientific achievement is spectacular. The political impact could and should be no less spectacular. The view of earth from outer space has made us all aware of the truth of international interdependence and has drummed into our unwilling heads the necessity for co-operation among all the inhabitants of this little vessel travelling through space to an unknown destiny.

(Mr. Astrom, Sweden)

On behalf of the Group of Western European Countries and Others, I should like to express to the United States delegation our congratulations and to ask it to convey this expression of appreciation and gratitude to the United States Government.

Mr. PIRADOV (Union of Soviet Socialist Republics) (interpretation from Russian): In the period of time that has elapsed since the last session the Committee on the Peaceful Uses of Outer Space has conducted very useful and fruitful work from the standpoint of understanding of the secrets of outer space as well as from the standpoint of international collaboration. The most outstanding achievement in that time was the flight of Apollo 11, which was able to land the heroic United States astronauts on the moon and then return to earth. That event is of great historic significance. Man's landing on the moon will go down in the annals of the twentieth century as a very important achievement in the conquest of outer space by mankind.

(Mr. Piradov, USSR)

On behalf of the socialist countries, I wish to extend my sincere congratulations to the American scientists, engineers and workers who made possible the launching of Apollo 11. We also congratulate the crew of that space-ship, who overcame such heavy obstacles in successfully carrying out their historic mission.

Mr. ARORA (India): On behalf of the delegations of Africa and Asia, my delegation would like to join you, Mr. Chairman, in congratulating, through the United States delegation, the now-famous astronauts, scientists and others associated with the Apollo 11 project on the historic accomplishment of the first landing of man on the moon.

The leap by three astronauts -- two actually made it -- into the vacuum of outer space and on to another celestial body is an outstanding one, with no parallel in history. We salute the brave men who accomplished that achievement, not only for the United States, but for all mankind.

On behalf of the delegations of Africa and Asia, we should like to express our great admiration for their accomplishments.

ELECTION OF THE RAPPORTEUR

The CHAIRMAN: Members will have noticed an additional item contained in the revised agenda for this session: namely, the election of our Rapporteur.

The delegation of Brazil has informed the Chairman that our Rapporteur of long standing, Ambassador de Carvalho Silos, will not be able to continue serving the Committee as Rapporteur in view of his new obligations as Ambassador of Brazil to Japan. On behalf of the Committee and particularly on behalf of the Bureau, I should like to express our sincere regret that the Committee will thus be losing Mr. de Carvalho Silos' valuable services. He has indeed been the longest-serving officer of this Committee, and, while changes have taken place in the posts of

(The Chairman)

Chairman and Vice-Chairman, Mr. de Carvalho Silos throughout the years has proved to be a pillar on which the Committee could always depend. He has indeed earned our particular appreciation, and I would ask the representative of Brazil to convey to him our deep gratitude for his long and devoted work in this Committee.

Mr. BEAULNE (Canada) (interpretation from French): I have the honour to nominate to succeed Mr. Carvalho Silos, to whom you have just paid tribute, Mr. Chairman, his compatriot, Minister Celso de Souza e Silva, the Deputy Permanent Representative of Brazil to the United Nations. It is with great pleasure that I act as spokesman for those delegations which support the candidacy of Mr. Souza e Silva and which requested me to submit his name in nomination to the Committee.

Before leaving Brazil just a few months ago, I was present at the Natal base in the State of Rio Grande de Norte, where I observed the launching of Canadian-built rockets by Brazilian crews, a joint venture participated in by United States and European technicians. During my stay in Brazil, I came to realize the remarkable progress achieved by that great country in the exploration of outer space, as well as Brazil's contribution to international efforts in this field.

Mr. de Souza e Silva, a Cariocan, born in Rio in 1924, was a graduate of the Catholic University of that city, a jurist and professional diplomat, has had occasion to study these problems very keenly in recent years. As a diplomat, he has been in Geneva, Caracas, San Salvador and Paris; and since 1966 has been here at the United Nations in the capacity of Deputy Permanent Representative of Brazil. During the past three years, he has headed the Brazilian delegation to the Committee on the Peaceful Uses of Outer Space; he also represented his country in Geneva at the meetings of the Legal Sub-Committee in 1967 and in 1969. While in Geneva, he also participated in the disarmament deliberations. Everybody has praised the efficiency, wisdom and ability which he demonstrated in the carrying out of his functions.

I therefore take pleasure in nominating Mr. de Souza e Silva to the post of Rapporteur of this Committee. I am convinced that he will do extremely well in this post.

Mr. McGOUGH (Argentina) (interpretation from Spanish): I have asked to speak in order to second most decidedly the nomination just made by the representative of Canada.

My delegation takes particular pleasure in seconding the nomination of Mr. Celso de Souza e Silva as Rapporteur of the Committee on the Peaceful Uses of Outer Space, having had numerous opportunities, both within the working groups and in other bodies of the United Nations, to observe the abilities of Mr. de Souza e Silva. Accordingly, I am sure that his election will serve to vindicate the opinion of the Argentine delegation, in addition to satisfying all members of this Committee.

Mrs. JOKA-BANGURA (Sierra Leone): My delegation is pleased to endorse the nomination of Mr. de Souza e Silva for the post of Rapporteur.

The CHAIRMAN: The name of Mr. de Souza e Silva has been placed in nomination for the post of Rapporteur of our Committee by the representative of Canada, and seconded by the delegations of Argentina and Sierra Leone.

If there are no further comments on this subject, I shall consider that the Committee declares Mr. de Souza e Silva elected Rapporteur of this Committee by acclamation.

It was so decided.

The CHAIRMAN: May I invite Mr. de Souza e Silva to take his place as Rapporteur of this Committee, and at the same time may I extend to him, on behalf of this Committee, our most heartfelt congratulations. I am very happy to have him with us, and am convinced that he will exercise his duties in the same way as did his predecessor.

I now call on Mr. Souza e Silva.

Mr. SOUZA E SILVA (Brazil), Rapporteur: First of all, may I associate my delegation with the remarks made here about the historical achievement of Apollo 11. May I also thank you, Mr. Chairman, and through you all members of the Committee on the Peaceful Uses of Outer Space -- especially the representatives of Canada, Argentina and Sierra Leone -- for the nomination that has just been made. I take it as a great honour to myself and a great homage to my country.

I also want to thank you and the representative of Belgium for your remarks on the activities of Ambassador de Carvalho Silos. I shall not fail to convey to him the expressions of friendship and praise addressed to him.

Under your leadership, Mr. Chairman, I hope to discharge my new functions with devotion and dedication.

The CHAIRMAN: I thank the Rapporteur for his remarks.

REPORT OF THE COMMITTEE TO THE GENERAL ASSEMBLY

- (a) REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE (A/AC.105/55 and Add.1, 2 and 3)
- (b) REPORT OF THE LEGAL SUB-COMMITTEE (A/AC.105/58)
- (c) REPORTS OF THE WORKING GROUP ON DIRECT BROADCAST SATELLITES (A/AC.105/51 and A/AC.105/66)

The CHAIRMAN: Before beginning the debate, I should like to make an announcement. We are very happy indeed to have with us today Mr. Paine, the Administrator of the United States National Aeronautical and Space Administration. I should like to extend to him on behalf of the Committee our most heartfelt welcome. After the successful completion of the Apollo 11 mission, the Chairman approached the delegation of the United States as to whether it would be possible for a special presentation to be made by the United States delegation to the Committee, at its September session, on the lunar landing mission and its impact and implications. I am very happy to inform

(The Chairman)

the Committee that we have received a favourable response from the delegation of the United States. This afternoon Mr. Paine, as a member of the United States delegation, will make a statement to the Committee. Furthermore, following the adjournment of this meeting Mr. Paine will, if the Committee agrees, make a special presentation on the lunar landing, including the showing of a film.

I wish at this point to express my sincere appreciation to the delegation of the United States for its co-operation and in particular to Mr. Paine for coming to our meeting in spite of his many pressing obligations.

We have only one speaker on our list this afternoon and I call on Mr. Paine to take the floor.

Mr. PAINE (United States of America): I am particularly appreciative of the remarks by the representatives of Sweden, the Union of Soviet Socialist Republics, India and Brazil at the meeting this afternoon. It is an honour and a pleasure to have this opportunity to report to this Committee at its opening meeting. This occasion is especially appropriate because this most dramatic extension of man's capabilities in space is indeed an achievement by and for all men everywhere.

This event has implications for mankind far richer and more meaningful than the landing on the moon in the narrowest technical sense. If men properly develop and exploit these advanced capabilities they can surely be directed to a great expansion of those practical benefits which we have only just begun to reap in space in the fields of communication, weather prediction, navigation, earth resources and other fields. And man will be able in time, to extend his domain beyond the confines of his homeplanet, earth. From our small 8,000-mile diameter planet we have set forth in this first step upward and outward into the 8,000-million-mile solar system around us.

When I say that the success of Apollo 11 is a step forward by all mankind I do not use those words without thought. The variety and extent of foreign contributions to the Apollo 11 flight are real and they are impressive and they are appreciated by all Americans.

(Mr. Paine, United States)

It is most appropriate that we express our appreciation in this forum to so many of the countries represented here for accommodation and, in many cases, operation of tracking facilities: Australia, the Malagasy Republic, Mexico, Spain and the United Kingdom. And we are particularly grateful for the use of a special 210-foot-diameter radio-astronomy facility in Australia which made it possible to bring back the dramatic movies of the surface of the moon to all television watchers everywhere. We appreciate the co-operation in the staging of our search and rescue aircraft and range instrumentation aircraft from Australia, Brazil, Chile, Japan, Libya, Mauritius, the Netherlands, Peru, Portugal, South Africa, Spain and the United Kingdom. We appreciate the overflight privileges which were granted to these aircraft by forty-seven different nations. We appreciate the co-operation in the scientific experiments that were carried on Apollo 11 to Switzerland for Professor Geiss' solar wind detector; and to Australia, Belgium, Canada, Finland, Germany, Japan, Switzerland and the United Kingdom for supporting the work of thirty-six scientists who are now receiving lunar surface samples for analysis in their laboratories. Brazil has co-operated in a sounding rocket programme that was co-ordinated with Apollo to monitor radiation hazards to our astronauts in space. Other countries, including France, are now utilizing the laser reflector left on the moon for scientific experiments. Sweden and Germany furnished the Hasselblad cameras which brought back the magnificently detailed photos of the lunar topography. We are grateful to seventy-three different nations which sent a memorable series of messages which we etched on to a small disc and carried to the moon and left behind.

Finally, I want to acknowledge the constructive work done by the United Nations Outer Space Committee itself in confirming in the Outer Space Treaty the status of astronauts as the envoys of all mankind and for providing for the safe return of astronauts who might land under emergency conditions.

I know that you are all interested in the preliminary scientific results which even at this early date have provided extremely valuable insights into the lunar surface. There will be a more detailed report in a press conference in about a week, but the following can already be said in a tentative fashion:

(Mr. Paine, United States)

The passive seismometer experiment operated within a few minutes of its deployment. It recorded astronaut footsteps, movements in the lunar landing module and possible surface slides on the moon. It was successfully commanded to a standby mode during the lunar night and then switched back on.

The long-period seismic element lasted until 26 August and the short-period element until 28 August. None of the long-period seismic data resembles earth data, but it is not certain whether the signals are caused by instrumentation changes or natural phenomena. If natural, the moon would be structurally very different from the earth -- a far more heterogeneous body than our home planet. This we shall explore further in the next landing, which is now scheduled to set forth on 14 November, when additional seismic instruments will be deployed. We have found as yet no evidence of any previous life on the surface of the moon, but all of you have seen men walking on the surface, men who will be the precursors of terrestrial life as it moves outward to our twin planet.

The minimum age of the Sea of Tranquillity area in which we landed is about 3 billion years, much older than believed earlier and possibly indicating that the moon formed at the same time as the earth. The length of time that the materials which we collected as our samples had been lying on the surface indicate that the surface of the moon is very ancient and has changed very slowly. The average density of the rocks is very high, 3.2 to 3.4 grams per cc. This is near the average density of the entire moon.

The lunar material that we collected shows an igneous origin, possibly volcanic, but it is chemically different from volcanic material here on earth, with a higher percentage of heavier elements.

We have detected no evidence in any of the samples examined to date of the presence of water. In fact, it appears likely that the rocks were formed under conditions with little oxygen or water present. They are typically crystalline and glass. The lunar surface dust is composed of a very high percentage of small round glass spherules, apparently the product of impacts by meteorites.

(Mr. Paine, United States)

The laser experiment which is still being conducted has already refined our measurement of the lunar distance down to a few tens of metres, and we hope in time to get it down to within a few centimetres.

If man's reach should exceed his grasp, the fact that we have been able in the Apollo programme to grasp the moon shows that man has perhaps not been reaching far enough. We can dare and we can win far more for man than we have ever thought possible -- and we should, not only in science and technology, but in all the affairs of men.

It is very proper that men everywhere around the world are asking us: if man can indeed go to the moon, why can we not do a far better job here on our planet earth in ordering the affairs of man? This is a question which is indeed appropriate and a question which those of us concerned with space programmes should welcome. There is much to be learned in space and it is relevant to our total environmental knowledge here on earth. We are opening a whole new field, that of planetary ecology. We should not assume that an environmental fact close at hand here on earth is necessarily more significant to us than an environmental fact at lunar distances or even at the surface of the sun or in the atmosphere of Venus or the surface of Mars. We may find the most critical facts and conditions that determine our terrestrial environment in the atmospheres and conditions of other planets, perhaps at the boundary of the earth's magnetosphere or in the surface of the sun. We may find critical insights into our own atmospheric processes in the atmosphere of Jupiter or other planets. We can and we must pursue this increased knowledge and we must turn it increasingly to the benefit of man.

To equip ourselves for this task we should continue the work we have begun and we should increase our capabilities still further. But above all we should do it, as much as possible, together.

After the Apollo programme we see a very rigorous opportunity to press forward. We believe that the Apollo 11 astronauts have opened a trail that many men will follow. Their flight is a beginning, not an end. We stand at the start of a new era which will see space flight become as safe, as reliable and as economical as aircraft flight through the atmosphere is today.

(Mr. Paine, United States)

We see lying ahead of us now the task of developing reusable spacecraft and permanent space stations in orbit that will greatly reduce the cost of space operations and will open space travel to men and women of all nations

The future space programmes will consist of equipment that will be multi-purpose; it will be used many times and will bring back in many areas far more information than we have been able to acquire in the first dozen years of space.

These future programmes can and should be carried forward with far greater international co-operation than has yet been the case. That participation will be as rewarding to all nations that take part as it has been to those nations that have started down this trail. The character of the space effort in the name of all mankind will surely be more rewarding to every person on this planet and will well repay the energies and the resources required. Certainly we in the United States will, as we have in the past, make increasing opportunities available to people of all nations who wish to join with us in the pressing forward of this great human endeavour.

The great explorations of history, carried out by many nations, have always opened up new vistas of the possible, and the sights of all men have been raised and their hearts inspired. The exploration of space is in that great tradition, and yet it extends by orders of magnitude the past explorations. Where before Apollo, exploration was a challenge in itself, its successful beginnings now stand as a challenge for our children and for all future generations as we open up this limitless frontier. Certainly the greatest challenge of all is that the world which is seen as one from space should also be seen as one from the earth itself.

Mr. Chairman, this concludes my remarks and with your permission I should like to present to you for this Committee after the adjournment of the meeting a lunar globe which contains all of the lunar features which have been mapped by the lunar probes to date.

The CHAIRMAN: Thank you very much, Mr. Paine, for your very interesting statement and the vision into the future which you have described to us here. We are very grateful to you for coming here to make that presentation and may I again congratulate you personally on NASA's outstanding achievement during this past summer.

The meeting rose at 4 20 p.m.

VERBATIM RECORD OF THE SIXTY-SECOND MEETING

Held on Tuesday, 9 September 1969, at 3 p.m.

Chairman:

Mr. HAYMERLE

(Austria)

REPORT OF THE COMMITTEE TO THE GENERAL ASSEMBLY

- (a) REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE (A/AC.105/55 and Add.1, 2 and 3)
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- (c) REPORTS OF THE WORKING GROUP ON DIRECT BROADCAST SATELLITES (A/AC.105/51 and A/AC.105/66)

The CHAIRMAN: Before we start our proceedings, I should like to make two announcements.

The first is that at previous sessions of the Committee and its Sub-Committees representatives of specialized agencies of the United Nations -- of the IAEA and of the UNDP -- and representatives of the Committee on Space Research and the International Council of Scientific Unions have participated in our meetings. I am happy to see that we have those representatives with us again, and I should like to welcome them in the name of the Committee.

The second announcement is in connexion with the report of the Working Group on Direct Broadcast Satellites. I am pleased to announce to the Committee that the Chairman of the Working Group, Mr. Rydbeck, intends to come to our meeting and make a special statement on the Working Group's report. I am informed by the Swedish Delegation that Mr. Rydbeck hopes to arrive in New York in time for our meeting on Thursday morning.

Mr. PIRADOV (Union of Soviet Socialist Republics: (interpretation from Russian): First of all, allow me, Sir, to thank you for the very kind words you stated with respect to studies in outer space conducted in my country.

Allow me now to congratulate the Brazilian representative, Mr. Souza e Silva, on his election to the post of Rapporteur of our Committee. We wish him all success in the implementation of his new, very important duties.

During the past year our country has carried out studies in the use and exploration of outer space for peaceful purposes. We are satisfied with the solutions that have been found to the problems that we have been studying in the past year. We have carried out a series of experiments. We have launched space ships which have circled the moon -- automatic space ships, for example, the Zond and the Luna --- and a series of cosmic experiments have been carried out by Soviet scientists by means of the automatic satellite Zond 7. Zond 7 has enriched science with new physical data concerning parameters of outer space.

All this is very important for the study of our own natural satellite. The launchings of the automatic space ships Venus 5 and Venus 6 were carried out on 16 and 17 May 1968. The direct measurements that were carried out by these space craft have made it possible to clarify the chemical composition of the atmosphere of that planet and we have been able to obtain information on temperature and pressure of the atmosphere surrounding Venus at a distance of approximately forty kilometres. These measurements have been more accurate than past ones. This new data on Venus is of great importance for accurate studies of the processes that take place on that planet.

(Mr. Piradov, USSR)

As a result of the experiment carried out by Soviet astronauts Shatalov, Polinov, Eliseev and Khrunov in January 1969 on the space ships Soyuz 4 and Soyuz 5, it was possible to place into orbit a functional experimental cosmic station. In so doing the astronauts Eliseev and Khrunov got outside of the space ship Soyuz 5 and walked in outer space. This experiment was the result of an entire series of theoretical studies and it opened up a new milestone in the conquest of outer space. That flight showed it was possible to operate successfully in outer space and it showed it was possible to place into orbit a space craft containing scientific measurement instruments. As a result of the flight that took place this past year, very fundamental problems have been solved relating to the creation of orbital space stations -- problems which, as we know, are related to the implementation of further interplanetary flights.

It is hard to overestimate the importance of all these achievements. Geological studies and studies of the interplanetary medium have been made as a result of these launchings and flights. Astronomical observations have been made utilizing very complicated scientific apparatus. Scientific physical and chemical experiments have been carried out in a vacuum. All these studies have been made under conditions of weightlessness.

Scientists and engineers will be able to work on these future space stations and they will study various subjects connected with their diversified fields of science and technology.

Throughout the past year further studies were made of outer space by means of the space ships of the Cosmos series. Since March 1962, almost 500 artificial satellites have been launched and placed into orbit. The studies of this type in the Soviet Union will be continued, particularly the studies dealing with the utilization of automatic means of guiding space ships. There is no doubt that development of society and international life as a whole will be closely related to scientific achievements, mainly to the conquest of outer space. We hope that successes achieved in cosmic studies will serve to raise the standards of living of the working peoples throughout our planet.

(Mr. Piradov, USSR)

The achievements of space science have been utilized very broadly. For more than two years now in our country meteorological systems of the meteor type have been put into operation. We have been carrying out a programme of work aimed at utilizing artificial satellites in promoting our country's agriculture. These satellites have been used in studying the outer layers of the earth's atmosphere. A new space station has been set up in the Soviet Antarctic area. The Soviet space ship Meteor is used for accumulating scientific information concerning the structure of the outer layers of the earth's atmosphere. All these studies are of great importance for the national economy.

In 1965 communications sputniks were launched for the first time, the Molnia I type. Four these satellites have been placed into orbit and they are operating in the far north area and also over the Soviet far east and over the central Asian areas of our countries. These satellites have made it possible for long-range television broadcasts to be received at distances far removed from transmitting stations.

Further communications satellites will be launched, and these communication systems will be expanded and developed. In particular, activities will be intensified to mark the 100th birthday -- that is, the jubilee -- of the founder of the Soviet State, Vladimir Lenin. Cosmic technology is being used in our country to promote the national economy, and these scientific data are being used, as we know, in other countries also.

Yesterday, we were all able to congratulate the representative of the United States on the successful mission of Apollo 11. These successful achievements are all the result of the past studies of outer space that have been made, beginning with the first cosmic flight that was carried out by Yuri Gagarin. Those space achievements have been followed by others. At the present time, when favourable conditions prevail for developing international co-operation in the field of outer space, the Soviet Union continues to participate very actively in international co-operation in the study of outer space. This co-operation has been expressed in a series of experiments that have been carried out, together with other socialist countries, particularly in the field of communications and so on. We are continuing to co-operate with France and other countries on many matters relating to the peaceful use of outer space.

Soviet scientists are participating in the work of international organizations, such as COSPAR, IAF, and still others. At the recent COSPAR session views were exchanged that made it possible to analyse and utilize the results of the findings that had been obtained in the various participating countries.

May I now sum up the work carried out by our Committee and its Sub-Committees during the period since the twenty-third session of the General Assembly. The Scientific and Technical Sub-Committee, which held its session last March, examined such matters as instruction and training in subjects dealing with outer space, and also exchanged information concerning the encouragement of international programmes on outer space.

Our delegation shares the conclusions and recommendations contained in the report of the Scientific and Technical Sub-Committee. In this connexion we should like to refer to the results obtained from the rocket that was launched in India, the Thumba rocket. In effect, the Scientific and Technical Sub-Committee also took note of the work carried out in Argentina in setting up a rocket station, and the Sub-Committee stated that it would be useful to transmit the information obtained from these experiments in accordance with the principles that were approved by the Committee in 1962. I should point out that Soviet scientists participated in the work of that group.

We also note the information that was submitted by United Nations specialized agencies concerning the work they had done in the practical application of cosmic technology and the possibilities available for them to promote co-operation of the developing countries in this area.

At the last session of the Sub-Committee a decision was taken to appoint to the United Nations Outer Space Division an official to help States in the application of the achievements of cosmic technology. Naturally, this appointment has an experimental nature and is designed to promote a more effective utilization of the possibilities of the United Nations Outer Space Committee and its Sub-Committees for the purpose of promoting the utilization of outer space for peaceful purposes.

Important work has also been done by the Legal Sub-Committee. It is that very Sub-Committee which has given a legal context to such important international legal documents as the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, and also the Agreement on the rescue of astronauts.

All this goes back to 1968. Both these documents have played a very positive role in regulating the relationships amongst States in the process of carrying out cosmic studies.

Amongst the items on the agenda of the Legal Sub-Committee particular attention was given to the preparation of a draft convention on liability for damages which might be caused by space objects. Unfortunately, we must observe that the work on the text of that convention has not yet been

(Mr. Piradov, USSR)

completed and that the General Assembly resolution on this point -- namely, resolution 2345 (XXII) of 19 December 1967 -- has not yet been implemented, although the Legal Sub-Committee has made great efforts to conclude its work. We must, in all justice, point out that that Sub-Committee has achieved considerable success so far. In point of fact, despite certain difficulties related to divergent approaches to the various aspects of this problem, which are due to different and divergent legal systems, the Legal Sub-Committee was able to agree on the majority of provisions of the convention, so that now we can say that the basis for the future convention is already available. However, discussion in the Sub-Committee has shown that on individual important items there are considerable divergencies in the positions of the various parties and that greater efforts are required of all members of the Legal Sub-Committee in order to achieve a general agreement on all those items on which we have not yet finally agreed. We hope that in the light of the useful and very helpful discussion that took place during this year in Geneva it will be possible for the Legal Sub-Committee, at its ninth session, to arrive at a final agreement on the text of the convention on liability for damage. I must say that useful work was also done by the Legal Sub-Committee on other items of its agenda.

This year our Committee had to deal with a new problem: the use of space communications for direct radio and television broadcasts from satellites. I should like to take this opportunity to express gratitude to our colleagues in the Working Group for their careful study of this problem and for submitting detailed reports on the technical and economic aspects of the problem, as well as on the possible consequences of direct television transmission in the political, legal, social, cultural and other spheres.

The technical and economic aspects of the problem were dealt with in detail in the Working Group's first report, dated 26 February 1969.

(Mr. Piradov, USSR)

In the second report of the Working Group on Direct Broadcast Satellites, conclusions were drawn as to the advisability of carrying out in the United Nations Committee on Outer Space further studies of legal questions which might be related to direct broadcasting from satellites. These conclusions in the view of the Soviet delegation reflect the concern felt by a number of States over the fact that every new scientific achievement such as direct television broadcasts can be used not only for the benefit of civilization and peace and friendly relations amongst all peoples, but also to the detriment of friendly relations and peace amongst States.

Furthermore, the relationship between the type of utilization of direct television broadcasts and the contents of these broadcasts themselves has a very negative effect on the development of international co-operation and might outweigh the benefits that could be provided by the utilization of direct television broadcasting from satellites. The humanitarian purpose of raising the cultural level of the population and expanding international exchanges in the field of science and culture by using that direct television broadcasting from satellites could be achieved in our view only in conditions of strict implementation of existing norms and principles of international law, including the Charter of the United Nations, and also the provisions of the 1967 Treaty on outer space which relate to all forms of space activities of States, including direct television broadcasting. Any misuse of direct television broadcasts using satellites and the use of these techniques without the agreement of the Governments of those countries where such broadcasts and transmissions are conducted, including transmissions of programmes which propagandize ideas of war, militarism and racial inequality, and broadcasts of an immoral nature and so on, could threaten peace and very likely would expand this gap of misunderstanding that exists amongst peoples instead of strengthening peace and the development of co-operation amongst peoples.

For that very reason we consider that direct television broadcasting should be carried out only in conditions of strict compliance with the generally recognized principles of the sovereignty of States and on a contractual basis amongst all countries concerned without any intervention whatsoever in the internal affairs of one another. Direct broadcasting by means of sputniks and satellites

(Mr. Piradov, USSR)

to other countries without the agreement of those countries would be unlawful and States are entitled to oppose and resist such broadcasting.

When we say this we feel that the responsibility for all national activities in outer space is borne by the Governments regardless of whether such activities are carried out by non-governmental organizations or by individual organizations or by non-governmental legal persons or subjects. This provision has been included in the 1963 declaration on outer space and also in the 1967 Treaty on outer space, and it also holds good for direct television broadcasting from satellites.

It seems to us that it is only by having regard to the aforementioned provisions that it will be possible for the Committee to come to a generally acceptable solution which would meet the interests of all countries and would serve the cause of peace and mutual understanding amongst all peoples.

A careful study of the second report submitted by the Working Group shows that the overwhelming majority of its members attribute paramount importance to the study and the formulation of the basic legal and international aspects of direct satellite broadcasting. In this connexion, in our view it would be useful if the United Nations Committee on Outer Space, and particularly its Legal Sub-Committee which is the most competent United Nations body in the field of the law of outer space, gave all due attention to the legal and international aspects of direct radio and television broadcasting from satellites, and it should draw all the appropriate consequences and conclusions therefrom.

Those are the views which will guide the Soviet delegation in approving the report of the Committee and the recommendations to the United Nations General Assembly on this subject.

Mr. THACHER (United States of America): It is a privilege to address this Committee in a year which marks one of the great milestones in man's efforts to push back the frontiers of outer space. As the world knows, the first step by a man on the moon was taken in the name of all mankind. All of us shared the excitement and awe as Neil Armstrong took that first step on the moon and as the astronauts successfully completed their specific tasks during their delicate mission on the lunar surface. And we all shared feelings of pride that the dreams of men in preceding centuries can be made to come true in our own time. This shared adventure is indeed an inspiration for all of us who seek through co-operation in bodies such as this Committee to meet the challenges facing the inhabitants of the earth.

None have expressed it better than the Secretary-General when, in welcoming the astronauts here on 13 August, he said that the flight of Apollo 11 brought us:

"A renewed realization of what we, as members of the human race, can accomplish on this planet with our resources and our technology if we are prepared to combine our efforts and work together for the benefit of all mankind."

(Mr. Thatcher, United States)

The astronauts took with them on their voyage to the moon and back, the flag of the United Nations and the flags of the Members of the United Nations and its specialized agencies.

This symbolism is particularly meaningful because it reflects the fact that the Apollo 11 mission owed much of its success to international co-operation and direct international contributions. Dr. Paine reported some of the details of these contributions yesterday. We look forward to a future of increasing opportunities for the people of all nations to join with us in the exploration and use of space. The National Aeronautics and Space Administration regularly invites investigators in other nations to propose experiments for flights on its spacecraft. These invitations -- opportunity arrangements, we call them -- are distributed by the Secretariat to all Member States. The latest of these, contained in document A/AC.105/67, calls attention to the opportunity to propose experiments to be performed on the Viking missions to the planet Mars planned for 1975. The important thing about these announcements is that they do produce foreign proposals which are accepted in competition with proposals from United States experimenters. The selection of a Swiss solar wind experiment which we saw deployed on the first lunar landing mission in the film yesterday is only the most recent and dramatic example of how scientists of other countries contribute to, share in, and gain from our programme.

Among the many other achievements in the peaceful uses of outer space since this Committee last met, one which is particularly pertinent to note in this context, is the Astronaut Assistance and Return Agreement, which was negotiated in this body, and which entered into force on 3 December 1968. More than thirty States are now parties to it.

(Mr. Thatcher, United States)

The Scientific and Technical Sub-Committee met in March, and considered the useful proposals of India and Sierra Leone that means be found to promote the study of the practical applications of space technology. These proposals reflected the interest of developing countries in the promise of such potential application of space technology as earth resources surveying and direct instructional broadcasts, as well as of such established space applications as satellite meteorology. The Sub-Committee made a number of constructive recommendations concerning ways in which the United Nations, its specialized agencies and its Member States can co-operate to assure that non-space Powers, and especially the developing countries, can share in the applications of space technology.

The Sub-Committee recommended a continuing survey of the capabilities of the United Nations and its specialized agencies in the area of space technology applications. It recommended that the Secretary-General appoint to the Outer Space Affairs Division a space applications expert to serve as a practical guide to help interested countries learn who is doing what specific work, and where. He would also help them to learn about the opportunities for participation and training, and would serve in a liaison capacity between the specialized agencies and countries interested in work already underway on space applications. Let me express our gratitude for the information provided to the Committee by the specialized agencies and to their efforts to promote space technology applications. As a necessary complement to this applications expert, the Sub-Committee also recommended that concerned Member States designate a specific office or individual within their administrations as a point of contact on space applications. Such designations should make possible a more effective flow of communications.

(Mr. Thacher, United States)

My Government heartily endorses these recommendations. The United States will continue to pursue an open space programme -- open in both planning and execution. We believe that the information flowing from our programme will help other countries to determine what their own role in space and in its application should be. We shall continue to make the practical benefits deriving from our work available on the broadest possible basis. We shall do all we can to facilitate the successful operation of the machinery which the Sub-Committee has asked this Committee to endorse.

This past year has also seen two meetings of the Working Group on Direct Broadcast Satellites, one in February to study the question of technical feasibility, and one this summer to consider the social, cultural, legal and other implications of direct broadcasting from satellites. Again the emphasis was on the need for international co-operation. Although the Working Group did not foresee direct broadcasting from satellites to unaugmented home receivers before 1985, at the earliest, it concluded that further studies of the international implications of direct broadcasting should be carried out in the period before us. My Government agrees that such studies, based as far as possible on practical experience with broadcasting in general and with experiments in direct broadcasting which may be conducted are useful at this time. The international effort in these studies will itself assist the process whereby this new technology would be ultimately of benefit to all nations interested in the advantages it may offer. These potential advantages include closer links between central and village authorities, more effective dissemination of information in such areas as health, agriculture and education, improved knowledge of the world around us, and a better life through a free exchange of information.

Another matter concerning this Committee in which my Government is pleased to co-operate is the proposed United Nations survey group to visit in October the Argentine Sounding Rocket Range at Mar Chiquita. A scientist from the United States has accepted an invitation to participate in this survey to determine the eligibility of the sounding rocket range for United Nations sponsorship. My Government believes that Argentina's endorsement of the concept of a rocket range open to the world's scientific community can contribute significantly to furthering international scientific and technological co-operation in the peaceful uses of outer space.

(Mr. Thacher, United States)

The success of space exploration during this historical year of 1969 makes the more and more glaring the failure of the Outer Space Committee to complete the liability convention. The interest of the international community in a meaningful liability treaty is almost as old as space exploration. During the Administration of President Eisenhower, the United States took the lead in stressing the need for a treaty on this subject.

On behalf of the United States, I want to state emphatically our dissatisfaction with the lack of progress and our discontent at the unwillingness or inability on the part of some to fulfil the commitment all of us undertook in General Assembly resolution 2345 (XXII) which called on this Committee to complete the liability convention during 1968.

The report of the Legal Sub-Committee shows that Members were able to agree on a number of aspects of the liability convention. But this is 1969, and our 1968 goal has still not been reached.

(Mr. Thacher, United States)

The basic problem remaining to be solved is, as it was last year, what provision to make to settle a claim on which a claimant and launching State have been unable promptly to agree through the process of negotiation. Except for Eastern Europe, countries that do not conduct space activities hold the view that a claimant should be entitled to refer the claim to arbitration. The non-space Powers appear to see in the possibility of impartial arbitration the only guarantees against the possibility of endless bilateral negotiations. We, for our part, see our own interests in much the same way.

We recognize that certain other delegations have taken a different position. Some of the few delegations that have thus far been unwilling to accept binding arbitration have suggested the possibility of providing for a unilateral right of a claimant State to invoke the jurisdiction of a competent and impartial tribunal on a disputed claim; this procedure would result in the delivery of an opinion by the tribunal which would be advisory to the Governments concerned, rather than binding on them.

We think that the draft convention introduced by India (L.32/Rev.2, Report, Annex II, p. 23) goes far toward meeting these differing views by requiring that an unresolved claim first be submitted to an inquiry commission. Only if the commission were unable to reach agreement on a recommendation for the settlement of the claim would the claimant State be able to refer the matter to binding arbitration. Although there are one or two drafting improvements we consider necessary, the Indian treaty text represents, in our view, a fair effort to reach a compromise on this most difficult of the questions holding up progress in this area. The United States has already moved to indicate its acceptance of this good-faith effort to find a solution that may be accepted by all. We hope others will do likewise.

Indeed, if a solution of the problem of unresolved claims can be found, the entire liability convention should fall quickly into place. A complete treaty text could, we believe, be negotiated within a matter of days if all sides were convinced of the desirability of doing so. Certainly, agreed solutions for questions relating to the secondary liability of members of an international organization, the question of applicable law, and of a monetary ceiling for damages resulting from an accident should be capable of prompt attainment. Let us consider each of these briefly.

(Mr. Thacher, United States)

At the last session of the Outer Space Committee, on 16 October 1968, the representative of the Soviet Union told us that the Soviet Union was ready to accept a requirement that a claimant present its claim first to an international organization where that organization's activities have caused the damage. The claimant would quickly proceed against the States members of the organization in the event the organization did not promptly provide appropriate compensation. Professor Blagonravov said -- and I quote from the verbatim record of the fifty-fifth meeting:

"In the opinion of the Soviet delegation the question of international organizations might be resolved on the basis of the well-known proposal of the delegation of India, concerning the inclusion in the convention of a provision indicating that claims for damage done by outer space objects launched by international organizations are presented first to the international organization itself or, in the case of non-compensation of the damage within a given time limit, to one or several of the States members of such organizations." (55th meeting, page 46)

We think that lays the groundwork for acceptance by all members of the reasonable proposal put forward by those among us who are conducting or who anticipate conducting space activities through the co-operative mechanism of an international organization. I refer here to the proposal put forward during the Legal Sub-Committee session this year by Belgium, France, Italy, Sweden and the United Kingdom. That proposal was contained in document L.60 and Add.1, which appears in the report of the Legal Sub-Committee, Annex 2, page 30.

Those countries have made a strong effort to bridge the gap between their preferred position and the position of those who expressed a certain concern that important international organizations might not move as swiftly as desired to accept the liability convention. The proposal by Belgium, France, Italy, Sweden and the United Kingdom includes a new second paragraph which obligates a State that is a party to the liability convention to support a declaration by an international organization of which it is a member accepting the rights and obligations provided in the convention. A "best efforts" undertaking of this character is certainly a reasonable compromise. We trust it can be accepted.

(Mr. Thacher, United States)

Another problem remaining to be solved is a provision on the law applicable to govern measure-of-damage questions. The United States originally proposed a straightforward international law standard, but many civil law countries considered that some reference to the municipal law of the claimant State was desirable in order to fit compensation more expressly into the social and economic context of the claimant country. Eventually, a compromise was put forward whereby the governing standard would be "international law, taking into account the law of the claimant State". We thought that proposal eminently fair, and in our view it remains the best solution.

Finally, there is the question of limitation. United States delegations have for some years noted the improbability of any large amount of damage, but have stressed the likelihood that a convention with a ceiling would meet with greater acceptance than one without any limitation. We recognize that many delegations have been opposed to a ceiling. We are pleased that there has come to be a greater willingness on the part of an increasingly significant number to accept the concept of a limit provided it is sufficiently high. This problem, too, can surely be solved through good faith negotiation.

My Government proposed a liability convention as early as 1959. The United Nations General Assembly expected a liability convention in 1968. We are now a year late. We should be no later. While I agreed with much of what was said earlier today by the representative of the Soviet Union, let me, with respect and friendship, disagree with him on this point. If I understood him correctly, he suggested that with regard to liability we should wait until the ninth session of the Legal Sub-Committee, which will take place next year. In our view, the liability convention should not be a project for the twenty-fifth anniversary of the United Nations: it should be a practical goal for the twenty-fourth session of the General Assembly. In this way, we could demonstrate once again that this Committee can keep pace with the splendid technological achievements we all admire so greatly.

(Mr. Thacher, United States)

Let me thank you, Mr. Chairman, and our Vice-Chairman for your continuing service to this Committee, and let me add my voice to the congratulations that have been extended to our Rapporteur on his new appointment, and extend our gratitude for his undertaking that task.

The CHAIRMAN: That concludes today's speakers' list. We have heard two very interesting statements this afternoon. I wonder whether or not the speeches have inspired other speakers to take the floor right now and make statements. I should like to invite those speakers who wish to take the floor to tell me whether they are ready to speak. I do not see anybody who wishes to take the floor.

I should like to remind the Committee that we have not very much time at our disposal. I therefore urge representatives who wish to speak during our present session to inscribe their names on the list of speakers as soon as possible.

There are a number of representatives who have inscribed their names for tomorrow morning. So far there are no speakers for tomorrow afternoon. Perhaps we can find somebody. I should like to tell the Committee that there are great problems in the United Nations. There are so many meetings at the moment that the Administration has urged me not to set a meeting when there is no speaker. So I urge you to inscribe your names. If not we shall have to inform the Administration that we shall have no meeting tomorrow afternoon. I still hope it will be possible to have a meeting and that we can perhaps tomorrow afternoon reach some sort of agreement on the way in which we are going to proceed in our future debates. Are there any comments?

Mr. DENORME (Belgium) (interpretation from French): I would like to ask for clarification only. It seems to me that we are talking about the procedure to be followed in our forthcoming debates. Have you any plans personally? You have also told us that we have little time available during this session. Has a time-table been drawn up and, if so, could you communicate it to us, or if not could you, at a future time, give us your opinion on the manner in which we should proceed during this session?

The CHAIRMAN (interpretation from French): I have no definite plan but I know that yesterday you stated some ideas regarding the procedure to be followed. We should have a general debate among all of us about this so as to decide. As to the final date for our session I do not think one has been set but we have to finish this week because the General Assembly will start at the beginning of next week. Of course I am entirely in the hands of the Committee and if the Committee so wishes we could continue next week, Monday or Tuesday.

Mr. THACHER (United States of America): If my memory serves me rightly, the Secretariat enjoys a Staff Day celebration on the Friday preceding the General Assembly. I wonder if the Secretary could inform us whether we can plan to have a meeting of this Committee on Friday afternoon as well as Friday morning of this week.

The CHAIRMAN: May I ask the Secretary to inform us whether it will be possible to have a meeting on Friday.

Mr. ABDEL GHANI (Secretary): Although it is the Staff Day, the Secretariat will be able to provide for two meetings on Friday, in the morning and in the afternoon.

The CHAIRMAN: Thank you very much and I think I speak in the name of the Committee when I tell you that we would be very happy if you could provide us with space and interpreters for the meetings on Friday.

The meeting rose at 4.25 p.m.

VERBATIM RECORD OF THE SIXTY-THIRD MEETING

Held on Wednesday, 10 September 1969, at 10.30 a.m.

Chairman:

Mr. HAYMERLE

(Austria)

REPORT OF THE COMMITTEE TO THE GENERAL ASSEMBLY (continued):

- (a) REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE (A/AC.105/55 and Add.1, 2 and 3)
- (b) REPORT OF THE LEGAL SUB-COMMITTEE (A/AC.105/58)
- (c) REPORTS OF THE WORKING GROUP ON DIRECT BROADCAST SATELLITES (A/AC.105/51 and A/AC.105/66)

Mr. SCHUURMANS (Belgium) (interpretation from French): Even though my delegation has already had occasion to extend, through the Permanent Representative of Sweden, Ambassador Aström, its congratulations to the delegation of the United States for the grandiose achievement accomplished before the eyes of the world by the crew of Appollo 11, we wish to stress here again the historic significance of that fantastic epic trip. At the moment when Neil Armstrong set foot on the moon, he uttered these words, which immediately became so famous: "One small step for a man, but a giant leap for mankind." May I repeat those words, which indicate quite clearly that the astronauts were indeed conscious of being the ambassadors of all mankind. A giant step has been taken in the development of technology and science; thanks to the United Nations and to this Committee, that step was not taken in a juridical vacuum, but took place within the framework of a pre-existing space law, embryonic as it may have been.

Last year, when our report was adopted by the twenty-third session of the General Assembly, I expressed the disappointment of the Belgian delegation, and even a certain apprehension, at the paucity of results reflected in the report of the Legal Sub-Committee, and I added that it would have been desirable to have had a certain synchronization in the preparation of the two conventions which are subsidiary to the Outer Space Treaty and which are both of an obvious humanitarian nature. I am speaking of the Convention regarding the assistance to be tendered to astronauts and of the other one which would settle liability in case of accident.

As early as at its eighteenth session, the General Assembly, by its resolution 1963 (XVIII), adopted on 13 December 1963, requested the Committee:

"... to arrange for the prompt preparation of draft international agreements on liability for damage caused by objects launched into outer space and on assistance to and return of astronauts and space vehicles".

(Mr. Schuurmans. Belgium)

The General Assembly expressed its pleasure at the agreement on assistance to and return of astronauts at its twenty-second session by requesting the Committee, in resolution 2345 (XXII), "... to complete urgently the preparation of the draft agreement on liability ... and, in any event, not later than the beginning of the twenty-third session ...".

The twenty-fourth session will be beginning its work in a few days, and the report of the Legal Sub-Committee indicates that the expected draft agreement has not yet been completed.

Are we to say that no progress has been achieved? The report indicates that many texts have been prepared by the Working Group; as a matter of fact, most of the secondary matters have been settled, and the text of the draft has been prepared almost entirely, with the exception of five fundamental problems, such as the status of international organizations, the law which should be applied, the settlement of conflicts, the extent of liability, and nuclear damage. A press release published by the Government of India on 22 March 1969 had given us some hope: concessions on all sides which had been made during the informal consultations, participated in, apart from India, by Hungary, the Soviet Union, the United States and Belgium, had made it possible to broaden the base of agreement on these matters. Success appeared possible in New Delhi, but we must now observe that the formal meetings of the Legal Sub-Committee in Geneva were held under less favourable auspices and that no progress was made on the draft.

Several delegations have clearly stated that they would regard a satisfactory convention on liability as a sine qua non for their acceptance of the agreement on assistance and return. The Belgian delegation, for its part, demonstrated its spirit of co-operation and humanitarian feelings by signing that agreement from the very start. We regret, therefore, that certain Powers do not seem to be sufficiently interested in bringing about an agreement on the liability, now that agreement on assistance and return has become a reality, because that agreement, too, is certainly of a humanitarian nature.

(Mr. Schuurmans, Belgium)

During the discussion in the First Committee last year, the representative of Belgium, Mr. Glinne, launched an appeal to the space Powers, asking them to show comprehension and understanding for all those who might one day become the innocent victims of accidents for which those Powers might be responsible.

The Belgian delegation was happy to hear, at yesterday's meeting, the eloquent statement of the United States representative, in which he expressed his dissatisfaction at the lack of progress. The question arose whether this deplorable situation was due to bad will in certain quarters, and it appears that a complete text of a treaty could be negotiated in a few days, provided that the one fundamental problem remaining could be solved: that of the compulsory settlement of disputes.

My delegation continues to attach transcendent importance to this problem. Indeed, the Legal Sub-Committee seems to have achieved potential agreement on some of the principles relative to the question of the applicable law, which in principle would be international law. Now, the question immediately arises: What international law? There are no international conventions of any sort in this field, so that, in practice, it would be necessary to resort to "general principles of law". We know the uncertainties and contradictions in the doctrine of the law of nations and in international jurisprudence relating to the content, scope and role of those general principles. The individuals who would be the victims of damages caused by objects coming from space would see their interests only partially protected; in fact they would never be certain of the scope or extent of their rights.

The Belgian delegation has always held the view that the interest of the victim must be the first criterion to be considered in indemnification. We should also like to take into account other interests as well, especially those of the defendant State. On this point, in a spirit of compromise, and in case an agreement could be reached on all the fundamental questions -- those referred to as the "New Delhi points" -- we have agreed, together with five other countries, that, in case of conflict over the laws which should eventually be applied, international law would prevail. But it follows that, if the defendant and plaintiff States

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should not be able to agree on the basis of such law, the victim would be unjustly penalized by a prolonged or even indefinite delay in the indemnification to which it is entitled.

We firmly believe, therefore, that a moment should come when an element of procedure should be applied so that defendant and plaintiff may objectively and equitably arrive at a settlement which would be satisfactory to the victim. Such an element of procedure, in its final phase, can only be the compulsory settlement of disputes by an individual or by a Committee with the assurance of complete objectivity and neutrality.

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And we must keep in mind that the treaty to be concluded will not regulate relations between States so much but that it will be called on to protect physical persons to whom the Universal Declaration of Human Rights -- which we all support -- has recognized the right of a hearing of their cause with justice by an independent and impartial tribunal. A first step in that direction has been accomplished by the proposal of the delegation of India which seems to us to be a minimum. It is in this spirit that the Belgian delegation has welcomed the Indian proposal and that it has declared itself disposed to accept it eventually in a spirit of compromise despite some imperfections and gaps.

As regards the problem of international organizations, the Belgian delegation has always maintained the thesis that, being an indispensable instrument for the spatial activities of smaller and medium States, their existence, with all the obligations and rights flowing from them, cannot be ignored by the treaty on liability. Nevertheless, we have demonstrated our flexibility with regard to the choice of the means aimed at limiting the field of implementation of these obligations and rights. Thus, with four other countries, we have submitted a text which took into account to an even greater extent the objections and reservations of some. Despite repeated concessions, these proposals have not received general acceptance. My delegation firmly believes that the solution of the problem is possible only if everyone realizes that the fundamental question is not whether the international organizations have or do not have a separate existence in international law, which is drawn up by the States themselves, but that these organizations are the only effective means of international co-operation in the field of the exploration of outer space and that therefore their activities should be included and interpreted in this sense.

I will not insist on the limit of liability which could be negotiable, nor on the question of the nuclear damages which is only, in our view, a false problem. I shall limit myself to deducing from the consideration of the successive reports of the Legal Sub-Committee at its seventh and eighth sessions the following points:

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First, that the Belgian delegation, like several other delegations, to which I wish to pay tribute, has made persevering efforts in order to find a basis for agreement and has given constant proofs of a worthy spirit of conciliation.

Second, that the secondary questions would appear to be resolved, while the essential problems have been thoroughly studied from the juridical angle; an additional study could only prolong the stagnation which, regrettably, we note, has existed for a year.

Third, that it would not be useful again to send the various draft agreements on liability to the Legal Sub-Committee since the problem now is of a political nature and should be resolved on this level, that is to say, by the Committee itself or, if it cannot do so, by the General Assembly.

My delegation firmly supports the point of view defended by the representative of the United States, namely, that the agreement on liability should not be a draft submitted to the twenty-fifth anniversary of the United Nations but should be a concrete objective for the twenty-fourth session of the General Assembly. We suggest that negotiations should begin immediately within the framework of this session of the Committee which should complete its work only after having achieved a positive result or after the discussion in the First Committee has forced it to admit its failure in writing.

The progressive preparation of space law is certainly a priority matter for this Committee. However, there exists another essential aspect of our action which was made quite clear at the Conference of Vienna in 1968. That Conference, in fact, has been an important milestone in the direction of the dissemination and application of space technology and the practical advantages which can be derived in the interest of all nations, particularly by the less advanced countries in space research.

The General Assembly has entrusted to this Committee the task of studying what should be the means of encouraging those Powers, especially the developing countries, to have them benefit from the application of space technology. On the one hand, it is important to promote the dissemination of the knowledge accumulated in space research among the non-space Powers;

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on the other hand, the latter should be able to benefit through the possibilities which have been opened up in this new field by human ingenuity. These are the two aspects of technical assistance: information and consultation on the one hand, and training scholarships on the other, which one finds in the various suggestions made by India, Sierra Leone, the United Arab Republic and others, to which reference is made in paragraphs 4 and 5 of Part A and paragraph 6 of Part B of resolution 2453 (XXIII) of the General Assembly.

The Scientific Sub-Committee has dealt with these two aspects under the headings "Promotion of the applications of space technology" and "Education and training".

The first of these two aspects is inscribed in the perspectives flowing from the Conference of Vienna of 1968. It will be recalled that at the end of that Conference, it was felt that information work on a broader scale would be desirable. It was thus at the closing meeting that Dr. Sarabhai, the scientific President of the Conference, stated:

"I am convinced that one of the important tasks of the present Conference will not be completed unless the contents of the papers which have been presented here are brought to the knowledge of a broader circle of readers and responsible persons."

The Minister for Foreign Affairs, Mr. Kurt Waldheim, President of the Conference, for his part, added:

"The Conference will only be a first step on a long and difficult road. The men of science and the experts who have spoken here have demonstrated the possibilities of the practical applications of space technology; they have pointed out the existing possibilities of progress and co-operation. The next step is one which depends on the will of our Governments. May we ... express the hope that they can face up to their responsibilities and that the spirit of curiosity of scientists, the ingenuity of engineers and the courage of the cosmonauts will match the clear-sightedness and determination of the political leaders."

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Now there are a certain number of indications which seem to corroborate the observation that the non-space Powers have not yet fully realized the progress which has been achieved by the Conference.

First, in paragraph 17 of its report, the Sub-Committee has indicated, for example, the fact that relatively very little use has been made of the documentation which has been made available by the Division on Outer Space.

In paragraph 44 attention was called of all members to the information appearing in the "International Repertory of Installations and Services related to Education and Training in the Different Subjects which are related to the peaceful Uses of Outer Space". In this regard, may I point out that the text approved at the meeting did not make explicit mention of the very useful publication of the United Nations which, unfortunately, seems to exist only in the English language. Perhaps one of the possibilities for a better dissemination of the information relative to the possibilities offered in the field of education and training, which is mentioned in paragraph 45 of the report of the Scientific and Technical Sub-Committee, would consist in the publication of this Repertory in other languages as well, in French in particular.

In the course of the discussion the representative of Italy felt that it would be desirable for the Secretary-General to submit a report on the requests for information on space problems which have been submitted by Member States. This is a very simple suggestion which, I believe, should be retained.

Finally, in the declaration which was made on 20 March 1969, the representative of the UNDP indicated the role which that organization, which is the principal source of multilateral assistance to developing countries in technical matters and in the matter of preinvestment, could play in this particular field and how that role could be increased.

On that occasion he gave the assurance:

"... that the UNDP would consider favourably all requests for assistance submitted by a participating Government or by a group of Governments with regard to projects relating to the peaceful utilization of outer space if the requesting country granted sufficient priority to the project and if it fell within the mandate of the UNDP as defined by the United Nations General Assembly."

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The Governments determine the relative priorities of the various projects for which UNDP assistance is requested; one can apprehend that they are not always conscious of the importance of those projects which can be presented for the development plans of their countries.

The Sub-Committee was fully conscious of its limitations. In taking them into account, it made a certain number of recommendations, the principal one being the appointment on an experimental basis of a specialist who would devote his full activities to the promotion of the practical application of space technology.

The delegation of Canada felt, given the nature of the functions with which the expert would be charged, that he should carry out his activity within the framework of the Department of Economic Affairs rather than in the Department of Political Affairs. That delegation suggested that the Committee should re-examine the choice of the service which would be in charge of that matter on the basis of a report of the Secretary-General. If such a report should be made available, my delegation would be happy to welcome it. We believe that the suggestions of the representative of Canada were extremely pertinent.

A third field in which the Committee was active in 1968 concerned satellites of direct radio broadcasting. I should like to pay a tribute to the delegations of Sweden and Canada for the initiative which they have taken in that regard, and to the Working Group which was directed with considerable competence by Mr. Rydbeck, for the two extremely useful reports which were submitted.

The second report of the Working Group on satellites of direct radio broadcasting indicates that at long range there are important possibilities of the application of direct radio broadcasting by satellites in the interests of the whole of mankind.

On the other hand, the broadcasts concerning the technical possibilities which are reflected in the first report of the Working Group establish a distinction between the various types of radio broadcasting systems by satellites.

The first of these types would make it possible to transmit television programmes through the intermediary of collective installations which would serve more or less restricted communities in which the broadcasts would be retransmitted according to regular procedures. Such a system, which could be realized in the coming years, offers very encouraging prospects. This is of particular interest

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for the developing countries, which are not yet in possession of an infrastructure relating to land telecommunications. It would make it possible to link isolated communities and would contribute especially to the efforts of those countries in the field of education and the training of teachers, as well as such fields as health, agriculture and so forth. The experiences envisaged in India and Brazil deserve our particular attention in this regard.

We should not expect that many international problems of co-ordination and control would arise in such case, because Governments would be able to adopt the regulations which would appear appropriate to them and would be able to exercise controls over the broadcasts. On the other hand, the problems which are related to the freedom of broadcasting would, of course, become acute if the direct reception would be an individual matter. In this regard, the report mentions two phases: where the domestic posts would have to be changed, that is to say with complementary equipment in order to receive directly the television broadcasts sent by satellites, and where the ordinary domestic receivers which are not changed could be utilized for that purpose.

I have mentioned two phases, because it seems that the receiving of broadcasts by modified posts could be technically realized by 1975, whereas the regular television service using receivers which are not modified could not take place before 1985. In addition, the cost of the modified reception would be prohibitive -- "a number of the problems discussed may not come to a head for some years". (A/AC.105/66, paragraph 52) The Working Group stressed that "nevertheless it is essential that such further study should proceed now to keep pace with technological development". (Ibid., paragraph 26)

The Belgian delegation shares that point of view. It seems normal that the international community should be concerned with the possible consequences of the application of new progress which technology is on the verge of making. We cannot underestimate the enormous advantages which this progress could make in bringing closer the populations of different countries and of various regions within the same country. On the other hand, we cannot overlook the obstacles which will exist for some time with respect to the development of direct television broadcasting, obstacles which are less technical than economic:

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even though the technical possibilities may exist, direct television broadcasting will not be commercially realized for many years. On the other hand, the Working Group has recognized that the abusive use of this technology could have particularly undesirable results. The role of our Committee, therefore, becomes quite clear.

First, it should study, on the basis of the preliminary work of the Working Group and the excellent memorandum presented by France, the implications of direct radio broadcasting.

Secondly, it should examine the principles and the application of regulations concerning the contents of broadcasting.

Thirdly, it should take into account the extraordinary possibilities offered by that technology to developing countries, and accord particular attention to the means of providing them with technical assistance in problems posed by that type of international co-operation.

Fourthly, it should co-operate with ITU, which is now engaged actively in the field of assigning frequency bands and establishing technological regulations.

Finally, it should co-operate with UNESCO, which is studying the problems of the protection of televised programmes within the framework of private international law.

The Working Group could only make an inventory of the problems and it has expressed the desire that its mandate should be prolonged so that it could "assist the Committee in the further study of the particular questions which the General Assembly might decide require further attention by it". (*Ibid.*, para. 66) The Belgian delegation believes that if the mandate of the Group should be prolonged the Group would be able to do useful work, especially with regard to the five groups of problems which I have just mentioned.

Finally, I should like to submit some observations concerning certain aspects of the method of future work of the two Sub-Committees.

I shall refer first to the new method of work devised by the Scientific and Technical Sub-Committee, the objectives of which we consider particularly praiseworthy. The Sub-Committee expresses the wish that the activities of the United Nations should be in step with the rapid progress of space science and technology. It wishes to increase its contribution to the development of

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peaceful international co-operation in space activities, taking especially into account the needs of the developing countries. Would the envisaged method respond to that objective? It presupposes -- this was decided by the Sub-Committee -- that the working documents would be prepared by the members on the subjects that they felt would be such as to be of most interest and importance for the Sub-Committee. All these subjects would automatically be inscribed on the provisional agenda, "thereby increasing opportunities for productive and enlightening discussions in the Sub-Committee". (A/AC.105/55, para. 48) The representative of India expressed apprehension that the proposed subjects could be too numerous to be studied within the course of a given session. He suggested that the Sub-Committee itself should choose the subjects and give certain indications to the countries.

My delegation would like to express some reservations with regard to the procedure envisaged by the Sub-Committee. Not only do we have some concern about the prospects of disorganized debates, but we also feel that the mandate of the Committee and, *a fortiori*, of the Sub-Committees, has been set down by the General Assembly, and that therefore, in principle, it is not up to the members of the Sub-Committee to prepare a working document on a subject which they feel would be of particular interest and importance.

In that regard, we believe that it would be useful to establish a parallel between the method proposed by the Scientific and Technical Sub-Committee and the list of subjects which must be examined in the future by the Legal Sub-Committee, as reflected in annex V of the report.

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This list, which was established by the Secretariat, taking into account the various suggestions made by delegations, includes fourteen points. Therefore, if the General Assembly or this Committee does not at least establish certain priorities among these questions, nobody will know, after the close of the debate on liability, what will be the subsequent task of the Sub-Committee. It appears evident to me that the Committee will have to perform its co-ordinating function by establishing priorities and submitting them to the approval of the General Assembly.

Taking into account the contents of paragraphs 13, 14 and 15 of the Legal Sub-Committee and the fact that a draft agreement on liability will receive the approval of the General Assembly at its twenty-fourth session, my delegation suggests the following system of priorities: first, the definition and the delimitation of outer space; secondly, the registration of objects launched into outer space; thirdly, the rules which should govern human activities on the moon and other celestial bodies; and fourthly, the legal regime applicable to materials coming from the moon and other celestial bodies.

The co-ordination of the activities of the specialized agencies concerning the questions related to outer space and the connected question of knowing whether it would be useful and possible to establish an international inter-governmental agency for outer space seem to us to be problems of a general character which have political implications that should be examined in due course by the main Committee.

The legal aspects of direct broadcasting from satellites fall within the competence of the Working Group under paragraph 3 of resolution 2453 B (XXIII). If it is decided to continue the existence of the Working Group, the examination of this question by the Legal Sub-Committee would constitute a duplication that we would not be able to approve.

With regard to the system of working papers, its usefulness is beyond doubt. But a working document is not necessarily the work of one delegation. Thus, when in the Legal Sub-Committee the problem of the

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definition and the delimitation of outer space was taken up without sufficient documentation, the Belgian delegation proposed a recommendation that the Secretariat should be invited to prepare an exhaustive document on the subject-matter. It is interesting to note that the Scientific and Technical Sub-Committee has already -- without waiting for the appointment of an expert who would be engaged on a full-time basis in the promotion of the applications of space technology -- made use of this procedure.

In paragraphs 27 and 30 of its report, the Sub-Committee requests the Secretary-General, with the assistance of that expert, to draw up: first, a complete analysis of all the needs -- in the field of assistance with regard to the practical applications of outer-space techniques -- and of the means of satisfying such needs, with an assessment of the administrative, technological and financial resources required; and secondly, a report on the desirability of convening in 1971, or as soon as possible after that date, a study group which would discuss the application of space technology and other connected techniques, after consultation with the FAO and other interested agencies of the United Nations.

Those are two concrete examples where the Sub-Committee itself asked the Secretariat to prepare documentation. This confirms the doubts which I have already expressed.

My delegation would therefore have preferred a more detailed description of the future method of work of the Scientific and Technical Sub-Committee, which would put stress on its institutional framework, would give the precise mandate of the Sub-Committee, and, while encouraging the initiative of members, would prevent a chaotic development.

The year 1969 was rich in admirable progress in the technical field, which is due mainly to the efforts of the United States and the Soviet Union. It is not astonishing that this Committee has some difficulty in trying to follow this enormous speed of development. However, it is important that the Committee should justify the trust placed in it and that it should respond to the legitimate hopes of the international community and should carry out to the very end the mandate which it received from the General Assembly. It is only thus that the Assembly will really be able to be satisfied with its work.

Mr. TSURUOKA (Japan): I should like, first, to express our warm congratulations to the Rapporteur on his unanimous election to that important post.

On the first day of this session we heard a statement by the representative of the United States on Apollo 11, and saw a special exhibition of a film thereon. The success of Apollo 11 may be likened to the discovery of America by Columbus. This comparison may be right in its importance to the history of mankind. However, there is one point on which the two events are quite different from each other. It is that the discovery of America by Columbus was an adventure of life or death, while, on the contrary, the success of Apollo 11 was accomplished with complete safety measures and on the basis of the marvelous results of science and technology. In saying this, I am not underestimating the courage of the three astronauts in any manner whatsoever, for I am one of the millions who greatly admire their bravery. Apollo 11 has shown the new extension of science and technology in space.

In this connexion my delegation is pleased that Japan was able to make a contribution to the Apollo 11 flight. Our relay station at Yamaguchi was given the important role of relaying the television waves from Apollo 11 to Europe so that the people of that continent could watch on live television the first step of mankind on the surface of the moon. In comparison with the space activities of the United States and the Soviet Union, those of my country are on a small scale and not fully developed, but we have recently begun to carry out a series of launchings of rockets, so that we can try to put an exploration satellite in orbit in the near future.

Now, my delegation would like to state, first with regard to the report of the Legal Sub-Committee, our regret that the Sub-Committee has failed again to complete the preparation of a draft convention on liability. Thus, the Committee cannot fulfil the instruction from the General Assembly on this problem. However, this does not of course mean that the Member States lacked the intention of completing a convention on liability. My delegation believes that all the delegations in the Legal Sub-Committee, during its last

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session, wanted to complete the preparation of a draft convention, but the reality was that there were differences of views on some basic points of the convention. My delegation does not hesitate to note that during the last session of the Legal Sub-Committee there was considerable progress. First, with regard to the problems other than the five controversial ones, many of them have been given concrete formulations. They include, among others, the fundamental principle of absolute liability, the definition of space objects according to which the launch vehicle is explicitly included, the exclusion from the convention of foreign nationals participating in the operation of a space object from its launching or at any stage thereafter until its descent, and the right of the State which has paid compensation to present a claim for indemnification to other participants in the joint launching.

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Secondly, my delegation would like to comment on some of the five controversial problems which were, to our regret, regarded by some delegations as some kind of "package deal". One problem on which there was a large difference of views between the socialist States, on the one hand, and the other States, on the other, was that of the procedures for the settlement of disputes. The socialist countries were against compulsory arbitration possibly because they feared that the convention included political elements. However, my delegation believes that there was a consensus that arbitration should deal only with the relation between the launching of space objects and the damage caused by them, and also the assessment of the amount of compensation. These two problems have no political elements. Accordingly, my delegation hopes that the socialist States will accept compulsory arbitration.

With regard to the applicable laws, the New Delhi Press communiqué and the draft convention proposed by India, document A/AC.105/C.2/L.32/Rev.2, provides that

"... the amount of compensation shall be determined in accordance with international law, taking into consideration the law of the claimant State..." (A/AC.105/58. annex II. page 26)

The expression "taking into consideration", may be interpreted to mean "and taking into consideration". In that case, the national law of a given State is placed on an equal footing with international law. My delegation is unable to support this, and believes that national law should be supplemental to international law.

Now, with respect to nuclear damage, my delegation in the Legal Sub-Committee reserved its position as to whether nuclear damage should be covered by the convention. However, I would like to state that, as a result of further consideration, my country is in favour of including nuclear damage in the convention.

These are the views of my delegation on problems of substance in the convention on liability. Turning to procedural matters, my delegation greatly regrets that during the last session of the Legal Sub-Committee the consideration of problems other than the five controversial questions were made in an informal working group where no record was taken. My delegation believes that records

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of a discussion are very useful since the interpretation of a convention is very much facilitated by the records of the conference that has considered the draft of the convention. The lack of records may give rise to more disputes on the interpretation of the convention.

My delegation considers that the Legal Sub-Committee should continue its consideration of the convention on liability at its next session. Our delegation is strongly against a repetition of what occurred in the past, that is, that only a limited number of member States of our Committee participated in negotiations and later urged the others to accept the results, not giving them sufficient time to consider fully the substance.

With regard to the item on utilization of space, my delegation appreciates the efforts of France in producing a draft convention concerning the registration of objects launched into space for the exploration or use of outer space.

I turn now to the report of the Scientific and Technical Sub-Committee. My delegation welcomes particularly, the recommendations of the Sub-Committee on the application of space technology. We also welcome its decision on its future work, according to which the Sub-Committee will make sufficient preparation so that it can carry out a full consideration of the substance of scientific and technical problems.

With respect to the report of the Working Group on Direct Broadcast Satellites, we are pleased to note that it has listed many possible problems which might occur when broadcasting directly from satellites comes to reality. My delegation cannot support the idea of making the Working Group a permanent body, since, as pointed out by the report, the realization of direct broadcasts from satellites on an operational basis may not take place for many years after the projected date of feasibility. My delegation is of the opinion that the reconvening of the Working Group may be considered in the future when there may occur concrete problems to be solved urgently.

Mr. EVANS (Australia): Mr. Chairman, the delegation of Australia wishes at the outset to welcome you to the first full session of the United Nations Committee on the Peaceful Uses of Outer Space, over which you have been called upon to preside since your election as Chairman of our Committee. We are confident that under your Chairmanship we will have a useful and fruitful session.

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We should also like to pass our best wishes to Mr. de Souza e Silva of the delegation of Brazil on his election as Rapporteur of our Committee.

As other speakers have noted before me, the Outer Space Committee is meeting this year at a most exciting time in the history of outer-space exploration. Since our Committee met in the latter part of 1968 we have all witnessed dramatic new achievements in the exploration of outer space. When, in 1960, the late President Kennedy set his hand to a programme which foresaw the possibility of a manned landing on the moon before the end of the current decade, there were many who, not improperly at the time, questioned whether this could be achieved. This project has now become a reality, and the delegation of Australia wishes to join its voice to those who have congratulated the United States delegation and, through it, the Government and people of the United States, for the remarkable combination of efficiency, far-sightedness and confidence which led to the success of the Apollo 11 mission and those which preceded it. The delegation of Australia looks forward to further successes by the United States, the Soviet Union and indeed all other States contributing to the peaceful uses of outer space for the benefit of us all.

The Government of Australia is particularly glad that it has been able, together with many other States, including Japan, whose Ambassador referred to this matter this morning, to co-operate with the United States in the Apollo series. We are grateful to the Administrator of NASA, Dr. Paine, for his gracious remarks on the role which Australia played in providing tracking and other facilities, including the use of the Parkes radiotelescope to assist in the reception of film coverage from the surface of the moon for hundreds of millions of viewers on earth.

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I should now like to turn to the activities of the various subsidiary bodies of this Committee which themselves have had a busy year. The decision to establish a Working Group on Direct Broadcasts from Satellites has, we believe, been justified by the work which it has performed during the year. I shall return to this at a later stage in our statement. I shall also return to the work of the Scientific and Technical Sub-Committee which engaged in a detailed review of possible new programmes in the light of the results of the Outer Space Conference held in Vienna in 1968.

The delegation of Australia wishes to deal primarily with the work of the Legal Sub-Committee because in our view the conclusion of a convention on liability for damage caused by the launching of objects into outer space remains the most important outstanding task of that Committee and indeed of the Outer Space Committee as a whole. Unfortunately, as in previous years, it was again impossible to conclude that convention at the 1969 session of the Legal Sub-Committee. The delegation of Australia, like the delegations of the United States, Belgium and Japan, which have preceded it, greatly regrets that this should be so. At the June session of the Legal Sub-Committee the delegation of Australia urged that the Sub-Committee should, if necessary, devote its entire session to consideration of the liability convention. It sought repeatedly with a number of other delegations to devise procedures both formal and informal for discussion of the liability convention with a view to completing it. Regrettably, however, some delegations were unable to respond to those procedural suggestions most designed to achieve that end. Failure to institute meaningful negotiations on the major outstanding points led to the inevitable non-conclusion of the convention.

Many delegations believe that it is essential to institute a proper balance of interests and responsibilities in space affairs between the major space Powers and the non-space Powers. Most non-space Powers readily accepted the Agreement on the Rescue and Return of Astronauts and Space Objects and while this Agreement constitutes undoubtedly a significant further advance in the development of the law affecting outer space, it is, as other delegations have noted, predominantly of advantage to the major space countries. The

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delegation of Australia believes that most delegations approached the Geneva session of the Legal Sub-Committee in the hope that the interests of the non-space Powers would ultimately be realized in a satisfactory liability convention. As I have already mentioned, this has still not yet been achieved, but we urge those who have as yet been unable to make meaningful concessions in the interest of a broad settlement to do so in the near future. We recall that a number of States have made known their view that until an acceptable liability convention is negotiated they will not be in a position to ratify the rescue and return agreement thereby accepting its provisions as binding legal obligations. The delegation of Australia believes that it will be in the interests of all, both claimant States and respondent States, if the liability agreement can be concluded as soon as possible, and it stands ready to assist in any efforts towards that end.

The report of the Legal Sub-Committee indicates that while there was no resolution of most of the major outstanding problems, which for convenient reference are referred to in document A/AC.105/C.2/L.51, there was some progress on a number of matters relating to the convention. We believe that a useful addition to the draft convention was the inclusion of a provision under joint liability making it clear that where two or more States are jointly and severally liable for any damage caused, the State which has paid compensation for damage shall have the right to present a claim for indemnification to other participants in the joint launching. That text is contained on page 9 of the report of the Legal Sub-Committee. That text also notes that participants in a joint launching may conclude agreements regarding the apportioning amongst themselves of the financial obligation in respect of which they are jointly and severally liable. Such a formulation will in our view provide some encouragement to States to co-operate in joint launchings by recognizing that arrangements between them for the payment of damage would be recognized as valid. The principle of joint and several liability would not, however, be affected under the convention nor would the rights of the State sustaining damage.

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I should now like to refer to some of the major unresolved issues and in particular to the question of compulsory settlement of disputes. The delegation of Australia has always shared the views of the very substantial majority of the Committee that if the liability convention is to be satisfactory for the non-space Powers, it must contain remedies which are certain and precise. Such certain and precise remedies would include compulsory arbitration procedures for disputes arising under the convention. In a situation where it is most likely that disputes will arise between a non-space Power and one of the major space Powers this position has in our view appeared both just and reasonable. We urge that those delegations which have objected to compulsory third-party settlement will further review their positions to meet the wishes of the large majority on this point. In this connexion, we would wish to record that we strongly doubt that suggestions that have been made for an optional protocol on compulsory arbitration would provide the certainty of remedy procedures which a convention of this kind should contain.

On the other outstanding points which have caused difficulty, we believe that although there is no formal agreement it is now the general understanding of the Legal Sub-Committee that nuclear damage should be covered by the convention. In this connexion we welcome the statement made this morning by the delegation of Japan indicating that it is now prepared to accept this position in a spirit of compromise. There are outstanding differences on the law to be applied in respect of damage but it would seem necessary at least to ensure that unless there is agreement between the parties as to the application of a particular system of national law or other principles or rules, compensation should be assessed in accordance with applicable principles of international law, justice and equity. Although some additional reference to a particular system of national law may well be appropriate -- and in our view this would refer to the law of the claimant or possibly the State in which the damage occurred, along the lines of the proposal contained in document A/AC.105/C.2/L.47 -- it would seem to our delegation in the nature of this convention that it would be inappropriate to have any reference to the automatic application of the law of the launching State.

(Mr. Evans, Australia)

It should be evident, on another outstanding point, that if the Convention is to provide for the imposition of international legal obligations upon international intergovernmental organizations it will be necessary either to permit those organizations to become parties to the Convention or alternatively by declaration to assume rights and obligations under the Convention similar to those of States.

I turn now to the report of the Scientific and Technical Sub-Committee contained in document A/AC.105/55. This Sub-Committee considered a number of useful proposals which emerged from the Outer Space Conference held in Vienna in 1968 and particularly those put forward by the delegations of India and Sierra Leone. The Sub-Committee related those proposals to the various needs and requests which had been made or might be made for information and technical and other assistance in various fields of the application of outer space techniques. The Sub-Committee placed particular and proper emphasis on the need to bring to the attention of Members of the United Nations the range of existing information and technical assistance available through the specialized agencies and individual States. The addendum to document A/AC.105/55 is most useful in that respect. We hope that the information contained in that addendum, together with that provided by Member States, can be kept up to date for the benefit of all Members of the United Nations. We welcome particularly the request that Member States consider carefully the possibility of making their own requests to particular specialized agencies and to the United Nations Development Programme for assistance. It is to be hoped that these bodies will give appropriate attention, as we believe they will, to requests for assistance in their fields of competence.

The delegation of Australia believes that the appointment of an expert in the Secretariat to co-ordinate requests for assistance and act as a channel of information on the applications of space techniques would be worth while. The experimental proposals outlined in paragraphs 23 to 27 of the Sub-Committee's report should be recommended to the General Assembly. Concerning the possibility of convening regional seminars from time to time on specific topics of space application, we note from the addendum to the report that a number of agencies such as ITU, WMO, WHO and the regional economic

(Mr. Evans, Australia)

commissions have already interested themselves in regional discussions on the application of space techniques. We share the view that any new activities involving panel meetings would best be carried out in connexion with the agencies involved and preferably be funded by them.

The final matters to which the delegation of Australia wishes to devote some attention are contained in the interesting reports (A/AC.105/51 and A/AC.105/66) of the Working Group on Direct Broadcast Satellites.

The conclusions of the first report on technical feasibility show that, while direct broadcasting into community ground receivers could be close at hand and might be possible in the mid-1970s, forms of direct broadcasting into home receivers are unlikely before the mid-1980s. However, the conclusions of the first report of the Working Group, which were endorsed by relevant references in the second report, indicate the need for early and proper allocation of the frequency spectrum for satellite space services. Studies are currently being undertaken by the International Radio Consultative Committee of ITU with a view to putting recommendations to the Plenary Assembly of ITU in January 1970. The second World Administrative Radio Conference for Space Telecommunications, which is due to convene in Geneva in 1971, will consider new frequency allocations for all the space services and will take necessary action to co-ordinate frequency planning requirements. The role of ITU in this field has been properly recognized in both reports of the Working Group. It follows from this assessment that the delegation of Australia feels that at least so far as the technical considerations are concerned the Working Group has fully discharged its mandate. We doubt that much, if any, further work need be done by the Working Group or by this Committee on technical feasibility questions and predictions, pending the appropriate decisions by ITU and the second World Radio Administrative Conference. We imagine that this view might be widely shared by the members of the Committee.

I turn now to the report of the second session of the Working Group. The second session endeavoured to identify the areas where action and decision would be necessary if the international regulation of satellite broadcasting was to move in time with the technological developments foreshadowed in the first report. The Working Group was able to suggest

(Mr. Evans, Australia)

what organizations should initially be responsible for such action and decision. The areas particularly covered by the Working Group in accordance with its mandate are, as is known, those relating to legal, social and cultural questions.

On the basis of the conclusions of the first report, the Working Group considered that, in the case of direct broadcast from satellites for purely domestic coverage, governments would be able to adopt such regulations as they considered appropriate. It was concluded that for purely domestic use there were few international or co-ordination control problems. When unaugmented home receivers are used for domestic coverage -- a development not foreseen in the period 1970 to 1985 -- problems of unintentional spill-over into other States might arise. The Working Group recognized that for regional or global coverage into community receivers a significant degree of control by individual governments would still be possible, as individual governments would presumably be able to maintain effective supervision of community receivers. It was recognized, however, that much more difficult problems could arise in the case of direct broadcasting into unaugmented home receivers.

This summary, in our view, provides the general framework for further consideration of the topic which was referred to the Working Group. The Working Group itself felt that the Outer Space Committee was the most appropriate body to co-ordinate and keep under review in a comprehensive fashion the activities of international institutions and States with an interest in direct broadcasting from satellites. After a detailed discussion of the international legal questions relating to such satellites the Working Group concluded that this Committee should recommend to the United Nations General Assembly that further study of these legal questions should be undertaken. A number of other recommendations for further study were made, as indicated in the report of the Working Group. For example, it was suggested that matters relating to the difficult questions of copyright and neighbouring rights should be studied and reported on to the Outer Space Committee by the competent international agencies, inter alia by UNESCO and BIRPI.

(Mr. Evans, Australia)

The content of broadcasts gave rise to some discussion, and it was recognized that considerable difficulties would lie in the way of producing a generally accepted code to govern the content of satellite broadcasts. Different States have different views on programme acceptability. The Working Group felt that political questions of programme content might remain a matter for discussion by the Outer Space Committee and recognized that UNESCO should assist it in the study of questions relating to national development, education and cultural exchanges, as well as on other issues. The Working Group considered that UNESCO and appropriate broadcasting organizations might provide further information on the commercial aspects of direct broadcasting, which are of such importance to a large number of countries.

(Mr. Evans, Australia)

As a result of its discussions, the second session of the Working Group was firmly of the view that a good deal of international co-operation would be necessary in the foreseeable future to regulate the use of direct broadcast from satellites in a satisfactory and acceptable manner. It was particularly conscious of the possibility of using direct broadcast satellites for the further dissemination of information for the development of all countries, and particularly those countries whose terrestrial facilities do not yet provide full or widespread domestic coverage.

The delegation of Australia supports the two main conclusions emerging from the Working Group's report. There is first a need for international co-operation and regulation in which both States and international organizations -- including broadcasting organizations -- will bear responsibility.

The second major conclusion is that there should be appropriate supervision and co-ordination in this process. We believe that this Committee should recommend to the General Assembly that international action in the field of direct broadcast satellites be undertaken as a coherent whole, and not as the result of individual actions by different organizations and States. The Outer Space Committee will need to keep a watching brief on developments, and it may be that the Working Group should meet again at an appropriate time.

In this connexion, as I have already alluded to, there would appear to be little further that the Working Group or this Committee can achieve in the near future on the purely technical side that has not been covered in the two reports before us. Clearly, however, the Working Group could play a useful role if it is to continue study of the questions which, it correctly points out, need further attention.

We can agree that if the Outer Space Committee is to retain an interest in this field, this probably means that the most appropriate body to pursue this study would be the Working Group itself, in which appropriate experts can devote attention to the particular questions already opened up.

(Mr. Evans, Australia)

We have no firm views at this stage, however, as to the timing of any future meetings of the Working Group, and recognize that time might be needed for further reflection on the points raised at the second session of the Working Group. If the recommendations before us are accepted, reports will need to be prepared by a number of international agencies, such as UNESCO; and, when prepared, these will require some study by States and other interested international organizations. Ideally, the Working Group would not need to meet again until this process of evaluation has produced something new and concrete for it to work upon.

Having said that, I wish to point out that the Australian delegation does not wish to see any undue delay in carrying forward the work which has now been begun. Technological developments have, after all, in the last decade or two, usually run ahead of the relevant predictions. We recall how in 1962 the declaration of legal principles was adopted by the General Assembly, and these legal principles ultimately led to the conclusion of the Outer Space Treaty. On reflection, I am sure that we would all agree that the Treaty and the principles have provided a most useful legal framework for outer space activities, which in the main have preceded the technological developments they were designed to regulate.

In closing, permit me first to recapitulate the main point of the earlier part of my statement. The delegation of Australia wholeheartedly shares the views of those delegations which attach particular importance to the early conclusion of a satisfactory convention on liability. We earnestly hope that this view is shared by all other members of the Committee, and we further hope that by joint action the liability convention can become an early reality. We are ready to continue discussion of this topic, as we have always been.

My final point concerns the basic reason for the existence of this Committee: namely, the promotion of international co-operation in the peaceful uses of outer space. The developments in the last year have shown how mankind

(Mr. Evans, Australia)

can meet and overcome the prodigious problems of space exploration. As the United States astronaut Mr. Neil Armstrong said when being honoured by the Secretary-General of the United Nations on these very premises, "It is to be hoped that we citizens of Earth, who can solve the problems of leaving earth, can also solve the problems of staying on it".

Co-operation in the peaceful uses of outer space is, after all, one aspect of the co-operation which we all need in all aspects of human endeavour if the purposes of the United Nations to maintain international peace and security and promote the general welfare of peoples are to be adequately fulfilled.

The CHAIRMAN: I should like to express my thanks to Mr. Evans for the kind personal remarks with which he opened his statement.

There being no other representatives of Member States who have asked to speak, I now call on the representative of ITU.

Mr. POULIQUEN (International Telecommunications Union) (interpretation from French): Mr. Chairman, before presenting a brief summary of the activities of ITU in the field of space telecommunications, I should like to tell you what great importance the Secretary-General of ITU, Mr. Mili, attaches to your Committee and how closely he himself follows your work. Because of his numerous obligations, Mr. Mili has asked me to convey to you his deep regret at not being able personally to attend this meeting, as well as his wishes for the complete success of your work.

Mr. Butler, Under-Secretary-General, who participated in the meetings of the sub-committees and working groups, is also sorry he cannot be here with you.

I think it is not necessary to examine in detail all of the activities of ITU in the field of space. Members of the Committee are certainly aware of what is going on, thanks to the various contributions of our Union.

(Mr. Pouliquen, ITU)

You also know why ITU must and does give particular importance to the matter of space. It is simply because all of the services which utilize satellites for their own needs must necessarily use radio communications, and it is the duty of ITU to do everything possible to assure them of radio communications which will enable them to function efficiently and without interference.

When a satellite is specially intended for channelling radio communications between different points on earth, it must, furthermore, ensure the integration of the system of which the satellite is part, according to the classic earth system.

The problem of space radio communications is particularly complex because it may easily be interfered with by services already existing on earth. It is precisely the role of the regulations for radio communications, annexed to the International Convention on Telecommunications, to formulate specific rules to ensure the correct functioning of its services.

These services are extremely varied; they may concern applications as diverse as space research, the utilization of satellites for aeronautics, or sound and visual radio broadcasting.

The present regulations with regard to space radio communications date from 1963. The rapid evolution of this technology made it necessary to revise the regulations. It is for this reason that the Governing Council of ITU, at its last session, decided, after approval by the majority of the members of the Union, that a world administrative conference on space telecommunications should be held in Geneva, starting on 7 June 1971. I think it superfluous to stress the importance of this decision because, as you can see in examining the resolution of the Administrative Council, the agenda is extremely vast, in as much as it provides for the revision of the provisions of the regulations on radio communications and the adoption of all new measures for the services relating to space radio communications. This covers the allocation of frequency bands to the different services. For this reason we must study in particular the problem of the frequencies to be allocated to the service of radio broadcasting by satellites. To take another example, we shall be studying the matter of the rational utilization of the geostationary orbit.

(Mr. Pouliquen, ITU)

In the field of regulation it can be said that the ITU has taken the necessary measures. But the 1971 conference, far from marking an isolated stage in the activity of our Union, in a sense, constitutes only a beginning. An immense preparatory work is now being started by the administration members of the ITU. This work, which is essentially a work of normalization and of studies, is being carried out in the consultative committee of the ITU.

For more than ten years the International Advisory Committee on Radiocommunications has undertaken the study of technical problems posed by space radio communications, studies which are carried out in one of the committees of that organ. This Committee studies all the technical problems posed by space radio communications. Thus one of its working groups studies the optimum utilization of the geostationary orbit and it is going to study the radioelectric problems posed by the satellites making a survey of the earth's resources. The other committees of the International Advisory Committee on Radiocommunications is also studying the problems posed by the introduction of satellites in their own fields, for example, those of the application of mobile services or radio broadcasting. Thus the facts given in the appropriate texts of that Committee have still been utilized very largely in order to draft the technical part of the report of the Working Group on direct radio broadcasting by means of satellites.

These study committees have just begun their meetings which will last for approximately two months. The conclusions of these meetings will be submitted for the approval of the twelfth plenary assembly of the International Advisory Committee on Radiocommunications which is to be held at the beginning of next year; they therefore constitute technical documentation which will be extremely useful for the preparation of new rules in 1971.

Another committee of the ITU, the International Telephonic and Telegraphic Advisory Committee, is dealing more particularly with the numerous problems posed by the integration of telecommunication satellite systems in the world network. This Committee has taken a series of important decisions at its plenary assembly which was held in Mar del Plata at the end of 1968.

(Mr. Pouliquen, ITU)

It can be said, thanks to the decision to hold the next world administrative conference on space telecommunications in 1971, and taking into account very heavy schedules of meetings, many of which will be directed to the preparation of this conference, the ITU has just embarked on a period of great activity in the space field. It is hardly necessary to stress the importance which this work presents for the future, work which is to be carried out during this period as well as the decisions which will be taken in 1971.

One of the major concerns of the Union is that of technical co-operation in the field of space and in particular the assistance to be provided for professional training as well as scholarships, also in the framework of the UNDP, as well as by bilateral and multilateral programmes under which Governments and members of administrations will have to make efforts to furnish as much assistance as possible. In this respect the ITU is an implementing agency for the UNDP and as such it does not finance directly through its own budgetary resources the different projects with regard to scholarships and professional training.

It is useful to mention that during their meetings the advisory committees of the ITU published a great deal of information which constitutes the basic elements which make it possible for the new and developing countries to take decisions on the development of their telecommunications network as well the implementation of new techniques.

The Union is actively engaged in all fields of the question of professional training, particularly with regard to telecommunications between fixed points, to radio broadcasting and television, fields in which many gaps presently exist, which will only become more serious until there is the systematic utilization of telecommunications by means of satellites.

Plans of great scope have been announced with regard to the establishment of earth stations which will be used in the space sectors of telecommunications.

During the next years about fifty to sixty stations will start functioning, a great part of which will be outside geographical zones which have high telephonic density, that is, in new and developing countries.

(Mr. Pouliquen, ITU)

It is now known that measures will be taken so that these stations may start functioning without delay, but it would be useful to study as of now the needs with regard to long-range professional training, taking into account particularly the fact that satellite systems are only one part of the means which can be implemented for telecommunications in order to ensure liaison between users. The new means to be implemented will demand an improvement in the quality of the liaisons as a whole.

At the present time the Union is administering about twenty-three important projects, undertaken under the title of the UNDP Special Fund, and to this end it will employ about 115 experts recruited on the international level. These are extremely important projects. Independently, under the title of the Technical Assistance aspect of the UNDP, about seventy projects will be undertaken for which experts have already been hired as advisers. The projects will carry out specialized missions to solve the problems of professional training of lesser importance.

The Ahmedabad project is now well known. It concerns an international experiment which is unique and a ITU-UNDP mission will evaluate the first phase of this project in order to determine the future policy to be followed.

The question of a wider policy with regard to professional training will be examined after the evaluation of the Ahmedabad project, but we can only see in any case that it will be necessary to increase the number -- which is of little importance -- of scholarships which are being offered at present in order to deal with the new space applications of telecommunications.

The ITU has encouraged the administrations to organize seminars by offering assistance for that purpose.

A certain number of these seminars have already been held, but we recently studied the possibility of using credits made available by the UNDP in order to organize seminars at the headquarters of the ITU and at the regional level. During the years 1969 and 1970, ten to twelve seminars will be held, which will deal with several aspects of telecommunications: the planning and management of networks, telecommunications in their relation to radio broadcasting, methods and techniques for professional training. It is obvious that space applications will

(Mr. Pouliquen, ITU)

sometimes be studied during these seminars, but it is necessary to point out particularly that a seminar is presently being held at ITU headquarters and that it bears more particularly on space telecommunication and on its integration in the whole system of telecommunication. At ITU headquarters it was felt that it would be appropriate to have a seminar intended to familiarize people with all aspects of space telecommunications. This seminar has brought together about seventy participants coming from more than fifty new and developing countries. In January 1970, in co-operation with the Moroccan Government, a seminar will be held in Rabat for African countries, also having as its purpose telecommunications by means of satellites and particularly earth stations. The administrations have organized a certain number of seminars on space telecommunication by giving guidelines in different subjects.

In accordance with the request contained in paragraph 12 of resolution 2453 (XXIII) the ITU, as in previous years, has prepared its report -- the eighth -- on telecommunications and the peaceful uses of outer space. Copies of this report will be distributed to those who still do not have this report.

(Mr. Pouliquen, ITU)

Having given an outline of these facts which make it possible to place the activities of ITU in the field of space, it might perhaps be useful to speak on a subject which is of great concern to the Committee, that is, co-ordination of activities in the field of space.

The ITU would like to co-operate more closely than in the past with the United Nations. It was represented at the meetings of the Scientific and Technical Sub-Committee and of the Legal Sub-Committee, with which it desired to co-operate as effectively as possible within its field of competence. It followed with particular attention the work of the Working Group on radio broadcasting by satellites, which included work already carried out by our competent committees.

With regard to the specialized agencies of the United Nations, it would be useful once again to stress the perfect co-operation which was established in the field of space between ITU and the international organizations responsible for certain satellite applications. We must mention, among others, the World Meteorological Organization for meteorological satellites, IMCO and ICAO for the applications to mobile services and to radio navigation, and UNESCO for radio broadcasting. That co-operation takes on different forms: reciprocal participation in the work and in the meetings of other bodies, joint expert missions and so forth. We should like to point out, among other things, the collaboration with UNESCO for studies concerning India, Pakistan, Brazil and now Latin America. In fact, that co-operation does not date from the space era; it had already started and bore fruit for many years in the field of traditional telecommunications.

The CHAIRMAN (interpretation from French): I should like to thank the representative of ITU for his statement. I believe that I am expressing the opinion of all the members of the Committee in telling him how much we appreciate the co-operation of his organization. With the agreement of the Committee, I should like to ask him to transmit this message to the Secretary-General of ITU.

The meeting rose at 12.35 p.m.

VERBATIM RECORD OF THE SIXTY-FOURTH MEETING

Held on Thursday, 11 September 1969, at 10.30 a.m.

Chairman:

Mr. HAYMERLE

(Austria)

REPORT OF THE COMMITTEE TO THE GENERAL ASSEMBLY (continued)

- (a) REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE (A/AC.105/55 and Add.1, 2 and 3)
- (b) REPORT OF THE LEGAL SUB-COMMITTEE (A/AC.105/58)
- (c) REPORTS OF THE WORKING GROUP ON DIRECT BROADCAST SATELLITES (A/AC.105/51 and A/AC.105/66)

The CHAIRMAN: I have great pleasure in announcing to the Committee that the Chairman of the Working Group on Direct Broadcast Satellites, Mr. Rydbeck, is with us today and is prepared to introduce the report of the Working Group.

Mr. RYDBECK (Sweden), Chairman of the Working Group on Direct Broadcast Satellites: It may be a little late in the day now to present the views of the Working Group, since the Committee has had ample time to debate them, but it may be of some interest to it to hear from me how the Working Group worked and what were the considerations behind some of the main conclusions arrived at by the Working Group.

As will be recalled, the mandate covered both the technical side and the legal, political and social side. The technical aspect was dealt with here in New York in February during a very fruitful session where distinguished technical experts -- in particular, of course, from the two space Powers, the United States and the Soviet Union -- co-operated and arrived at the unanimous report which forms the basis, I think, for any future work in the field of direct broadcasting as far as concerns the United Nations and probably other bodies also.

(Mr. Rydbeck, Sweden)

As regards the time-table, the first step -- that of direct broadcasts into community receivers -- is very close at hand, according to unanimous opinion; the second step -- that of direct broadcasts into augmented home receivers -- is expected around 1975; then, after the necessary decision has been taken to realize that scheme, finally, but not before 1985, there would be the possibility of direct broadcasting into unaugmented home receivers.

The time-table and the technical findings of this report are of course the foundation also for the second report. We adhered strictly to the findings of the first report in all our considerations, which leads immediately to this question: Why, if there is such a relatively long time before the realization of direct broadcasting from satellites, in the full sense of the word, should the Committee and the United Nations attack some of those problems which are dealt with in our report now? As you will find from the report, there was a feeling that, in spite of this, the time to attack them is now, which also emerges very clearly from the report. Some of them take considerable time to solve; they involve international legislation, international conventions, and also changes of national legislation, just to give one example. So the technical element, according to the Working Group, does not indicate that one could let things rest for any length of time.

It is also stated somewhere in the report that the developments in the social and cultural fields should keep pace with technical developments.

I want to pay special tribute to the work accomplished at that first meeting, especially by the drafting committee under the chairmanship of Mr. Marchand of Canada. Although it did not produce a full document giving all the information on direct broadcast satellites, it did, I think, produce, thanks to the great co-operation among members, a document which, in addition to its conclusions, will be of extreme value to all countries which want to seek information in the field of direct broadcasts from satellites -- and I am thinking perhaps in particular of the developing countries.

The second meeting took place in Geneva this summer, and when we met we were faced, of course, through the papers presented and, as the meeting progressed, through the interventions made by several delegations, by a vast complex of questions covering political, social, legal, economic and technical aspects -- a whole complex in which one aspect proved very soon to be very closely related to the other, which also gave us some concern as to how we should organize our report. Everything hangs together, more or less.

(Mr. Rydbeck, Sweden)

Now, what we had to decide at the very outset was how ambitious we should be. You must remember, we had two weeks at our disposal; we could not avail ourselves of the facilities in Geneva any longer than that -- and I do not think we could have done it here either, had we met here. So we had two weeks, and from the beginning there was agreement that we should set our goal so that we could achieve what we set out to do; and what we agreed on was to proceed carefully -- which we certainly did. There were very open and intensive discussions, especially in the drafting committee, to establish the problem areas -- I use the word "problem", which is wrong; one should not start with that, and we did not -- the potentialities for good and positive developments, and then the inevitably arising problems which follow from any use of direct broadcasting from satellites across the borders of certain countries. So we consciously limited our ambitions to that, and while it may be considered perhaps a little too modest, in doing so I think we arrived at a result which can be used for future work; whereas if we had involved ourselves in a more detailed discussion, in particular of extremely important problems, we might not have been able to make a contribution to the future work of this Committee -- including this setting out of the areas to which the United Nations, and this Committee and other bodies -- I should like to underline that -- should devote themselves.

We also tried -- and I think we have been successful, at least partly -- to indicate how perhaps the United Nations Outer Space Committee could continue its work and how other bodies involved might act to contribute to the final solutions. We started, of course, by having a general debate, and some of the statements made in that debate were added to the material which we turned over to the drafting committee in written form. The drafting committee was formed of those delegations which had sent in papers, and also by some other delegations which had not -- in particular, the Mexican, Indian and Brazilian delegations -- representing a very important group of future users of this means of communication. Of course, the space Powers were also in that drafting committee. It worked under the chairmanship of the Australian representative, Mr. Brooks. It had at its assistance the representatives of the ITU and UNESCO; it worked

(Mr. Rydbeck, Sweden)

very hard, but I think I can say it also worked very openly and informally, and I think no problem was avoided; they were all touched upon; all were openly brought into debate; and in the end the drafters produced what proved to be a report which might require some changes in the end, but which could substantially be the final report of the Working Group.

(Mr. Rydbeck, Sweden)

I should stress also that although we had a working group, it was open to all representatives to assist as observers, and of course, if they so wished, to indicate their views during the work of the Group.

The first thing to note about direct broadcast satellites is its great potentialities to further the aims of the United Nations as set down in the Charter or in other documents for the development of the developing countries. I think that the emphasis emerges very clearly from the report, the emphasis we unanimously want to put on the potential benefits to be derived from direct broadcasts from developing countries. This can be a revolutionary means for the spread of information in general if it is allowed to work under conditions which permit its development. There was, however -- and this is quite clear -- a unanimous opinion that, if abused, adverse effects would arise. When it came to discussing the possible adverse effects the emphasis differed from delegation to delegation and no attempt was made to define more precisely which effects were considered the most dangerous. There was unanimity that there were such adverse effects, and in our report we indicate what fields should be studied in this context.

International co-operation emerged very soon as the basis for the development of direct broadcasts from satellites. This was already stressed very strongly by the technical section, let us say, at our meeting in February, and it was taken up as a basic theme in this report, as you will see -- international co-operation between countries, but also bilaterally or multilaterally, with the United Nations as a co-ordinator between international agencies. A whole network of international co-operation is obviously required.

The first and most important thing which we wanted to draw to the attention of the Committee on the Peaceful Uses of Outer Space was the forthcoming World Conference of the ITU because at the basis of all other solutions there is a solution on the technical side, that is, the frequency problem and related problems. In our report we do exhort our Governments to pay great attention to this and also in this context to reflect about participating there on the various social, legal and other aspects of broadcasting which certainly might be affected by decisions taken on the technical side.

(Mr. Rydbeck, Sweden)

Legal questions took up quite a lot of our debating time because there you touch upon many of the real problems. This covers a wide area. It covers international public law, international private law and national legislation. It is also interwoven with the great problem of contents of any direct broadcasts from satellites. The report makes it quite clear that if we have divided things up, it is not that we are unaware of this one complex area which certainly requires the study of the appropriate bodies. Here there are some bodies which are already working. Of course UNESCO is part of the area, BIRPI in other areas. There may be other bodies and certainly this Committee is involved in this work.

The basic international legislation, we agreed, would have to be and is the United Nations Charter. Account should also be taken of the Outer Space Treaty as well as of several of the United Nations General Assembly resolutions. But it is quite clear that in this field there are quite a lot of knots that have to be untied, where the opinions and interests are not unanimous between those who participated in our work. Perhaps it would have been surprising if they had been unanimous.

One basic debating point when it comes to international legislation was the question of sovereignty and non-interference which was taken up as the main theme by some delegations. Others, on the other hand, found that perhaps too much stress should not be laid on this in the context in which we are now working.

I mention this to indicate one very important problem area which this Committee -- and I see no other forum than the United Nations -- must eventually take up. Then you have the more conventional copyright and related rights which have to be dealt with, where we found that the existing network of conventions, legislation, is not adapted to the new situation. Not only that, there is a patchwork where some are universal and some are not. Even as it is now it is a very complex area and has to be attacked from a new angle.

(Mr. Rydbeck, Sweden)

One particular point was mentioned: protection of broadcasts; it has arisen already. It is not a copyright, it is simply to protect a sending country from having its signal used by unauthorized users. If some kind of protection of that kind is not provided a great difficulty will arise in using any system because you will not be able to obtain the rights for your transmission from the holders of the rights unless you can guarantee to what audience they will be directed. UNESCO is dealing with that at the urgent request of the international broadcasting regional unions and the question will be taken up in UNESCO in December at an intergovernmental experts meeting. Attention is drawn to this meeting in our report.

Content is of course a very difficult subject. A code of practice might be a solution. There were, I think, many representatives who rightly doubted whether, in view of the cultural and other differences, it would be feasible to establish a universal code of conduct. Other solutions were debated, the right to object to receiving any programme which you do not want and so on. It is a field which obviously needs very careful study, a field where study should be started, I think, as soon as possible. In this context attention has been drawn to the fact that international co-operation of a rather unusual character already exists between the broadcasters of the world. You have regional unions in Europe, Asia and Africa. You have some organizations in America. In any case, co-operation between these broadcasters has been pushed very far. As a matter of both content and practical co-operation there is a lot of experience to be gained, which was pointed out in our report. This is a point which I think perhaps it might be useful to start by attacking the content problem which is indicated here and on which these unions could do some job in this context.

(Mr. Rydbeck, Sweden)

There is this special chapter devoted to international co-operation. This is not by chance because, as I said in my opening remarks, I think that the key to any solution is international co-operation. We have also stated -- and I think this is quite correct -- that there is no existing body now internationally, outside the United Nations, which covers all the complex fields that have to be attacked. There are specialized agencies whose co-operation is essential -- the ITU and UNESCO are just two -- but there is no body co-ordinating this whole activity. The members of the Working Group have said quite clearly that we believe that the United Nations, and in particular the Committee on the Peaceful Uses of Outer Space, should sustain the interest it has now shown in co-ordinating activity in the field of direct broadcast satellites. The Working Group:

"... considers that the Committee on the Peaceful Uses of Outer Space is the most appropriate body to co-ordinate and to keep under review in a comprehensive fashion the activities of international institutions, and to keep Members of the United Nations informed in a general way of all the relevant developments." (A/AC.105/66, para. 51)

This does not mean -- and I should like to underline this -- that there was any wish on the part of any delegation to establish this Committee or any other United Nations body as a sort of new instrument for administering this. But it was felt that there was a strong need for co-ordination. Logically, we found that this must rest within the United Nations and also, it seemed natural, within this Committee, in whatever form the Committee, and particularly the General Assembly, found appropriate.

I think that I have touched upon the basic aspects of what we propose for our future work. We have indicated that the ITU should take this up, that UNESCO should take it up, and that this Committee should play a sort of co-ordinating role in the whole field, and perhaps in some areas, where is no body working at the moment, review the possibilities of undertaking studies itself.

(Mr. Rydbeck, Sweden)

I shall end my statement by pointing out that, in view of the fact that further work is necessary, and very complex and co-ordinated work, we asked ourselves whether we should suggest that the Working Group should continue its work. We found that:

"In the light of the above report and conclusions, the Working Group is of the opinion that the Committee on the Peaceful Uses of Outer Space should consider whether the Working Group should continue to assist the Committee in the further study of the particular questions which the General Assembly might decide require further attention by it. The Working Group believes that it could, if continued, play a useful role in helping to co-ordinate and study various matters related to direct broadcasts from satellites as outlined in the conclusions of its reports."

(Ibid., para. 66)

That is the gist of our report. I have attempted to give a faithful summing up of the spirit behind it. In mentioning the spirit behind it, I can only say that it was a privilege and a pleasure to be Chairman of the Group. I have rarely seen a group of people, dealing with such extremely touchy and difficult problems, working so well together. A tribute is certainly due to all members. In view of the matter which we are dealing with, which mainly stems from the activities of the space Powers -- and there are only two so far -- I should pay a special tribute to the delegations of the United States and the USSR, which co-operated splendidly with everybody else in the Group.

The CHAIRMAN: Thank you, Mr. Rydbeck, for introducing the report of your Working Group to the Committee. If the Committee agrees, I think that we should now continue with our proceedings. Of course, some members might wish to put questions to Mr. Rydbeck, and perhaps other members might wish to make some remarks in connexion with this report. Therefore, I would suggest, if the Committee agrees, that we should reserve some time tomorrow morning, before entering into our normal proceedings, for this purpose.

Mr. BERARD (France) (interpretation from French): In accordance with our past traditions, we have once again met on the eve of the General Assembly session to consider the results of the activities of the Committee on the Peaceful Uses of Outer Space for the past year and to formulate directives that we would like to give to the two Sub-Committees.

Before I comment on the reports that have been submitted to us, I should like to express my delegation's pleasure at seeing Mr. Souza e Silva elected to the post of Rapporteur of this Committee. His great abilities and the merits of our Brazilian colleague are a guarantee that he will fulfil his task to the satisfaction of all concerned.

The year 1969 is beyond all doubt a milestone in the history of space research since, after many bold and brilliant experiments, the United States of America has achieved a remarkable exploit. It has in fact fulfilled a project which was already in the imagination of our ancestors, and it has justified the dream of Jules Verne. The moon is no longer a dreamland to be extolled by poets. No, the moon has now been conquered by man. It will be utilized, we sincerely hope, in the interests of mankind as a whole, in accordance with the principles of the outer space Treaty.

I should like to congratulate most warmly the United States delegation on the very impressive success achieved by Apollo 11. It represents the culmination of years of research and experimental launchings, and perhaps it marks the beginning of an endeavour that will vastly transform living conditions and the way of life of the inhabitants of our own planet.

Coming now to the item on the agenda of the Committee, my delegation very deeply regrets the deadlock in which the Legal Sub-Committee found itself at its eighth session with respect to the convention on liability for damages.

The States which signed the Convention on Assistance to and Rescue of Astronauts -- and they did this for humanitarian reasons -- did not always obtain satisfaction during the negotiations, and they very likely regret that their concerns are not being given all due attention. We do hope, therefore, that certain positions will be reconsidered in order to facilitate an agreement in accordance with the recommendations contained in resolution 2453 B (XXIII).

(Mr. Bérard, France)

Acting in a spirit of conciliation, my delegation, in Geneva, agreed to broad concessions in order to promote the adoption of the Indian draft, which itself was a compromise resulting from the New Delhi conversations. These concessions dealt mainly with the applications of international law in the assessment of damages. They also dealt with the possible limits to liability, and they covered the procedures to be used in compulsory arbitration. However, the French delegation firmly favours the application of the national law of the territory in which damages occur, namely lex loci, and we feel that the application of the law of the respondent State is absolutely unacceptable.

Finally, we are convinced that the basic principles set forth in the outer space Treaty will remain a dead letter if the draft convention is not accompanied by a procedure for settling disputes; and in its final section it must also have a clause dealing with compulsory arbitration.

(Mr. Bérard, France)

At this time when progress in the conquest of space stimulates us to expedite the legal work of our Committee, it seems to us appropriate to consider a definition of outer space that would serve to provide practical application of the principles contained in the Treaty on outer space.

We feel, on the other hand, that it is urgent to define space activities and space objects, and, particularly, to lay down as quickly as possible an appropriate procedure for the registration of space objects more satisfactory than the present system of registering launchings with the Secretariat of the United Nations. We hope that the French draft submitted at the end of the seventh session of the Legal Sub-Committee will be studied in all its aspects so that a convention may be worked out in the course of the next session of that Sub-Committee.

In his very excellent statement yesterday, the representative of Belgium suggested the establishment of a list of four priority subjects for the future work of the Sub-Committee. Both the subjects and the order suggested for their consideration are suitable as far as the French delegation is concerned. We hope that this initiative will be examined by our Committee with all due attention.

I should like now to comment on the report of the Scientific and Technical Sub-Committee, which met in New York from 17 to 28 March last; I refer to document A/AC.105/55. The Sub-Committee's work was devoted basically to the questions of the exchange of information and the development of applications of space technology for the benefit of developing countries.

Generally speaking, the French delegation approves the recommendations appearing in that document, particularly the proposal to compile and bring up to date information on the activities of the United Nations and the specialized agencies in the field of the applications of space technology. I refer here to paragraph 23 of the report.

We noted, in paragraph 17, that relatively little use is being made of the documentation already compiled by the Division on Outer Space. My delegation is puzzled by this situation. Possibly the nature and the contents

(Mr. Bérard, France)

of the documents that have been assembled is not sufficiently well known to those who might wish to use them, or perhaps they do not correspond exactly to the actual needs. So as to avoid wasted effort, it might perhaps be a good idea to inquire from Governments, by circulating among them a listing, concerning their interest in such documentation.

The recommendation to recruit into the Secretariat some qualified person charged with studying the possibilities of providing information and assistance in the field of the application of space technology is entirely agreeable to my delegation, and we support the definition of his functions as it appears in paragraph 24.

Coming now to the question of the international installations for the launching of probe rockets, I should like to express our appreciation for the work carried out at the Thumba Base in India. Furthermore, we warmly welcome the projects being carried out at the Mar Chiquita Base in Argentina, with which country France has established a programme for co-operation in space research. We are very pleased indeed at the opportunity of participating in the mission of experts that will be visiting those installations in the coming October.

Finally, during the session of the Scientific and Technical Sub-Committee, we strove earnestly with other delegations to study ways of improving the effectiveness of that body. The recommendations appearing in paragraphs 46, 47, 49 and 50 of the report are acceptable to us. However, as the representative of Belgium stated, it seems to us that paragraph 48, which invites the Secretariat to include in the provisional agenda of the Sub-Committee's meetings all subjects proposed for examination by its members, a few months before the session, might entail certain disadvantages,

In any case, it is certainly part of the mandate of the outer-space Committee to reconsider, at this session, the best way of stimulating the work of that Sub-Committee.

Before commenting briefly on the labours of the Working Group on Direct Broadcast Satellites, may I be allowed to thank the delegations of Canada and Sweden for the efforts they have exerted to bring the examination of this subject into the work of this Committee.

(Mr. Bérard, France)

In the view of the French delegation, the conclusions of the first session of the Group provide very useful technical information which, for the time being, does not require completion by any further study.

The Group's second report brings out the considerable number of obstacles, mainly of a political nature, which a generalized use of direct-broadcast satellites will give rise to.

Our representative at Geneva emphasized some of the problems connected with television broadcasting by satellite, and he pointed out in particular the advantages and risks that such broadcasting might entail for States. In any case, in a few years from now such broadcasts will become a reality requiring active co-operation on the part of Governments and broadcasting organizations. Work aimed at regulating such activities in accordance with legal rules binding upon all is therefore not only useful but urgent as well. States, indeed, will have to undertake long and difficult negotiations so as to reach agreement on the conditions governing the utilization of this revolutionary type of technology. But the time remaining is relatively short, for, according to the first report of the Group, direct reception of broadcasts by local installations could be a practical reality by 1970.

It is for this reason, in our view, that it would be useful to continue the terms of reference of the Group so that it could explore these problems even further. However, at its next meeting, it should be provided with studies and data obtained from the specialized agencies.

These are the views that the French delegation wishes to submit on the reports submitted to the consideration of the twelfth session of the Committee on outer space. They have been motivated basically by our desire to see our committee fulfil the terms of reference assigned to it by the General Assembly, namely, to stimulate international co-operation in the peaceful uses of outer space.

Mr. CERNIK (Czechoslovakia): Mr. Chairman, at the outset, permit me to congratulate the representative of Brazil, Ambassador Souza e Silva, on his unanimous election as Rapporteur of our Committee and to wish him much success in the fulfilment of his tasks.

This year abounded in many further successes in the peaceful conquest of outer space. These successes attest to the fact that the human spirit and technological progress are capable of overcoming even the most complicated obstacles on the road into outer space which mankind managed to enter only a short time ago. At the same time, every successful step in outer space and every new success of science and technology in this field accelerate and shorten the time targets of outer space programmes to an unprecedented degree. There is no doubt that these attainments are beneficial not only to scientific theories concerning outer space but, to an ever larger degree, to the solution of many tasks having direct influence upon the improvement of the living conditions on our planet. This we consider to be one of the cardinal missions of the peaceful exploration of outer space together with the important aspects of the rapprochement of peoples and international co-operation.

May I be permitted, on behalf of the Czechoslovak delegation, to join all the preceding speakers in congratulating primarily the scientists and technicians of the two outer space super Powers on their new significant successes attained this year. The comprehensive reports of the representatives of the USSR and the United States containing information on the progress of their outer space programmes attest to the enormous strivings of man in this field of exploration and concrete work. From the time of the first artificial satellite and the first successful flight of man in outer space which ushered in the era of direct exploration of outer space, we have come to this year when we have witnessed the first step of man on another planet. I would like to congratulate the crew of Apollo 11 and all the scientists and technicians who made that step possible.

Hand in hand with these attainments of science and technology in the field of the exploration of outer space there have also been successes made here in the United Nations in the solution of political, technical and legal problems. Much has already been done, but there are considerable tasks still facing us.

(Mr. Cernik, Czechoslovakia)

The positive role played by our Committee in the solution of the questions connected with the peaceful uses of outer space is beyond any doubt. The rapid progress in the field of outer space forces us to finish some discussed but yet unresolved tasks and to cope with ever new problems posed constantly by the progress in this field.

When I mention the necessity to finish the work on some problems under our consideration I have primarily in mind a draft agreement on liability for damage caused by objects launched into outer space. At its latest session the Legal Sub-Committee achieved considerable progress, reached agreement on a number of articles of the draft agreement, succeeded in clarifying positions in some of the disputable questions and some positions are closer to each other than before. Even though some important questions remain unresolved, the attainments of the Legal Sub-Committee yield the hope that the efforts aimed at solving these very complex problems will be crowned with success. We believe that we must proceed with consideration and feeling, that we must patiently deliberate all proposals which might be conducive to a generally acceptable compromise formula. Consequently, we have studied with great care the individual proposals and it is our intention to contribute actively in the search for a just solution.

The session of the Sub-Committee has also shown that apart from the above-mentioned task new problems are arising and some concrete proposals aimed at their solution were submitted. For example, in the course of the Legal Sub-Committee's session held this year there was a businesslike discussion of a draft agreement on the registration of objects launched into outer space which was submitted by the French delegation at the eighth session of the Sub-Committee. Even though this proposal requires some specifications and further studies there seems to prevail the unanimous view that the registration of objects launched into outer space would be useful, in particular in connexion with the liability for damage caused by such objects. For that reason, the Czechoslovak delegation supports the recommendation of the Legal Sub-Committee to the effect that the Technical Sub-Committee should deal with the technical aspects of such a draft

(Mr. Cernik, Czechoslovakia)

agreement in 1970. Such an approach, if accepted, would greatly contribute to future negotiations. In this connexion, we would like to express our appreciation to the Secretariat for preparing a survey of the existing system of registration, which is directed by the Secretary-General of the United Nations under General Assembly resolution 1721 (XVI) and which was published as document A/AC.105/C.2/6 of the Legal Sub-Committee. We consider it similarly useful that the Secretariat prepared information concerning technical aspects of registration in ITU, IMCO, ICAO and in other international organizations which deal with the registration of ships, aircraft and outer space objects. Apart from this proposal some new proposals concerning the orientation of the Sub-Committee's activities were submitted. Many of them are of interest and deserve our attention. When determining priorities we shall have to proceed from practical needs.

Useful work was done by the Working Group on Direct Broadcast Satellites established under General Assembly resolution 2453 (XXIII). Both sessions of the Working Group confirmed that from the technical point of view such broadcasts were possible in a not too distant future. At the same time, the sessions discovered a number of problems of an economic, technical and legal character which remain to be solved. The working documents submitted by a number of States, among them Czechoslovakia, have drawn attention to various problems which must be elaborated further and in much more detail. We wish to express our thanks to the Working Group and we believe that it fulfilled its tasks with success. The ideas and materials which resulted from the Group's consideration constitute a suitable basis for concrete work which, in our view, should be done at this stage both in the Technical and Legal Sub-Committees. Special attention should be paid to the legal regulation of direct broadcast from satellites on an internationally acceptable basis. These activities should be started without delay in order to gain some start before the technological development in this field.

(Mr. Cernik, Czechoslovakia)

We believe that our Committee will make the necessary recommendations in this respect so that the proposals of the members of the Working Group can be brought into existence and possibly expanded by some new proposals. The Czechoslovak delegation proceeded in that spirit at the eighth session of the Legal Sub-Committee when submitting the proposal to include the question of "The utility of the elaboration of the legal principles on which the creation and functioning of space communications should be based" (A/AC.105/C.2/L.46) in the agenda of the next session of the Sub-Committee.

The Czechoslovak delegation will gladly participate in resolving all questions on the agenda of our Committee. We are glad that we could make a small contribution to the development of international co-operation in the exploration of outer space by organizing the COSPAR session held in Prague this year. We hope that we succeeded in creating a favourable atmosphere for a useful exchange of views and for further strengthening co-operation between the scientists of the participating countries.

Mr. MIGLIUOLO (Italy): Mr. Chairman, since I am a newcomer in this Committee, I should like to begin my remarks by expressing deep appreciation for your Chairmanship and voicing our belief that your experience and talent are the best guarantee for the successful fulfilment of our mandate. May I also voice our congratulations and good wishes to the Rapporteur, Mr. de Sousa y Silva.

Your introductory remarks gave us a vivid picture of the latest achievements in the field of outer space exploration. Later, the representative of the Soviet Union acquainted this Committee with the most recent developments in the space research of Soviet scientists. The representatives of the United States had no need to speak -- in fact, everybody in this Committee was well aware of the historical significance of the Apollo 11 mission, and the film on the trip to the moon did not indeed need any comment.

The Italian delegation shares the admiration of the whole world for all those achievements and wants to renew here the congratulations already expressed by the Swedish Ambassador on behalf of the Western countries. But this very sense of admiration leads us to a rather negative comparison with our work. If I might paraphrase Mr. Neil Armstrong's words, I would say that while the two

(Mr. Migliuolo, Italy)

space super-Powers are proceeding in the exploration of the cosmos and therefore towards the use of outer space by giant leaps, we are progressing in our work by taking small, very small, steps forward.

I shall not try to summarize the work accomplished by our two Sub-Committees and by the Working Group on Direct Broadcast Satellites. Other representatives having already done so, and the Italian delegation will limit its remarks to a tentative assessment of this work and to a few conclusions on the future.

We acknowledge the efforts made by the Sub-Committees and by the Working Group. The Italian delegation can appreciate the difficulties with which they were confronted. In fact, Italy has been engaged for some years in space research. Its national programme, even if limited in scope, permitted the achievement of some important results in the organization of an equatorial launching base and in the study of the upper atmosphere. Moreover, Italian scientists are taking an active part in co-operative endeavours, both on a bilateral basis and within the multilateral framework offered by organizations such as ESRO and ELDO.

We know, therefore, that co-operation in the field of space is not easy to carry out. But we cannot refrain from voicing some disillusionment with the results achieved so far within the organs of this Committee. We have in mind primarily the Legal Sub-Committee, concerning whose activities we share the criticism expressed by other representatives. We think that the Legal Sub-Committee should have completely fulfilled its mandate by agreeing on the text of the convention on liability. The discussions held in Geneva proved that there is an overwhelming majority in favour of a quick solution of the problems left open. That majority group is unanimous in considering that the convention should embody rules for the settlement of possible disputes through compulsory arbitration. We urge that everybody accept the principle of arbitration so as to make possible a subsequent discussion on the practical aspects of that problem, which, in our opinion, is open to various solutions. On the other hand, the Italian delegation insists on drawing attention to the importance of the problem of the scope of liability. The representative of the United States has stated here that it is hardly believable that important damages may be occasioned by space activities. That consideration, in our opinion, should

(Mr. Migliuolo, Italy)

encourage the acceptance of the principle of unlimited liability. On both these problems, the Italian delegation considers that this Committee should urge Member States to overcome the remaining obstacles in order to have the convention on liability signed during the twenty-fourth session of the General Assembly.

We have taken note with interest of the report of the Scientific and Technical Sub-Committee and of the comments of the delegations. We think that the future activities of that Sub-Committee should be more ambitious and aimed at far-reaching goals. The technological fall-out and spin-off of space research is of paramount importance for the development of key industries and, therefore, of the economics of every country. The very swift pace achieved by the United States and the Soviet Union in that field runs the risk of leading to a dangerous widening of the gap already existing between their level of technological development and that of other countries, and in particular of the developing countries. The Scientific and Technical Sub-Committee should therefore be urged to explore all possibilities to make the results of space research available to all countries, and to further all forms of co-operation in the space field.

In doing so, the Sub-Committee should, we think, take due account of the fact that most probably this international co-operation will for some years ahead continue to develop through bilateral channels.

We know that a wide exchange of scientific information has already been implemented, thanks mainly to the United States. In this context we were gratified by Mr. Paine's statement and by the offer to participate in the Viking project, even if we must remark that the time-limit for proposing experiments is rather short. But what is most important in the field of space co-operation is not so much to embark on passenger experiments on satellites developed by other countries as to participate in the technological and industrial processes of realization of satellites. Moreover, we would appreciate it if all the opportunities already offered in the field of scientific satellites could be extended to the very important field of application satellites.

(Mr. Migliuolo, Italy)

Of course, these remarks do not diminish the importance and the positive assessment of the co-operation made available by NASA to other countries. On the contrary, we should certainly welcome it if every Government actively engaged in space activity followed NASA's example in that direction. Our Committee should encourage this co-operation and charge the Scientific and Technical Sub-Committee with the task of exploring all ways to improve it. On our side, we renew our offer to open to developing countries both our equatorial launching facilities for co-operative projects and our earth station at Fucino for the training of telecommunication technicians. We confirm also our willingness to co-operate with the ILO centre in Turin for the same purpose and to take an active part in the implementation of the FAO study on the applicability of space techniques to the management of food resources, which we consider a very important project.

As far as the Working Group on Direct Broadcast Satellites is concerned, we certainly regret that practically it had to confine its activities to an inventory of the problems to be studied. We think there is an absolute necessity for further discussion of this matter, because geostationary satellites open new, challenging possibilities, not only for telephone, telegraph and data transmission but also for an increasing number of important economic and social activities. Other representatives have pointed out some political aspects of the use of telecommunication satellites; we would recall also that the de facto appropriation of geostationary parking lots risks the raising of delicate problems in certain geographical areas. The matter, therefore, needs urgent consideration.

The representative of Belgium, Mr. Schuurmans, has drawn our attention to the necessity to think over the implementation of the tasks and the role of our Committee. The Italian delegation fully shares his point of view on the matter. We consider that, in order to implement the mandate of the General Assembly, we should not simply take note of the reports of our Sub-Committees and of the Working Group but we should make an assessment of their activities and suggest guidelines for the future. From this point of view, summing up the remarks already made, the Italian delegation proposes that this Committee should primarily act in the following manner.

(Mr. Migliuolo, Italy)

First, it should take a firm stand in favour of an early completion of the drafting of the convention on liability.

Secondly, it should establish an order of priority for the future activities of the Legal Sub-Committee. On this point, the Italian delegation endorses the proposal put forward by Mr. Schuurmans and supported by Mr. Berard concerning the four items that should be examined first: definition and delimitation of outer space, registration of objects launched into outer space, rules governing human activities on the moon and other celestial bodies, and a legal régime for materials originated on the moon and other celestial bodies. Of course the Italian delegation endorses the two resolutions approved by the Legal Sub-Committee on these matters.

Thirdly, this Committee should urge the Scientific and Technical Sub-Committee to concentrate its attention on practical projects of co-operation and on the study of ways and means to improve the programmes of co-operation, both multilateral and bilateral, already being implemented.

Fourthly, this Committee should extend the mandate of the Working Group on Direct Broadcast Satellites with the aim of working out in consultation with the relevant bodies -- ITU, UNESCO, BIRPI and so on -- solutions for the problems raised during the first stage of the discussions.

The CHAIRMAN: I should like to thank the representative of Italy for the personal remarks with which he opened his statement.

Mr. ASTROM (Sweden): Trying to assess the situation with regard to developments in space activities is as difficult as obtaining a clear picture of the surrounding landscape from a fast-moving train. We may believe we know the station from which we started, but as the tempo increases and new pictures and new information flash before us not only do we realize the infinite variety and complexity of the new places that rush into our view but our understanding of our point of departure also is fundamentally changed and enriched.

The exploration of space has indeed placed man at a vantage point. Our knowledge of the stars above us is increasing beyond all expectations. At the same time we are receiving a deeper understanding of our own planet, its genesis,

(Mr. Aström, Sweden)

its physical characteristics and resources and perhaps its future. As seen by the astronauts heading for the moon, the earth must resemble an oasis shrinking from the eye in the empty desert of space. Triumphant breaking the fetters of gravitation in the quest for new worlds, man is also, at the same time, given a dramatic insight into the limitations and frailty of his own condition. Certainly, of all those hundreds of millions of people who on television watched the awe-inspiring spectacle of the first man on the moon, there were few who could fully realize its technical and scientific significance. The long-range implications are still only dimly perceived even by experts.

What was clearly evident to us all, however, was the demonstration that, with firmness of resolve and mobilization of all resources, man can in a short period of time perform gigantic, hitherto unimaginable, tasks through his technological and organizational skill. This seems to us to be the real challenge of the space age: to bring about a new understanding of the imperatives of life on earth and a will to use the new tools at our disposal for solving human problems.

The achievements in space are, as has been stated many times, the result of dedicated, ceaseless work by men from many lands, stretching far back in history. One can speak of teamwork within the only true international community in existence, the global scientific community. However, while social and economic development everywhere is more and more influenced by progress achieved in the fields of technology and the natural sciences, space science and exploration remain very much the privilege of the two super-Powers. The time has come for co-operation between the two space Powers and indeed among all countries of the world, so as to allow every one of them to contribute to the further development of space technology and to share in the benefits to be won from its application. In order to make such co-operation truly international and in order to reduce friction between the space Powers and the rest of the world, we should strive at making the United Nations a focal point for joint space efforts.

(Mr. Aström, Sweden)

May I refer here to the interesting debate which has taken place in the Sub-Committee on this subject. Various proposals were considered there, many of them at the initiative of the Indian delegation, designed to achieve broader sharing of the benefits of space research, in particular for the developing countries. Sweden, for its part, is willing to consider those proposals in a positive spirit.

The practical potentialities of space science have emerged most clearly in the communications field. This development, however, has taken place largely outside the United Nations, mainly through the INTELSAT Organization.

May I in this connexion recall that the General Assembly, in resolution 1721 D (XVI) of 20 December 1961, reaffirmed the belief that communications by means of satellites should be available to the nations of the world as soon as practicable on a global and non-discriminatory basis, and recommended that States parties to negotiations regarding international arrangements in the field of satellite communications constantly bear this principle in mind.

It has been gratifying to my Government to note during the INTELSAT negotiations that this principle has had almost universal support during discussions of rules for admitting new members, use of the system, etc. We have considered it desirable that this principle be also reflected in the more vital clauses dealing with the formulation of general policy, voting, sharing of responsibility for the development of the system, etc. We have suggested a separation of commercial and public functions providing, on the one hand, a commercially sound, adequate and efficient organization and management of the venture, and, on the other hand, the establishment, on a joint and equal footing, of the required governmental supervision as regards the public utility function of the system on a world-wide basis. We think that from a managerial and technical point of view INTELSAT has been a great success, of immense value to its members. But we also feel that there is a need for international rules based on the principles of the Charter to form the framework within which the activities of the organization are to take place.

(Mr. Aström, Sweden)

I should like now to turn to the topic of direct broadcasting from satellites. In the view of the Swedish delegation, the result arrived at by the special working group is of great value. In a rather short lapse of time, the international community has got at its disposal a comprehensive report on a new type of mass communications, the enormous potentialities of which are clearly understandable to all. The report succinctly indicates the main problems in the various fields and notably singles out the special relevance of direct broadcasting for developing countries, which have not yet acquired an extensive infrastructure of conventional telecommunications. Equally important, it has served to demonstrate clearly the necessity of close international co-operation if the full potential of direct broadcasts from satellites is to be realized.

The first two reports represent only a preliminary -- and perhaps in part somewhat conservative -- survey of a vast complex of technical, legal, social, cultural and other questions. As far as technical aspects are concerned, much new information is, perhaps, not to be expected before the 1970 meeting of the plenary assembly of the International Radio Consultative Committee of ITU and of ITU's Second World Administrative Radio Conference for Space Communications in June 1971. Those meetings will be devoted to new frequency allocations for all space services and will consider recommendations for the optimum application of techniques in the establishment, use and interconnexion of radio-communications systems, including space systems. It is important that in developing these arrangements due attention should be paid to appropriate legal and social considerations.

I just mentioned the peculiar importance of direct broadcasting for developing countries, especially in the fields of education and vocational training. Much study is already being devoted to these questions, both in the developing countries themselves and in competent international organizations. They should obviously be pursued further and receive special attention by the international community.

(Mr. Aström, Sweden)

It is essential, it seems to us, that the international legal aspects of direct broadcasting be further studied. Likewise, the complicated problem of content of broadcasts would require further consideration. It might be advisable to try to achieve some sort of generally acceptable codes of conduct on programme standards. The experience already gained in this field from existing regional co-operation among what I might term conventional broadcasters could be used to help overcome the very considerable difficulties involved.

It follows from what I have said that the Swedish delegation would like to see the work of the working group continued. As noted by the group in its report, there is no international institution which has the competence to act in all the fields touched upon by direct broadcasting, and it would therefore seem indicated, in our view, that the Outer Space Committee, through its working group, should continue its co-ordinating activity in the field, and, where appropriate, make suggestions on regulatory procedures. To this end it would pursue its own studies, keep under review in a comprehensive fashion the activities of international institutions and keep Members of the United Nations informed of all relevant developments. At the same time, it would seem advisable to invite interested specialized agencies, Member States and broadcasting organizations to submit comments and further studies for the consideration of the Outer Space Committee and its working group.

The Swedish delegation, therefore, would like to recommend, as far as it is concerned, that the mandate of the working group be prolonged, in the first instance, for one year. During this time the working group could fruitfully pursue its study of certain legal questions, the clarification of which is essential before the system of direct broadcasting becomes operative. We think also that the working group should devote attention to questions relative to the benefits to be derived from direct broadcasting for the developing countries.

(Mr. Aström, Sweden)

May I recall here that special preparations are now in course for the Second Development Decade. Whereas it might be difficult, at this stage, to include in these preparations any detailed reference to direct broadcasting, the Working Group should, as we see it, be aware of this relationship and might, at an appropriate time, if its mandate is prolonged, establish working contact with the Preparatory Committee for the Second Development Decade.

Use of satellites for communication purposes is now taken for granted. But space science and technology already revolutionize many other fields of human activity and we can certainly look forward to even more rapid developments in the future.

It seems to us that international co-operation, co-ordination and in many cases international control are necessary ingredients in such a development. It is, therefore, necessary to try to envisage what the most important future fields of applied science and technology might be.

Next to space communication, satellites devoted to the exploration, surveying and control of the earth's resources will probably be the most important space activities in the 1970s and the 1980s. We have as yet had only a foretaste of what might become possible in this field. It is clear that the problem of future satellite activity must receive greater attention in the years to come, more than has been the case during the past years. Questions regarding the resources of the earth, their possible utilization and at the same time protection for the benefit of coming generations, are fundamental problems for all peoples in the world. We should like to stress, in particular, the importance of using satellite surveys to gather basic data of use in the fight for the protection and improvement of the environment. The development of new methods for studying the earth, the oceans and the atmosphere in all their details also raises fundamental problems similar to those that are being the subject of intense international discussion and negotiation in the field of satellite communications. As in the field of communications, our endeavour here should be to make the United Nations the focal point of such discussions and negotiations.

(Mr. Aström, Sweden)

Meteorology is probably less controversial than many other fields of exploration in science and at the same time it may be technically looked upon as the entrance gate to many other topics. The international planning of possible future co-operative projects has also proceeded quite far. As is well known, the United Nations adopted two resolutions in 1961 and 1962, respectively, supporting the development of more intense international co-operation in the field of meteorology using space techniques. Out of this has grown the World Weather Watch providing, inter alia, for the co-ordinated continuous growth of the global data collection and data exchange for weather services. Over the last few years the World Meteorological Organization (WMO) and the International Council of Scientific Unions (ICSU) have jointly planned a Global Atmospheric Research Programme which is an attempt to co-ordinate research on extended and long-range weather forecasting and problems regarding the physical basis of the climate of the earth, which topics are both of basic importance for an optimum development of the weather services. As part of such a programme, may I recall, a global experiment is now envisaged in which an attempt will be made to observe the movements and the weather conditions of the whole atmosphere during one year with the aid of satellites as well as conventional observing techniques. The system comprises altogether seven satellites in simultaneous use. On the basis of the planning work so far completed the two organizations will call a world conference in March 1970 to find out what contributions might be expected from States to such a global experiment to be launched in 1975. The United Nations might, in our view, take cognizance of this important development and support further attempts to achieve global co-operation in this field so important to the well-being of mankind. The atmosphere is a vital component of our environment and the plans evolving should also be seen in the very much wider context to try to come to grips with the environmental problems.

May I, finally, submit a few comments on the report of the Legal Sub-Committee. At its eighth meeting the Sub-Committee had a further discussion of the definition of outer space. Many countries, including my own, were of the opinion that this question has not yet been sufficiently studied and that the time has not yet come

(Mr. Aström, Sweden)

to establish a demarcation line between inner and outer space. The establishment of a line will have far-reaching consequences from political and military points of view. Owing to such problems, the 1969 discussion did not advance things significantly and it was felt that no breakthrough is to be expected if, in considering this problem, the Sub-Committee does not seek consultations with other United Nations bodies, notably those dealing with disarmament. Pending such consultations the Swedish delegation would like to propose that further discussion of the subject in the Sub-Committee be postponed and that all attention be focused on more urgent questions.

The most important of such questions is, of course, an early completion of the liability convention. We are all aware of the repeated, peremptory requests from the General Assembly addressed to this Committee to prepare and present a complete draft convention. It is with deep regret that the Swedish delegation takes note of the fact that it has not yet been possible to reach agreement in spite of all efforts at compromise.

At the time when the General Assembly adopted the convention on the return and rescue of astronauts, there was clear understanding on the part of the non-space countries that completion of the liability convention would be given very high priority. There is reason to believe that several States withhold their ratification of the rescue Convention as well as the space Treaty until such time as the liability convention is completed.

In the view of the Swedish Government an adequate liability convention must contain effective rules concerning compulsory settlement of disputes arising from the convention, especially covering the question whether liability for damage exists in a concrete case and concerning the determination of the amount of compensation.

All efforts must be made towards taking care of the elements of compromise which have emerged during the discussions of the Sub-Committee. One such element is that of the limited extent of liability. A significant majority within the Sub-Committee have pronounced themselves in favour of a ceiling, fixed at an amount that would cover most plausible cases, with the provision that claims which in a concrete case might exceed this amount could be presented in accordance with the rules of general international law.

(Mr. Aström, Sweden)

It should, in our view, not be impossible to reach a solution of this problem. Nor should agreement be unattainable on other central questions, such as that concerning which national law should be applicable, alongside the general principles of international law, and that of the rights and obligations of international organizations, the space activities of which have already been recognized in the two space agreements mentioned before.

The liability convention is of primary concern and importance for the non-space Powers and as such it should be the result of a negotiation between all the Members of the United Nations and particularly of the members of the outer space Committee. We expect due regard, in other words, to be paid to the interest of the whole international community.

Also the case of the liability convention is but one side of a general consideration which I have touched upon repeatedly in this statement. The achievements in science and technology, although largely brought about by the efforts of the super-Powers are of direct interest and importance to all nations. We feel that all nations, therefore, should be given an opportunity not only to utilize these achievements, but also to influence the modalities for their use. We, for our part, do not doubt that this should be achieved through strengthening the influence and role of the United Nations with regard to the various implications of the application of science and technology.

Mr. HILDYARD (United Kingdom): May I first of all associate my delegation in the warm welcome which has been extended to our Rapporteur, Mr. Souza e Silva of Brazil. The esteem which he enjoys in the United Nations is, I think, outstanding, and we know that he will be a worthy successor in every way to his colleague Ambassador Silos.

You, Mr. Chairman, on behalf of this Committee, and the representative of Sweden, on behalf of the Western European and Others Group, have paid high tribute to the United States authorities and the three astronauts themselves on the epic achievements of Apollo 11. It would not be fitting, however, to speak in this forum without expressing again our admiration for all those responsible for this momentous new development in the long history of the human race. The year 1969 will always be remembered for Neil Armstrong's giant leap.

(Mr. Hildyard, United Kingdom)

Nevertheless, we have also seen other glimpses of the future, particularly with the Mariner shots of Mars. From the Soviet Union we have heard of the highly successful and important docking operation by the spacecraft Soyuz 4 and Soyuz 5 last January, with all that this implies for the construction of earth/space stations.

The meetings of this Committee offer each member an opportunity to report on the activities of his own country in the field of outer space; even if these are on a very different scale from those of the two major space Powers, they can be of interest. Before turning to the reports which form the main item on our agenda, I should like to speak briefly about recent developments in the British space programme and in various collaborative space programmes in which we participate.

In the United Kingdom Sounding Rocket Programme, which was started in 1957, over 180 Skylark rockets have been launched. Petrel and Skua sounding rockets for the investigation of the ionosphere have been launched from the Outer Hebrides and from Kiruna in Sweden. The United Kingdom participated in collaborative rocket programmes with India at the Thumba range, and a similar programme is likely to be mounted soon at the Sonmiani range in Pakistan. United Kingdom experiments have been included in NASA's OSO-F and G spacecraft. UK-3, a satellite designed, developed and manufactured entirely in the United Kingdom, has continued to transmit useful scientific data. A fourth satellite in this series is now being developed.

The European Space Research Organisation's current rate of sounding rocket launchings is now about thirty per year. Of these launchings, in future some twenty will be from ESRO's own range in Arctic Lapland and the remainder from the Italian range in Sardinia. United Kingdom participation amounts to 77 out of 177 experiments up to the end of 1968. The United Kingdom Skylark rocket is one of the major launch vehicles used, some twenty-five having been launched out of a total of seventy-six launches up to the end of 1968.

(Mr. Hildyard, United Kingdom)

ESRO's first satellite (ESRO 2 or "Iris") failed to achieve orbit on first launch in 1967, but was launched successfully in May 1968, from the United States. It has functioned well in orbit. Of the seven experiments making up the payload, five were supplied by the United Kingdom. This satellite is studying solar radiations and cosmic rays and was followed the autumn of 1968 by another small satellite, ESRO 1, which is investigating the Polar ionosphere and auroral phenomena. ESRO's third satellite, HEOS-A, was launched by NASA at the end of 1968 and is studying magnetic fields and particle fluxes in the magnetosphere, including the magnetospheric shock front which lies about 10 Earth radii in the direction of the sun. There are four United Kingdom experiments out of the eight on board ESRO 1, and three out of the eight on board HEOS-A. A further satellite known as HEOS-A2, and similar to HEOS-A in general design is to be submitted for approval to the ESRO Council. HEOS-A2 would be launched in late 1971.

Turning to the reports before the Committee, I should like to say how glad my delegation is to see Mr. Rydbeck, the Chairman of the Working Group on Direct Broadcast Satellites with us today and to express to him both our appreciation of the personal report which he has just given us and our congratulations on the very useful work which the Group has performed. We support the Group's conclusions, including the suggestion that the Group should reconvene at a mutually convenient date to study in greater depth the legal, political and commercial implications of such satellites. My delegation also believes that UNESCO should be invited to inform the Committee of the results of its meeting in December this year on the social, cultural and copyright aspects of this subject. We hope that the Working Group will devote attention to the organizational aspect of direct broadcasting by satellites. Section 7 of the United Kingdom working paper submitted to the Working Group and published as document A/AC.105/65 of 18 August 1969, dealt fairly extensively with the organizational aspects. My delegation believes that a great deal of confusion may result in this field if it is not dealt with at an early stage by the Working Group.

(Mr. Hildyard, United Kingdom)

The meeting in March of the Scientific and Technical Sub-Committee was, we believe, constructive, and we welcome the appointment early next year of an officer in the Outer Space Affairs Division of the Secretariat to assist Member States seeking information and advice on the practical applications of space technology. My delegation supports the Indian proposal for follow-up action on the Vienna Conference on the Peaceful Uses of Outer Space. We also welcome the proposal that consideration should be given to the convening of a panel in 1971, in which the FAO would be involved, to study the applicability of space techniques to the management of food resources. Further, we shall be very glad to send a United Kingdom scientist as a member of the group which will visit the Mar Chiquita Station in Argentina in October in order to report to this Committee on its eligibility for United Nations sponsorship in accordance with the basic principles approved by the Committee.

Various delegations have already expressed disappointment with the results reported by the Legal Sub-Committee, disappointment which my delegation shares. Although, as has been pointed out, there are five major issues outstanding, the settlement of claims remains the principal problem. We regard this as an essential element in any liability convention, since, unless provision is made for a binding third-party settlement, no party has any real assurance that its legitimate claims for compensation will be met. In my delegation's view, compulsory conciliation or an optional protocol would not make up for adequate provisions on compulsory settlement, and we see no reason why this simple question of compensation should not be arbitrated in any case where the parties cannot agree on a figure for compensation. We further believe that it is important that any liability convention should contain appropriate provision to cover the position of international organizations such as ELDO and ESRO, so that their rights and obligations in the outer-space activities they undertake are adequately protected. As to the problem of applicable law for the measurement of damages, we believe that a solution should be based on the law of the State where damage occurred, or of the claimant State and international law. My delegation shares the view expressed by a number of previous speakers that every effort should be made to achieve an outcome satisfactory to all at the latest by the end of the twenty-fourth session of the General Assembly. We hope that in the light of the

(Mr. Hildyard, United Kingdom)

virtually unanimous opinion of all other members and of the very considerable efforts which have been made to reconcile the differences of view, the Soviet Union and the other States of Eastern Europe will be prepared to reconsider their stand on these matters.

Before concluding, I should like to refer briefly to the very pertinent observations in the statement made yesterday by the representative of Belgium. This year our meeting has been held against the background of the golden glow with which Apollo 11 and the various other remarkable technical achievements have invested all space activities. But in reality, it has been brief and limited in scope. In general, delegations have highlighted in this larger forum their major comments on the main issues debated in the Sub-Committees. We have had very little discussion of the guidance which we might give these Sub-Committees for the future, or of the priorities which we believe they should establish. Perhaps for the present at least this is right: they may have quite enough work in front of them, and the priorities may be reasonably clear. Nevertheless, I share the views of the representatives of France and Italy that we would do well to consider carefully the opinions expressed by the representative of Belgium in the clear and incisive way which we have come to expect from him, and also the priorities which he suggested for the future. An effective relationship between the Sub-Committees and the main Committee is clearly a matter of considerable importance.

The CHAIRMAN: There are no more speakers on my list among the member States, but I wish to announce that the representative of COSPAR has indicated that he would like to address this Committee.

Mr. PORTER (COSPAR): At the beginning of these remarks, I would like to pay a tribute to my colleague Academician Blagonravov, of the Soviet Union, Vice-President of COSPAR, who, being temporarily in ill health, has been unable to attend this session of the Committee on the Peaceful Uses of Outer Space. I am sure we all wish him a speedy recovery.

(Mr. Porter, COSPAR)

The name COSPAR is an acronym for Committee on Space Research. It designates one of several scientific committees of the International Council of Scientific Unions, which I shall refer to as ICSU in the rest of my statement, and which is a non-governmental scientific body composed of sixteen international scientific unions covering various branches of the physical and biological sciences, and sixty-one representative national scientific institutions in countries of widely-differing developmental status and without regard to political situation. The current President of ICSU is Professor Ambartsumian of the USSR; the Secretary-General is Professor Chandrasekharan of India. The Secretariat is located in Rome, Italy.

Inasmuch as COSPAR is represented here essentially as an observer for ICSU, it might be appropriate for me to say a few general words about some of the other space-related interests and activities of ICSU which may not be entirely familiar to all members of this Committee, and of the relationship of COSPAR to these other interests and activities.

The International Astronomical Union, IAU, has of course long had great interest in, and has organized specific commissions to deal with, such subjects as solar activity, comets, planets and satellites, the moon, light of the night sky, meteors and meteorites, and a wide range of other topics with which space research has now become involved. Since the advent of artificial earth satellite technology, the IAU has added a Commission for Astronomical Observations from Outside the Terrestrial Atmosphere. COSPAR joined with the IAU in sponsoring a special symposium on X-ray and gamma-ray astronomy that was held in Rome last May.

The International Union of Geodesy and Geophysics includes seven Associations, of which those for Geomagnetism and Aeronomy, known as IAGA; Geodesy, IAG; and Meteorology and Atmospheric Physics, IAMAP, are most concerned with space research. IAGA, which is meeting this month in Madrid, is convening several different symposia which will deal primarily with the results of space research.

(Mr. Porter, COSPAR)

The International Union of Radio Science, with its broad interest in the ionosphere, magnetosphere, radio astronomy, and solar-terrestrial physics, has recently organized within the Union itself a Committee for Space Research, which works closely with its counterpart, COSPAR. During the General Assembly of this Union in Ottawa last month, that is August, there were many discussions of scientific results from space experiments.

The nine other ICSU Unions which belong to COSPAR, namely those for Chemistry, Physics, Biological Sciences, Mechanics, Mathematics, Physiological Sciences, Biochemistry, Biophysics, and the Nutritional Sciences, have all undertaken at least some specific interest in space research, and perhaps it is significant that an officer of one of them, Professor Roy of IUTAM, is President of COSPAR. Each Member Union is represented on the COSPAR Executive Council and can also designate individual scientists of its choosing to serve in any of the working groups or panels in which it may have an interest.

Problems of radio frequency allocations for radio astronomy and space research are considered by an ICSU Inter-Union Commission, including representatives of URSI, IAU, and COSPAR, which makes recommendations to the International Radio Consultative Committee and the Telecommunications Union on behalf of all ICSU bodies. Active co-ordination of the Global Atmospheric Research Program (GARP) is carried out by a Joint Organizing Committee (JOC) of the ICSU and WMO. COSPAR's work on the Global Atmospheric Research Program, which is concerned with the planning of measurements and data collection from space vehicles, is reported directly to this JOC. COSPAR is also included in a special panel on GARP, established by ICSU in 1968, to advise its officers on matters of policy concerning the programme.

For the important area of data exchange, there is an ICSU panel on World Data Centers (Geophysical and Solar). Its functions are: (a) to co-ordinate various Union, Commission and Committee interests in geophysical and solar data; (b) to provide a link with government bodies similarly concerned; (c) to provide advice to World Data Centers, as required; and (d) to issue, at appropriate intervals, consolidated data guides and supplements, and to stimulate the flow of data therein proposed. These World Data Centers

(Mr. Porter, COSPAR)

constitute an important and readily available source of data for oceanography, meteorology, solid-earth geophysics, polar research, water, solar-terrestrial physics, and space research. Space Research Data Centers are located at the Goddard Space Flight Center, Greenbelt, Maryland, United States, at the Academy of Sciences of the USSR in Moscow, and at the Radio and Space Research Station, Slough, Bucks, England. Considering the questions raised by representatives at the recent meeting of the Scientific and Technical Sub-Committee about the availability of space information, it would seem that these Centers should be more widely and frequently used than now seems to be the case.

Finally, there is the Inter-Union Commission on Solar Terrestrial Physics, ICUSTP, which has been established by ICSU to provide continuing co-ordination for the whole field of solar-terrestrial physics. Inasmuch as the particular disciplines involved, solar activity, particles and fields in interplanetary space, particles, fields and waves in the magnetosphere, external geomagnetic field, ionosphere, and aeronomy, all depend heavily, although not exclusively, on space research, it has been necessary to maintain an especially close working relationship between the ICUSTP and COSPAR. This has been accomplished by holding concurrent and sometimes even joint meetings and by a significant overlap of people between the two organizations.

Inasmuch as the purpose of COSPAR since its inception has been -- and here I quote its charter -- "to further on an international scale the progress of all kinds of scientific investigations which are carried out with the use of rockets or rocket-propelled vehicles", and these objectives are to be achieved "through the maximum development of space research programmes by the international community of scientists, working through ICSU and its adhering national academies and unions", it would appear that the growing interest in space research throughout the ICSU family of organizations should be a source of satisfaction.

COSPAR held its twelfth meeting in Prague, Czechoslovakia, during May 1969. Associated with this meeting were special symposia on properties of the thermosphere (with IAGA and URSI), on dynamics of satellites (with IAU, IUTAM, IAG, and URSI), on biological rhythms (with IUBS, IUB, IUPS and IUPAB), and on nutrition of man in space (with IUBS, IUB, IUPS, IUDAB, and IUNS). In

(Mr. Porter, COSPAR)

an effort to promote interdisciplinary exchange among the scientists from different disciplines who attend COSPAR, a series of nine review papers were presented, each by a well-known expert in a particular area of space research. These papers were scheduled in such a way that all scientists could attend. Also, of course, there were the usual parallel sessions of the working groups and panels, at which smaller groups of scientists in each area came together to discuss in some detail the recent results, plans and techniques used in their work.

Among the items discussed in these working sessions were co-operative international programmes in geodesy, a proposal by the IUCSTP for a co-ordinated comprehensive study of the magnetosphere and the solar wind interaction to be conducted on an international basis during the period 1974-1976, creation of a COSPAR Panel on Solar Flare Effects and Forecasting, data required to improve the COSPAR International Reference Atmosphere tables, possibilities for international exchange of experiments in the life sciences, preparation of a report on space systems for GARP, utilization of satellite data in preparing operational weather forecasts, recent results from space vehicles flown to the vicinity of the moon and the planet Venus, and the establishment of an ad hoc panel to study the possibility of preparing reference atmosphere models for Mars and Venus.

The Consultative Group on Potentially Harmful Effects of Space Experiments, and its Panel on Planetary Quarantine both convened during the COSPAR meeting in Prague. The principal business with which they were concerned was that of preventing the biological contamination of the planets, especially the planet Mars. To this end, the Consultative Group recommended, and COSPAR unanimously approved, a resolution reaffirming in specific terms the basic objective for planetary quarantine and asking that members provide, within a limited period after launch of any planetary flight, eight specific items of information relating to flight control and sterilization procedures used to meet this objective. It was also decided to join with WHO in sponsoring a symposium on problems of "back contamination" to be held at the thirteenth meeting of COSPAR.

COSPAR is continuing to publish in cloth cover most of the scientific papers presented at its annual meetings and symposia, and in paper cover, its

(Mr. Porter, COSPAR)

technical manuals, transactions, directory, and periodical Information Bulletin. In addition, all national scientific institutions that are members of COSPAR prepare each year complete summaries of space research work in the countries which they represent, including bibliographies of papers published during the year. Taken together, these reports constitute a comprehensive and authoritative record of world-wide space research, which is of considerable value to any national space authority in planning its own future work.

(Mr. Porter, COSPAR)

The next major meeting, which will be the thirteenth annual assembly of COSPAR, will be held in conjunction with a large Inter-Union Symposium on Solar-Terrestrial Physics, in Leningrad during May 1970. COSPAR will participate in the organization of that joint symposium and will limit the scientific content of its own sessions to areas other than those included in solar-terrestrial physics.

On behalf of COSPAR, I should like to mention the admiration and satisfaction with which scientists of all nations regard the recent lunar and planetary exploits of the major launching nations, and to express our hope and belief that those great technological achievements will lead to equally important scientific achievements in the future. At the same time, I believe it is important to remind the Committee on Peaceful Uses of Outer Space of the great scientific results that have already been achieved using relatively simple rockets and unmanned Earth satellites, and the many opportunities which still remain to use such vehicles effectively for important scientific work. It is possible, perhaps even probable, that in the near future such work will prove to have more practical value to mankind than the more spectacular feats of lunar and planetary exploration and of manned space flight.

We sincerely appreciate the opportunity once again to observe the deliberations of the Committee on Peaceful Uses of Outer Space, and we wish to reaffirm our desire to co-operate with the United Nations and any of its agencies in all appropriate ways.

The CHAIRMAN: In the name of the Committee I should like to thank Mr. Porter, vice-president of COSPAR, for his interesting statement. We very much appreciate his co-operation.

At the same time, I think that I express the desire of the entire Committee when I say that we associate ourselves whole-heartedly with the wishes for a speedy recovery addressed by Mr. Porter to Academician Blagonravov. The Academician is, if I may say so, one of the pioneers of this Committee. We miss him very much at our present session. May I ask the Soviet delegation kindly to convey this message to Academician Blagonravov.

The meeting rose at 1 p.m.

VERBATIM RECORD OF THE SIXTY-FIFTH MEETING

Held on Thursday, 11 September 1969, at 3 p.m.

Chairman:

Mr. HAYMERLE

(Austria)

REPORT OF THE COMMITTEE TO THE GENERAL ASSEMBLY (continued):

- (a) REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE (A/AC.105/55 and Add.1, 2 and 3)
- (b) REPORT OF THE LEGAL SUB-COMMITTEE (A/AC.105/58)
- (c) REPORTS OF THE WORKING GROUP ON DIRECT BROADCAST SATELLITES (A/AC.105/51 and A/AC.105/66)

Mr. SEN (India): I have not been a frequent participant in the work of this Committee, but I should like to think that I have kept in reasonable touch with developments here; and if today I have come to speak here it is simply because my delegation feels that a stage has been reached where a general review of the three reports before us should be considered in its totality. Not being a technician, I am naturally well advised not to come here every day and for every meeting; but because this is a general review, perhaps whatever contribution I may have to make will be of some help to the Committee and to our future work.

I should like, however, before making my statement, to pay a special tribute to you, Mr. Chairman, and to tell you how happy we are to see you back in the Chair. We hope and we are almost certain that you will continue to give your leadership to our work, as well as your guidance to the future task of the Committee and its Sub-Committees.

We also welcome Ambassador Diaconescu, our Vice-Chairman.

Furthermore, the election of Mr. Souza e Silva as Rapporteur has given us great pleasure. We are confident that he will discharge his duties with the same competence and ability as his predecessor, Ambassador Silos, brought to his post.

To turn now to the subject before us, I should like to start off with some general observations. I would say that man's long dream of reaching the moon came true two months ago when two American astronauts landed there with scientific precision. My delegation congratulates the three brave and skilful astronauts who undertook that historic journey. The numerous scientists, administrators and engineers who worked for the success of the Apollo mission, and the American people, all deserve our congratulations.

(Mr. Sen, India)

A breathless world watched with admiration and wonder what may well be the beginning of a new age; our planet and the moon may never be the same again. That extraordinary voyage will have enriched scientific knowledge; scientists all over the world will examine the specimens brought back from the moon and may make further discoveries and add to scientific analysis. New voyages will no doubt add to the treasure of knowledge already gained. We should hope that space efforts would always be peaceful and serve the genuine aspirations and desires of all mankind. Let the advantages of the technological spin-off and new applications of space technology be available to all and shared with all.

After those general comments, I should like to turn to the reports in front of us. I should like to take the report of the Scientific and Technical Sub-Committee first.

At its sixth session, that Sub-Committee considered, among other matters, suggestions made by my delegation and the delegation of Sierra Leone for the promotion of applications of space technology. The Committee will forgive me if I give a brief outline of those proposals.

As a follow-up of the conference on the peaceful uses of outer space, it was suggested that an Applications Resources Group be established to study the political, economic and social aspects of all proposals, and that the United Nations Secretariat be strengthened by appointing a few experts. It was also suggested that the United Nations should, on request, undertake survey missions to explore the potential of specific techniques within the context of local situations. Those survey missions would attempt to evaluate the technical and economic aspects of space applications in relation to conventional methods. My delegation also suggested the holding of panel meetings in collaboration with specialized agencies on specific topics of space applications such as meteorology, communications, navigation, earth resources, etc.

We further suggested the setting up of a programme of fellowships for nations of developing countries for training on specific applications which a particular country wishes to undertake. The fellowships could then provide the developing countries with opportunities for training to encourage development of specific outer space applications in their own countries. I am glad to notice that the proposals mentioned above were discussed at the sixth session of the Scientific and Technical Sub-Committee. Its report (A/AC.105/55) contains the recommendations made by the Sub-Committee on some of these matters.

(Mr. Sen, India)

The Sub-Committee has decided that henceforth it will itself promote more energetically the application of space technology, and in future meetings it will consider various concrete initiatives, including, for example, panel meetings in collaboration with appropriate United Nations specialized agencies, international or national organizations, or both. It has further stated that:

"Without wishing to inject itself into the normal process by which the UNDP screens various requests for survey missions, panel meetings or fellowships, the Sub-Committee wishes to encourage the UNDP to assist through these and other modalities which might be useful for the promotion of the applications of space technology with particular reference to nations not advanced in space research, including developing countries, and expresses its willingness to assist in this process".

(A/AC.105/55, para.27)

That rather complicated sentence is a quotation from the report.

(Mr. Sen, India)

It has called upon the Secretary-General -- again I quote:

"... to prepare a comprehensive assessment of the requirements and the ways of meeting them, including the magnitude of the administrative, technical and financial involvement". (ibid.)

My delegation attaches particular importance to that assessment and would like to see it presented to the twenty-fifth session of the General Assembly after it has been considered by the Scientific and Technical Sub-Committee and this Committee.

The Sub-Committee has also recommended the appointment by the Secretary-General of a qualified person whose full-time task would be to promote practical applications of space technology. He would be closely associated with the office of the Secretary-General in carrying out liaison with the various elements within the Secretariat, including UNDP and the specialized agencies. He would also serve as a point of contact for all Member States seeking information and assistance with regard to pertinent United Nations or other proposed programmes.

My delegation welcomes that recommendation, and we trust that the Secretary-General would appoint the best available expert. We have heard with interest the views expressed on where the expert could best be located; we believe that discretion should be given to the Secretary-General, not only in choosing the expert, but also for deciding where in the Secretariat he should work.

The Sub-Committee has noted with complete satisfaction the work being carried out at Thumba Equatorial Rocket Launching Station (TERLS) in India, and has recommended that United Nations should continue to grant sponsorship to TERLS. We are gratified at the continued sponsorship of the United Nations, and we hope that the Committee will make a recommendation to the General Assembly accordingly.

The International Telecommunications Union and the UNDP have made important contribution in setting up, in collaboration with the Government of India, the Experimental Satellite Communications Earth Station (ESCES) at Ahmedabad. This is the first project of its kind to be undertaken by specialized agencies. An important objective of ESCES is to train scientists and engineers from India and other developing countries to make effective use of satellite communications. Assistance from the United Nations and its specialized agencies to this project is significant, since it involves the recognition of the proposition that advanced projects, even the ones dealing with outer space, can help the developing countries in solving problems facing them.

(Mr. Sen, India)

Satellite television can, in our view, be a very powerful means of mass communication and for promoting national integration. For countries like India, with a very varied and numerous population, this question of national integration is of special importance; and I am quite sure that even in other countries, where the problem of national integration is perhaps not quite so significant as in countries like India, the problem still remains; and we believe that mass communication can be of great help in solving this problem.

The Government of India proposes to undertake a joint experiment with the NASA of the United States to try out a satellite television system for national development. In this experiment ESCES will provide up and down links for television programmes to be distributed via satellite. It is the hope of the Government of India that ITU and the UNDP will encourage that experiment by helping ESCES to widen its scope of activities. We appreciate the statement of the representative of ITU, made yesterday or the day before, that it is ready to make its contribution towards the successful implementation of this project.

Other specialized agencies can also contribute significantly. UNESCO can help with the "software" side and provide useful support in training personnel in programming techniques through fellowships, etc. However, requirements of the hardware and software for a project of this kind should be integrated and the efforts of the specialized agencies -- the ITU and the UNESCO in this instance -- should be complementary. A UNESCO team is at present touring India, assessing the Indian requirements for the software. As regards the hardware, the training provided through ITU fellowships and the experience gained at ESCES have enabled Indian engineers to undertake the system-designing of the Communications Earth Station at Arvi to operate with INTELSAT satellites. The 97-foot dish antenna required for the station at Arvi has been made in India by our engineers.

A group of scientists will visit Argentina in October to conduct a survey of the Mar Chiquita station on behalf of the United Nations. The Government of India has gladly placed the services of Mr. H.G.S. Murthy to serve on the group and will look forward to the report of the group. My delegation appreciates the desire of the Government of Argentina to make available, under United Nations sponsorship, facilities at Mar Chiquita station.

(Mr. Sen, India)

The Sub-Committee has requested the Secretary-General to initiate a preliminary consultation with the FAO and other concerned United Nations bodies on the advisability of convening in 1971 a panel for discussion of the applicability of space and other remote-sensing techniques to the management of food resources. My delegation looks forward to positive results from such consultations.

Now I should like to comment -- rather briefly, I hope -- on the Working Group's report on direct broadcast satellites.

My delegation would congratulate the Working Group on Direct Broadcast Satellites for the two excellent reports that it has prepared under the able Chairmanship of Mr. Rydbeck of Sweden, who, I believe, is with us now. We welcome him, and I should like to state my delegation's appreciation for the work done by him and his Committee.

We note from the report on the first session of the Working Group (A/AC.105/51) that direct broadcast into community receivers could be developed by the mid-1970s. Such a system is considered to be less expensive than the one intended for reception directly into peoples' homes. It would also be easier to establish, and less expensive where the radio noise level is low.

We have particularly noted in the report (A/AC.105/66) on the second session of the Working Group the statement that:

"The advent of direct broadcast satellites transmitting television signals into community receivers by the mid-1970s will have a special relevance to developing nations which have not yet acquired an extensive infrastructure of telecommunications using conventional technologies."
(A/AC.105/66, para. 42).

The Working Group further stated that it believed: "... that these countries will greatly benefit from the use of satellite television systems through programmes of their own choice and suited to their specific needs". (ibid.)

It has been recognized in the report that

"Direct broadcasting from satellites into community receivers will have great practical benefits for national integration and development because it makes it possible to link together isolated rural communities and distant centres of population". (ibid., para. 43)

(Mr. Sen. India)

The Working Group has further noted with interest the studies that are being carried out in many developing countries. It particularly looks forward to the results of the experiments that India and Brazil have proposed to conduct. It is important to note that the Working Group has drawn the attention of competent international bodies to the need for considering the most effective ways of assisting States in acquiring the benefits of satellite broadcasts. The possibility of making available, first, information regarding latest developments in the technology; second, fellowships; and, third, survey missions, has been emphasized.

The Working Group has acknowledged that "the new technology would, if abused, give rise to serious adverse effects". It is the view of my delegation that we need not be unduly concerned by direct broadcasts by satellites which spill over to other countries. The world is familiar with conventional wireless and television broadcasts which can be seen and heard easily across the national frontiers whenever the receiving sets are sufficiently powerful. In these circumstances direct broadcasts by satellites should have no greater significance, provided the regulations in force are respected.

(Mr. Sen. India)

The Working Group, noting the special value of direct broadcasting into community receivers for developing countries, "strongly believes that direct broadcasting from satellites can make an effective contribution to meeting the needs and the particular interests of developing countries". It has further noted that "the appropriate international agencies such as FAO, ITU, UNESCO and WMO and the UNDP should further study these needs and interests and provide information and, in conformity with their established procedures, appropriate assistance to developing countries in this regard". The hope was also expressed that States would also provide similar information and assistance. My delegation strongly supports this recommendation of the Working Group and we welcome such effective measures as may be taken to provide assistance to developing countries in this new field.

The Working Group has achieved its immediate objective and has provided two sound and encouraging reports for our consideration. However, the Working Group has also recognized many areas which need further study and consideration. It is my delegation's belief that the Working Group can and will continue, at least for the time being, to give its assistance to this Committee by co-ordinating and studying various pending problems related to direct broadcasts from satellites.

Now, after having spoken briefly, I hope -- perhaps the members of the Committee have other views -- on these two reports, I should like to turn to the report of the Legal Sub-Committee. I should like to deal briefly with the unanimous report of this Sub-Committee on the work of its eighth session held in Geneva earlier this year, which has been circulated as document A/AC.105/58. The question of the definition of outer space or of the legal aspects of the utilization of outer space and celestial bodies for space communications, have been examined by the Sub-Committee and at this stage we need only endorse the resolutions and decisions contained in paragraphs 13 to 16 of this report.

My delegation is concerned with the delay in the completion of the work of the draft liability convention for damage caused by objects launched into outer space. We have to discharge the mandate given to us by the General Assembly. The representative of the United States has emphasized how we have delayed this work by more than a year and the urgent need for completing this

(Mr. Sen, India)

task during the forthcoming session of the Assembly. We agree with him and hope that this Committee will ensure the speedy completion of this proposed convention.

I need not deal at length with the history of the preparation of the draft convention, nor justify its importance to the world as a whole, and particularly to the States which are not so advanced in space technology. The international community -- or mankind if you will -- has accepted man's conquest of space and the consequential pushing back of the space frontiers. The United Nations has set out and adopted the basic legal framework within which space exploration should be regulated. Two basic elements have already been established as part of law -- I refer to the Outer Space Treaty of 1967 and the Treaty on Rescue and Return of Astronauts of 1968. It is urgent that the third important limb of that framework, the liability convention, is added to it.

A look at the report of the Legal Sub-Committee will show that the basic groundwork for the completion of the liability convention has been prepared, and in this work every delegation has made lively and significant contributions. There are five major proposals for a draft liability convention; from the delegations of Belgium, the United States of America, Hungary, Italy and India. In addition, there are numerous concrete proposals on various aspects of the problems. These are reproduced verbatim in annex II to the report. In its operative part, the report shows how, as a result of intensive informal and formal negotiations and discussions held in New York in 1968, in New Delhi in March 1969, and in the Sub-Committee and its Working Group at Geneva in June/July 1969, the areas of agreement have been built up step by step and the areas of disagreement narrowed.

I should particularly like to invite the attention of representatives to paragraphs 21 to 26 of this report. They indicate that agreement has been reached on the question of the applicable law to measure damage, paragraph 21; a provisional agreement has been reached on the liability of the international organizations, paragraph 22; definitions of terms, such as, "damage", "launching", "launching state" and "space object" have been approved, paragraph 26; and acceptable texts on the questions of absolute liability and exoneration from liability, and joint liability of two or more States launching a space object, have all been finalized, paragraph 26. The report also

(Mr. Sen, India)

reproduces agreed texts on the subjects of procedures for presenting claims, time limits within which these claims may be presented, and the relevance of exhaustion of alternative remedies.

I realize that a few subjects require further discussion before agreements are recorded. There is the question of relationship between the liability of States members of an international organization and the liability of the international organization itself; whether it should be residual and contingent or whether it should be joint and several and concurrent. The question of joint liability may also need some further discussion and refinement. Then there is the question whether a ceiling should be fixed on the quantum of compensation for damage resulting from any single incident. Finally, there is the problem of the mode of settlement of claims.

In the view of my delegation, solutions can be found for all these problems, given goodwill and earnest effort from all directions, which I am sure will be forthcoming in full measure. Most of the areas of further discussion are mainly technical in nature and acceptable solutions may not be difficult to find.

The question of ceiling on compensation depends essentially on the assessment of possible damage resulting from space objects in the case of a likely and, we hope, unlikely, incident. Answer to this question is within the special knowledge of the space Powers. If the damage is likely to be low, no ceiling may be necessary; if it is likely to be high, an acceptable ceiling figure should be agreed to.

As regards the mode of settlement, my delegation is fully familiar with the various viewpoints on the subject. The crucial issue is whether a compulsive procedure for definitive settlement of claims should be provided. It is submitted that the question of claims for damages should not be considered in the same light as settlement of political differences or disputes. The assessment of the extent of damage and the computation of compensation are neutral subjects and should have no political aspects of their own. However, if settlement of claims ever raises political aspects, I am sure that the parties concerned would always reach a fair settlement of the issue through diplomatic negotiations. In our view, the compulsive procedure will start only if diplomatic negotiations do not lead to a satisfactory conclusion.

(Mr. Sen. India)

Bearing in mind the areas of agreement built up during the prolonged negotiations and discussions on the subject, the Indian delegation introduced its basic proposal in a revised form at Geneva which is now reproduced as document A/AC.105/C.2/L.32/Rev.2 at pages 23-30 of the report. The revised proposal was introduced during the closing days of the session on 3 July 1969 and, therefore, could not be discussed at length at Geneva. The proposal received, however, encouraging response at Geneva, and we were glad to note that it has met with some degree of approval at this Committee, on all issues including the flexible mode of settlement of claims indicated in the annexure to the document I have referred to.

(Mr. Sen. India)

It has been suggested that our proposal should be taken up as a basic proposal for a draft convention.

We are indeed grateful to the representatives for their words of appreciation, and we will reciprocate by assuring them that my delegation will continue to participate actively in our joint effort to complete the draft convention, with a view to submitting it to the forthcoming session of the General Assembly. In view of the limited time now available for the Committee, it may be advisable for it to continue this work during the General Assembly session, to finalise the draft convention and to submit it to the General Assembly. However, should it be considered that in the meantime it would be more appropriate to set up a working group with a mandate to complete the draft of a convention within a specified period, say within two or three weeks, and submit it to the Committee for its consideration, it would be acceptable to my delegation.

That is all I wanted to say under the two reports. Before I conclude I should like to say that on this highly technical subject in a new field a great deal of progress has been made, in spite of the various points of view, and my delegation looks forward with hope, encouragement and some belief that this work in all these three fields with which our reports deal will be completed in the near future so that at the end of this year or at most the end of next year we shall see practical results follow from our work.

The CHAIRMAN: I thank the representative of India for the kind personal remarks with which he opened his statement.

Mr. BEAULNE (Canada) (interpretation from French): This is not the first time that my delegation has taken the floor during this session. At our first meeting it was my delegation which suggested the candidacy of Mr. Souza e Silva of Brazil for the post of Rapporteur. However, our statement at that time did not deal with the work of the Committee as such. For that reason I should like to take this opportunity to express to you my delegation's satisfaction at seeing you, Sir, guiding our resumed discussions usual ability.

During our first meeting Ambassador Astrom of Sweden expressed to the United States delegation, on behalf of the Western European delegations and others, our sincere congratulations on the achievement of Apollo 11. The past year

(Mr. Beaulne, Canada)

has been marked by great achievements in the field of space. The recent flight of Apollo 11 has enlarged the scope of our world as it exists. This exploit will remain forever in our memories. The United States representative stressed yesterday the international co-operation which facilitated this great achievement, and our Committee was to a certain extent associated with this great feat because it prepared the convention designed to safeguard human life in outer space.

Our Committee has been concerned with the study of the possible consequences of man's activities in space. We all hope indeed that mankind will benefit from the exploration and utilization of outer space, as well as from the application of new technology in space.

This year three reports will be considered by our Committee. First I shall deal with the report of the Scientific and Technical Sub-Committee, which is item 3 on our agenda. I should like to recall that Mr. Rettie of the Canadian National Research Council presided over the Sub-Committee at its sixth session, held last March; he replaced Mr. Martin of Australia, who unfortunately was absent. I have been instructed by Mr. Rettie to convey to you his regrets at being absent today.

As this report shows, the work of the Sub-Committee yielded positive results. With respect to the application of space techniques, it has been suggested that the Secretary-General appoint a qualified person in the Secretariat whose task it would be to promote the practical applications of space technology. We feel that this recommendation should be supported by this Committee, and we hope that it will indeed be adopted by this Committee.

However, at the 62nd meeting of the Sub-Committee, held last March, the Canadian representative questioned whether this person should necessarily be appointed to the Outer Space Affairs Division in the Secretariat. In view of his function, which I suppose is intended to expedite the transfer of space knowledge to the developing countries, it would seem perhaps more appropriate to assign this person to the Office for Science and Technology of the Department of Economic and Social Affairs.

Our participation in the study of the Scientific Advisory Services of the United Nations has only strengthened us in this belief. We would suggest, therefore, that if this is not a matter for the Secretary-General to decide, and if this appointment is to be made to the Outer Space Affairs Division, perhaps our Committee could re-examine this decision at a subsequent session in the light of the experience acquired in the interim.

(Mr. Beaulne, Canada)

The report also states that the Sub-Committee should study training and teaching in the field of the peaceful uses of outer space. My delegation feels that teaching and training are matters which fall within the purview of such agencies as UNESCO and ILO and the various technical assistance programmes which generally deal with such matters, taking into account the priorities established by the beneficiary countries and the organizations concerned. Furthermore, we believe that the role of the Scientific and Technical Sub-Committee in this matter should rather be to study the reports submitted by various organizations on their activities in this field and to comment on them and to make appropriate recommendations. The specialized agencies and other organizations, whether or not they are within the United Nations system, which have a role to play in teaching and training in the field of the peaceful uses of outer space should be encouraged to report to the Scientific and Technical Sub-Committee on their activities.

(Mr. Beaulne, Canada)

In this way, we believe, the Sub-Committee would have more time to deal with matters that lie within the competence of space scientists rather than that of educators.

In its report the Legal Sub-Committee asks for the assistance of the Scientific and Technical Sub-Committee in examining the question of registering objects launched into space. We believe that this request conforms with the procedure outlined in the report of the Scientific and Technical Sub-Committee with respect to its future work. On this point we wish to commend the Sub-Committee for having defined its working methods. By this means the Sub-Committee could act as an advisory service on all matters relating to space technology. We hope that in the months to come the members of the Committee will examine the possibility of utilizing these working methods.

Now I should like to comment on the report of the Legal Sub-Committee's eighth session. As earlier speakers in this debate have emphasized, we must recognize, unfortunately, that at that session, as at earlier ones, the Legal Sub-Committee was unable to submit an acceptable draft convention on the liability of States for damage caused by the launching of objects into outer space. I scarcely feel it necessary to go into this subject at any length. We believe that such a convention is highly desirable and, in order to be effective, it should provide for a compulsory procedure to be applied for the settlement of disputes, not only to avoid friction between parties to any litigation, but also to ensure that the innocent victims of any such accident will be provided with prompt compensation.

It seems to my delegation that during the discussions in the Legal Sub-Committee, held this year in Geneva, it was this matter of compulsory settlement of disputes with respect to third parties that was the stumbling block to agreement on the convention.

It would appear that the Sub-Committee has indeed made progress in solving a number of problems, such as the inclusion or exclusion, as the case may be, of nuclear damage, the role of international organizations, and the scope of liability as well as the laws to be applied on this subject. We listened with interest to the views expressed yesterday by the representative of Belgium and we are giving his suggestion all due attention.

(Mr. Beaulne, Canada)

In addition to the convention on liability, the Sub-Committee also dealt with the definition of outer space and the utilization of outer space and celestial bodies. We hope that the Sub-Committee will give further consideration to these matters and will be able to make progress concerning them.

In this regard we are in favour of the proposal that the Scientific and Technical Sub-Committee should be requested to study at its next session the technical aspects of the registration of objects launched into space for the exploration and use of outer space. Furthermore, we feel that, if necessary, the Sub-Committee should obtain from the specialized agencies -- such as ITU, IMCO and ICAO -- information on the registration of ships, aircraft and so on. As we have emphasized earlier, this proposal could become a part of the recommendations contained in paragraphs 46 to 50 of the sixth report of the Scientific and Technical Sub-Committee.

Finally, I should like to comment on the two reports of the Working Group on Direct Broadcast Satellites, which is item 3 (c) of our agenda.

My delegation participated in the preparation of these two reports. We collaborated closely with the delegation of Sweden in preparing both these documents which were submitted jointly to the Working Group. We should like to express our thanks to our Swedish colleagues for the encouragement which their collaboration provided. We are grateful also to the Working Group for giving consideration to our views in preparing the two reports. We consider these reports to be extremely important as a preliminary analysis of direct broadcasting, particularly because of the useful information which they contain and because of the positive manner with which they deal with the subject. In our view, one of the factors which has enabled the Working Group to achieve positive results is that a competent, effective Working Group has been set up to study such a complex subject. Furthermore, the experience gained during the last two sessions has demonstrated the importance of co-ordination and supervision. Our Committee can play such a role in preparing a new field of activity such as that of direct broadcasting from satellites.

(Mr. Beaulne, Canada)

Without going into a detailed analysis of the conclusions contained in these reports, my delegation would like to express its approval of paragraph 51 of the report of the second session, which notes the absence of an appropriate international agency to deal with all aspects of direct broadcasting from satellites. Further, it recommends that the United Nations, and particularly our Committee, should sustain the interest it has shown in the subject, and we believe it is necessary to continue the mandate of this Working Group. We hope the other members of the Committee will agree with us on this point. During this session we shall consult with other delegations concerning the most practical way to take action on this recommendation.

I regret particularly that I cannot share the view expressed yesterday by the representative of Japan that it would be inadvisable to continue the mandate of the Working Group inasmuch as direct broadcasting from satellites will not be significant for many years to come.

(Mr. Beaulne, Canada)

Several countries are presently envisaging the possible use of satellite broadcasting to community receivers in the relatively near future. Studies relating to more elaborate systems are also under way in other countries, including my own. Thus, we strongly believe that the studies being undertaken by the Working Group are already timely and that it would be unwise and retrogressive if it were not continued and if thereby the impetus already acquired were to be lost.

More specifically, the following are a number of tasks which we think the Working Group could be asked to undertake during the forthcoming year. First-- and this would also involve asking the Secretary-General to act -- we believe that it would be useful if the Secretary-General were to ask the Members of the United Nations and also the international organizations referred to therein to study the two reports of the Working Group (A/AC.105/51 and A/AC.105/66) and to submit their comments on them as soon as possible. The Working Group itself could then review those comments and make any further recommendations which might follow from them. Second, we believe that the Working Group could be asked to assist in co-ordinating the study and if required itself to study the various matters related to direct broadcasting which are outlined in the conclusions of its reports. Third, it may be that there may be particular questions which this Committee and the General Assembly may decide require its further attention. Finally, we believe that it would be useful for the Working Group to submit a comprehensive report to us next year reflecting progress made by the organizations concerned in matters relating to satellite broadcasting and reporting on any significant and new developments in the field.

As I have already indicated, my delegation is anxious to co-operate with the other members of the Committee in ensuring that the report which we forward to the General Assembly contains recommendations both acceptable to all of us and designed to ensure that man's continuing activities in the outer space field benefit all peoples. To this end we look forward to consultations with the other members of the Committee and our Rapporteur on what would be generally acceptable as the contents of our report.

The CHAIRMAN: Before I call on the next speaker I should like to ask delegations wishing to take part in this general debate to indicate their desire to do so. We have several speakers for tomorrow morning, and I hope we can conclude the general debate at that time. So we should be very grateful if delegations wishing to speak this afternoon would inscribe their names on the list.

Mr. GONZALEZ GALVEZ (Mexico) (interpretation from Spanish): First of all I should like to apologize to the delegation of Canada. I declare myself guilty of having been responsible for having advanced Canada's turn in taking the floor. Unfortunately I am the Chairman of the Drafting Committee of the Special Committee on Principles of International Law, and it was a little difficult for me to leave that meeting in order to come here to make a very few brief remarks before this Committee.

I cannot begin my substantive comments without expressing first our warmest congratulations to Mr. Souza e Silva on his election as Rapporteur. Brazil is like my second country inasmuch as I have spent much time in Rio de Janeiro and I have always supported the representatives of Brazil. I am sure Mr. Souza e Silva will continue the tradition established in this Committee by Ambassador Carvalho Silos, whom we shall miss very much in any case.

My delegation wishes to take the floor principally in order to refer to a specific question. We will not speak or comment in detail on the reports of the Working Group on Direct Broadcast Satellites or on the report on technical questions, since Mexico's tradition, particularly in regard to the first report of the Working Group, has already been stated by the representatives of my country in those bodies and, as you all know, Mexico submitted a case study, to which reference is made in document A/AC.105/65, with which I am sure you are all perfectly familiar.

The reason why my delegation decided to speak in this debate was mainly to present a very brief remark with regard to the basic items under consideration in the Legal Sub-Committee. My country, as well as many other countries -- I am sure the great majority of the countries present here -- feels that this auxiliary body finds itself in an extremely serious impasse

(Mr. Gonzalez Galvez, Mexico)

with respect to the conclusion of a convention concerning liability for damage caused by the launching of objects into outer space. We realize the very grave difficulties which the negotiators have had to face in order to reach an agreement acceptable to all. My delegation cannot but pay tribute to India for the initiatives it took in this matter, and basically we feel that the only solution to the problems pending is to continue with informal negotiations.

We all know the very interesting exchange of views on the part of some delegations in New Delhi when the talks took place from 13 to 21 March of this year. We consider that this impasse cannot be overlooked by this Committee. It is necessary that in our report our interest in finding new ways and means of solving the conflicts which have arisen should be placed on record. We had a similar experience during the Conference on the Law of Treaties in Vienna, and all of you know that in the view of my delegation it was possible to find a solution which was acceptable to the majority. It should not be possible for one delegation or a group of delegations to veto development and progress with regard to this point.

(Mr. Gonzalez Galvez, Mexico)

For these reasons, I think it is extremely important that the Chairman of this Committee take on his shoulders the task of guiding informal negotiations on this question. We think that the initiative taken by India in inviting a certain number of delegations which had expressed their specific interest in this question to submit proposals is the solution to the problems we are facing.

We cannot allow this impasse to continue as long as certain delegations refuse to continue informal negotiations on different points. If, as a result of those negotiations, we reach the conclusion that there is no possible solution, then this Committee, or perhaps the Legal Sub-Committee, may have to decide the road to be followed in the future.

But, I repeat, the Mexican delegation considers that it is of fundamental importance to organize, unofficially and informally, these negotiations on points which are still pending with regard to the convention on liability for damage caused by the launching of objects into outer space, and this should be done between this session and the next session of the Legal Sub-Committee.

There were also suggestions in informal talks of the possibility of postponing the closing of this session of the Committee sine die, until a solution is found to the problems which still face it. I honestly do not think that this will give us a solution to the present problem, but I do believe, Mr. Chairman, that, with the trust which we all place in you, you may perhaps call an informal meeting in order to explore possible ways of conciliation. These informal meetings which I suggest may be headed or initiated by the delegation to which the Chairman belongs. It might, of course, be presided over by you, Mr. Chairman, and perhaps representatives of the different geographical areas represented in this Committee might take part.

I have no objection, naturally, to taking any one of the innumerable texts that have been submitted on this question, but my delegation is very much in favour of the text submitted by India with respect to this question, and, without making a formal proposal, I do hope that it will be possible to adopt or consider the possibility of adopting one single text, possibly India's text, with a few alternatives with regard to some of the conflicting points, as a basic working document.

(Mr. Gonzalez Galvez, Mexico)

This proposal is made by my delegation because we are deeply concerned by the situation in which we find ourselves. It is necessary to continue the negotiations which have been begun. We have heard some criticism by certain delegations because they were not consulted during the informal negotiations, but I think that this criticism is not justified. I believe that the negotiations which have been carried out so far were carried out in the best spirit of co-operation, and many of the delegations showed particular interest by the presentation of various proposals on the item with which we are dealing.

I repeat, my delegation thought it was desirable to intervene in this debate in order to express the concern of which I have just spoken. As a rule, and you know this better than I do, Mr. Chairman, the Mexican delegation does not take part in the debate in the Committee. We have endeavoured within our limitations to co-operate in every possible way within the Sub-Committees and the Working Groups, but on this occasion, departing from our customary practice, we felt it necessary and advisable to take the floor in order to voice our serious concern. I do hope that this humble suggestion will be taken into account by the representatives in this Committee and that in future we may hear your own views on this question.

The CHAIRMAN: There are no more names on my list of speakers of member countries, but before calling on the representatives of the United Nations Educational, Scientific and Cultural Organization and the Food and Agriculture Organization, I should like to consult for a moment with the Committee.

As far as our future proceedings are concerned, I think it would be advisable if we finished our general debate at tomorrow morning's meeting, and it would perhaps be advisable to have an informal meeting of this Committee tomorrow afternoon in order to get a clearer view of how we should proceed and finish the meetings of this Committee.

We have before us the reports of our two Sub-Committees and of the Working Group which contain a series of recommendations to this Committee and to the General Assembly. In addition, many proposals have been made by various

(The Chairman)

delegations during the course of this debate. Several delegations have offered to collaborate with the Bureau, and especially with the Rapporteur, in order to draw up a report of the Committee to the General Assembly which would reflect the different views expressed during our discussions. If the delegations would be willing to give their views in writing, we would be very grateful and I would ask the delegations kindly to pass on their proposals to the Secretariat. They would then be handed over to the Rapporteur, and that would facilitate his work tremendously.

I am completely in the hands of the Committee, but I think that the procedure that I have indicated would be advisable. If the Committee agrees with this, we shall hold a formal meeting tomorrow morning. I would ask the delegations which wish to do so to indicate their proposals, if possible in writing, to the Rapporteur. We could then meet tomorrow afternoon in an informal meeting to find out how we can continue our work and finish it in a satisfactory manner. Are there any comments or proposals on what I have just suggested?

Mr. ARORA (India): We are thankful to you, Mr. Chairman, for having summed up the position as it now exists. We shall follow your suggestion and submit our views in writing to the Rapporteur. You also mentioned that we should submit any proposals we have to the Rapporteur. I presume that that means proposals regarding the report.

The CHAIRMAN: Yes.

Mr. ARORA (India): The representative of Mexico a few minutes ago made a very valuable suggestion. He suggested that you, Mr. Chairman, as Chairman of this Committee, might like to hold informal consultations with a view to finding out what progress we can make in this Committee on the question of a liability convention. We would very much look forward to the results of the consultations that you might hold in this respect.

(Mr. Arcra, India)

We have in our statement this afternoon suggested that the Committee might continue its work during the General Assembly session to finalize a draft convention. We are aware that the next session of the General Assembly starts early next week. Therefore the Committee could meet even at the beginning of next week, that is Monday, and continue to meet immediately after the session starts whenever facilities are available for it, or it could meet during the session whenever the necessary preparations have been made and consultations have been carried out and when facilities for its meetings are available.

Therefore, while we are thinking of our report for the session we might keep this in mind, because if the Committee is going to meet during the next few weeks, whenever it is convenient to do so and whenever it is possible to make progress on the matter we have before us, we should consider that the report that our Rapporteur is now to submit to us would be an interim one and that it would be finalized when the Committee meets during the session of the General Assembly to present the final recommendations to the General Assembly.

We should also like to suggest that, if it is necessary to set up a working group in the next few weeks, we should be prepared to accept the suggestion. I think that suggestion was made by the representative of Mexico, and my delegation also alluded to this matter earlier. If that course of action could help the Committee in finalizing a draft declaration, it would be most valuable and acceptable to my delegation.

Mr. GONZALEZ GALVEZ (Mexico) (interpretation from Spanish): I support the suggestion made by the representative of India, basically on two points. One is that the informal negotiations should be conducted by you, Mr. Chairman, during the next session of the General Assembly. The second is that the report to be submitted by the Rapporteur should be a provisional report, pointing out that the final report would be submitted to the General Assembly only when we know the results of the negotiations which might be held on the item I have referred to specifically. Perhaps the only divergence of opinion I might have with the representative of India is with regard to the date on which a conclusion should be reached on this particular question.

(Mr. Gonzalez Galvez, Mexico)

My personal opinion, and it is the view of my delegation, is that a deadline should be set before the next General Assembly session finishes so that you, Mr. Chairman, in the light of the results of the informal consultations that may be carried out on this question, may decide when the definitive report should be submitted to the General Assembly on the results of the work of this Committee. Perhaps it might be premature to form a working group for this. Perhaps the first stage should be that you, Mr. Chairman, consult those delegations that you deem appropriate in order to examine, consider and evaluate the possibilities for carrying out more formal negotiations, but I do not think that at this stage a working group should be constituted which might have difficulty in working without knowing what possibilities for agreement exist.

The first stage which my delegation proposes is that, however you may deem it convenient or advisable, individually or in groups, you should consult those delegations which you think appropriate with regard to holding informal negotiations during the General Assembly session which will start next Tuesday. On the basis of the results of those negotiations, if you think it appropriate and the representatives of different geographical areas agree, it might be decided whether an informal working group should be established so that it might examine drafts with a view to seeking a solution to the basic problem that we are now facing. Thus my delegation supports with great enthusiasm the proposal that has just been stated by the representative from India. In fact he was supporting a Mexican proposal, and I am most grateful to him for his support, since his delegation has so greatly and so effectively contributed to the work of this Committee.

Mr. DEBERGH (Belgium) (interpretation from French): Having heard the statement made by the representative of India and that made by the representative of Mexico, I am quite ready to accept their proposals. As you will recall, my delegation suggested that a solution should be found to the deadlock prevailing in the Legal Sub-Committee. For this reason we fully support the proposal made by the representative

(Mr. Debergh, Belgium)

of India and especially the proposal made by the representative of Mexico, with this reservation -- that, if we are to follow the procedure that these delegations suggest, we should hold this session of our Committee open so that at any time after the unofficial consultations which you will preside over it should be possible for the plenary Committee to meet and continue its meetings. Furthermore, I should like to call the attention of members of the Committee to what happened two or three years ago when we followed a similar procedure with respect to another problem, namely, the draft convention on assistance to astronauts. That convention was prepared during a General Assembly session and precisely at a time when difficulties arose during negotiations in the Legal Sub-Committee. It was precisely by means of negotiations during a General Assembly session that a solution was found to the problem. Therefore I think that at the present stage we could also find a solution to this problem of liability in the same fashion.

Mr. ROBERTSON (Canada) (interpretation from French): I am perfectly in agreement with the proposal that you, Mr. Chairman, made a few moments ago. I think that we might finish the general debate tomorrow morning and then tomorrow afternoon we might study the different proposals that have been made with regard to specific questions.

Mr. GONZALEZ GALVEZ (Mexico) (interpretation from Spanish): I apologize for taking the floor once more but I wish to clarify one point which I think should be placed on record. The two stages proposed by my delegation for conducting negotiations are intended to avoid placing in a difficult situation any delegation which for political reasons might not be prepared to work in this area.

(Mr. Gonzalez Galvez, Mexico)

For that reason I think the first stage should be completely informal and guided by you, Mr. Chairman. If there are possibilities and if there is good will and the desire to have negotiations, then a group of eminent jurists who are more familiar with this subject than we might meet to try to find formulas in order to reconcile different viewpoints. If the working group were to be set up from the beginning, I think it would be placing direct pressure on certain delegations which, for very legitimate reasons, I am sure, may not find it advisable or appropriate at this time to negotiate on this question. For that reason I make the proposal for the two stages. I think it is advisable to form a small working group, a small sub-committee, whatever name we may give it, in the second stage, only if you, Mr. Chairman, think it is advisable and only if you feel such a working group may be able to reach viable results.

The CHAIRMAN: If there are no other comments, I shall take it that there is general agreement that we should try to finish our general debate tomorrow morning.

Mr. CAPORTORTI (Italy) (interpretation from French): Mr. Chairman, your proposal contains two parts, that is, to close the general debate tomorrow morning and to continue with an informal meeting tomorrow afternoon in order to continue the debate we have more or less started this afternoon with regard to possible procedures to be followed. I think that by referring only to tomorrow morning's meeting you seem to set aside the proposal with regard to an informal meeting tomorrow afternoon. In the view of my delegation, an informal exchange of views tomorrow afternoon could be very useful in order to determine future procedure.

The CHAIRMAN (interpretation from French): I was under the impression that we wished to meet informally tomorrow afternoon; inasmuch as it will be an informal meeting, I did not wish to announce it at a formal meeting.

(continued in English)

If there are no more Member States wishing to speak I should now like to invite the representative of the United Nations Educational, Scientific and Cultural Organization to take the floor.

Mr. NIKOLSKY (United Nations Educational, Scientific and Cultural Organization): Thank you, Mr. Chairman, for allowing me to address the Committee on behalf of the United Nations Educational, Scientific and Cultural Organization (UNESCO) on the matters now under consideration and particularly on the question of direct broadcasting via satellites to which great importance has been attached by this Committee and in which field the role of UNESCO is generally recognized.

Our organization is deeply concerned with the social, cultural as well as the legal aspects of space communication. UNESCO's action pertinent to these fields is summarised particularly in the paper (A/AC.105/60) on the implication of space communications for UNESCO's programme submitted to the present meeting.

I would confine myself to mentioning that our report deals with such subjects as news transmission, education and national development, cultural exchange, exchange of scientific data and, finally, the international arrangements in UNESCO's field of competence that may be needed.

The last item seems to be of specific significance, since the potentialities of space communication can bring real benefit only if they are properly used. Indeed it is evident that the advent of space communication, in extending enormously the range and scope of the mass media, calls for international co-operation to ensure the use of satellite broadcasting in the interest of all.

Direct broadcasting via satellite to home receivers lends new urgency to the international agreements and arrangements required. Such arrangements have been a matter of concern to the United Nations and the International Telecommunication Union as well as to UNESCO.

The report of the Working Group on Direct Broadcast Satellites reflects the fact that UNESCO is deeply involved in the use of space communication for the exchange of information, the spread of education and greater cultural exchange between the peoples, which, as you know, Mr. Chairman, are among the main aims of our organization.

We wish to emphasize specifically the importance attached to educational television via satellite which, in common opinion, can substantially contribute to national development, in the first place for the benefit of developing countries, as already demonstrated by UNESCO expert missions to a number of countries, such as India, Brazil and Pakistan.

(Mr. Nikolsky, UNESCO)

I might mention here that smaller countries are also beginning to show interest in the use of satellite communication, on a shared basis, regionally or sub-regionally. It is the intention of UNESCO to continue assisting Member States in studies and training related to projects for the use of space communication in developing countries and regions, a work to which inter alia the UNESCO Advisory Panel on Space Communication has been devoting much of its efforts.

I wish to note that the activities of UNESCO in the field of space communication are being carried out in close co-operation with other international organizations and bodies concerned, notably the United Nations, the International Telecommunication Union, the International and Regional Broadcasting Unions and the International Press Telecommunication Committee.

The General Conference of UNESCO, at its fifteenth session, specifically stipulated that UNESCO would:

"co-operate with the United Nations Committee on the Peaceful Uses of Outer Space in its studies of the problems posed by direct broadcasting satellites".

It is a great pleasure to note that UNESCO's policy and action have met with favourable response at the session of the Working Group and have been commended by a number of the members of this Committee.

I wish to take this opportunity to draw the attention of the Committee to the Meeting of Governmental Experts on International Arrangements in the Space Communication Field which is to be convened at UNESCO House in Paris next December. That meeting is being convened by the Director-General following a resolution adopted at the last UNESCO General Conference with the purpose of assisting in formulating:

"proposals concerning international arrangements and conventions to promote the use of space communication for the furtherance of UNESCO's aims".

The meeting is intended to define the problems falling within UNESCO's competence that might be resolved by means of international arrangements and conventions, specifically in the fields of dissemination of information, copyright and neighbouring rights as well as the assessment of the requirements of education, science and culture in the future allocation of frequencies for space communication.

(Mr. Nikolsky, UNESCO)

I wish to add here that the study on frequencies has been prepared in close collaboration with the International Telecommunication Union, and in fact the meeting itself was convened in consultation with that agency so as to make it possible for its suggestions and conclusions to be taken into account by the World Administrative Radio Conference for Space Communication in 1971.

As you may see, all the items which will come up for discussion at the UNESCO meeting are in full compliance with the recommendations and requests made to UNESCO in the report of the second session of the Working Group on Direct Broadcast Satellites, and we hope the forthcoming meeting can contribute substantially to the study of satellite broadcasting being carried out by this Committee.

(Mr. Nikolsky, UNESCO)

In conclusion, I have the privilege of informing you that the Committee on the Peaceful Uses of Outer Space is among the international bodies which have been invited by UNESCO to be represented at the December meeting in Paris. A valuable contribution by this Committee to the work of the meeting is expected and will be highly appreciated.

The CHAIRMAN: On behalf of the Committee, I should like to thank the representative of UNESCO for his statement and for the invitation to participate in the December meeting. I now call on the representative of the Food and Agriculture Organization.

Mr. WOODWARD (Food and Agriculture Organization): Mr. Chairman, on behalf of the Food and Agriculture Organization (FAO), I wish to thank you for the opportunity of reporting further on FAO'S activities concerning the application of space technology to agriculture, forestry and fisheries.

First, I would draw the attention of Committee members to the previous report on FAO'S activities (A/AC.105/55/Add.2). In that report, and linked to the application of space technology to agricultural, forestry and fishery activities, the early development was anticipated of a broadened, positive programme for FAO. Before finalization of the programme, however, the Director-General of FAO wished to have the benefit of attendance of his representatives at a meeting which was shortly to be held at Cambridge, in the United Kingdom, on the subject of earth observation satellites. Subsequently, the Director-General has given consideration to appropriate measures to lay foundations for an expanded FAO programme, and action has been taken in a number of directions. These include the following.

First, at FAO headquarters in Rome, an Inter-divisional Group, under the chairmanship of the Assistant Director-General, Agriculture Department, has been formed to consider and co-ordinate all aspects of space technology related to the work of FAO.

(Mr. Woodward, FAO)

Secondly, plans have been initiated for the establishment, during the next FAO biennium of 1970-1971 of an organization-wide advisory panel. In the interim period the various functional divisions will be individually responsible for obtaining consultative services on the application of satellite sensing in their particular fields. Visits by such consultants will be co-ordinated as far as possible to coincide with each other so that the consultants and the Inter-divisional Group can meet as a body.

Thirdly, it is the intention for the 1970-1971 biennium to include specific projects using satellite information as part of FAO's regular programme. Examples of these are the following.

First, there is the world forest inventory. This is an ongoing project, largely staffed by associate experts, to which satellite information will be particularly applicable. It is hoped that world inventories of crops and grasslands can be included in this project. Informal discussions have already taken place with the University of Michigan for assistance with this project.

Second, there is the survey of marine fishery resources and the development of forecasting and monitoring systems. In this field, various consultants have already been approached by FAO, through its Fisheries Department, so that the Organization may have expert advice in formulating plans for future activities in these projects.

Third, we have the soils map of the world. This too is an ongoing project. Already certain map sheets are being checked as regards land form and soil boundaries by the use of satellite information. Eventually it is hoped that a land capability map can be produced following the pattern of the soils map of the world.

In conclusion, I would emphasize that FAO is desirous of working in close co-operation with this Committee and with other agencies also concerned in the wide area of space technology. For its part, FAO, by virtue of its wide activities embracing programmes in agriculture, forestry and fisheries, on land and in the oceans, is in a most advantageous position to relate what I might term "ground fact" to "sensor information". That may well be one of the major contributions FAO can make to the advancement of space

(Mr. Woodward, FAO)

technology in its relationship to production and food. Indeed we of FAO have noted particularly the references made by a number of speakers to that relationship between space technology and earth resources.

The CHAIRMAN: On behalf of the Committee, I should like to thank the representative of FAO for his statement and to ensure him that we appreciate the co-operation of FAO.

The meeting rose at 5 p.m.

VERBATIM RECORD OF THE SIXTY-SIXTH MEETING

Held on Friday, 12 September 1969, at 10.30 a.m.

Chairman:

Mr. HAYMERLE

(Austria)

REPORT OF THE COMMITTEE TO THE GENERAL ASSEMBLY (continued)

- (a) REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE (A/AC.105/55 and Add.1, 2 and 3)
- (b) REPORT OF THE LEGAL SUB-COMMITTEE (A/AC.105/58)
- (c) REPORTS OF THE WORKING GROUP ON DIRECT BROADCAST SATELLITES (A/AC.105/51 and A/AC.105/66)

The CHAIRMAN: Today we shall conclude the general debate.

Mr. DIACONESCU (Romania) (interpretation from French): This year, from its very first days, marked one of the most remarkable stages in the history of man's conquest of outer space.

As early as the middle of January, Soviet scientists were able to establish the first experimental orbital station by joining two space vehicles, which carried four astronauts.

Shortly thereafter United States scientists launched Apollo 9 and Apollo 10, to be followed later on, about two months ago, by the brilliant success of the Apollo 11 mission which assured the spectacular landing on the moon of the first inhabitants of the earth. The brave astronauts, as well as the scientists, technicians and workers who contributed to the achievement of these historic acts, received the admiration and the well-deserved congratulations of the whole world.

The trip to the moon and the successful return to earth of the three astronauts of the Apollo 11 mission represent an important historic victory for science, a brilliant expression and symbol of the creative capacity of mankind, a memorable moment in the history of universal knowledge.

Mankind can now expect that this great victory of human genius will exert a favourable influence not only on the general progress of science and technology but also on relations between peoples. The cause of peace and international co-operation and reason, which won such a victory in outer space, will demonstrate that it can affirm its immense potential here on earth also through the victory of the ideals of peace, the mutual respect of peoples and the fruitful co-operation of all peoples in the interest of human civilization.

(Mr. Diaconescu, Romania)

The accomplishments to which I have just referred were accompanied by an intensification of space activity in a growing number of States and an increase everywhere throughout the world in interest with regard to these activities and the applications of space techniques to the needs of contemporary progress.

It is in this triumphant atmosphere created by the irresistible advance of man in the mysteries of space that our Committee has carried out its activities, seeking to make its useful contribution to the development of international co-operation in the field of the peaceful uses of outer space.

The Romanian delegation appreciates the work carried out during its last session by the Scientific and Technical Sub-Committee. The exchange of views which took place on that occasion on items of interest with regard to the applications of space techniques and the different recommendations which appear in its report represent a truly positive contribution to the enrichment and diversification of the activities of that Committee.

But at the same time we consider that there still exist possibilities for making the Scientific and Technical Sub-Committee more effective. In that spirit the Romanian delegation at the last session of that Sub-Committee, together with other delegations, expressed its concern for finding the most appropriate means which would make it possible to increase further the usefulness of the work of that Sub-Committee and to increase its contribution to the development of peaceful international co-operation in these activities. In order to achieve a true exchange of experience and widespread dissemination of acquired knowledge in the field of the applications of space techniques in the interest of human progress, particularly to satisfy the needs of the developing countries, it is necessary, in our opinion, to think of going beyond the stage in which most of the session of this Sub-Committee is devoted to a general debate on the broad scientific and technical aspects of international co-operation with regard to the peaceful uses of outer space or to the procedure for taking note of the different reports and documents submitted to it.

(Mr. Diaconescu, Romania)

To that end, we supported the idea of inviting the States members of the Sub-Committee to submit to the Secretariat, at least four months before the meetings of the Sub-Committee, working documents on items which they felt to be of special interest or of special importance to the Sub-Committee.

That suggestion, as it is conceived by my delegation, should lead us to a situation in which the work of the Scientific and Technical Sub-Committee will be concentrated on more specific items, included in an agenda that could be drawn up and distributed to Governments well in advance together with the necessary documentation. In that same spirit, we welcomed the decision of the Sub-Committee to promote more energetically the applications of space technology and to envisage, at its future meetings, the taking of various concrete initiatives such as, for example, the organization of meetings of experts in collaboration with the specialized agencies of the United Nations and other international and national organizations. My delegation also attaches great importance to the Sub-Committee's intention to envisage meetings of experts from time to time, on a regional or international basis, for the purpose of studying specific questions involving applications of space technology. This idea received its first encouragement in the proposal to request the Secretary-General to undertake preliminary consultations with FAO and other interested bodies of the United Nations concerning the advisability of convening, in 1971 or as soon thereafter as possible, a study group to discuss the possibilities of applying space techniques and the results of other research still to come to the management of food resources, and to submit a report to the Sub-Committee, at its next session, on its conclusions and recommendations.

My delegation supports the recommendation of the Scientific and Technical Sub-Committee concerning the appointment by the Secretary-General, on an experimental basis, of a properly qualified person who would devote himself, within the framework of the Outer Space Affairs Division, to promoting practical applications of space technology.

With regard to the activities of the Legal Sub-Committee, efforts were made during the year, in the framework of the Sub-Committee itself as well as outside the Sub-Committee, to achieve the well-defined goal of continuing to work for the progressive enlargement of the juridical basis for space activities. At the

(Mr. Diaconescu, Romania)

beginning of this year, we were tempted to hope that during the present session of this Committee we should be able to congratulate ourselves on the elaboration of a new chapter in space law, on the working out of a draft agreement on liability for damages caused by the launching of objects into outer space. Our optimism was based on a clearly expressed undertaking in resolution 2453 (XXIII) of the General Assembly, under the terms of which the Committee on the Peaceful Uses of Outer Space was to conclude, as a matter of urgency, the elaboration of a draft of such agreement and submit it to the General Assembly at the twenty-fourth session. But now we must note with regret that, despite the progress achieved and the goodwill manifested, it was not possible to carry out the directive given by the General Assembly.

In the present situation, new efforts must be made by all members of the Committee to reach, as soon as possible and through the normal procedures of the Committee, an agreement responding to the interests of all the parties concerned.

The Romanian delegation announces its readiness to participate, together with the other members of the Committee, in new negotiations for the purpose of concluding, as soon as possible, the agreement in question.

Very positive results were achieved by the Working Group on Direct Broadcast Satellites which was created by the Committee on the Peaceful Uses of Outer Space on the admirable initiative of the Swedish delegation. In its two reports the Working Group has indicated that mankind is on the threshold of a new revolution in the field of communications. According to preliminary evaluations, in about five years we may expect to have satellites capable of broadcasting directly, to the great mass of the public, television programmes through community installations. In fifteen years' time, the technology will probably make possible the organization of a regular television service by satellites utilizing unmodified domestic receivers. With this prospect in view, it is very important to think right now about the manifold implications of direct broadcasting from satellites and to try to find solutions to the complex questions stemming therefrom.

As early as its first session, the Working Group reached the conclusion -- a proper one, in our view -- that international co-operation must necessarily play a basic role in the creation of systems of satellites for direct radio broadcasting.

(Mr. Diaconescu, Romania)

The conclusions concerning the need for the establishment of broad international co-operation as the premise for all effective systems in that field became even more apparent when the Working Group discussed the social, cultural, juridical and other consequences arising out of direct broadcasting by satellite. We share the opinion, emphasized in the report, that such international co-operation should be based on equality and mutual respect for the interests of each country; and it should also, in particular, include recognition of the right of all nations to use this means of radio broadcasting in an equitable and well-ordered manner, in conformity with the principles of international law and the Charter of the United Nations, as well as the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. Utilization of this new technology for purposes that might infringe on the sovereignty of other States or that might constitute interference in the internal affairs of other States would have profoundly negative effects on that spirit of mutual understanding that we wish to promote in relations among States and peoples; it would also adversely affect international peace and security as well as the very functioning itself of the system of direct broadcasting by satellite.

(Mr. Diaconescu, Romania)

The two reports of the Working Group contain, in our opinion, a wealth of ideas, suggestions, conclusions and questions which might arise with regard to direct satellite broadcasting. From this standpoint, we might consider that the original mandate given to the Working Group, contained in General Assembly resolution 2453 B (XXIII), was fulfilled with great success. It is now for the General Assembly to indicate to the Committee on the Peaceful Uses of Outer Space the best road to follow in order to carry out the study of the many questions related to direct satellite broadcasting in order to arrive at acceptable solutions in this field. For instance, we could suggest that at a certain stage legal questions with regard to direct broadcasting be studied, that is, that satellite broadcasting be included in the agenda of the Legal Sub-Committee of this Committee. This suggestion was also made by some delegations at the last meeting of the Legal Sub-Committee.

My delegation shares the view expressed during this debate that the need for Governments seriously to consider these questions calls for a certain period of reflection before the Committee starts the specific work of drawing up solutions for different aspects of direct satellite broadcasting.

To conclude, I should like to stress the constructive atmosphere and the spirit of co-operation which marked the work of the current session of the Committee on the Peaceful Uses of Outer Space.

Mr. BAVAND (Iran): The well-known philosopher Hegel once defined history "as the march of God on earth". Now, with the march of man on the moon, we have entered a stage of development quite new in dimension and novel in prospects. If man's dynamic intellectual spirit through thousands of successive years has made him master of his own planet earth, now indeed it has opened the way towards his mastery over the moon and other parts of the solar system and possibly to galaxies outside our own system.

(Mr. Bavand, Iran)

Ten years ago, we were looking forward hopefully to the application of technology gained from the space race in communications, meteorology, navigation and geology. Today, there are already satellite systems in operation for those areas. Now, however, we are entertaining the idea of possible exploitation of the moon's resources and its utilization as the natural satellite of earth for communication and many other objectives entrusted to the short-lived artificial satellites.

This gigantic achievement in a short span of time is not only due to the pioneering efforts of many scientists and engineers from so many countries, over so many years, but it is also due to the dedication, determination and deliberation of the few countries which have set the exploration of the moon as a national objective. It is in the light of this fact that my delegation joins previous speakers in extending warm congratulations to the United States delegation on the magnificent accomplishment of the Apollo 11 mission.

With the rapid development of space science and technology and the ever-increasing number of national, regional and international organizations initiating space programmes or wishing to do so, two important questions might occupy our minds: first, whether the United Nations is adequately prepared to keep pace with the enormous speed of space development, and, secondly, whether it has ever attempted to co-ordinate and keep under review the activities of various international agencies which have become involved in different areas of space activities.

There has already been apprehension among a number of delegations regarding the fact that the lack of effective co-ordination among specialized agencies is fraught with the danger of duplication and possible overlapping in their future activities. This uncertainty could also be due to the lack of co-operation among the non-specialized international agencies, such as INTELSAT and Inter-Sputnik. Apparently none of them work under the auspices of the United Nations or are legally connected with the International Telecommunications Union. Although both of them have started with global aspirations, or at least have announced intentions to do so, they differ fundamentally, from the technical and conceptual points of view.

(Mr. Bavand, Iran)

It seems quite clear that if at this early stage the necessary steps towards co-ordination and harmonization of the activities of these agencies are not to be taken, this Organization will in the future undoubtedly be faced with enormous difficulties.

Two years ago my delegation, together with other delegations, submitted proposals to the Scientific and Technical Sub-Committee on the desirability of enlarging the personnel, budget and power of the Outer Space Affairs Division. We still believe that, in view of the rapid expansion of space activities and the continually growing responsibilities of the Outer Space Committee, its reorganization is clearly necessary.

The validity of that suggestion was recognized at the United Nations Conference on the Peaceful Uses of Outer Space. The Vice-Chairman and Scientific Chairman of the Conference, in his statement on 14 August, while referring to that suggestion, maintained that "the resources at the disposal of the Outer Space Affairs Division are totally insufficient for it to perform an active role". He earnestly urged that "serious consideration be given to redefine its responsibilities and role providing appropriate back-up to stimulate on a continuing basis the understanding and the utilization by all nations of the uses of outer space".

The world applauded the agreement reached two years ago on the rescue and return of astronauts and the return of objects launched into outer space, and it was viewed as another important step in the effort towards creating a legal framework for space activities and co-operation. However, that flourishing beginning somehow paled into insignificance when the prolonged debate on its natural corollary, the convention on liability for damage caused by objects launched into outer space, did not lead to any concrete result.

Despite the hope expressed at the twenty-third session of the General Assembly for an early conclusion of a convention on liability, the Legal Sub-Committee once more failed to fulfil its mandate. The report of the Legal Sub-Committee reflected some pedestrian progress towards a convention, but the main important questions have been left in limbo.

(Mr. Bavand, Iran)

In the light of that development, my delegation deems it necessary once more to reiterate its position on certain important principles. We believe that nuclear damage should be covered by the convention. In this connexion my delegation sees no rational ground for accepting limited coverage for damage. To fix any ceiling in this case would not only make the inclusion of nuclear damage in the convention meaningless to a certain extent; it would also be incompatible with the generally agreed principle of absolute liability.

(Mr. Bavand, Iran)

It seems quite inconceivable that the law concerning the amount of compensation should be determined by the launching States. We share the view that compensation should be assessed in accordance with the applicable principles of international law, justice and equity. However, the compensation may be determined in accordance with any other principle agreed upon between the claimant State and the respondent State.

We always have held the view that the interest of the injured State should be the first criterion to be considered in indemnification. Speedy reparation, however, is not likely if, for lack of efficient remedies at the disposal of the victim of the damage, the day of reckoning can be put off. We of course share the general view that, in resolving inter-State claims, negotiation is the method of first resort. We cannot agree that the matter can be left at that, if the persistent differences cannot be resolved. There must be the means of final settlement. In our view, that means third-party settlement machinery.

I turn now to the report of the Scientific and Technical Sub-Committee. We supported the proposal of the representative of India at the 53rd meeting of the Committee for establishment of a small advisory group to arrange panel meetings, fellowships, surveys and technical assistance. We are pleased that the Sub-Committee received well this modest proposal, along with that of Sierra Leone, and related the proposals to the various needs and requests which had been made or might be made for information and technical and other assistance in the various fields of the application of outer space techniques.

We also believe the suggestion of the Sub-Committee for the appointment of a qualified individual to the Outer Space Affairs Division on a short-term basis to promote the application of space technology is praiseworthy, and it is indeed a modest primary step towards the strengthening of the Outer Space Affairs Division.

With respect to the report of the Working Group on Direct Broadcast Satellites, we believe it truly reflected many possible problems which might occur when broadcasting directly from satellites becomes a reality. However, the problems on the one side should not keep us away from the prospects on the other. Indeed, its actual realization would enhance the process of democratization of information and communication and unequivocally would make people further aware of the happenings in the world around them.

(Mr. Bavand, Iran)

As the report of the second session of the Working Group indicated, there is a vast opportunity for effective utilization of direct broadcasts for improvements in communication, education, health, agricultural extension, animal husbandry and family planning. Particularly, it has a unifying effect on culturally heterogeneous societies and geographically scattered and isolated communities. Of course we should not forget that the impact of direct broadcasting on the social and educational systems of rationalized societies is to a certain extent different from that on traditional ones. In one respect it might further the standardization of the educational system and also, to a degree, compensate for the shortage of teachers in the growing numbers of schools in rationalized urban societies.

But, on the other hand, there is an inherent danger in the development of televised education. It not only accelerates the process of social atomization but also it somehow impersonalizes the relationship between students and teachers. At the present time when the traditional organic units of society are rapidly crumbling and family and neighbourhood relationships are piling into insignificance, colleges and schools are the main centres for the cultural and social development of children and youth.

In the light of these facts, my delegation believes that in the future the consideration of the social and cultural aspects of direct broadcasts should be comprehensive and embrace all positive and negative features of both traditional and rationalized societies.

Mr. MARSCHIK (Austria): I wish to associate my delegation first of all very warmly with the congratulations expressed by previous speakers to our new Rapporteur, Mr. Souza e Silva. Mr. Souza e Silva has indeed been associated with the work of the United Nations and our Committee for a long time, and we are fortunate indeed to have him as the new Rapporteur of our Committee.

As you said in your opening statement, Mr. Chairman, it has become a pleasant tradition in this Committee to review at our autumn meeting the achievements in the exploration of outer space during the past year. Never indeed, has it been a more impressive record than this year. The representative of Sweden at our opening meeting, also on behalf of my delegation, has already

(Mr. Marschik, Austria)

conveyed to the delegation of the United States our heartfelt congratulations on the historic Apollo 11 mission, and at this time we wish to join very warmly in the expression of these congratulations both to the Government and delegation of the United States and to the three astronauts.

With your permission, Mr. Chairman, we should like now to make a few brief comments on the reports submitted to us by the Legal Sub-Committee, the Scientific and Technical Sub-Committee and the Working Group on Direct Broadcast Satellites. We received the report from the Scientific and Technical Sub-Committee with much interest this year. Its session was the first meeting of the Sub-Committee since the 1968 Vienna Conference on the Exploration and Peaceful Uses of Outer Space. At the Conference many delegations had stressed the fact that, while the Conference had successfully put into focus the potential benefits to be derived from the applications of space technology, further action would now be required to follow up the work of the Conference. Like others, we had at last year's General Assembly session expressed the wish and the hope that our Committee would play a significant role in this respect.

We note from the Sub-Committee's report that a number of proposals were made during its session on the promotion of the application of space technology, and I recall in particular the proposals made by India in that respect.

The recommendations on which the Sub-Committee finally agreed are perhaps more modest than many of us would have hoped. They appear, nevertheless, realistic and constructive, and my delegation fully supports them. We express the hope that the recommendations contained in paragraph 23 of the report will be implemented. We welcome the recommendation contained in paragraph 24 concerning the appointment by the Secretary-General of a special officer to promote the practical applications of space technology. We know that the Secretary-General will wish to lend his particular attention both to the selection of a qualified person for this position and to the question of how this officer could most effectively carry out his responsibilities.

At the same time we hope that at future sessions the Scientific Sub-Committee will feel encouraged to make further proposals to promote the applications of space technology for the benefit of all countries, and in particular those not yet advanced in space research.

(Mr. Marschik, Austria)

We have noted also the suggestions made by the Sub-Committee with regard to the organization of its future work. We believe that the procedure envisaged by the Sub-Committee will be helpful in making its discussions more fruitful. However, it will be the responsibility of the Sub-Committee to ensure that the new items suggested for inclusion in the provisional agenda of its meetings will not exceed the terms of reference of the Sub-Committee. It will, furthermore, be the responsibility of our Committee and the General Assembly to establish some kind of order of priorities to serve as guidance for the Sub-Committee in organizing its work.

Turning now to the report of the Legal Sub-Committee, my delegation shares, of course, the disappointment expressed by all speakers in this debate that the draft convention on liability has still not been completed. We were rightly reminded that the General Assembly requested the prompt preparation of this convention as long ago as 1963, that in 1967 it requested the completion of the convention before last year's session of the General Assembly, and that it reiterated the request for an urgent completion at last year's session.

The report now before us of the Legal Sub-Committee shows, I believe, the great efforts deployed by the Legal Sub-Committee to reach agreement on the draft convention this year. It appears to my delegation that, while obviously a number of aspects remain unresolved, there is basically one main problem on which fundamental differences of opinion exist, namely, the problem of the settlement of disputes.

My delegation realizes that the question of compulsory third-party arbitration of disputes does represent a very serious problem to some delegations, and one that is rooted not only in legal considerations but in general legal-political concepts.

Yet we appeal to those delegations also to understand that to many countries, including my own, satisfactory provisions on the settlement of disputes for which a settlement could not be reached through diplomatic negotiations are the essential element of the proposed liability convention.

(Mr. Marschik, Austria)

May we remind ourselves that the settlement of claims through diplomatic negotiations is possible on the basis of existing international law, on the basis of article VI of the Outer Space Treaty of 1966, which provides that States shall bear international responsibility for national activities in outer space and, more particularly, on the basis of article VII of that treaty, which provides that each State that launches objects into outer space is internationally liable for damage caused by such objects.

To us, therefore, the essence of a special convention in this matter would be the creation of an impartial third party to which the settlement of disputes which cannot be resolved through normal diplomatic negotiations on the basis of normal international law would be referred.

We sincerely hope that all countries will weigh this argument and that we shall reach as soon as possible, in the not too distant future, general agreement on the text of a liability convention incorporating this principle.

Finally, I should like to turn to the reports of the Working Group on Direct Broadcast Satellites. The Working Group, in our opinion, has achieved very useful results and has proved to be an efficient and valuable body assisting our Committee. We should like to pay a tribute to the delegations of Sweden and Canada, which initiated the creation of the Working Group, and we should like to pay a special tribute to Mr. Rydbeck, its Chairman, for the excellent way in which he has guided the work of the Group. The conclusions of the Working Group in its reports deserve, we believe, our endorsement.

While the Working Group has successfully discharged the immediate mandate given to it last year, my delegation feels that many of the problems covered by its reports will require further attention in the years to come. The Working Group would be a valuable instrument in such future discussions. We believe, therefore, that the Working Group should have an opportunity to continue its work next year or at the appropriate time.

Mr. BUDAI (Hungary): Mr. Chairman, as this is my first statement during the present session of this Committee, I should like to join previous speakers in congratulating you on your return as Chairman of the Committee on the Peaceful Uses of Outer Space at its present session.

I should also like to congratulate our Vice-Chairman and our newly elected Rapporteur and to wish all of you success in the conduct of the Committee's deliberations.

I cannot let this opportunity pass without also paying a tribute on behalf of my country to the two space Powers, the Union of Soviet Socialist Republics and the United States, which have achieved further marvellous and, I may add, historic results in the exploration of outer space since the last session of this Committee.

The purpose of my intervention at this stage is only to make some brief remarks on one or two problems raised either by the reports of the two Sub-Committees and that of the Working Group on Direct Broadcast Satellites or by statements recently heard in this Committee.

My delegation wishes to express its appreciation to all three bodies mentioned for the thorough, skilful and often business-like work which they performed during their recent meetings. These words of appreciation go first of all to the Scientific and Technical Sub-Committee which, in our opinion, made very important progress not only in its recommendations concerning different methods of international co-operation in outer space science, technology and training, but also in the attention it paid to the further development of its own activities. My delegation is also of the opinion that the intention of the Scientific and Technical Sub-Committee to improve, or rather to re-evaluate, its programme and activities as expressed during its last session is of the greatest importance.

Similarly, we highly appreciate the valuable work of the Working Group on Direct Broadcast Satellites, the positive result of which has been expressed in the report of the Group's first session in document A/AC.105/51. We acknowledge, however, the complexity of the problems and of the difficulties which the Working Group faced at its second session. Considering those problems, in some

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statements, representatives have now suggested that the mandate of the Working Group be extended in order that it may study further the political, legal economic and cultural impact of direct broadcasting from satellites, taking into account all the views put forward at the Group's latest session.

My delegation fully shares the opinion of other delegations that those problems ought to be studied further and ought to be studied very carefully. As the Working Group on Direct Broadcast Satellites, however, has fulfilled at least half of its mandate and has made a very elaborate study of the technical side of the question, we are inclined to consider another, possibly more appropriate, framework for further study of aspects which are naturally different from the technical ones. Such a framework could properly be, in our opinion, the Legal Sub-Committee of this Committee.

Last, but not at all least, I should like to make some very brief remarks on a subject which many previous speakers have called crucial, namely, the question of the liability convention. The complex nature of that problem has again been commented on during the course of our present debate.

(Mr. Budai, Hungary)

I may not be far from the truth when I say that the basis of our consideration must be twofold. First, we have to study very carefully each and every factor which may have an impact on States or organizations involved and try to avoid any possible negative outcome resulting from such factors. Secondly, we ought to search for a solution mutually acceptable to all parties.

From the report of the Legal Sub-Committee (A/AC.105/58) as well as from statements heard during our present deliberations, we can notice a number of problems which urge us not to arrive at any premature or hurried conclusions. Without attempting to repeat those problems, I refer only to statements made by representatives of the United States, Japan, France and India and, of course, to more than one other Member, from which statements it has become clear that there are still a number of obstacles before us on this question.

Furthermore, the representative of the United Kingdom in his statement yesterday took a new approach towards the problem of interpretation of the arbitration clause of the liability convention, which, in our view, deserves a very careful consideration by legal experts. My delegation doubts that during the usually very overloaded working programme of the General Assembly we shall be able to find sufficient time for such a consideration without hampering its positive result. At the same time, we highly appreciate the good intentions of the delegations of India and Mexico to speed up our pace of work in this regard. I have already expressed my delegation's concern at the increased workload on delegations during the General Assembly, and this refers also to the suggested creation of a working group on this subject. We feel, however, that informal consultations held by you, Mr. Chairman, would serve a good purpose and we fully agree with the representative of Mexico who, among others, suggested yesterday that such consultations could be held between this session and the next session of the Legal Sub-Committee. My delegation, as it did in the past, is ready to co-operate with Members in this regard.

The CHAIRMAN: I should like to thank the representative of Hungary for the friendly personal remarks with which he opened his statement.

Mr. TARABANOV (Bulgaria) (interpretation from French): I should like first of all to congratulate our new Rapporteur, our colleague from Brazil, Mr. Souza e Silva, who is certainly the most capable person you could have found to collaborate with you, Sir, in the elaboration of the report which will have to be submitted. I am sure that he will brilliantly replace his predecessor and I know this quite well because we have collaborated and discussed many questions as neighbours and as representatives. I am quite sure that, thanks to his collaboration and thanks to your able guidance, Mr. Chairman, our work will be crowned with success not only at our present session but also in the future.

The delegation of the People's Republic of Bulgaria had certain doubts as to whether it should take the floor at this time inasmuch as we do not have very much to say on the items we are considering. Nevertheless, in view of the turn the debate has taken we should like to make only a few remarks before the Committee and before the work of this Committee comes to an end.

It would appear from the debates at our present session that the Committee on the Peaceful Uses of Outer Space has seriously concerned itself with guiding its work in such a way that measures may be taken from the outset so that the first steps taken in such an important field of human activity as the peaceful uses of outer space should not in future prejudice the whole of the problem. We are quite certain that the Committee will be fully aware of this danger during all of its work at present and in the future.

The Bulgarian delegation is perfectly well aware of the fact that, as with many of the other participants in this Committee, our country cannot undertake independently expensive and costly studies which the exploration and particularly the utilization of outer space require. It is for this reason that we most warmly welcome the efforts of the countries which at present have the scientific and economic potential necessary and sufficient to undertake and successfully complete these studies. We also welcome most warmly the success obtained so far in this field not only by the Soviet Union, which did pioneering work and which registered brilliant achievements during the year which has just passed, some of which were mentioned in the interventions of

(Mr. Tarabanov, Bulgaria)

its representative, but also by the United States of America, which has just concluded one of the most spectacular exploits of the year, the round trip to the moon. We should like to stress here particularly the exceptional courage shown by the astronauts who participated in that venture, bravery which we applauded when our signature was requested a few days ago, and once again we applaud it, in spite of the fact that the Soviet representative was entrusted with the task of expressing our congratulations during his initial intervention at the commencement of the work of this session of the Committee.

We hope also that in the future their studies and their efforts, as well as the efforts carried out by other countries such as France, the United Kingdom, Italy, India, Japan, Brazil and others, will meet with full success. As a small country without the possibility of participating independently and perfectly aware of our economic and scientific limitations and restrictions, we ardently hope that their success will be as great as possible and that they will reach their goal as soon as possible. We are certain that all of the other countries which take part in the work of this Committee, as well as those countries which do not possess the necessary means to take part in these studies -- which constitute most of the countries which belong to the United Nations -- desire that also. At the same time we should like to voice the hope that such success might pave the way to the international collaboration and co-operation which is necessary if these small countries which do not have the possibility of participating in the studies and the exploration and utilization of outer space are to have a means of associating themselves with the scientific and technical progress in this field. Independently of the efforts involved and the scope of this co-operation, it should be organized in such a way as to respond to the needs and interests of the small countries which wish to take part.

(Mr. Tarabanov, Bulgaria)

It is on this basis that Bulgaria, together with the Soviet Union and other socialist countries, participates in a programme which includes the study of the physical properties of the higher strata of the atmosphere and cosmic space, questions dealing with meteorology and cosmic communications, biology and cosmic medicine, which might become one of the most important branches in the development of mankind.

We are perfectly aware of the limitations and restrictions applying to the small countries which are not able to take part separately or independently in the study of the peaceful uses of outer space -- and this is the case with most of the countries in the world. We find it necessary to stress the need of doing everything possible to avoid from the outset -- as we have already stated at the beginning of our intervention -- undertaking any steps in the field of the peaceful uses of outer space which might be harmful to the interests of the small countries, especially with regard to the use of artificial satellites for direct or indirect broadcasts, which were mentioned in the report of the Working Group.

In the first place, the Committee should concern itself with envisaging the study and adoption of measures to safeguard the rights and interests of countries which are not in a position to defend themselves easily against any kind of aggression, precisely because of the limitations and restrictions due to their small influence in different fields. This concern has already found an important place in the report on the second session of the Working Group on Direct Broadcast Satellites. The study of these measures nevertheless should be encouraged and should be completed quickly in order to find the most appropriate legal modalities for their expression and thus to draw up compulsory international norms. The small countries will feel secure only when precautions are taken to protect them against any kind of interference in their internal affairs through outer space.

Second, I think that it would be advisable as of now to try to adopt measures with regard to the commercial aspect of the utilization of outer space, particularly in certain fields in which the small countries do not have the capacity to develop and for which they would have to pay very high prices in order to obtain the technology.

(Mr. Tarabanov, Bulgaria)

Third, it should be made possible for certain countries which may not be in a position to profit immediately from the possibilities of this new branch of technique and science -- presenting considerable advantages for economic and social development -- to profit from such advantages. This is all the more necessary in view of the fact that the potential possibilities of this new technique are enormous, especially as concerns the dissemination of scientific knowledge, which is at the basis of rapid economic development.

We do not wish to speak on all the questions which the Working Group and the Sub-Committee have discussed, and, inasmuch as other delegations have stated their views adequately on these questions, we do not intend to go into more detail. Nevertheless, we do not wish to conclude our intervention without mentioning a question which was raised at the end of the report on the second session of the Working Group: this is the question of the prolongation of the mandate of the Working Group.

Not having the capacity of the large delegations to participate in the many organs which proliferate in the United Nations, the delegation of the People's Republic of Bulgaria feels that it would be preferable not to have duplication particularly of bodies which discuss the same questions. We are fully aware of the fact that the Working Group did very useful work and we pay tribute to it, but we believe that now that it has presented its report the work could be continued in the two Sub-Committees and in the full Committee. In our opinion, this kind of procedure would be much more appropriate for those delegations which are not able to send representatives to the various bodies with regard to questions which necessarily will be discussed once again in the appropriate higher organs.

Nevertheless, we think that some preliminary work is necessary. Perhaps it might be possible to entrust this work to competent organs of the Secretariat and to ask them to distribute the necessary material in order to keep delegations sufficiently informed so that they might usefully participate in the meetings of the Committee and the work of the competent Sub-Committees. In this way, we believe, the work entrusted to the Working Group could be carried out with great success in the competent Sub-Committees.

The CHAIRMAN (interpretation from French): I thank the representative of Bulgaria for the very kind words he addressed to me.

Mr. MARTINEZ (Argentina) (interpretation from Spanish): My delegation is making its intervention after having heard many other statements. This is a positive factor because it makes it possible to appreciate the success with which you have guided our work, Mr. Chairman. At our first meeting my delegation, which supported the proposal of the Canadian delegation on the appointment of Mr. Souza e Silva of Brazil as Rapporteur, spoke of his virtues. Today these virtues have been proved. For this reason I should like to congratulate you Mr. Chairman, as well as my friend and colleague Mr. Souza e Silva.

We are particularly pleased to speak at this meeting of the Committee on the Peaceful Uses of Outer Space. This is because of the great feat of the astronauts, Armstrong, Collins and Aldrin. When, at the beginning of the present decade, the step which has now been achieved was announced by President Kennedy, many voices were raised on the planet Earth expressing the opinion that it was impossible. Today we see how unfounded were those opinions. The different steps carried out by the Apollo project one by one with mathematical precision have brought into reality a fact which, I believe, is considered to be one of the most important human achievements in centuries. Therefore, I should like to express the congratulations of my delegation to the Government of the United States, and especially to the astronauts on their bravery.

I do not intend to analyse in detail the reports submitted to our Committee for consideration, but I do believe that we should congratulate ourselves upon the work done by the Sub-Committees as well as by the Working Group.

(Mr. Martinez, Argentina)

With regard to the report of the Legal Sub-Committee and the convention on liability for damage caused by the launching of objects into outer space, the position of Argentina is well known. On many occasions we have pointed out the indisputable and urgent necessity of having, at the earliest possible time, an instrument of this type, and my delegation worked intensively at the meeting of the Legal Sub-Committee in Geneva to that end. For this reason, it is with satisfaction that we note that some of the objections that we met with in the past have been overcome and that today the opinion is gaining in our Group that the convention on liability should be brought to reality as soon as possible. In that regard, we should like to give our support to the suggestions made during yesterday afternoon's meeting by the delegations of Mexico and India, with the support also of the Belgian delegation.

Whenever informal contacts have been established among members of the Committee, it has been possible to make real progress in the task before us. That is to say, Mr. Chairman, that if, under your skilful guidance, such contacts can be maintained during the coming session of the General Assembly that begins next Tuesday, we can cherish the hope of being able to achieve something concrete before the session ends.

I should now like to say a few words concerning the report of the Working Group on Direct Broadcast Satellites, contained in documents A/AC.105/51 and A/AC.105/66. In this field there are various problems that are accompanied by an interrogation mark. For that reason we favour greater advances in the technical and scientific fields, and it is our view that the Working Group must continue its work.

Nevertheless, I should like to explain that the interventions of the representatives of the specialized agencies, particularly of UNESCO and FAO have been very useful indeed to my delegation, and we shall hasten to submit them at once to our Government. The objective of my intervention is not, however, to enter into details concerning the work of the Committee, inasmuch as many delegations that have preceded me and whose point of view we share have done so with great clarity and precision.

(Mr. Martinez, Argentina)

The delegation of Argentina cannot intervene at this meeting without expressing the satisfaction my country has felt at the appointment of the United Nations Group of Experts that is to visit the Argentine base at Mar Chiquita for the purpose of advising on the eligibility of that installation for the sponsorship of this Organization.

I should also like to thank each of the delegations that have mentioned the Mar Chiquita base. My country is exerting great efforts in the construction of that base, which has as its purpose the furtherance of international co-operation in this field.

My Government has already prepared a very busy programme for the mission and submitted it to the Secretariat since, fortunately, the visit of the Group of Experts coincides with a meeting on similar matters which unquestionably will be of great interest to all.

The Mar Chiquita base is located very close to one of the most popular beaches in my country, and although October is not a seasonable month for the beach, I hope that a few warm days will make it possible for the members of the Working Group to combine pleasure with duty.

The CHAIRMAN: I thank the representative of Argentina for the personal remarks he was kind enough to address to me.

Mr. KLEPACKI (Poland): Mr. Chairman, as I take the floor for the first time at this session I should like to congratulate you on your election to your post and to wish you much success in your work.

The Polish delegation takes a positive view, in general, of the activities of the Scientific and Technical Sub-Committee, the Legal Sub-Committee and the Working Group. We think they have already accomplished a great deal, but perhaps not so much as we ourselves might have wished. Among the many problems with which the Sub-Committees and the Working Group are dealing, the elaboration of a convention on liability for damages caused by objects launched into space is, to our mind, the most important and urgent question. The Legal Sub-Committee, although unfortunately, it has until today not yet elaborated the final version of the aforementioned convention, has nevertheless achieved a great deal in that

(Mr. Klepacki, Poland)

field. Despite the divergent attitudes among its members on many questions, it has already worked out the majority of the rules governing liability for damages caused by objects in space. We profoundly believe that, through the patience and common efforts and goodwill of all delegations, the convention on liability for damages caused by objects in space will be worked out the next time.

We support the interesting proposal of the representative of Mexico for conducting, under your leadership, Mr. Chairman, of informal negotiations between this session and the next session of our Committee and we are ready to participate in such negotiations.

For some years now we have been observing the intensification of man's activities in the exploration of the moon. Two months ago we were able to admire the magnificent landing of men on the moon, and in the near future we shall be dealing with man's activities in the utilization of the moon. Two days ago we had the pleasure of hearing the interesting speeches of, on the one hand, the representative of NASA and, on the other, the representative of the Soviet Union. Both speakers announced further intensive activities of their countries in the field of the exploration of outer space. In these circumstances, the Polish delegation believes that in the programme of work of the Legal Sub-Committee there should be included as soon as possible a study of the question of the rules governing man's activities on the moon and other celestial bodies, in particular the legal régime governing substances coming from the moon and from other celestial bodies.

The Polish delegation takes a positive view of the report of the Scientific and Technical Sub-Committee. We support the idea of appointing a special person to the Outer Space Affairs Division whose task would be to promote the practical application of space technology. We stress, however, that his function should be of an experimental character. On the other hand, to our mind, this post should be regularly rotated. It is our hope that in the near future, the one-man post -- I repeat, the one-man post -- should, in accordance with a sound and generally prevailing tendency, be transformed into a division with many functionaries.

(Mr. Klepacki, Poland)

Finally, I shall deal with the report of the Working Group on Direct Broadcast satellites. We consider this report very important, most of all by reason of the very valuable information it contains. The Polish delegation is conscious of the great possibilities and advantages for nations resulting from the utilization of direct broadcast satellites. Such utilization, however, must not violate the sovereignty of States or serve the purpose of broadcasting war or apartheid propaganda. These problems require further careful study.

Lastly, I should like to state that the Polish delegation views positively the activities of the specialized agencies, IAEA and UNDP, and the United Nations Secretariat in the promotion of the applications of space technology, as briefly described in the annex of the report of the Scientific and Technical Sub-Committee.

The CHAIRMAN: I thank the representative of Poland for the remarks he addressed to me personally.

Mr. BAENA SOARES (Brazil): At the outset of my intervention may I state the satisfaction of my delegation at having you preside over our deliberations, especially at this moment in which urgent and important measures are expected of us both by the General Assembly and by the community of nations at large. Indeed it is the considered view of the Brazilian delegation that the Committee on the Peaceful Uses of Outer Space has a crucial role to play in the establishment of the system of rules and co-operation in the vast field of space exploration. We are engaged here in carrying out pioneer work of great historical significance, requiring from each of our delegations the best that we have to offer in skill and dedication. And for this very reason I should like to touch briefly upon the functions that are incumbent on this Committee.

For my delegation the Committee on the Peaceful Uses of Outer Space is much more than an intermediary instance between its subsidiary bodies and the General Assembly. We are entitled here to establish working groups of experts or any sort of organ that may help us to fulfil our task. Moreover, we have to assist our two Sub-Committees upon which are devolved specific charges and which have the same objective -- to contribute to the decisions we have to take in this present instance. So, when any of these subsidiary bodies have not been able to discharge their task, I believe it is incumbent upon us to make every effort to proceed with the task unfulfilled, and give more satisfaction to the recommendations of the General Assembly. It is with this in mind that I should now like to refer to the report presented to us by the eighth session of our Legal Sub-Committee. During the eighth session, on the question of a convention on liability, it was once again made quite clear that there is a lack of political will on the part of some delegations toward regulating the activities of States in the exploration and use of outer space. The discussions regarding the conclusion of such a draft made little progress, giving us grounds to fear that the Sub-Committee might unduly delay the completion of this task.

In a way, the package deal arrived at by some countries and submitted to the eighth session served only to polarize the diverging positions of the members of the Sub-Committee. This is much to be regretted since the intransigence of some countries has so far had the effect of leaving the non-space countries less than

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protected from any eventual mishaps involving objects launched into outer space. At the last meeting of the Legal Sub-Committee, the delegation of Brazil had the opportunity to state its position on some of the main issues involved in drafting a convention on liability. At this time, we should like to reiterate some of the views we expressed in Geneva.

In the first place, we feel that no valid argument can be advanced for the exclusion of nuclear damage from a convention on liability. On the contrary, we feel that the probability of nuclear damage being much more serious than the damage caused by non-nuclear objects should impress upon the Committee the necessity for clearly defined rules on this question in the proposed convention. There are distinctions to be made between nuclear and conventional damages in the Convention; we would favour, in cases of joint launching operations, a division of responsibility between the nuclear and non-nuclear countries participants in the launching, the responsibility for purely nuclear damage resting solely on the country or countries controlling the nuclear material used. The advanced technology and high level of skills required for the handling of nuclear material, a fact of which the developing countries are so constantly reminded, would, in our view, be reason enough for the limitation of liability to the country or countries controlling the nuclear material used. It is also the view of the Brazilian delegation that the Convention should recognize the right of States participating in a joint launching to agree among themselves as to the degree of liability to be borne by each one of them in case of accident with the space object causing damage to another State. We welcome the agreement already reached on this point which constitutes a compromise formula strenuously negotiated in the Sub-Committee.

On the question of the amount to be paid for damages caused by space objects, we wish to restate our position that no ceiling should be fixed. It is obvious that even full compensation for material losses, whatever the amount involved, could not, in many cases, be considered sufficient redress for the damage suffered. Disruption of services and other secondary effects of damage caused by a space object can always increase the losses to a much greater extent than that anticipated in the compensation assigned for coverage. In the case of

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loss of human lives, it is of course sheer fiction to establish compensation amounts on the basis of the economic productivity of the persons involved. It is indeed a sad situation which we are forced to accept because of the difficulty of finding better criteria. It is impossible to put a price tag on a human being. However, we consider that the proposals already put forward by the United States delegation might be accepted as a serious basis for negotiation.

On the question of the settlement of disputes arising from the application of the convention on liability, the Brazilian Government holds the view that no compulsory procedure should be included in the convention. The parties should rely on the methods of peaceful solution of controversies provided for in international law and in the usual practices of diplomatic negotiation.

At the last session of the Legal Sub-Committee, the Brazilian delegation, in a spirit of compromise, stated that it would be prepared to accept a formula which would provide for compulsory arbitration for the determination of the amount of compensation to be paid, all other related questions being left to the parties to solve according to international law. We feel that this position could provide the basis for fruitful negotiations on the question of the settlement of disputes, being an intermediate solution between the two extreme positions held in this Committee.

Another very important problem is the law applicable to the determination of the damage. The Legal Sub-Committee has covered some ground on this subject, selecting international law and the law agreed to by the parties as two of the elements to be taken into consideration for the assessment of the damage. It has not, however, decided the order of priority of the two elements agreed upon and it has not decided what other legal principles or systems should also be taken into account. The delegation of Brazil believes that a practical formula should include the law agreed to by the parties, the lex loci commissi or the law of the State complaining, and the international law, in that order.

These are some of the basic positions that Brazil has been defending in the Legal Sub-Committee of the Committee on Outer Space, and we hope that we have made some contribution to speed the completion of the convention. It is quite clear to us all that the work of the Committee on the Peaceful Uses of Outer Space

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has not kept pace with material developments in the exploration and use of outer space. As the gap widens between technological achievements in outer space and the development of space law, we are running the risk of rendering our work increasingly more difficult. The gap must be bridged, and the conclusion of a convention on liability would be a major step in that direction.

At this stage, I wish to refer to the pertinent remark made by the representative of Japan on a certain procedure adopted in the eighth session of the Legal Sub-Committee. It was agreed during that session that some issues not related to the package deal arrived at in the informal meeting in New Delhi would be considered by a small group of delegations. This agreement, concluded by a few delegations, was carried out with no records, as mentioned by the Japanese delegation, and with no information to other delegations, before their conclusions were directly related to the plenary meetings of the Legal Sub-Committee. My delegation has formally reserved its position on such procedures and I wish to reiterate here, for our records, the same reservation made in Geneva.

I should like now to turn to the work done by the Scientific and Technical Sub-Committee in its Sixth Session. Very interesting proposals put forth by the delegations of India and Sierra Leone were considered in detailed and useful debates, as were some other proposals emanating from the Vienna Conference. My delegation welcomes the report submitted to us in document A/AC.105/55 as a summary of efforts in the direction of extending the benefits of space technology to all mankind.

(Mr. Baena Soares, Brazil)

My delegation believes that the recommendations contained in the report constitute a good and useful way to fulfil some of the tasks we have before us. It is our view that the extraordinary space technology existing today should be put to practical application, particularly in accelerating the economic and social progress of developing countries. The difficulties and hurdles encountered in some other areas should not be allowed to compromise the effort we are making to present our Committee as an example of fruitful and effective co-operation among all nations for the benefit of all mankind. Having in mind that lofty purpose and the very reason for our coming together around this table, we should emphasize that developing nations are entitled to share the benefits of the space age.

Mr. Chairman, my delegation has consistently held the view, since the very beginning of the work of our Committee, that space technology must be an instrument of peace and understanding among nations and not a tool for political and ideological propaganda; it should contribute to the betterment of our world, and not stimulate disharmony or spread intolerance. As regards this specific point, I wish to state that my delegation fully agrees with what was said here by the distinguished representative of the Soviet Union on the first meeting of this session to the effect that direct broadcasts from satellites should be controlled under strict norms of existing international law and under the United Nations Charter. Direct broadcasts can play a very useful role in improving cultural standards all over the world, but we should make sure that they will not be used in violation of the principle of non-intervention in internal affairs. We would even go so far as to state that an international body should be entrusted with the task of maintaining strict control over direct broadcasts from satellites in order to ensure their utilization only according to agreed purposes.

My delegation wishes to praise the report of the Working Group on Direct Broadcast Satellites, conducted with the skill, competence and experience of Mr. Olof Rydbeck.

In conclusion, Mr. Chairman, I would like to express that my Government is very pleased to co-operate with the group of scientists to visit Mar Chiquita Station next month in accordance with the provisions of General Assembly resolution 2453 (XXIII). One of our leading space scientists, Dr. Fernando de Mendonça, will be honoured to participate in this mission.

Mr. PIRADOV (Union of Soviet Socialist Republics): The work of the session of the Committee on Outer Space is nearing its conclusion. In our view this work has been very interesting and very useful. During the session very useful exchanges of views took place on the report of the Scientific and Technical Sub-Committee as well as on the report of the Legal Sub-Committee and that of the Working Group on Direct Broadcast Satellites.

Many views were expressed on the main trends of the work of this Committee and its subsidiary bodies for the purpose of developing further international co-operation in the use of outer space and in methods to be used in solving a number of important problems arising in this area.

The views that have been expressed are of undoubted interest and they merit the most serious consideration, but time is required for such consideration. In view of the discussions that have taken place in the Committee my delegation would like to make a number of additional comments in order to clarify individual points which were made in our main statement.

The view is expressed that efforts should be made to complete the preparation of a convention on liability for damage caused by space objects. We fully agree with this. Naturally, it would be naive to believe that progress could be achieved simply by making mutual accusations. Everyone realizes that, apart from a very sharp discussion, such a procedure would lead nowhere. Everybody knows from the last session of the Legal Sub-Committee what has happened, and many of my colleagues here recall vividly the eighth session of the Sub-Committee in Geneva. Most of the members of this Committee are firmly convinced that it would be hardly possible to achieve the completion of this Convention if attempts were made to include in the Convention such unrealistic provisions as a maximum limit for liability. Naturally, the convention should not contain any limit for liability and this would open the way to a realistic solution. In fact it would be the only rational solution to this problem.

(Mr. Piradov, USSR)

Everyone realizes the procedure for settling disputes, which was discussed at such length here. With respect to this procedure, if the Convention is to be signed by all States such disputes then should be regulated in accordance with existing practice amongst States having different social and legal systems. In other words, if we fail to do this we shall be making no step forward whatsoever.

Various ideas were expressed concerning our future work. It was also suggested that the Committee's work could be continued and extended. This is not a matter of the form of our work but rather a matter of substance.

If all members of the Committee seriously wish to achieve positive results, then any form of working procedure could be used. But before we raise this question we must decide on a matter of substance and it seems to us that the representatives of the States members in this Committee should maintain close contacts and conversations on the substance of the Convention and they should endeavour to ascertain whether or not there are real possibilities for harmonizing their individual positions.

It seems to me that, after an appropriate exchange of views it would not be difficult to find a suitable form for our future work. And if there are real possibilities for reaching agreement, then in these consultations the Chairman of this Committee could convene the Committee on Outer Space once again and if necessary he could also convene the Legal Sub-Committee. That has already been done in 1968, at the time that the convention on the return of astronauts was being prepared.

(Mr. Piradov, USSR)

Incidentally, with respect to the convention, the difficulties involved are not as great as has been mentioned here by certain representatives; I think they exaggerated somewhat. It seems to me that, if we can come to an acceptable agreement on this point, the convention could indeed be concluded.

We should like to stress once again that we must work in a business-like atmosphere if we want to achieve positive results. The comments made here to the effect that certain individual States are not altogether ready to take positive decisions, and the efforts to create an unbusiness-like atmosphere certainly do not lead to any real practical results. There is no point in carrying out a fruitless discussion and going into polemics, as has been the case. I mention that as a general point.

Now a few words concerning direct broadcasting from satellites. On this point a number of representatives have expressed views concerning the ways and means of conducting future work in connexion with the use of direct broadcasting from satellites. We share the views of those delegations which have stressed the importance of this problem and the need to continue the joint efforts of all members of this Committee in order to solve the legal, social and organizational problems connected with this matter, and in order to create favourable conditions for the utilization of cosmic technology in the interests of all progressive-minded States.

Views differ, however, as to how we should carry out our work in order to deal effectively with this particular problem. All here agree that the Working Group on Direct Broadcast Satellites -- about which, in fact, a great deal was said today -- has carried out some very useful work and has prepared a very interesting report, which, from a casual perusal, appears to us to contain a few interesting points.

The technical possibilities of direct broadcasting have been outlined, and the practical uses of broadcast satellites have been stressed in the report; the report also gives the basic lines along which our Committee could move in dealing with problems such as that of direct broadcast satellites. Thus the Working Group has fulfilled the task entrusted to it under the decision taken by our Committee and by the General Assembly.

(Mr. Piradov, USSR)

A new problem has now arisen, however, in connexion with that Working Group on Direct Broadcast Satellites, and at this stage that problem should be dealt with having specific regard for each individual aspect of the problem. For example, in our view it would seem that the social and cultural aspects of this matter connected with the use of direct broadcasting from satellites to meet the needs of the developing countries could be studied by UNESCO and its subsidiary bodies and other such agencies. The legal aspect of this very important problem should, in all logic, be studied by our Legal Sub-Committee, which is the most qualified body for dealing with this particular issue.

What we have in mind is the need for an international juridical framework to cover the system of direct broadcasting from satellites, and a legal instrument to forbid such broadcasting to foreign countries without the agreement of those countries, and to prohibit the broadcasting of propaganda. Such broadcasting should not be carried out without the agreement of the receiving country; and the representative of Brazil has referred to this matter.

Now, the technical aspect of the problem -- for example, the establishment of international standards covering such broadcasting and other such problems as were mentioned here by many delegations in this Committee -- falls within the purview of future activities of ITU. It goes without saying that under the directives and terms of reference of our Committee, and in accordance with the General Assembly decision, our Committee is impelled to co-ordinate its work and not duplicate the efforts of other agencies, in order to achieve the greatest possible efficiency in its work. I have no doubt that the Legal Sub-Committee and other bodies could call in scientific and technical experts to help them in their work, and I believe that they will do so. However, in addition to that, each one should deal with the aspect in which it is most qualified.

Those are our comments on the matter of direct broadcasting from satellites.

In conclusion, I should like to express our deep gratitude to the Chairman and to the Bureau for the assistance they have given to the Committee during this session.

Mr. DENORME (Belgium) (interpretation from French): Like the representative of the Soviet Union, my delegation feels it would be useful, before the close of this session's general debate, for us to analyse the accomplishments of this session. Not only would that be a useful procedure, but I think it would also help us to comment on a number of points today.

(Mr. Denorme, Belgium)

The discussions which have taken place since last Tuesday, and I believe that twenty-one out of the twenty-eight members of our Committee have participated in these discussions, have stressed a number of points which will be included in our report. My delegation feels, Mr. Chairman, that your own suggestion to convene this Committee in an informal meeting would help us to reach an agreement on the procedure to be followed in the future.

On this point, I shall comment on one aspect of our terms of reference, an aspect which most representatives have felt to be of paramount importance in the success of this session, namely, the preparation of a draft convention on liability for damage caused by objects launched into outer space. On 8 September, I emphasized the importance of a thorough study of the Legal Sub-Committee's report on this subject. At that time, I stressed that the General Assembly very probably would reprimand us for not having reached an agreement. Since that time, the permanent representative of Belgium, Mr. Schuurmans, on this question made a suggestion to the effect that negotiations should be begun immediately during this session of the Committee and that these negotiations should not be concluded until a positive result had been attained or until a report on their failure could be submitted to the First Committee.

No representative opposed this suggestion, which was submitted formally yesterday by the representative of Mexico, with the support of the representatives of India and Canada. I was very gratified, therefore, to note that today the Soviet Union representative took the floor once again to reiterate his view that the difficulties facing us are not by any means insurmountable and to stress that informal talks should be held during this very session. He warned us, naturally, of certain obstacles facing us, and I was very pleased to note and I believe that this view is generally shared, and it might even be the unanimous feeling -- that such consultations and conversations could be held during this very session.

Furthermore, when I look at the list of speakers who have taken the floor I see that India, Canada, Mexico, Brazil, Hungary, Argentina and Poland have supported the idea of this procedure.

(Mr. Denorme, Belgium)

I have one more comment to make concerning the statement made by the Japanese representative, who vigorously opposed a repetition of what happened in the past when only a limited number of the members of this Committee participated in such discussions and when that limited number of States urged the remaining members to accept the results of their negotiations without allowing those other members to study the results of the negotiations. My delegation shares this viewpoint, and therefore we suggest that these negotiations be held within the very framework of this session of the Committee.

I should like to quote what was stated by the representative of Romania. He said that we must make new efforts to achieve in the shortest possible time a draft convention. He asked that such efforts be undertaken in accordance with the normal and usual procedure.

Our Vice-Chairman also emphasized that this Committee cannot be by-passed as has been the case in the past. After hearing these statements, and in the light of certain consultations I have had since yesterday, I have come to the conclusion that a great many representatives here are ready to undertake one more effort in order to try to harmonize divergent viewpoints on the draft convention on liability for damage caused by objects launched into outer space before the General Assembly begins its work. I am sure that none of the representatives here would wish to take the responsibility before the General Assembly of not having fulfilled our terms of reference.

In the light of the foregoing, my delegation would like to submit, in accordance with rule 121 of our rules of procedure, the following motion:

"The Committee on the Peaceful Uses of Outer Space,

Noting the report of the Legal Sub-Committee, more particularly paragraphs 17-26 inclusive,

Bearing in mind resolutions 1963 (XVIII), Part I, para. 2, 2130 (XX), Part I, 2222 (XXI) para. 4(a), 2345 (XXII), para. 4 and 2453 (B) (XXIII), para. 2 (a),

1. Decides that informal negotiations which would be open to all members of the Committee should begin immediately under the direction of the Committee Chairman during the present session in order to complete the

(Mr. Denorme, Belgium)

preparation of a draft international convention on liability for damage caused by objects launched into outer space and to prepare this in due time for submission to the twenty-fourth session of the General Assembly;

2. Decides to adopt this interim report concerning the work of the present session and to ask its Chairman to convene an official meeting once the informal negotiations have been completed, but by 13 October at the very latest."

My delegation feels that this proposal represents the general prevailing view here and that it is in line with the statement made yesterday by the Mexican representative, who explicitly requested that a deadline be set for the reconvening of our Committee. We hope, therefore, that this motion will be adopted before the end of this meeting. However, Mr. Chairman, if you feel that the members of the Committee require time for reflection on the matter, my delegation would suggest that a brief official meeting be held this afternoon in order to take a decision on this matter before holding informal negotiations for the purpose of preparing the interim report of our Committee and deciding how informal meetings can be held in order to finish the report of this Committee by 13 October at the latest.

Mr. ROBERTSON (Canada): The brief and somewhat informal remarks which I am going to make now might perhaps have come this afternoon during our informal consultations. However, they were stimulated by part of the statement of the representative of the Soviet Union, and I thought it might be more appropriate if I were to comment now on what he said with regard to the question of whether or not we should renew the mandate, or continue the existence, of the Working Group on Direct Broadcast Satellites.

I think that the position of the Canadian Government on the necessity of avoiding, wherever possible, the duplication of work and the creation of unnecessary bodies in the United Nations is already fairly well known, especially to representatives who from time to time sit in the Fifth Committee. Therefore, it was not lightly that we ourselves came to the decision that it would be in our interest if the Working Group were to be continued. Nor was this decision based on an affection for a body in which, we hope, we have been able to play a constructive role and in preparation for the meetings of which we devoted a good deal of effort. Our chief reason for considering that the Working Group should be continued is based more on considerations of the methodology of our work.

The subjects that the total effect or scope of direct broadcast satellites impinges on or gives rise to are very numerous. The potential problems it could give rise to and the potential benefits it certainly will give rise to were suggested in earlier interventions by ourselves and other speakers and were also outlined in the reports of the two sessions of the Working Group. I think that from these reports it is clear that there is indeed some urgency if the most effective utilization of this new technology is to be made. It further seems to us that there is no single body, especially no single United Nations body, that is competent and has the necessary expertise to supervise and keep an eye on all the aspects of this matter. The representative of the Soviet Union himself indicated a number of the organizations that will have an important role to play and will have significant comment to offer on certain aspects of direct broadcasting. I think that the clear implication of this is that there is no one single organization, other than perhaps this Committee itself, that could play a co-ordinating role.

(Mr. Robertson, Canada)

When we turn to the Committee on Outer Space itself, if we agree that the subject is topical and important enough to merit further study, it seems to us that neither the parent Committee nor the two Sub-Committees are properly constituted to give it the sort of attention it deserves. The parent Committee is, as we know, essentially a formal body which meets as a rule just before the meeting of the General Assembly. Its meetings tend to be short. It has already matters to deal with and it tends to conduct debates of the sort that we have been having here. It is not a study group. The Technical Sub-Committee when it meets deals with specific matters; so does the Legal Sub-Committee; but, in our view, both these Sub-Committees already have work to do that is important and significant but does not have the broadness or scope that the subject of direct broadcasting has. Therefore neither of those is the proper body -- to use a simple phrase -- to keep an eye on it.

The chief benefit that we saw in the creation of the Working Group, as we mentioned in our statement, and one of the important factors contributing to what we consider to be the successful outcome of the first session, was the clear benefit derived from the ability of Member States to convene small, knowledgeable, efficient groups of experts to deal with the subject. The benefit of using the Working Group, in our view, is that it is flexible. One can mingle the technical experts with the legal experts. Where there are political implications or educational implications, delegations can strengthen their representation or alter their representation accordingly.

For these reasons, we ourselves feel that the Working Group should be continued and that it is not only necessary but probably the best way of dealing with the problem.

Mr. ARORA (India): My delegation was not planning to take the floor this morning -- for two reasons. Firstly, after the representative of Mexico spoke yesterday and made some very useful suggestions, we had an opportunity to intervene yesterday and to give our point of view. Secondly, you decided, Mr. Chairman, that the Committee would have an informal meeting this afternoon, when all delegations would have an opportunity of presenting their points of view.

(Mr. Arora, India)

My delegation will take the opportunity this afternoon to do the same; However, this morning we have heard some important statements, particularly that made by the representative of the Soviet Union, to which we listened with great care and interest, as we usually do to the statements made by the delegations of the Soviet Union, with whom, I need hardly state, we have very good relations.

We were particularly impressed by the statement made by the Soviet representative that the disagreement on the draft liability convention was not great. He mentioned that the differences should not be exaggerated -- a point which has been touched upon also by the representative of Belgium. This is the point which the representative of India, Ambassador Sen, made yesterday in his statement. He said yesterday:

"In the view of my delegation, solutions can be found for all these problems, given goodwill and earnest effort from all directions, which I am sure will be forthcoming in full measure." (65th meeting, p.13)

Therefore it is our view that we should continue our efforts to obtain an agreement on the draft convention.

We are aware that previously the Committee was called into session when agreement was reached on a draft treaty on the rescue and return of astronauts. When the representative of Mexico suggested a slightly different procedure and the authors endorsed that procedure and made a certain addition to that suggestion, what we were thinking was that there would be no harm in following a somewhat different procedure at this stage.

(Mr. Arora, India)

Therefore, our idea was that the Committee could at this time finish with the formal part of its business, namely, the general statements and perhaps go into informal meetings and later into formal meetings again. All these -- the formal and informal meetings -- could be worked out in a number of different ways.

The representative of Mexico made a suggestion yesterday. The representative of Belgium made a suggestion today. My delegation would be prepared to go along with either of the methods and procedures suggested. We shall have an opportunity, as I stated earlier, to go into that question at a later stage when we discuss it informally.

The representative of Belgium has just made a concrete proposal. I must state frankly that my delegation has not had sufficient time to consider it, and the representative of Belgium recognizes that other delegations have not had time to consider his proposal. Therefore he has suggested that a short formal meeting take place this afternoon to consider his proposal.

My delegation would have no objection to the procedure suggested by the representative of Belgium. I trust that it will be possible for the Committee Secretary and the Secretariat to provide the necessary services for such a meeting. We do not wish to comment now on the Belgian proposal, which also seems, if I may say so in parentheses, to be along the lines of the suggestion made yesterday by the representative of Mexico, which we supported. Therefore, while we do not wish to make any comments on this, we think that it could be discussed this afternoon, and we could also discuss informally the procedures we have to follow, particularly regarding the interim report and any other matters which other delegations might like to raise.

The CHAIRMAN: I think that the informal meeting this afternoon will give us plenty of opportunity to discuss procedure. So I feel that, if there are no substantive questions which delegations wish to raise now, we should consider our general debate now closed.

Mr. DENORME (Belgium) (interpretation from French): Mr. Chairman, I am in total agreement with your suggestion to hold an informal meeting this afternoon, but I think that it is impossible to consider the general debate closed until an official decision has been taken with regard to my proposal. It is for that reason that I should like to ask that the closing of the general debate be postponed until the Committee as a whole is able to take a decision, after having studied the text as requested by the representative of India. Thus the representatives will have the opportunity to consider this question, and we could discuss it this afternoon. I have no objection to having an informal meeting this afternoon, but I should like to know when the Committee will be in a position to reach a decision on the formal proposal I submitted.

The CHAIRMAN (interpretation from French): First of all, I think that it would be difficult to hold an official meeting this afternoon, because, as this is Staff Day, the necessary services will not be available. I also think it would be difficult to have the translations made in time. I do not think we shall be able to discuss your proposal officially and formally until a later time. However, I think that your proposal is not one for the general debate. It is a special question. As for the general debate, which covers all the question on the agenda, I think that it can be considered closed.

Mr. DENORME (Belgium) (interpretation from French): As my proposal is a procedural motion, I thought that we could reach an agreement on it immediately. However, if there is no immediate agreement, a subsequent debate might have substantive implications. It is for that reason that I request you not to close the general debate until a decision has been taken on my motion.

The CHAIRMAN (interpretation from French): I am entirely in the hands of the Committee. Is there any objection to taking a decision on the proposal of the representative of Belgium? Are all delegations in agreement?

Mr. RLIS (United States of America): The United States delegation wishes only to state that it does not understand that it makes any difference whether or not the general debate is closed.

The CHAIRMAN: In view of the lateness of the hour, I would suggest the following. I would agree with what the delegation of the United States has just said. It makes no difference whether or not we close the general debate. I think that in any case we should have an official meeting at a later stage at which we should try to get agreement on the motion which the Belgian representative has just proposed. So I would appeal to the delegation of Belgium not to press for an official meeting this afternoon and I would suggest we discuss the motion in question at a later stage.

Mr. LENCORME (Belgium) (interpretation from French): For some delegations there might not be too much difference between the general debate and what is to follow. In that case I should simply like to ask you, Mr. Chairman, not to close the general debate, since it makes no difference to those delegations. That would also facilitate the work of the Committee inasmuch as it would not be required to finish its work today. That is precisely the purpose of my proposal: to enable the debate to be continued during this session. After the debate is closed, procedural objections might be raised to the holding of a new debate on questions which we should like to see examined during this session by this Committee.

Miss ALVAREZ (France) (interpretation from French): The delegation of France is not in a position to comment on the substance of the motion submitted by the representative of Belgium. However, we could support his suggestion to the effect that we should not close the general debate until a decision has been taken on the motion he has submitted.

Mr. ALDOSHIN (Union of Soviet Socialist Republics) (interpretation from Russian): It seems to my delegation that we should not be too hasty. For the moment we are not in a position to comment on the Belgian proposal, since we do not have it in writing; thus we are unable to take any position for or against that suggestion.

As regards the closing of the general debate, it seems to me that all delegations have already spoken on the items on our agenda, and we see no real or serious reason for not taking a decision on this matter now.

The CHAIRMAN: The Committee has the proposal of the Belgian delegation, supported by the French delegation, that we hold an official meeting to consider the Belgian motion. Therefore I would ask the members not to press for discussion of the motion this afternoon. I should like to set another meeting for Monday morning to discuss the proposal.

I should now like to ask our Rapporteur to say a few words to the Committee.

Mr. SOUZA E SILVA (Brazil), Rapporteur: Mr. Chairman, I should like to say, that, in accordance with your suggestion, I have already received from some delegations, in writing, their concrete proposals to be considered for the draft report. The delegations of the United States, Canada and India have already given me their documents, which we are going to distribute as an informal document to all members of the Committee. If other delegations could do the same, it would be very useful for our work.

I should like to avail myself of this opportunity to thank all the members of the Committee who have expressed kind words with regard to my election. I should like to tell the Committee that I have some very good friends sitting around the table here and that many of the expressions might be discounted on the basis of friendship.

The CHAIRMAN: There will be no official meeting this afternoon, but I should like to invite all members to participate in an unofficial meeting in Conference Room 8. We have heard very interesting statements indeed during our debate. If I may say so, this proves that the Committee is a living entity and is competent and able to deal with the very complex task with which we are confronted.

Now comes the more difficult part of our considerations. We should try -- and we always have tried in this Committee -- to reach a unanimous view on how to proceed in the future. Therefore I would appeal to all the members of the Committee to come to this afternoon's meeting in a spirit of co-operation, so that we may find the right way out of the impasse we are in at the moment.

(The Chairman)

There is one problem this afternoon: there are no interpreters available. Therefore I think that at the informal meeting we should try to help ourselves. Perhaps delegations will act as their own interpreters when discussing the difficult problems we have to deal with. This afternoon's meeting will begin at 3 p.m.

I would only add this. Several delegations have asked that we do not hold an informal meeting this afternoon but that first of all we have consultations among different groups. I personally feel that that would perhaps not be advisable, because if we do that the consultations may not really take place. In view of the beautiful weather, delegations might very well leave for the weekend, and we shall find ourselves on Monday in the same position as now. Therefore I urge all the members to come to the meeting this afternoon. We can always split into groups and reconvene again if that would be a useful and constructive way to speed up our work.

The meeting rose at 1.10 p.m.

VERBATIM RECORD OF THE SIXTY-SEVENTH MEETING

Held on Monday, 15 September 1969, at 10.30 a.m.

Chairman:

Mr. HAYMERLE

(Austria)

REPORT OF THE COMMITTEE TO THE GENERAL ASSEMBLY (continued)

- (a) REPORT OF THE SCIENTIFIC AND TECHNICAL SUB-COMMITTEE (A/AC.105/55 and Add.1, 2 and 3)
- (b) REPORT OF THE LEGAL SUB-COMMITTEE (A/AC.105/53)
- (c) REPORTS OF THE WORKING GROUP ON DIRECT BROADCAST SATELLITES (A/AC.105/51 and A/AC.105/66)

The CHAIRMAN: At our informal meeting on Friday afternoon we reached agreement on various matters: first of all, that all the proposals that had been made during the meetings should in some way be amalgamated in a report, and that in order to facilitate our reaching final agreement on that report it should be distributed to members of the Committee in the form of an unofficial document.

In that connexion I call on the Rapporteur.

Mr. SOUZA e SILVA (Brazil), Rapporteur: We shall be proceeding exactly as you have said, Mr. Chairman. With regard to that document, the Secretariat, until very recently, was not prepared to submit a draft; but I am informed, and can assure you, that by Tuesday we shall be in a position to submit that draft to the Committee, whenever it wishes to convene.

The CHAIRMAN: That means we shall not be able to discuss that document this morning. It would anyway have been very difficult to do so because of the many proposals made Friday afternoon. However, if the Secretariat can tell us that the paper will be ready, we could meet perhaps tomorrow morning to discuss it. I would ask the Secretary to tell us whether that would be possible.

Mr. ABDEL-GHANI (Secretary of the Committee): I think that during the day we shall be able to present the Committee with a draft report which will contain the various proposals and suggestions made during the general debate.

The CHAIRMAN: That does not mean we have no work to do this morning. I think there are several questions of substance which cannot be solved just by drawing up a report. There are three questions, as far as I can see, on which we should try to reach agreement in this Committee in order to guide the work of the Secretariat. One of those problems is that of priorities, and if the Committee agrees I would suggest that we discuss this problem now. If there is no objection, I should like to tell members what I have in mind.

I would draw the attention of the Committee to paragraphs 13-15 of the report of the Legal Sub-Committee. Those paragraphs deal with the questions of the definition and utilization of outer space. Paragraph 13 contains two resolutions. In the first the Legal Sub-Committee recommends to our Committee:

"... that the Scientific and Technical Sub-Committee be invited to study as soon as possible the technical aspects of the registration of objects launched into space, obtaining, if considered appropriate, suitable information from certain United Nations specialized agencies such as... COSPAR and other competent international organizations". (A/AC.105/58, para. 13)

In the second resolution the Legal Sub-Committee requested our Committee to invite the Secretary-General to prepare certain background papers.

In the light of our general debate, it appears to me that there is general support for those resolutions. If there is no objection, I shall take it that the Committee approves those two resolutions, in which case we shall accordingly instruct the Secretary to make mention of this in the report. I shall also take it to be the wish of the Committee to follow its past practice of not having a formal resolution but incorporating it in its report as the agreed view of the Committee.

As I hear no objection, we shall proceed accordingly.

We come now to paragraphs 14 and 15 of the report of the Legal Sub-Committee, which deal with certain specific subjects relative to the utilization of outer space and celestial bodies. During our general debate last week, the representative of Belgium suggested the following system of priorities:

(The Chairman)

"... first, the definition and the delimitation of outer space; secondly, the registration of objects launched into outer space; thirdly, the rules which should govern human activities on the moon and other celestial bodies; and fourthly, the legal régime applicable to materials coming from the moon and other celestial bodies". (63rd meeting, page 16) That Belgian suggestion was supported by France, Italy and the United Kingdom.

On the other hand, the representative of Sweden proposed that, pending consultations with other United Nations bodies, further discussion in the Legal Sub-Committee of the question of the definition of outer space should be postponed.

There was a third suggestion, made by the representative of India, to the effect that at this stage the Committee need only endorse the resolutions and decisions contained in paragraphs 13-15 of the report of the Legal Sub-Committee.

Inasmuch as we have already approved the resolutions contained in paragraph 13, the Indian suggestion would mean that we endorse the contents of paragraphs 14 and 15.

I now wish to consult members of the Committee on the manner in which we should deal with those two paragraphs of the Legal Sub-Committee's report. Could we agree on the priorities that have been proposed? Are there any objections?

Mr. EVANS (Australia): I do not wish to raise an objection but merely wish to refer to a very important qualification which was made, I believe, in the statement of the representative of Belgium in outlining the possible priorities for the future work of the Legal Sub-Committee. Although I do not have the text before me, my recollection is that he very specifically related those priorities to the supposition that the convention on liability for damage would not need to be on the agenda of the Legal Sub-Committee next year because it would in fact have been concluded before the conclusion of the forthcoming session of the General Assembly.

(Mr. Evans, Australia)

The delegation of Australia recalls that there was some fairly substantial discussion of those paragraphs in the report of the Legal Sub-Committee in Geneva. For example, the wording in paragraph 14 specifically says that the Sub-Committee could examine these matters; and similar wording is used in paragraph 15.

That wording was used for a very particular reason, and it was precisely the same reason as that to which the representative of Belgium has alluded in his statement.

We do not wish to object to endorsing the proposals in those paragraphs but I do wish to recall the view of my delegation that, if there were to be any attempt to establish priorities, then it must be undertaken in the light of the important caveat originally suggested by the delegation of Belgium.

In our view, the matters in paragraphs 14 and 15 in toto are not of the same importance as the conclusion of the liability convention, and I wish to record the view of my delegation on that point.

The CHAIRMAN I thank the representative of Australia for clarifying that point. There was probably no doubt in the minds of any delegations in that respect, but it is very good that he has pointed it out again.

Mr. DENORME (Belgium) (interpretation from French): I should simply like to confirm that the Australian position is the same as that expressed in the statement made by the Belgian representative. He said "... having regard to paragraphs 13, 14 and 15 of the Legal Sub-Committee's report, and assuming that a draft agreement on liability will be approved by the General Assembly at its twenty-fourth session, my delegation suggests that priority should be given to the following topics, in order", and he went on to enumerate the four topics which you mentioned a moment ago.

The CHAIRMAN: Do we all agree that this order of priority should be established?

Mr. THACHER (United States of America): I think that before we embark on an attempt to set up the priorities for the topics which are at present considered under the general heading of the item on utilization of outer space, we need more information than is now available to the members at this session. One of these is the status of the liability convention, and I am afraid that as far as my delegation is concerned, until such time as we have that agreement, we very seriously question the wisdom of attempting to sort out the priorities of these other topics. To do so, in our judgement, would appear to detract from the overriding priority which we consider should be devoted to the subject of liability.

I would also say it would be difficult to attempt to sort out this question of priority as it relates to these four topics even if we had a liability convention in hand today. I am not sure how many delegations here have instructions on this point; mine does not. I am also not sure how many delegations here have very much awareness of the subject matter of each of these four topics. So I think without objecting, in principle, to the idea suggested by the representative of Belgium, that it would be difficult at this meeting to attempt to establish priorities for the traditional second item of the Legal Sub-Committee.

Therefore I believe that we should approve the contents of paragraphs 14 and 15 of the Legal Sub-Committee's report, secure in the knowledge that the relative priorities of the topics contained therein, or the topics that we have considered are contained therein, can be established at a subsequent time.

Miss ALVAREZ (France) (interpretation from French): The French delegation believes that the Outer Space Committee can at this time recommend to the Legal Sub-Committee that it consider a number of priorities for the topics it will be examining at its next session. There is clearly a connexion between these priorities and the matter of agreement on the draft convention concerning liability. That is why we think that in its report the Committee might recommend to the Legal Sub-Committee an order of priority for these four topics, perhaps using the formulation given by the Belgian representative in his statement -- which I do not fully recall offhand -- and in any case stating that if agreement on the liability convention is reached, the Legal Sub-Committee might examine the following topics, after which the four topics in question would be outlined.

Mr. MIGLIUOLO (Italy): I should like to make it clear that we stand by what we have already said to this Committee, that is, that we are in favour of the proposal put forward by Ambassador Schuurmans. We agree with the point that our main task should be to concentrate on the liability convention, but assuming that that task will be fulfilled, we would support the order of priority proposed by Ambassador Schuurmans.

Mr. IWAI (Japan): My delegation supports the statement made by the representative of the United States. In the Legal Sub-Committee there was much discussion with regard to the substance of paragraphs 14 and 15, and I think it would be better for this Committee to respect the discussion that took place in the Legal Sub-Committee on these two paragraphs.

I think there are many delegations which have not received sufficient instructions about this question -- about the proposal by the Belgian delegation for the priorities for the four items. My delegation thinks it is a little premature for this Committee to decide upon those priorities.

Mr. DENORME (Belgium) (interpretation from French): I should simply like to remind the Committee that the first two items to which my delegation suggested that priority be given -- assuming that a draft agreement on liability for damage is previously approved by the General Assembly -- are items which were already on the Legal Sub-Committee's agenda, items to which the Sub-Committee has already given attention at its recent session at Geneva and on which it has held discussions; and in the course of these discussions various suggestions were made to enable the Sub-Committee to continue its work at a later session. This is why my delegation ventured to make the suggestion it did. Obviously, if delegations have not had the time to obtain the instructions they consider necessary, my delegation would not wish to press for an immediate decision; but it does find it hard to accept the suggestion that the Committee should endorse paragraphs 14 and 15 of the Legal Sub-Committee's report, since their endorsement might imply that no priorities would be set at this session of the parent Committee. It is, however, precisely the role of the parent Committee -- the role of co-ordinating the role of guiding the work of its two Sub-Committees -- that the Belgian delegation sought to bring out in its statement.

Mr. ARORA (India): As you mentioned in your excellent introductory statement, Mr. Chairman, the point that the delegation of India raised in its statement on 11 September that paragraphs 13 to 16 of the report of the Legal Sub-Committee (A/AC.105/58) be endorsed has, by the decision taken this morning, been admirably covered.

The representative of Belgium has just clarified his position. He has said that he is not seeking a decision immediately, in view of the fact that many delegations do not have instructions on the suggestions he has made. I suppose he would give the other delegations some more time to think about it, and, as the Committee is not concluding its work or its session just now, there will be enough time to take a decision on this matter.

We agree with the view put forward by the representative of Belgium regarding the role that this Committee should play and the co-ordinating functions that it has so far as the work of the two Sub-Committees is concerned. It is important for this Committee to take on the leadership role and to give guidance to the work of the two Committees. Therefore, in that context the suggestion made by the representative of Belgium is quite valid and to the point, though, as he himself said, he would give other delegations more time to think about it and to get instructions.

The CHAIRMAN: Are there any more speakers on this subject? I think that the discussion we have had this morning has made the problems much clearer in our minds. We know exactly what the different delegations have in mind, and I would propose that we discontinue this discussion for the moment to give us time to consult with one another and try to find a way to bridge the different views on this subject.

Mr. THACHER (United States of America): I suggest that perhaps we could approve these paragraphs, keeping open the possibility for further discussions, at this session or at a future session of the Committee, on the order in which these four topics should be considered. But I am concerned, as I think all of us are, because we have the General Assembly opening tomorrow,

(Mr. Thacher, United States)

that if we leave significant parts of the report of this Committee open in an unresolved fashion, we are all going to find ourselves in some difficulty even when it comes to advising our Governments with regard to the contents of the Outer Space Committee's report on which we will be acting in the General Assembly this week. So perhaps we could approve these two paragraphs. That would not preclude further action at this session, or at another session of this Committee, to address ourselves to the question of the priority for the four topics mentioned.

The CHAIRMAN: I share the procedural preoccupation of the representative of the United States -- the preoccupation that we might find ourselves in some trouble owing to the fact that the General Assembly is to be convened tomorrow afternoon. I wonder whether we could put this proposal now to the Committee. We do not vote, but if we do not have unanimous agreement we shall find ourselves in some difficulty. I would ask the representative of Belgium to tell us whether he would agree to that formulation.

Mr. DENORME (Belgium) (interpretation from French): After receiving the instructions that are necessary for this purpose.

The CHAIRMAN: Could we think over this today and try to reach an agreement on this formula tomorrow morning at the beginning of our meeting?

Mr. THACHER (United States of America): Let us resolve this question. Either we have these two paragraphs or we do not. I suggest that it is in the interest of those delegations which are concerned about priority that we do have these two paragraphs in the report. If they wish to open the question of whether we are going to have these two paragraphs, I really do not think that they would find that in their own best interests. Then we reopen the whole question of what we have as an agenda for the Legal Sub-Committee.

As far as my delegation is concerned, I repeat now, we want liability to be the subject before the Legal Sub-Committee. If others are willing to sacrifice future discussion of such subjects as definition, registration, rules for activity on the moon, and the régime for material from the moon -- if they are willing to risk the disappearance of those topics from the agenda -- it is their right to do so, but I doubt that they would really wish to do that. So I think we really ought to be able to go ahead, for on this point no one needs instructions. Our delegations were instructed in Geneva. They reached agreement; agreements are recorded in these paragraphs. I doubt that any of us think that our instructions have changed since that time. I think we should really go ahead and approve it. If we are not going to approve it, then that is something quite novel.

Mr. MIGLIUOLO (Italy): It seems that the question is not really whether we accept paragraph 14, because the contents of paragraph 14 are also included in the proposal of the Belgian delegation, which was supported by the French, Italian and United Kingdom delegations. The question is really the order of priorities. I think that the only item that could be omitted is the question of the possibility of setting up an international agency for outer space affairs. That is the only item which is left out by the Belgian proposal. Of course, on this point, our Committee should express a view on whether or not we feel that this item is now a timely one for discussion; on whether or not what has already been done in the field of space activities within the United Nations justifies setting up a formal organ for that. That is the only item omitted.

(Mr. Migliuolo, Italy)

The point for us is to establish priorities. I may add that the point for us is also to see what we want to achieve during this session. Some delegations are pressing for the establishment of our report, but the entire meaning of our discussion on Friday afternoon was that a number of delegations felt that the report, under the circumstances -- in view of the fact that we cannot yet agree on the conventional liability -- should be simply an interim one, leaving the problem open for consideration during this session, that is, during the Assembly session. If this important item is to be left open, we do not see much difference whether or not we agree definitely on specific paragraphs.

I realize the preoccupation of the United States delegation; of course, to leave problems open when the General Assembly is about to convene tomorrow is not the best solution. In any case we are leaving open the main item, the big problem on which we were supposed to reach a conclusion. If we leave that open, we do not see much difference in leaving open the order of priorities or the subject which should be sent to the Legal Sub-Committee for immediate consideration. Our main point should be to see what we want to achieve during our session -- whether our session must end with a report which would avoid the main point and whether we must reconvene again and at that time reconsider the order of priorities according to the results we have achieved at that time.

Mr. EVANS (Australia): With great clarity the representative of Italy has made almost precisely the points that the delegation of Australia felt might be useful at this stage of our discussions. I might recall that paragraphs 14 and 15 were included in the report of the Legal Sub-Committee only -- if I can use a phrase perhaps not often used here -- by the skin of their teeth. There was a considerable body of opinion, along the lines of that referred to by the representative of Italy and others here this morning, that, unless and until the Legal Sub-Committee and the Outer Space Committee were able to report an agreed liability convention to the General Assembly for consideration, other matters and their priority were really of secondary importance.

(Mr. Evans, Australia)

It would seem to my delegation that there are, in the light of the discussions we have been having, a number of possibilities during the next three months for resolving all these issues in a way which we all hope will further the work of our Committee and its Sub-Committees. We are persuaded by the argument of the representative of Italy that, if we are unable to close the main item of our business at this stage, perhaps the need for deciding on what I think the representative of India brought up ought not to be a matter of pressing urgency. We, for our part, can go along with the recommendations and the conclusions in this report. As I mentioned before, we can accept the endorsement of those paragraphs, although whether there would be a formal endorsement in our report is another matter. However, we could have difficulty in putting our names to all that is contained in paragraph 15, which, after all, does reflect the views of individual delegations, as the representative of Italy has pointed out.

There was by no means unanimity of view on the need for a new international space organization, a point which, of course, is not included in the Belgian list. But we, for our part, could accept, in the general context of what we think is the proper scale of priorities for our work, leaving that open until a later stage, either in this Committee or in the General Assembly itself, which has the overriding responsibility to determine the priorities. If we cannot complete the major part of our work, I do not think we need feel too upset at this stage about not having reached final conclusions on matters which are of much less importance.

The CHAIRMAN: I should like to say a word to the Committee now in order to find out exactly what we are doing here.

There are two possibilities: we can take the majority view and vote on subjects; or, as has proved to be a very successful method in the past, we can discuss problems here, consult and finally find a unanimously agreed view on how to draw up our report to the General Assembly.

(The Chairman)

Although this is the first time I have been in the Chair, I remember that last year we had unofficial meetings during the General Assembly session, before the Political Committee discussed the item on the agenda. There, too, we formulated one unanimously agreed draft resolution which was submitted by all delegations around this table. I am entirely in the hands of the Committee on how to proceed. Since the method formerly used has proved to be very successful, and as delegations are completely clear on what they have in mind, I think that, if we were to discontinue this discussion for the moment and enter into private consultations to find out in which way we could present the different views, we might arrive at an agreed formula -- something which is not possible at an open meeting.

(The Chairman)

If the Committee agrees, I would suggest that we discontinue this discussion now. I have full understanding for the view expressed by the representative of the United States and as the General Assembly session begins tomorrow, we are somewhat pressed for time, but we have the whole day today at our disposal, and I hope it will be possible to reach agreement today. May I ask the representative of the United States whether he withdraws his objections and whether we could proceed in this way? Thank you.

That was the first item on our agenda that I wanted to discuss with you today and on which I thought we should have an exchange of views. The second item is the question of the Working Group on Direct Broadcast Satellites. There are substantial differences of opinion regarding the future of that Working Group. The Working Group itself suggested to the Outer Space Committee that the Committee should consider whether the Working Group should continue to assist the Committee. You have all read the report and you know the reasons why that has been suggested.

During our meetings Canada proposed that the Working Group be reconstituted for the forthcoming years, and Canada added four points: to continue to assist the Committee in the study of the particular questions which the General Assembly might decide required further attention; to assist in co-ordinating the study and studying as required the various matters related to direct broadcasting from satellites as outlined in the conclusions of its reports, to review the comments on the first two reports submitted in response to the Secretary-General's request; and to submit a comprehensive report to the Committee on the progress made by all organizations concerned in matters relating to satellite broadcasting.

Sweden has supported that request. Belgium has proposed that the Working Group's mandate should be extended and that the Group should be invited to study further the implications in international law of direct broadcasting and to examine the principles and implementation of regulations regarding programme content; to pay particular attention to providing developing countries with technical assistance in this field; to co-operate with ITU and to co-operate with UNESCO.

The United States has proposed that the Working Group should continue its work at the further session to be held after the studies to be undertaken by ITU, UNESCO and the International Bureau of Protection of Intellectual Property have been completed. The Soviet Union has proposed that the Committee should, whenever in future it might consider it useful and advisable to do so, enlist the assistance

(The Chairman)

of the Working Group in the study of particular questions concerning direct broadcasting and in the review of governmental comments on the Working Group's first two reports. The Secretary-General would be asked to circulate the report to all Members of the United Nations with requests for comments. The Soviet Union has suggested that technical questions should be taken up by UNESCO and ITU and legal problems by the Legal Sub-Committee.

Australia, like a number of other delegations, has no firm views at this stage but has suggested that ideally the Group would not need to meet again until the various agencies, such as UNESCO, had completed their process of evaluation and produced something new and concrete for the Group to work on. Japan takes the view that the Working Group should not be made a permanent body, since the realization of direct broadcasting satellites on an operational basis may not take place for many years after the projected date of feasibility. Japan considers that the reconvening of the Working Group might be considered in the future when there might be concrete problems requiring urgent solution.

Those are the different proposals before us. Here again there are differences of opinion between different delegations. I should like to invite comments and find out how we can arrive at one view in this respect also.

Mr. ARORA (India): Mr. Chairman, I am not making any comments at this stage. I believe you did not mention India's views on this matter. Perhaps the Secretariat did not have a copy of our statement or did not see the statement in the record. We gave our views on the question of the work of the Working Group, and I am just going to read from our statement so that other members of the Committee will know what the Indian delegation said. I am quoting from Ambassador Sen's statement made on 11 September:

"It is my delegation's belief that the Working Group can and will continue, at least for the time being, to give its assistance to this Committee by co-ordinating and studying various pending problems related to direct broadcasts from satellites." (65th meeting, p. 11)

The CHAIRMAN: I am sorry that the Indian delegation's proposal was not included in my remarks.

Miss ALVAREZ (France) (interpretation from French): I entirely understand, Mr. Chairman, that you were not able to make reference to every delegation which addressed itself to this point. I should like to recall, however, for the Committee's information, that our representative suggested that it would be useful for the Working Group's mandate to be extended in order that the Group might go more deeply into the problems related to direct broadcast satellites. He went on to say, and I quote:

"It would be appropriate, however, for it to be able to have before it, at a forthcoming session, the studies and information requested of the specialized agencies."

Mr. MIGLIUOLO (Italy): I should like to say a few words about the Italian delegation's position. We have also expressed ourselves in favour of extending the mandate of the Working Group. I may add that we take that position because we think that the matter discussed by the Working Group is highly specialized and that we need experts to deal with the different aspects of the problem. If I am restating our position, it is merely because during our statement we pointed out one specific item that we should like to see on the agenda of the Working Group: what we call the de facto appropriation of geostationary plots in orbit. We know that this matter is a little controversial but we have reason to believe that the problems of interference between satellites may sooner or later become a real issue in certain geographical areas of the world. It is for that reason also that we should like to see a panel of experts such as the Working Group continue to study the different problems related to geostationary telecommunication satellites and to provide our Committee with authoritative views on a number of the problems.

Mr. TARABANOV (Bulgaria) (interpretation from French): Since we are making an inventory of the views of delegations on the question of continuing the Working Group, my delegation would also like to remind the Committee that we expressed a rather definite position on the matter, but since the records have not yet appeared the Secretariat has obviously not been able to note it. We expressed the opinion that there are bodies, such as the Committee and the two Sub-Committees, which certainly could work a little more steadily and which could take up and continue the consideration of problems discussed by the Working Group. In this way we would avoid setting up an excessive number of subsidiary

(Mr. Tarabanov, Bulgaria)

bodies of the Outer Space Committee and also avoid creating difficulties for smaller delegations which cannot send representatives to all meetings. As far as experts are concerned, when they discuss matters they should keep in mind the particular views of all delegations, for many delegations cannot take part in every discussion. In the circumstances I believe that the Committee and especially the Sub-Committee should meet and study the problems rather than leaving them to the Working Group.

We support the view expressed by Japan that we should not have a permanent Working Group.

Mr. IWAI (Japan): My delegation has no objection to the continuation of the Working Group.

Mr. HILDYARD (United Kingdom): I wish to recall that in our statement my delegation also supported the continuation of the Working Group. However, we thought it might be advisable not to fix any particular date at this moment for its next meeting but to wait until we saw whether, perhaps with further material from the specialized agencies, there would come a moment when it would become appropriate. It should meet at a mutually convenient time, possibly fixed at the next meeting of this Committee rather than fixed now in a void.

Mr. SKALA (Sweden): The Canadian representative last week stated very well the position of his delegation, and to a great extent it is also the position of the Swedish delegation.

I think we find from this discussion here that there are very many members of this Committee who really feel that the work of the Working Group could fruitfully be pursued and that the mandate of the Working Group, the same or a new mandate, should be continued.

There are certain delegations that object to the continuation of the Working Group, mainly for two reasons: one is that they take another view of the urgency of the problem; the second is that they feel that there is a proliferation of bodies within our Committee and they are afraid of making the Working Group some sort of permanent body.

It is clear, I think, that much more work needs to be done in this field and with some urgency. We should not like to convene the Working Group before much other work has been done within the specialized agencies and perhaps also by Member States, the broadcasting organizations throughout the world and so on.

We feel that after these studies have been completed the Working Group should be reconvened, but we should not like to fix an exact date. I think that, as the representative of the United Kingdom has said, we are not very well placed in the situation, because we cannot know exactly when all these answers might come in. At the same time, we should not like to delay this too much, and perhaps we could find some mutually agreeable date for a later meeting of the Working Group.

(Mr. Skala, Sweden)

The reason we feel it would not be quite realistic to stop the work of the Working Group now and ask the permanent bodies of this Committee to take over the work is, of course, that any realistic estimate of the work of the Legal Sub-Committee, for instance, must show that it, for its part, cannot take up this work until the next year and perhaps not even at that time. Secondly, we, for our part, do not have any absolute objections to the taking up of these questions at a later stage by the permanent bodies but we find that that stage has not yet come.

The first stage would be to obtain comments from the different organizations; the second stage would be to ask the Working Group to refine these reports a little and try to make a synthesis of what has been done -- perhaps within the meetings during next year. However, I think we should not object if at a later stage a permanent body, say the Legal Sub-Committee, were to take up in greater detail outstanding legal questions and so on.

I think the Canadian representative said last week that his delegation would not like to create any proliferation of organs within our Committee, and this, of course, is also the view of the Swedish delegation. We should not like to take a stand today on whether this should be made a permanent body but we feel that at least next year it could still pursue some fruitful work, and perhaps a decision on whether it should be made permanent or discontinued could usefully be taken up next year or after a further session of the Working Group.

Mr. PIRADOV (Union of Soviet Socialist Republics) (interpretation from Russian): Our Committee finds itself in a most interesting position. No one objects, indeed everyone including the Soviet delegation agrees that the Working Group has done much useful work. We endorse its report, which will be submitted to the Committee and presented as its document.

At the same time, if we think of the number of issues which our Committee considers and try to draw an analogy with the present situation, we might imagine something like the following. There are issues which we will want to subject to the very valuable and useful experiment of study by working groups. But what may happen in the relatively near future? Let us say that we set up a working group on the question so clearly and convincingly expounded here by the Italian representative, concerning an international space agency. That is one of the questions which our Committee must tackle sooner or later. Or take the question of holding a conference to define sovereignty in outer space, or another question of concern to us all -- determining a régime for the moon under international law -- about which the representatives of Argentina and Poland spoke at Geneva this summer, or many other issues.

I imagine that in each specific case we will set up a working group. That is the sensible course of action, and no one has any quarrel with it. But think what would happen if all these working groups were continued after their assignment was completed. They would go on functioning as little offshoots of the Committee. What then would the Committee's organs -- the Sub-Committees -- have to do?

I think, therefore, that today or tomorrow we should endorse the work of the Working Group, on the understanding that we will continue in the future to appoint working groups for specific purposes and on specific issues, and that when they have completed their assignment and have marked the end of their work by a report, we will refer the matter to the appropriate Sub-Committee -- either the Scientific and Technical Sub-Committee or the Legal Sub-Committee -- in which we have the most competent people who can make a considered judgement of the preparatory work done by the working group. As the next step, the Sub-Committee would consider the issue itself, and later the Committee would take appropriate action.

(Mr. Piradov, USSR)

This seems to me the only logical and sensible approach not only to the present problem -- that of direct broadcasting from satellites -- but also to future situations where other issues arise in our work. I do not see the justification for establishing the Working Group as a permanent body. This might be the practical result if we were to extend the Group for a year, since a year from now it might very well happen that we would be told that the Group should be continued for another year. In the meantime, other issues will come up, and so forth. This precedent would not be the best one for the work of our Sub-Committee.

I therefore think that we should express our gratitude to the Working Group and say that from this point on the political and legal aspects of direct broadcasting will be considered, obviously by the Legal Sub-Committee, and the social and economic aspects by UNESCO. If the Legal Sub-Committee or the Committee itself has any doubts in these matters it can always refer back to the experts for further clarification, if that proves necessary. I believe that this is the only approach to this and other issues which would be sensible and workable.

Mr. ROBERTSON (Canada): I would not want to go over again here the arguments we put forward the other day in support of our view that the mandate of the Working Group ought to be renewed at least for one more year. However, there are, perhaps, two particular points which I could stress at this time. One is that, unlike what has been the case, for instance, in the Working Group on Navigational Satellites, the discussions in the Working Group on Direct Broadcast Satellites came to conclusions about the nature of problems which would confront us but were not in any sense conclusive. We felt that one reason for continuing that work for at least one more session, particularly if Governments were prepared to offer comments on the reports, was that

(Mr. Robertson, Canada)

it would be desirable, before deciding ultimately that the Working Group had finished its task, to enable it to reflect the views of a larger group of States than those represented in this Committee.

This leads to the second related consideration that I should like to urge upon the members of the Committee, and that is that both the problems and the benefits -- the problems which would perhaps arise in connexion with, and the benefits which would clearly devolve from, the use of direct broadcast satellites -- are going to be of particular concern to the developing countries; and they are, relatively speaking, not as largely represented in this particular Committee as they are in the General Assembly as a whole.

Therefore, I think that, through the comments which they could give to the Secretary-General -- if my suggestion is adopted that he be asked to seek their comments -- it would be desirable to allow them to express their own views on this matter. Extending the mandate of the Working Group for one year and having it, if it does nothing else, study those reports and the reports of the various international agencies whose advice is also being sought would put us in a much better position next year for coming to a final decision concerning what particular tasks we want to allocate, if necessary, to the Legal Sub-Committee, assuming that the Legal Sub-Committee is not already fully occupied with the matters in paragraphs 14 and 15 of the report.

This is simply another argument, which we feel is a good one, for continuing the Working Group for one more year anyway, without prejudice at all and without any desire to set up a formal standing group within this Committee.

The CHAIRMAN: If there are no more comments, I should like to sum up this discussion. I think it was a very useful discussion. I think we have found out that there are many points on which all delegations agree. I think all delegations agree that the Working Group has done very useful work, and I think there is common agreement that in any case it would be useful and advisable for us to rely again on the assistance of the Working Group.

(The Chairman)

I think that is one side of the picture where we all agree. On the other hand, many delegations -- those delegations that wish the Working Group to continue -- have expressed the view that, although they wish it to continue, it should not be made a permanent body. So the idea has been put forward by two delegations that are the initiators of this Committee that it should be prolonged, for the time being, for one year in any case, to receive and review the reports of the different organizations which have been asked to study the report.

I think, personally, that it will not be too difficult to bridge these different views. Here I should like, if there are no more comments, to discontinue this discussion and I hope we can find very quickly a unanimous view on this matter.

Mr. THACHER (United States of America): I also support the idea which was put forward by a number of representatives -- those of France and the United Kingdom and perhaps another -- that the decision on the timing of any future meeting of the Working Group on Direct Broadcast Satellites should be made in the light of the studies and the material being prepared.

The CHAIRMAN: May I take it that the Committee agrees with the views which I have just expressed?

Mr. ARORA (India): I only wish to seek a clarification with regard to the comments made by the representative of the United Kingdom. The representative of the United Kingdom, if I understood him correctly, said that the timing of the next meeting could be fixed at the next meeting of the Committee. Does he mean the next session or the next meeting?

(Mr. Arora, India)

I should also like to know when the next session will take place, if it is the intention so to indicate; because if the session takes place as usual, just before the beginning of the General Assembly session, that will not be until next September, which would be a little late.

I merely seek clarification on whether the representative of the United Kingdom meant that the decision should be taken at the next meeting or at the next session; and perhaps the Secretariat could tell us what the schedule for the meetings of this Committee is for next year, as far as it knows, so that members may have a clear understanding of what the implication of the suggestion is.

The CHAIRMAN: May I ask the representative of the United Kingdom to clarify this matter?

Mr. HILDYARD (United Kingdom): I did mean the next session, not the next meeting; and I was putting to my colleagues around me the same question as the representative of India is asking: when is the next session likely to be held? Will it not be until this time next year?

I had thought it would perhaps be in the spring; but I was trying to find out specifically. I therefore very much support the question which the representative of India has put to the Secretariat: when can we expect the next session to be? Will it be in March or is it not likely to be held until September of next year?

The CHAIRMAN: Before asking the Secretary to answer that question, I should like to ask this. Is that not a decision which we ourselves have to take -- when we are going to meet again? I am very much in favour of not postponing the meeting; the next session should not be held only a week before the beginning of the next session of the General Assembly. I think we can see quite clearly that that would create many difficulties. So I hope we shall meet sooner: in the middle of next year, or whenever the Committee feels it would be appropriate. But I should like the Secretary to tell us now about the plans.

Mr. ABDEL-GHANI (Secretary of the Committee): Usually this Committee holds two annual sessions, one just before the General Assembly session to consider the reports of the Sub-Committees and convey them to the Assembly. In previous years we used to have a session early in the year, some time in January or February, for the purpose of deciding on the time and place for convening the Sub-Committees.

We expect that, if the Committee agrees, we shall have a session around the middle of February.

The CHAIRMAN: As this question has been raised, perhaps I could find out whether delegations would agree to holding a session in the early part of next year. That would be a guide-line for the Secretariat in setting up these meetings.

Mr. ARORA (India): I have no objection to having a session at about the middle of February. I should like to seek a clarification from the Secretariat, however. I want to know, from previous practice, how many days the Committee has when it meets in the first session, at the beginning of the year, and what plans the Secretariat has in mind at the moment.

The CHAIRMAN: Before I ask the Secretary to answer that question, I should like to stress that that again, I think, is a question which this Committee will have to decide. It is for us to indicate how many days we should need, and then, if I am not mistaken, the Secretariat would have to make the necessary provisions.

Mr. ABDEL-GHANI (Secretary of the Committee): You are completely correct, Mr. Chairman, but I am merely saying that in the past that session used to be a short one; it used to deal with procedural matters; so we would meet, as far as I remember, for about two or three days to discuss the time and place of the meetings of the Sub-Committees.

Mr. DENORME (Belgium) (interpretation from French): I have no objection to having this Committee meet at the beginning of next year; but if the purpose of that meeting is simply to set up a meeting schedule, perhaps it would be better to attend to that task during this very session so that we could advise the General Assembly accordingly. If there are any other tasks for the Committee to perform, then my delegation would feel that we should meet in February, or at any other appropriate time. I am not opposed to meeting at the beginning of the year, but the task mentioned during this discussion is much too small for the convening of a regular session of this Committee merely for the purpose of deciding on when it is to meet -- in other words, to set up a meeting schedule. It seems to me that such decisions should be taken before the end of the current session of the General Assembly.

Mr. ABDEL-GHANI (Secretary of the Committee): I should like to mention an important point: namely, that the schedule for next year has to be decided upon before the General Assembly session is over. As you know, there is appropriate machinery for this in the United Nations. The Committee on Conferences has to decide on the schedule of meetings for next year; and that decision has to be made before the end of the General Assembly session. Thus it is necessary for the Committee, during this session, to decide on the meetings it will require.

I should also like to draw attention to paragraphs 47, 48 and 49 of the report of the Scientific and Technical Sub-Committee, wherein it has been decided that the papers to be presented by Member States to the Scientific and Technical Sub-Committee must be presented to the Secretariat at least four months in advance of the session of the Sub-Committee, and that those papers have to be distributed to members at least two months in advance of the session. That makes it very necessary for the Committee to decide during this session on the meetings for 1970.

Mr. PIRADOV (Union of Soviet Socialist Republics) (interpretation from Russian): It seems to me that the proposal made here to meet in February is a judicious one. Furthermore, my delegation would have no objection to our setting up at that preparatory meeting a priority list of items to be discussed. In my view, for the time being we should reflect on this matter and then, in February, in a business-like atmosphere, take a final decision on all the subjects which have caused such a heated discussion today and on which so many divergencies have arisen. I think that would be the most reasonable and useful way to solve this problem. With respect to a February meeting such a proposal would be fully acceptable to my delegation.

Miss ALVAREZ (France) (interpretation from French): My delegation certainly has no objection to the holding of a second session in February of next year. If, however, as the representative of the Secretariat told us a few minutes ago, it is for this session of the Outer Space Committee to set the dates for the meetings of those Sub-Committees, I wonder what items will be inscribed on the agenda of the second session of the Outer Space Committee in February.

In any case, the question of a possible future meeting of the Working Group on Direct Broadcast Satellites has not yet been settled.

Mr. THACHER (United States of America): I should like to support the points made just now by both Belgium and France. I think it is clear that we all need to know well in advance the precise schedule, the timing of meetings for next year of the Committee and its subsidiary bodies including the two Sub-Committees -- and surely that should be done during the next day, if possible. It is certainly evident to my delegation, and I suppose to everybody else, that we really should return to the old pattern of having a brief meeting at the beginning of each calendar year devoted to the programme of work for that year for the Committee and its subsidiary bodies. It would certainly not be inappropriate at such a meeting for the Committee to address itself to the questions of priority with regard to itself or to its subsidiary bodies.

I have one reservation, however, and that does relate to the timing of any future session of the Working Group on Direct Broadcast Satellites. It seems to me that it would be procedurally correct for this Committee in its report to the Assembly to inform the Assembly of our intention to reappoint the ad hoc Working Group -- for it is an ad hoc Working Group -- but I doubt that at this stage we shall be able to select a date with the Working Group should meet. I doubt that we shall have enough information available this week concerning the studies which it is hoped will be under way very shortly even though they may require a formal endorsement by the General Assembly some several weeks from now before they can officially be instituted by other organizations such as UNESCO. Therefore the work of the Committee at its meeting early next year would include the programme and probably, with regard to this particular Working Group, would also include its re-creation and the setting of a date and a schedule for its meetings.

The CHAIRMAN. I should like to make the following suggestions. First, we shall cancel the official meeting for this afternoon. We shall meet to-morrow morning. In the meantime we shall try to get some news unofficially from those delegations which have made proposals so that perhaps to-morrow at our official meeting we can reach conclusions on two of our three substantive items which are still open. Meanwhile, the first version of the draft report will be at the Committee's disposal tomorrow, and then we can see whether we can reach agreement on the text. Is the Committee in agreement with this procedure?

Mr. DENORME (Belgium) (interpretation from French): I have no objection to that procedure, Mr. Chairman, but I should like to ask you how you plan to proceed. It seems to me that the system of informal meetings is extremely useful if the summing up which you make at the end of an informal meeting is repeated at a formal meeting.

It was my understanding that such a procedure would be followed today, but as it has not been I should like to ask you whether the informal discussions we are holding are leading to results or are simply a futile exercise which are not leading us to any concrete result.

I very much doubt that that is your purpose, but that being so I should like to ask you to repeat to us the remarks that you were good enough to make at the end of the informal meeting of Friday last.

The CHAIRMAN (interpretation from French): I hope that the consultations will lead to a result. I intended to speak of this matter at the official meeting tomorrow morning because I thought that that might give us more time for consultation this afternoon.

Mr. DENORME (Belgium) (interpretation from French): I believe that I have been misunderstood. What I am asking is this. When you make observations at the end of an informal meeting that are accepted by all the members attending that informal meeting, do you intend to repeat them at the next formal meeting so that they may serve as a basis of the effort to reach agreement.

The CHAIRMAN (interpretation from French): Yes.

Mr. DENORME (Belgium) (interpretation from French): Could I, then, ask you to repeat today the remarks which you made - and against which no objections were raised - at the meeting of Friday afternoon?

The CHAIRMAN (interpretation from French): With your permission, I should like to have a little time and to do that tomorrow morning.

Mr. ROBERTSON (Canada): Mr. Chairman, I wonder whether I could ask you for clarification on one point. In view of the consultations which you suggested might take place this afternoon, is it your intention to convene this afternoon the same sort of informal meeting as we had on Friday afternoon or were you planning to do it on a bilateral basis?

The CHAIRMAN: I should like to suggest the following procedure. I should like the meeting to be perhaps even a little more informal than on Friday afternoon. I would suggest that all those delegations that have made proposals and wish to participate should be here this afternoon to help us overcome any impasse -- and we hope the way has already been eased by Friday afternoon's meeting. I propose that all delegations wishing to participate in informal consultations this afternoon be cordially invited to be present here at 3.30 p.m.

Mr. ARORA (India): Mr. Chairman, your suggestion in fact amounts to having an informal meeting such as we had last time. I am sure all delegations would be interested in taking part in a discussion regarding many of the important subjects. There is, as we know, the motion submitted by the Belgian delegation on 12 September regarding the consultations to take place on the liability convention, on which discussion was not completed in the informal consultations on Friday afternoon. Other matters have been raised today, regarding the schedule of this Committee's meetings for next year and the question of priorities, and perhaps also some comments might be called for on the report which we might consider tomorrow. So in fact it will mean informal consultations for the whole Committee.

I am just mentioning it in this way because, if your idea is to have the Bureau settle this in consultation with some delegations, then it will be a different matter; but if you are inviting those interested to come here, then it will be an informal meeting of the Committee this afternoon.

The CHAIRMAN: I am in the hands of the Committee, but I should like to tell you what I have in mind. I would say it would be even more informal than the meeting we had last time. If it appears useful I will invite geographical groups or groups of those countries that have made certain proposals and have supported them to get together perhaps in a caucus and discuss the problems as the need arises. So I should be very happy if those who are interested would be here this afternoon.

Miss ALVAREZ (France) (interpretation from French): We have no objection to the holding of an informal meeting this afternoon. I should simply like to point out that it will be necessary to have interpreters.

Mr. IWAI (Japan): Mr. Chairman, I apologize for speaking at this time, as it might be out of place. However, returning to the question of the Working Group on Direct Broadcast Satellites, I said in my last statement that my delegation had no objection to the continuation of the Working Group. In that statement I did not mean that we were in favour of making the Working Group a permanent body. I meant in that statement that we had no objection to the continuation of the Working Group for the next year or until some appropriate time in the near future.

The CHAIRMAN: If there are no further comments, the next formal meeting of this Committee will be held tomorrow morning at the usual time, and this afternoon I would invite all those delegations that wish to participate in consultations to be present at 3.30.

The meeting rose at 12.30 p.m.