THE LEGAL STATUS OF THE ANTARCTIC AIRSPACE

ABSTRACT

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Summary:

This dissertation represents the first wide ranging analysis of the legal status of the Antarctic airspace.

To place the study in its perspective, the initial chapters are concerned with sketching the geographic, economic and strategic setting of the area together with general features of the current legal regime of the continent.

In the foregoing context, the various national airspace claims and the attitudes thereto of certain States are outlined.

The past, current and future uses of the airspace are then discussed. The regime of the Antarctic airspace is examined especially with regard to airspace sovereignty, transit, supersonic flight, prohibited areas, rules of the air, jurisdiction, air navigation facilities and the role of ICAO.

Finally some broad conclusions are offered on the future utilisation of the Antarctic airspace and queries are raised as to the basis of, and the demands to be met by, a new Antarctic airspace regime.

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Chapter I

INTRODUCTION

Introduction

The subject of this paper may at first glance seem rather esoteric and perhaps of dubious relevance to today's problems. No prior work has been done in this field and there is little recognition of the many legal difficulties and opportunities presented by this area of airspace.(1)

The Antarctic region represents an enormous proportion of the world's surface area and, until just over ten years ago, was the setting of numerous inter-governmental disputes, negotiations and indeed military incidents. The suggestion or even implication of national 'rights' or 'sovereignty' excites fervent nationalistic feelings in a number of countries and usually produces predictable reactions from Governments with interests in the area. The Antarctic issue is as much legal as political and strategic as emotional.

International aviation, particularly civil aviation, is unfortunately assuming an increasingly common character - the hopes of the Chicago Conference of 1944 for an 'international' approach, on a national basis, are not being realised. Aviation the world over is an increasingly 'national' enterprise dominated by considerations of prestige, national identity and pride.(2)

Nations are taking much the same individual approach to partitioning and exploitation of the resources of the sea and the sea bed. Inevitably, after allocation of the marine domain, nations will turn, as a number have done already, to the Antarctic.(3)

Thus it could well happen that an interaction of traditional and new Antarctic claims could be aggravated by the aviation interests of many States. This paper surveys Antarctic claims in the present regime and analyses the more important issues regarding the airspace.

Contingency thinking has always presented the danger, particularly in technology oriented air law, that a regime created within today's horizons might stifle tomorrow's progress. This may be true in regard to an Antarctic regime but issues are so fundamental and extensive that possible problems should now be anticipated. The unique status of Antarctica is such that development of a viable airspace regime should influence creation of an effective territorial regime. Creation of a new regime for the Antarctic airspace thus presents a unique opportunity.

The inter-relationship of many of the issues in this study has caused some problems of approach and for the sake of clarity there is some repetition of certain aspects.

It is hoped that the following pages show that a problem does exist with regard to the Antarctic airspace and that a solution must be found.

Chapter II

THE SETTING

The Setting

The following paragraphs are meant simply to give a concise summary of the most important geographic, economic and strategic facts regarding Antarctica. These facts both influence the conduct of States and some important aspects of today's legal regime. They are equally relevant to the future.

1. Geographic

The South Polar Continent covers an area of about 5½ million square miles - about the size of the United States and Mexico. It has some 18,500 miles of coastline and numerous adjacent ice covered islands. In contrast to the North Pole, the Antarctic mass is not floating on the high seas but is a land area almost totally covered with an ancient ice sheet.(1) Indeed, recent studies tend to confirm that it once formed part of a hypothetical procontinent called Gondwanaland, which included present day South America, Africa, Arabia, Madagascar, Ceylon, peninsular India and Australia.(2)

The Antarctic ice layer has gradually increased in thickness from accumulated snow and it has thus pushed outwards towards the oceans. In many places it extends over the sea as ice shelves. The largest such shelves are the Ross Ice Shelf in southern Antarctica and the Fichner

Ice Shelf in the west.(3) Movement of the ice sheet and consequent shelves is relatively small and they are little affected by seasonal conditions.(4)

The whole continent is not ice covered. There are quite extensive ice free valleys and, in summer, they are also snow free.

In contrast to the foregoing, there is a striking analogy between the Antarctic seas and the Arctic oceans. In winter, the seas around Antarctica are ice covered. The ice is in motion and there is a seasonal variation in its extent; one estimate places its outer limit at about 120 miles but another suggests the average limit in the August/September (maximum) season well outside 60° south latitude. Maritime navigation in the area is not possible all the year.(5)

Finally two small points should be noted. First, the Continent is unusually high - 7,500 ft on the average. The South Pole is 9,000 ft above sea level. Second, the Antarctic is by far the remotest Continent. Although the west peninsula is only about 700-800 miles from Argentina and Chile, New Zealand is approximately 2,500 miles from the south coast.

For an 'internationalised' continent there is a surprising pattern in the disposition of the major permanent national bases in Antarctica. The claimant States

have generally concentrated their facilities in their sectors and the principal 'outsiders', the U.S. and U.S.S.R., have spread their bases widely. This situation reflects perhaps what States regard as the temporary nature of the Treaty: - (The claims are discussed in detail infra)

'Australian' sector:	Molodezhnaya	(U.S.S.R.)
	Mawson	(Aust)
	Amery Ice Shelf	(Aust)
	Mirnyy	(U.S.S.R.)
	Davis	(Aust)
	Vostok	(U.S.S.R.)
	Casey	(Aust)
'French' sector:	Dumont D'Urville	(France)
'New Zealand' sector:	Scott Base	(N.Z.)
	Hallett Station	(U.S.-N.Z.)
	McMurdo Station	(U.S.)
	Vanda Base	(N.Z.)
'Norwegian' sector:	Showa	(Japan)
	Novolazarevxkaya	(U.S.S.R.)
	Plateau Station	(U.S.)
	Sanae	(South Africa)

'South American' sector (British Argentine and Chilean claims)		
	Halley Bay Base	(U.K.)
	General Belgrano	(Argentina)
	Sobral	(")
	Bellinghausen	(U.S.S.R.)
	Palmer Station	(U.S.)
	Deception Island	(U.K.)
	In addition there are numerous small coastal stations on the Antarctic Peninsula operated by Argentina, Chile and the United Kingdom.	
'Unclaimed' sector:	Byrd Station	(U.S.)
South Pole	Pole Station	(U.S.) (6)

It should also be noted that Williams Field, the major U.S. air facility at McMurdo Station, also lies within the 'New Zealand' sector. Specific notice of the construction of the facility was not given to New Zealand and express approval has never been forthcoming from New Zealand authorities. Important too is the fact that

Williams Field is built on the Ross Ice Shelf - semi permanent bay ice.(7)

Williams Field is by far the most sophisticated aviation complex on the Continent. The absence of alternatives is primarily a function of the harsh environment. No earth or rock based airstrip is in regular use. In summer, the melting of the ice surfaces of the Williams Field runways, results in extensive deterioration and 'patching' (by freezing ice chips and fresh water together in the depressions) must be done.

On unprepared ice shelf ski equipped planes find excellent surfaces and almost unlimited expanses of suitable neve for all year operation. No one has yet succeeded in preparing such a surface for wheel equipped aircraft.

Continental ice has also been used, but mainly for ski equipped aircraft. The disadvantage in fitting aircraft with skis rather than wheels is that the latter have smoother landing characteristics and produce smaller drag in the air. In practice, ski-wheel combinations are often used.(8)

The geographic realities of the Antarctic also raise problems in the protection of aircraft on the ground. Only a few small hangars have been built for light aircraft. At Williams Field and at the Soviet Mirnyy

base aircraft must still be tied down on the ice in the open. Even such tethering is a major engineering problem in view of the high winds. The semi permanent nature of the shelf ice, although providing the best landing surface is hardly the material on which to build extensive large scale hangars. One important consequence of the foregoing difficulties is that extensive repair and servicing of aircraft is not yet practicable.(9)

Lastly, but not least, some important facts about the relative setting of Antarctica must be noted. In Mercator type projections, the third dimension of the globe cannot be represented and it can be easily forgotten that such representations are inherently distorted, both in regard to relative size and direction. The shortest route from Rio de Janeiro to Darwin, Australia, appears to be westward but actually the most direct route passes near the South Pole.(10)

Similarly the length of the Capetown-Sydney route now flown by Qantas could be reduced by some 2,300 miles (from its current 9,200 miles via Perth, Cocos Islands, Maurtius and Johannesberg) if the more southerly route was available. Distance savings can also be made if a more southerly route is flown on South Africa, South America connections.(11) These realities produced by the new maps of the air age are discussed more fully in Chapter V.

2. Economic

Not even the intensive exploration and research during and since the International Geophysical Year has shown that any economic benefits are to be directly derived from Antarctica. Indirectly, of course, many purely scientific activities may produce results valuable in application outside Antarctica.(12)

Exploitation of any resource of the Continent must be inhibited by the cost of transport. Sea freight costs to the Continent, for instance, run from 2 to 10 times the cost of shipping similar goods over similar distances. Inland transport ranges from 3 to 5 times U.S. domestic air freight costs or from 30-40 times rail freight costs.(13)

Similarly 'costs per man' are another inevitable limitation. One study concludes that shore line operations in favourable locations during the short summer season could be conducted at costs that may be only 'moderately above those in temperate climate easily accessible areas'. Costs at inland stations, being influenced by the costs of air transport, would be several times higher.(14)

The possibility of mineral riches on the Continent has frequently been suggested. In recent years this has been given impetus by growing scientific evidence of the Gondwanaland theory.(15) Yet of course in Antarctica the

exposed area of rock is less than 10% of even that of the Andes. The natural barriers are also uniquely harsh. High value minerals may be a possibility but the general figures for cost/price ratios for say gold, uranium and diamonds are not encouraging.(16)

Coal desposits have been reported at numerous places in East Antarctica but they are not of high grade and economic exploitation is faced with alternative sources of energy such as nuclear power.(17)

The biological resources of the Antarctic seas are now being regarded as one of the most important assets of the area.(18) The indiscriminate killing of seals had, by 1825, decimated most of the herds and recovery is just now becoming significant. This matter has been of some concern to SCAR and the protection of this resource has been the subject of recommendations of Consultative Committee Meetings pursuant to the Treaty.(19)

Whaling in the Antarctic showed the same disregard for conservation. Vessels of all nations except Japan and the U.S.S.R. have abandoned Antarctic whaling. Revival is estimated to take perhaps 50 years yet once achieved the maximum sustainable catch is estimated to be worth about $100m at current prices.(20)

A newly discovered marine resource of these seas is the Antarctic Krill a form of early zoo plankton. Both the Japanese and Soviets are giving thought to the possibility of harvesting this rich source of protein.

It should be noted that if nations become widely interested in these resources, the absence of territorial sovereignty and territorial waters renders obsolete traditional bases of marine resource allocation.(21)

Another suggested exploitable resource of the Antarctic is its climate. Indeed this has given rise to the Continent's greatest current economic asset - tourism.

It is not widely appreciated that several hundred tourists travel by ship to the Antarctic each year. The market shows great potential.(22) The rapid development of tourism has forced the Treaty Governments to lay down certain ground rules.(23)

Until more sophisticated aviation facilities are developed and accommodation is available, there is unlikely to be any great expansion in tourist flights. The past, current and future uses of the Antarctic airspace are discussed more fully in this respect in Chapter V infra.

3. Strategic

Strategic considerations as much as economic and political factors, have traditionally influenced States' attitudes towards Antarctica.

Australia and New Zealand and, to a lesser degree, South Africa have been anxious over the years to ensure that the Continent and its adjoining waters should not be

used to prejudice their long maritime routes. The British, Chilean and Argentinean claims in West Antarctica have been all partly prompted by the desire to have some control over the strategic Drake Passage.(24) The French and Norwegian claims have minimal strategic impetus. These national attitudes were re-inforced when German raiders were active in southern waters during both World Wars.(25)

These more regional fears regarding misuse of the area were joined in the 1950's by the U.S. and U.S.S.R.'s reservations that the Continent should not be included in the global strategic struggle. The result of this concern is, of course, the demilitarisation of the Antarctic Treaty area.

Since the 1950's and the Antarctic Treaty, military technology has apparently rendered the Antartic of less strategic moment. Nuclear missile carrying submarines, fractional orbit bombardment systems, reconnaissance satellites and nuclear ships have largely superseded what, if anything, Antarctica could offer.(26)

The airspace (and indeed West Antarctica in toto) will certainly remain of importance to South American States. The very proximity of the Antarctic to Argentina, Brazil, Chile and Ecuador together with the possibility of a breakdown of the Antarctic Treaty makes the guarantee of

peaceful uses of the area of crucial importance. The peaceful dedication of the airspace, on a long term basis, would be a considerable improvement over today's regime.(27)

The strategic concern of the above South American States has from time to time been reflected in the diplomatic correspondence of both Argentina and Chile in relation to their claims. In a Note of 31 January 1948 to the British Ambassador in Santiago, Chilean authorities noted:-

> '... That the Chilean Government feels that it's rights in the American Antarctic are securely bound to the principles of continental security ...'(28)

After the signing of the Antarctic Treaty the U.S. Secretary of State released the following statement:-

> 'The Governments of the United States of America, Argentina and Chile, on the occasion of the signing of the Antarctic Treaty, declare that the Antarctic Treaty does not affect their obligations under the Inter American Treaty of Reciprocal Assistance signed at Rio de Janeiro, Brazil in 1947 ...'(29)

The Rio Treaty's scope is confined to a geographic region including a portion of West Antarctica(30) and also to 'the

territory of an American State'.(31) Juridically, the U.S. declaration is of dubious validity but it suggests the high priority Argentina and Chile placed on defence of their Antarctic claims. Recent U.S. statements with regard to the increased Soviet presence in the Indian Ocean also suggest a renewed interest in the strategic implications of part of the Antarctic Treaty area.(32)

Chapter III

GENERAL FEATURES OF THE CURRENT LEGAL REGIME OF THE CONTINENT

General Features of the Current Legal Regime of the Continent.

The present legal regime of the Continent is constructed from a complex of principles of international law, the Antarctic Treaty, international 'legislation' developed under that Treaty and other international commitments and national laws of claimant States. As will become clear, in each of the foregoing areas there are aspects of considerable contention as there is, likewise, with some of the pivotal provisions of the Antarctic Treaty. In addition to these difficulties, there are a number of national laws which can be interpreted as applying to the Antarctic airspace. Doubt is piled on doubt.

Before looking at these rules it should be noted that the situation is most unsatisfactory in the sense that the variety and type of problems exposed mean that, under today's regime, Governments have even more latitude to give 'political' rather than 'legal' decisions on how they shall act.

As will become clear, as far as many States are concerned, Antarctica is not a legal wilderness. In one form or another, it is subject to a web of regulation. It's complexities and ambiguities suggest a need for early rationalisation.

1. General Principles of International Law.

By this expression is not meant solely the general principles of law 'recognised by civilised nations'(1) but the whole range of general rules from various sources that govern States. As international law governs entities, not areas,(2) it must extend to States manifesting activities in Antarctica. Thus, all the rights, privileges, powers and immunities, as well as the correlative duties, absence of rights, liabilities and disabilities constrain and enhance the conduct of States in their Antarctic affairs.

The unique conditions of the area question the rigid applicability of some of these general rules (e.g. the basis for the acquisition of sovereignty) and the legal status of the Continent presents further difficulties. Of particular relevance to the airspace regime are the questions of lateral and vertical delimitation.

The Vertical Limit

This problem is, of course, not unique to the Antarctic. It has been extensively discussed for many years and, while by no means settled, a functional division seems to have emerged.(3)

It should be noted that this matter is, for several reasons, of less moment in the Antarctic airspace.(4)

First, despite small differences, both space and the Antarctic airspace have similar regimes in that both are demilitarised.(5)

Second, subject to the foregoing, there is freedom of user - although there are some doubts as to the extent of that freedom in the Antarctic.(6) These two common themes must minimise pressures to create a vertical delimitation.

The Lateral Limit

This is, without doubt, one of the most difficult problems of the future.(7) If the Antarctic airspace was to have the same status as that of the high seas obviously the matter would not be important. But the Antarctic Treaty has already given the Antarctic airspace a peculiar character in some respects and, of course, national airspace claims also prompt the need to make a division. Where does the airspace freedom of the high seas end and the Antarctic airspace regime begin?

The Antarctic Treaty certainly provides no answer. It adopts an ambiguous 'solution' by stating that:-

> '... the provisions of the present Treaty shall apply to all the area south of 60° South Latitude, including all the ice shelves, but nothing in the present Treaty shall prejudice or in any way affect the

> rights, or the exercise of the rights, of any State under international law with regard to the high seas within that area ...'(8)

The nature of the ice structures on, and surrounding, Antarctica has already been described.(9) It should be noted that the ice shelves have no equivalent in the Arctic but certainly there is a similarity between Arctic and Antarctic 'pack' or 'sea' ice. Whether the various types of ice have the status of high seas (as opposed to territory) has long been discussed by legal scholars mainly in relation to the acquisition of title. The latter and the definition of 'territory' have thus become inter-related.

Sea Ice

Surveying the publicists one finds quite a range of views. The Norwegian writer Smedal summarised many of their opinions in 1931:-

> '... Waultrin and Balch are of the opinion that sovereignty can be acquired over immobile ice. Scott holds that a floating field of ice is not capable of being submitted to sovereignty.

... Lindley does not find any reason for excepting from occupation the regions around the two Poles ... Clute is of the opinion that even if large areas of the Arctic Sea are frozen up, it must be regarded as an open sea and cannot be submitted to sovereignty.

... Oppenheim mentions the question whether the North Pole can be occupied. In his opinion it must be answered in the negative 'as there is no land on the North Pole'. ... Breitfuss suggests the division of the Arctic Ocean between five polar States, and recommends that their sovereignty shall not only include the land and islands lying there, but also, to a certain extent - to be decided by international agreement - 'the areas of the sea which are covered with ice fields'.

... Lakhtine, who also gives an opinion especially on the Arctic Sea, says that the sea areas covered with more or less immobile ice fall within the sovereignty of the polar States...'(10)

Although academic opinion differs, only one State, the Soviet Union, expressly purports to claim the North Polar pack ice in it's Arctic sector.(11) This arises not from any intrinsic nature of the ice but what the Soviets regard as the special situation of the Arctic generally.

Waldock after a survey of the authorities in 1948 concluded:-

> '... In the absence of any judicial authority, it is impossible to pronounce with confidence concerning the status of frozen seas generally in international law. The problem is, in any event, a limited one in the Antarctic because it is improbable that an international court would uphold a claim to sovereignty over the areas of sea many miles from land, when these are frozen only for part of the year and are navigible during the remainder ...'(12)

In an essay in 1949 titled Airspace Rights over the Arctic, John Cobb Cooper concluded that:-

> '... ice covered areas of the Arctic Ocean must be treated as high seas and the airspace over such areas as free to the use of all ...'(13)

In recent years however, there has been a re-awakening of interest in the problem. Current debate is centered on the legal aspects of Canada's Arctic claim and the validity of certain measures it has taken in 'international waters' to it's north. Necessarily the status of the floating Arctic pack ice has been considered.(14)

Donat Pharand has surveyed the nature of 'ice islands' and the smaller 'pack ice' formations in the Arctic and he doubts (on a novel approach) whether such floating formations can be islands - i.e. assimilated to land.(15) He notes that Article 10 of the Convention of the Territorial Sea specifies that 'an island is a naturally formed area of land'. This suggestion that substance is not solely sufficient to constitute an island is also reflected in Article 5 of the Continental Shelf Convention which provides that structures on the continental shelf 'do not possess the status of islands.'(16) That Convention also asserts airspace freedom above such 'non-land' structures.(17)

In November 1969 this problem arose incidentally in the course of proceedings in the Territorial Court in the Northwest Territories in R. v. Tootalik E4-321(18). The case arose over the alleged unlawful killing by the defendant of a female polar bear with young contrary to the Northwest Territories Game Ordinance 1960. The primary

defence raised was that the offence took place off shore on the sea ice (otherwise outside territorial waters) and therefore the Canadian Court had no jurisdiction. The trial Judge noted some of the declarations of prominent Canadians regarding Canada's Arctic claim and concluded that:-

> '... it is not declarations of sovereignty that count so much as the actual day by day display of sovereign rights ...'

Such displays were listed. The defence was rejected.

Thus the status of floating 'sea' or 'pack' ice is subject still to considerable differences of opinion. If such ice is not to have the status of high seas (where outside national limits) then an enormous area of the world's seas will be subject to national claims. The repercussions on maritime and aviation traffic are obvious. Additionally, the seasonal nature of much of this ice would pose considerable problems of setting practical and recognisable boundaries; the fluctuations of such seasonal ice structures could not be accommodated by the doctrines of loss and accretion.(19)

Shelf Ice

Most legal writers have taken the contrary view regarding the Antarctic ice shelves. Most assimilate the

shelves to land. Smedal was one of the first to record an opinion:-

> '... In appearance it (the Ross Barrier) resembles a land territory rather more than a sea territory. At the Barrier edge all navigation obviously ceases. In this instance it is difficult to plead the considerations that have formed the rule that the sea cannot be made subject to the sovereignty of a State. We are, therefore, of opinion that good reasons favour the view that the Ross Barrier should be regarded as land ...'(20)

The geographic continuity of the continental ice sheet culminating in the shelves has been seized upon by other commentators:-

> '... It seems to the writer that, as there is no natural boundary between those parts of the Barrier which are afloat and those which rest on solid ground, and as the whole ice mass externally represents a continuation of the Antarctic continent, then the whole of the Barrier should be treated as territory subject to rights of sovereignty ...'(21)

The national claims in the Antarctic are as evasive on this point as the Antarctic Treaty which extends to 'all the ice-shelves' but in no way prejudices or in any way affects the rights or the exercise of the rights of any State 'under international law with regard to the high seas within that area.'(22)

Thus, at the outset, there is a fundamental difficulty in setting the territorial limits of the Continent's airspace in international law.

2. The Antarctic Treaty

Much has been written about the Antarctic Treaty as regards events leading to its signature, what it says and what it stands for.(23) Here it is proposed to concentrate essentially on what it says but it should be borne in mind that it is a highly political instrument and thus the drafting of some Articles cannot stand fine legal analysis. What it says is as important as what it does not mention.

The Treaty was signed in Washington on 1 December 1959 and it came into force on 23 June 1961 after receipt of the twelth original signatory's instrument of ratification. It was ratified by Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, the USSR, the Union of South Africa, the United Kingdom and the United

States. Subsequently Poland (1961), Czechoslovakia (1962), Denmark (1965) and the Netherlands (1967), acceded to the Treaty. Thus, in view of general principles of international law, these are the only countries contractually bound. The rules established in general go no further contractually than to bind the 16 participants. However some treaties give rise to rules of customary international law and this point in relation to the Antarctic Treaty is discussed infra.(24)

Scope

Thus in contractual terms the Treaty is quite limited. However Article X in effect enlarges the scope by providing:

> '... Each of the Contracting Parties undertakes to exert appropriate efforts, consistent with the Charter of the United Nations to the end that no one engages in any activity in Antarctica contrary to the principle or purposes of the present Treaty.'

The duration of the Treaty is not unlimited - nor is it limited. Article XII provides for a Conference after the expiration of 30 years after entry into force to 'review the operation of the Treaty'.(25) It is reasonable to assume that at such a meeting the Treaty will be subjected to intense national pressures.(26)

The area of the Treaty is ambiguously defined.(27) Within the foregoing limitations a number of rules are made.

Prohibitions

The primary rule is that Antarctica 'shall be used for peaceful purposes only'. Measures of a non peaceful nature are defined inter alia as 'the establishment of military bases and fortifications', the carrying out of 'military manoeuvers' and the testing of any type of weapons. However use of military personnel or equipment for scientific research or for any other peaceful purpose is permissible. Obviously there is, at some point, a fine line dividing 'peaceful' from 'non-peaceful'.(28) Nuclear testing and disposal there of radioactive waste is also prohibited.(29)

The scope of the waste material prohibition of Article V should not be underestimated. France, until recently conducting a series of nuclear tests in the southern Pacific, is a signatory to the Treaty but it has signed neither the Partial Nuclear Test Ban Treaty nor the Non Prolifération Treaty. Hence the 'cross reference' provision in Article V(2) is not yet effective. Another complaint of the world community against France in respect of these tests might well be that it is producing radio-active waste in the Antarctic atmosphere.(30) All the other

signatories of the Antarctic Treaty have assumed the additional and wider obligations of the Partial Nuclear Test Ban Treaty.

Co-operation.

The foregoing is balanced by Articles II and III providing for freedom of scientific investigation and co-operation as applied during the International Geophysical Year and for the exchange of information, personnel and results.(31) This freedom of scientific investigation has been widely interpreted by the parties - for instance US service aircraft have for many years conducted aerial mapping and geophysical surveys over every sector of the Continent. The Treaty only gives this freedom to 'scientific investigation' and thus it confers no general freedom of movement.

Status of Claims.

The difficult question of the status of national claims was removed by the 'freeze' provision of Article IV.(32) Problems of interpretation arise under Article IV particularly:

> '2... No acts or activities taking place while the present Treaty is in force shall constitute a basis for asserting, supporting, or denying a claim to territorial sovereignty in

> Antarctica or create any rights of sovereignty in Antarctica. No new claim, or enlargement of an existing claim, to territorial sovereignty in Antarctica shall be asserted whilst the present Treaty is in force ...'

There are a number of weaknesses in this arrangement of particular relevance to the airspace. First, the whole theme of Article IV concerns 'territorial' sovereignty and, while normally 'territorial' sovereignty encompasses airspace sovereignty the Treaty does not recognise that there can be a division of the two. This matter is discussed further infra.(33)

Second, Article IV(2) does not explain what is meant by 'new' or 'enlargement'. Is 'new' meant to envisage a claim based on new activities or is it designed to cover merely reiterations of an old and inchoate claim? Is 'enlargement' used in a geographic sense or in a juridic sense?(34)

Finally, the scheme of Article IV is such that there may be nothing to prevent two or more Contracting Parties from asserting a joint claim.(35)

One solution to all the foregoing problems lies in the 'spirit' of the Treaty; however the spirit of the Treaty is so liable to be subjectively interpreted part-

icularly with regard to claims that emphasis must be placed primarily on the legal words of the instrument.

Inspection

To ensure observance of the prohibitions of the Treaty Article VII provides machinery for inspection by mominated observers of certain Contracting States.(36) The Washington Conference thought it necessary to include a distinct right of aerial inspection:-

> '... Aerial observation may be carried out at any time over any or all areas of Antarctica by any of the Contracting Parties having the right to designate observers...8(37)

Whether to inspect or not is a question for each Government to decide. Some have decided that inspection is unnecessary in view of the spirit of co-operation and the good relations prevailing. Other Governments have felt that since the right is written into the Treaty it should be exercised lest it fall into desuetude. The first observers, two New Zealanders, visited the US Mc Murdo station in December 1963 and later in that same season Australia, the United Kingdom and the United States sent out observers. Argentina made inspections in 1965 and the United States inspected again in 1967 and 1971.(38) The right of inspection between the parties extends inter alia '... to all ships and aircraft at points of discharging or

embarking cargos or personnel in Antarctica...'(39) In contrast to the aerial 'observation' clause, this provision is only available to 'any observers designated in accordance with paragraph 1 of Article VII.

Jurisdiction

The scheme of the Treaty has been to subject nominated observers, exchanged scientific personnel and members of accompanying staffs to the jurisdiction of their national State.(40) The question of jurisdiction over the large number of general scientific and technical personnel in the Continent, especially at mid season, is not settled. The Treaty lists 'questions relating to the exercise of jurisdiction in Antarctica' as a matter to be discussed and recommendations formulated under the Consultative Meeting process (41) and, in the interim, '... the Contracting Parties concerned in any case of dispute with regard to the exercise of jurisdiction in Antarctica shall immediately consult together with a view to reaching a mutually acceptable solution...'(42) No action has since been taken on the question nor does it appear ever to have been discussed at Meetings.

Some of the national claims are such that by assimilating the areas concerned to the national territory, the legal system of the metropolitan area applies.(43) Additionally some aviation laws touch incidentally on jurisdiction. To give effect to Article VIII, Australia,

New Zealand and the United Kingdom have expressly limited the jurisdiction of their courts, but implicitly those nations thus reassert that they possess jurisdiction over all others within their sectors.(44)

Is application of national jurisdiction on a territorial basis contrary to Article IV(2) of the Treaty? If it is illegal, how for instance are internationally based aviation regulations to be enforced? If it is not to be on this traditional basis what alternatives are available?

Consultation

Article IX of the Treaty provides for periodic meetings of representatives of certain Contracting Parties to consult, exchange information and to formulate, consider and recommend to their Governments '... measures in furtherence of the principles and objectives of the Treaty' - including measures regarding:-

a. use of Antarctica for peaceful purposes only;

b. facilitation of scientific research in Antarctica;

c. facilitation of international scientific co-operation in Antarctica.

d. facilitation of the exercise of the rights of inspection provided for in Article VII of the Treaty;

e. questions relating to the exercise of jurisdiction in Antarctica;

f. preservation and conservation of living resources in Antarctica.

So far there have been six such meetings - Canberra (1961), Buenos Aires (1962), Brussels (1964), Santiago (1966), Paris (1968) and Tokoyo (1970) - and a significant body of rules has been developed as a result.

Article IX(4) of the Treaty provides that the foregoing measures shall become 'effective' when 'approved' by all the participating Contracting Parties. Some suggest that once 'effective', recommendations become binding; however the history of some recommendations suggests the contrary.(45) The first Consultative Meeting was held in Canberra, Australia, in 1961 shortly after the coming into force of the Treaty.(46) The Meeting adopted 16 recommendations - the first 6 concerning the facilitation of the exchange of information regarding scientific activities, logistics and expedition and transportation details. The representatives also suggested that Governments recognise the 'urgent need' for measures to conserve the living resources of the Continent and indeed suggested some general rules to that end. It was proposed that animals and plants indigenous to Antarctica should not be 'unnecessarily disturbed' and that certain

activities be regulated with a view to 'preventing serious harm to wildlife' - notably flying aircraft in a manner which would 'unnecessarily disturb' bird and seal colonies.

The representatives also concluded that search and rescue and radio communications be discussed further. It is with the germ of these recommendations, that developments of relevance to aviation have come about.

The Second Consultative Meeting took place in Buenos Aires in 1962.(47) The representatives again recommended that the Governments exchange details of their activities and their results. They also urged that Governments should consult together with a view to the establishment of effective and internationally agreed measures for the protection of the living resources of the Antarctic. The Meeting suggested that a meeting of specialists in radio communications be held and that a symposium of experts on Antarctic logistics should be arranged.

The Third Meeting in Brussels urged that their Governments exchange particularly information on airfield facilities in the Treaty area. It was recommended that details should include '... particulars of location, operation, conditions and limitations, radio aids to navigation, facilities for radio communications and instrument landing and be in detail sufficient to enable

an aircraft to make a safe landing ...' Further recommendations made were on logistics and telecommunications. The natural environment was the subject of two recommendations(48)

Firstly, the Meeting set out Measures for the Conservation of Antarctic Flora and Fauna and suggested that pending their becoming 'effective' that they be considered as guidelines.

Secondly, the representatives recommended that the Governments look at regulation of pelagic sealing and the taking of fauna on the pack ice; suggesting in the interim that Governments regulate ships of their nationality so as to ensure the 'natural ecological system in not seriously disturbed'.

The Fourth Consultative Meeting was held in Santiago two years later. The Meeting re-iterated the Interim Guidelines for the Conservation of Antarctic Flora and Fauna and stipulated 17 'specially protected areas' entry and activities in which were to be 'controlled' by the participating Governments. Interim guidelines for the voluntary regulation of Antarctic pelagic sealing were also recommended. Telecommunications and logistics also featured in discussions and recommendations. The effects of tourism received attention from the representatives and it was recommended that Governments should refuse permission for tourist groups to visit their stations '... unless

reasonable assurances are given of compliance with the provision of the Treaty, the Recommendations then effective and the conditions applicable at stations to be visited ...'(50)

The Fifth Consultative Meeting took place in Paris in 1968. The representatives submitted some 9 recommendations to their Governments. The Measures for Improving Antarctic Telecommunications provided for a meeting of experts in Buenos Aires in September 1969 to consider ways of facilitating communications traffic. The Meeting also recommended revisions of the Interim Guidelines for the Voluntary Regulation of Antarctic Pelagic Sealing to limit the permissible catch of specific species, zones and seasons of operations and exchange of information.(51)

The most recent Consultative Meeting was held in Tokøyo in 1970. During the two weeks of discussions, 15 recommendations were adopted. The most important concerned telecommunications and the collection and transmission of meteoroligical information for use in Antarctica and the World Weather Watch. Man's impact on the environment and the effect of Antarctic tourism were also considered.(52)

The texts of the more important of the foregoing recommendations are set out in Appendix I.

The Omissions of the Treaty

Obviously what has been omitted will depend on the model against which the Treaty is to be measured. Some of the more apparent 'technical' weaknesses of the instrument have already been noted and, without doubt, these could cause serious problems for the future.

The Treaty omits to regulate the economic potential of the area. The normal method of such regulation - by national sovereignty - was inappropriate.

As has already been outlined, the mineral and climate resources currently present little difficulty - but biological resources and tourism have been the subject of considerable discussion between Governments.

Regarding sealing, the main thrust of discussion has so far been towards conservation rather than equitable sharing. At the Sixth Consultative meeting the topic was removed from that limited forum and a draft international convention was referred to interested Governments.

On tourism, the main line of action has been for purposes of conserving the environment. Fortunately sufficient financial or economic interests are not involved as yet to make this a point of contention - particularly when the activity may not necessarily confined to a limited area of the continent.

The Treaty's environmental machinery has been adapted to help solve these problems but it may well prove inadequate to equitably allocate future valuable stock-flow resources. An air route is precisely such an asset. In contrast to sealing and current tourism, an air route is peculiarly referable to national territorial claims and closely affects national interests. The use of environmental controls to allocate such resources has obvious limitations.

3. The 'Legislative' Effect of the Treaty.

One of the basic principles of international law is that a State is not bound by an agreement to which it is not a party.(53) This was codified in the 1969 Vienna Convention on the Law of Treaties in Article 34:-

> 'A treaty does not create either obligations or rights for a third state without its consent...'(54)

Does this mean then that the rules of the Antarctic Treaty and the measures and decisions made pursuant to the Treaty bind only the parties thereto?

Treaties play a significant role in the evolution of customary international law. As evidence of international custom, parties may rely on provisions of treaties, particularly multi-lateral ones, and thus, in a loose sense, a treaty may become a 'source of international law.' Perhaps

the thought is aptly expressed by Pollock:

> '... There is no doubt that, when all or most of the Great Powers have deliberately agreed upon certain rules of general application, the rules approved by them have very great weight in practise even among States which have never expressly consented to them ... As among men, so among nations, the opinions and usage of the leading members of a community tend to form an authoritative example for the whole...'(55)

What criteria are to be applied to ascertain whether certain rules of a treaty have attained this 'legislative' effect?

These 'treaty-laws' are, on one view, said to be instruments in which the parties have broad common aims to lay down general objective rules for their future conduct. Multiplicity of parties is perhaps a feature.(56)

McNair is one of a school which believes that treaties may have these objective effects:-

> '... It is therefore not surprising that from time to time groups of States should have assumed the responsibility of leadership and used the instrument of a treaty to make certain territorial

> or other arrangements required, or which they consider to be required in the interest of this or that particular part of the world ... But it is undeniable that after a period of time, to which no fixed duration can be attributed, the mere lapse of time and the acquiesence of other States in the arrangement thus may have the effect of re-inforcing the essential juridical element of the treaty and converting what may at first have been a partly de facto situation into a de jure one.(57)

As an example, the eight power treaty of 1815 establishing the neutralisation of Switzerland, though binding only the eight powers, is suggested to form 'part of the public law of Europe and that the status thus created possesses universal validity.'(58)

By a Convention of 1856 between France and Great Britain on the one hand and Russia on the other it was agreed that 'the Aaland Islands shall not be fortified and that no military or naval base shall be maintained or created there'.(59) Here there is certainly some direct parallel with the Antarctic Treaty. After the First World War the foregoing Convention was submitted to an eminent Commission of Jurists by the Council of the League of Nations prompted by claims by Sweden that she was entitled

to claim the demilitarisation of the island. The Commission reported:-

> '... The provisions were laid down in European interests. They constituted a special international status, relating to military considerations, for the Aaland Islands. It follows that until those provisions are duly replaced by others, every State interested (including Sweden which was not a party) has the right to insist upon compliance with them. It also follows that any State in possession of the Islands must conform to the obligations binding upon it, arising out of the system of demilitarisation established by these provisions ...'(60)

In other decisions and opinions, even wider rationales have been expressed for creating 'legislative' rules. In 1866 Sir Robert Phillimore noted, regarding a Treaty between New Granada and the United States of America concerning transit across the Isthmus of Panama:-

> '... It is true, indeed, that in ordinary circumstances a third State would have no right to interfere in the question of the construction of a Treaty between two

> other States but this important subject of transit over the Isthmus of Panama and generally of communication between the Atlantic and Pacific Oceans, has of late years been recognised as affecting the interests of all civilised States and has been the subject of various negotiations and treaties.(61)

In view of the foregoing, it was suggested that an exclusive privilege of transit could not be granted

O'Connell suggests that in todays dynamic age, the moral persuasiveness of some rules and the political realities involved may be such 'that their translation from conventional to customary law is immediate or almost so.'(62) Indeed, the International Court of Justice has almost endorsed such an approach in the North Sea Continental Shelf Cases.(63) In that judgement the Court also gave some criteria for identifying such 'transformed' rules:-

> '... There is no doubt that this process is a perfectly possible one and does from time to time occur: it constitutes indeed one of the recognised methods by which new rules of customary international law may be formed. At the same time this result is

not lightly to be regarded as having been attained.

72. It would in the first place be necessary that the provision concerned should, at all events, potentially be of a fundamentally norm creating character as could be regarded as forming the basis of a general rule of law...'(64)

The Court clarified this somewhat ambiguous statement by noting:-

'... it might be that, even without passage of any considerable period of time, a very widespread and representative participation in the convention might suffice of itself provided it included that of States whose interests were specially affected...'(65)

and that:-

'... an indispensable requirement would be that within the period in question, short though it might be, State practice, including that of States whose interests are specially affected, should have been

> both extensive and virtually uniform
> in the sense of the provision invoked; -
> and should moreover have occurred in
> such a way as to show a general
> recognition that a rule of law or
> legal obligation is involved...'(66)

Against these criteria can the Antarctic Treaty in toto (or part thereof) be regarded as valid erga omnes?

The Preamble of the Treaty contains a recognition by all the parties that it is 'in the interests of all mankind' that Antarctica be used exclusively for 'peaceful purposes' and shall not be the scene of object of 'international discord'. The Preamble also uses such sweeping purposive phrases as 'the interests of science and the progress of all mankind' and 'continuance of international harmony in Antarctica' and the conviction of the parties to further the purposes and principles embodied in the Charter of the United Nations is also expressed.

These themes are reflected throughout the Treaty and are expressed in the world's interest - a far wider reach than the instrument considered in the Aaland Islands episode. In the Reparations Case (67) the aims of the U.N. Charter and the functions of the Organisation set up thereunder were of importance in determining whether the Charter was valid erga omnes - its contribution to international peace and harmony was stressed. Solely on

this criteria the Antarctic Treaty could be considered legislative - however perhaps it attains that character by the total of its provisions and the more recent dicta of the International Court of Justice.

The 'participation' criteria suggested in the North Sea Continental Shelf Cases appears to be met. Although the Treaty is concluded between a limited number of States - they are widely representative of the international community. Accession is open to all the Members of the United Nations and any other State with the consent of all the original parties. However the right to take part in Consultative Meetings is more limited. Modification and ratification provisions require unaminity of States. It, of course, includes all those States whose interests are 'specially affected' - that is the claimant States.

In the history of the Treaty there has not been any general non-recognition of the arrangement - either by signatories or by outsiders. Both in the spirit and the letter State experience has been 'extensive and virtually uniform'.

Thus it may well be, particularly with the passage of time and further ratifications of the Treaty, that the status of Antarctica will be governed by a derived principle of customary international law. An objection to this

conclusion may well be that the character of the Treaty is 'interim' and how can temporary, short term rules create a substantial point of customary international law? The Treaty, from a strictly legal viewpoint does not have a set period of life but merely a review clause after 30 years from the date of entry into force.(68) It could also be argued that the interim nature of the Treaty can be seen in Article IV (Rights and Claims) and in the way resource allocation was neglected and jurisdictional problems are left for later agreement.

From the viewpoint of world order, clearly the best approach is to regard the Treaty as creating a custom having the character of a rule of customary international law.(69) The possible 'legislative' effect of the Agreed Measures involves similar arguments.(70)

4. International Environmental Law.

In the preceeding pages, the process whereby the Antarctic Treaty States have moved towards the creation of an authorative environmental regime for the Treaty area was outlined. The Agreed Measures thus prompt two questions:

1. Are non-Antarctic Treaty signatories bound by the Agreed Measures?
2. Are there any general principles of international environmental law which act

in addition to (or in lieu of) the Agreed Measures?

The arguments in favour of the provisions of the Agreed Measures having the status of rules of customary international law are much the same as those in respect of the Treaty itself. Those arguments may be re-inforced in future years if some Canadian points of view are adopted by other States. It may be recalled that in introducing its recent anti-pollution legislation, the Canadian Government made a great deal of the Arctic's unique ecology and the need for it's preservation. Although it was recognised that there is little or no environmental law on an international level, it regarded itself as having an inherent right of self defence to protect the environment adjoining the Canadian coast.(71) These new values if widely adopted must inevitably lead to a strengthening of the status of the Agreed Measures.

Do any other environmental rules exist relating to the international environment?

Limited treaty rules apply in respect of maritime oil pollution. Apart from those and the Treaties concerning nuclear weapons testing and nuclear power, there are no broad international controls. This is particularly evident in the case of aviation. Limitations on aviation noise and particle pollution is current a function of individual States and is thus unregulated over the high seas and areas not subject to any State sovereignty.(72)

There is however a growing realisation of the need to create general international environmental principles and in the next five or so years we may well see the birth of a basic environmental regime. The General Assembly of the United Nations has recognised just such a requirement and has taken steps to convene a United Nations Conference on the Human Environment in 1972.(73) The European Conservation Conference sponsored by the Council of Europe in 1970 laid down some broad principles for the European environment and there is now a wider appreciation of the urgent need to set up a uniform international regime.(74)

Although this trend is laudable there could well be another tendency as a result. States may well use these new principles as a way of controlling areas and activities currently out of their reach. Thus Antarctica may drift away from being considered at international forums and become subjected to more national laws and there may be further encroachments on international airspace.

Chapter IV

NATIONAL AIRSPACE CLAIMS AND ATTITUDES OF STATES

National Airspace Claims and Attitudes of States

1. Introduction

Another component of today's airspace regime in the Antarctic is the various legislative claims of claimant states as affected by the attitudes of the main non claimant's - the Soviet Union and the United States and, in the future, Japan.

In the following pages a factual outline is given of the legislation of the various claimants but no attempt is made to judge the future legitimacy of those claims. The traditional tests for the acquisition of sovereignty in international law will probably never be fully and legally applied to the Antarctic. Any solution will be more political than legal.

Mention is made in several places of a 1938 Antarctic Overflight Agreement by an exchange of Notes in October 1938 between Australia, France, New Zealand and the United Kingdom. The circumstances which prompted the agreement are not clear nor are the documents themselves. For instance, the Notes are in respect of overflight by 'aircraft' which could be interpreted narrowly to cover only civil aircraft or widely to include also state aircraft. The text of the Agreement is set out in Appendix III infra. It is still operative.

2. Argentina

The Argentinian claim is certainly not as clear as those lodged by Australia, Britain, France, New Zealand and Norway.

Apparently the first definite official Argentine pronouncement on the boundaries of its claim was in a note of 3 June 1946 to the Government of the United Kingdom which referred to the Argentine Republic's 'indisputable right to the lands situated south of the 60th parallel between the meridians of 25° and 68° 34' of west longitude..' (1) In 1947 the National Commission of the Antarctic issued a publication in which the Argentine sector was described as 'that situated between the 25th and 74th meridians of longitude west of Greenwich, to the south of 60° south Latitude'(2)

The foregoing overlapped with a sector claim put forward by Chile and, after negotiations, a Declaration was signed between the two in July 1947 stating inter alia:

> '... their desire to arrive at agreement as soon as possible on an Argentine-Chilean treaty of demarcation of boundaries in the South American Antarctic...'(3)

A similar declaration was made in March 1948.(4) To date no demarcation has been made.

The next significant legal development was the implementation of a law titled Provincialization of the National Territories in 1955. Article I of the law declared:-(5)

> '... Declarase provincias de acuerdo con lo establecido en los articulos 13y68 (inciso 14) de la Constitucion Nacional a todos los territorios nacionales con los limiaties que a continuacion se expression.
> ... c) Sector Antartico Argentino ...'

This formal inclusion of the sector into the Argentine nation was protested by the U.S. However it appears that the measure still stands.

The new Argentine Aeronautical Code of 1967 is equally ambivalent as to its extent. It of course, does not mention Antartica but notes:(6)

> '... Este Codigo rige la aeronautica civil en el territorio de la Republica Argentina, sus aguas jurisdiccionales y el espacio aero que los cubre.'

Article 2 of the Code is an analogy provision which could easily be used to extend the scope to disputed territories: (7)

'... Si una cuestion no estuviese prevista en este Codigo, se resolvera por los principios generales del derecho aeronautico y por los usos y costumbres de la actividad aerea; y si aun la solucion fuese dudosa, por los leyes analogas o por los principios generales del derecho commun, teniendo en consideracion las circumstancias del caso ...'

Thus this legislation could be quite readily interpreted as having applied to Antarctica and, latently, may well continue to apply.

Support for the foregoing can be found in the little known dispute in 1965 between Argentina and Great Britain over purported British application of the International Telecommunications Convention 1965 to the Falkland Islands and Dependencies and British Antarctic Territory. In its Note the Argentine Government stated that certain adjacent territories claimed by Britain 'and the land lying in the Argentine Sector of the Antarctic are not the colonial possessions of any nation but form an integral part of Argentine territory ...'(8)

3. Australia

There has long been Australian interest in the Continent to it's South. However it was only in 1933 that the Australian claim was formally expressed in a British Order-in-Council of that year:-

> '... That part of His Majesty's dominions in the Antarctic seas which comprises all the islands and territories other than Adelie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and 45th Degree of East Longitude is hereby placed under the Authority of the Commonwealth of Australia...'(9)

Shortly after, the Federal Parliament passed the Australian Antarctic Territory Acceptance Act 1933 declaring the Australian claim to be accepted as a 'Territory under the authority of the Commonwealth by the name of the Australian Antarctic Territory'.(10) The Act further provided that the Governor-General might make Ordinances 'having the force of law in and in relation to the Territory...'(11)

In 1954 another Act, the Australian Antarctic Territory Act was passed to 'make other provision for the Government of the Australian Antarctic Territory'. The Act withdrew the Governor-General's former wide power to make Ordinances for the Territory and provided:(12)

> '... the laws in force from time to time in the Australian Capital Territory (including the principles and rules of common law and equity so in force) are, by virtue of this section, so far as they are applicable to the Territory and are not inconsistent with an Ordinance, in force in the Territory as if the Territory formed part of the Australian Capital Territory...'(13)

It was also provided that the Supreme Court of the Australian Capital Territory should have jurisdiction in the Territory (14) and that the Governor-General should have power to make Ordinances 'for the peace order and good government' of the Territory.(15)

The Act also contains another important section regarding the application of Commonwealth Acts to the Territory.(16)

> '... An Act or a provision of an Act (whether passed before or after the commencement of this Act) is not, except as otherwise provided by that Act or by another Act, in force in such Territory, unless expressed to extend to the Territory...'

After Australian ratification of the Antarctic Treaty, an Act was passed to give effect to the jurisdiction Articles of the Treaty - in effect it removed from Australian jurisdiction observers, exchanged scientific personnel and accompanying staffs of contracting Parties to the Treaty while they were in the Territory and created a special jurisdiction over such Australian personnel outside the Territory.(17)

It has already been noted that as long ago as 1938 Australia being a party to the 1938 Overflight Agreement had asserted its sovereignty in the airspace above the Australian Antarctic Territory.(18)

Under the Air Navigation Act 1920 (as amended) are made the Air Navigation Regulations which implement in detail the provisions of the Chicago Convention and the Annexes thereto. By a Proclamation of April 1956 that Act was extended specifically to the Australian Antarctic Territory.(19) The Air Navigation Regulations purport to have similar coverage.(20)

Legislative claims in relation to the South Polar claim have not been restricted to implementation of the Chicago Convention. The Civil Aviation (Carriers Liability) Act (21) (as amended) expressly applies to 'every Territory of the Commonwealth' as does the legislation adopting the Rome Convention (22) and the Tokoyo Convention.(23)

Thus Australia closely assimilates the regime of the airspace of it's Antarctic claim to that of it's metropolitan areas.

4. Chile

As has already been mentioned in connection with the Argentinian claim, Chile claims a portion of the 'South American' Antarctic.(24) The Chilean claim was expressed precisely in a Presidential Decree of 6 November 1940 to the effect:-

> '... The Chilean Antarctic or Chilean Antarctic Territory is formed by all lands, islands, islets, reefs, pack ice etc. known and to be discovered, and their respective territorial seas lying within the limit of the sector constituted by the meridians 53° longitude west of Greenwich and 90° west of Greenwich ...'(25)

Two points should be noted about this assertion. Firstly in contrast to all the other claims, it extends to 'pack ice' - the status of which may be closer to that of water than that of land.(26) Secondly, the claim has no south latitude base line as have all the other national claims (except for the Norwegian which covers 'the land laying within this coast and the environing sea').

In June 1955 a special law was promulgated (No. 11.846) which incorporated into the Chilean provincial administration of the Magallanes, the Chilean Antarctic Territory.(27) The move was expressed to be pending the establishment of a special regime for the area by Statute. In July 1956 such a law came into effect.(28)

The Chilean Air Navigation law provides that:

> '... The State shall exercise full and exclusive sovereignty over the air space over its territory and territorial waters.'(29)

No elaboration of 'territory' is given. Navigation of foreign aircraft is permissible subject to the provision of 'international agreements'.(30)

It is important to note that Chile has never signed the Air Transit or Air Transport Agreements and has adopted some unusual civil aviation policies. In 1961 the Chilean Civil Aeronautics Board set out rules by which it hoped Chile could get adequate service from foreign carriers and also maintain a viable national airline.(31) To assure service, overflights of national territory were only to be authorised where the airline concerned provided certain regular services to Santiago. This is an application of the Ferreira doctrine that aviation (in all its forms) is an asset of the subjacent State

and thus can be allocated by that State as any other property right.(32)

The philosophy is quite different to that followed by the other states having interests in Antarctica.

Thus, on the basis of the foregoing legislation, Chile might readily assert sovereignty in its sector's airspace.

5. France

By a Presidential Decree of March 1924 it was asserted that in the Crozet Archipelago and Adélie or Wilkes Land certain rights were reserved to French citizens.(33) Additionally every concession of any nature had to be the 'object' of a decree issued on the proposal by the Minister of Colonies.(34) In November of the same year a further Decree attached the St. Paul and Amsterdam Islands, the Keguelen and Crozet Archipelagos and Adélie Land to the responsibilities of the Governor-General of Madagascar to provide for the administrative organisation of the islands and lands.(35)

However it was only in April 1938 that the limits of Adélie Land were definitively and precisely fixed.(36) That sector claim still stands. The definition of the French territory and French airspace sovereignty was implicitly recognised by the United Kingdom, Australia and

New Zealand in the 1938 Overflight Agreement.(37) All Parties to this agreement were then signatories of the Paris Convention 1919.

The foregoing regime existed until 1955. The growing international interest in the Antarctic together with the movement of Madagascar towards independence gave rise to a law of 9 August 1955 conferring administrative and fiscal autonomy on the southern possessions including Adélie Land.(38) The new Territory was named 'Les Terres Australes et Antarctiques Françaises' (T.A.A.F.) and was placed under 'l'administrateur supérieur des terres australes' in Paris assisted by a consultative council of 7 members.(39)

By a Decree of September 1955 (40) the 'administrateur supérieur' was conferred with the powers of the Republic in the Territory and specific provisions of the Decree elaborated his responsibility for public order, justice and defense.(41) These wide powers explicitly asserting sovereignty over the Territory in the basic functions of government are delegated, in respect of Adélie Land, to the chief of mission from time to time.(42) It is interesting to note that even after the signing by France of the Antarctic Treaty these delegations to the chief of missions in Adelie Land have continued.(43) Thus France has for long asserted, through legislative and administrative acts, its sovereignty over Adélie Land.(44)

As regards application of the Civil Aviation Code (45) to the T.A.A.F. a number of problems arise in French law.

Firstly, under the principle of the 'spécialité législative' of the oversea territories, a legislative text is only applicable in an overseas territory when the text indicates expressly its application overseas and it has been promulgated and published locally.(46) However some matters, notably laws which one can presume the legislature intended to impose in toto on territories under French sovereignty, apply without local promulgation. (47) Constitutionally, the Civil Aviation Code could be extended to T.A.A.F. by a simple law or decree(48) - however, although no such action has been taken, in view of the latter part of the 'spécialité législative' principle, all or part of the Code might now apply. Thus the right of overflight would be regulated for civil aircraft by Article 131 of the Civil Aviation Code:-

> 'Les aéronefs peuvent circuler librement au-dessus des territoires français. Toutefois les aéronefs de nationalité étrangère ne peuvent circuler au-dessus du territoire français que si ce droit leur est accordé par une convention diplomatique ou s'ils reçoivent à cet effet, une autorisation qui doit être spéciale et temporaire.'

Secondly, although portions of the Chicago Convention are incorporated into the Civil Aviation Code, under the Constitution of 1958 treaties and international agreements(49) once ratified or approved have upon their publication an authority 'superior to that of laws'. In view of the fact that the Chicago Convention, the Warsaw Convention and the Transit Agreement etal all contain provisions which ipso facto extend the agreements to non metropolitan areas of Contracting States, are such treaties and agreements exempt from the 'spécialité législative' principle? Is local promulgation or presumption necessary? Precisely this point arose in a case before the Cour d'Appel de Dakar in 1957 and it was held that the Chicago Convention was fully applicable in the overseas territories by its own force.(50)

Thus, in the absence of clarifying legislation it may well be that the Chicago Convention and other aviation treaties and international agreements apply in Adélie Land.

State aircraft are, of course, not under the Chicago regime. In French law their entry into French airspace is, subject to approval by French authorities. The 1938 Overflight Agreement can be interpreted as a limited approval.

6. New Zealand

The history, basis and validity of New Zealand's claim in the Antarctic has long been extensively discussed and thus it is not proposed to cover that ground again.(51) However for the purpose of examining the aviation regime it is necessary to note some historical legislative facts.

The New Zealand claim was first formally expressed in a British Order in Council of July 1923:(52)

> '...I. From and after the publication of this Order in the Government Gazette of the Dominion of New Zealand that part of His Majesty's Dominions in the Antarctic Seas, which comprises all the islands and territories between the 160th degree of East Longitude and the 150th degree of West Longitude which are situated south of the 60th degree of South Latitude shall be named the Ross Dependency.
>
> II. From and after such publication as aforesaid the Governor-General and Commanders-in-Chief of the Dominion of New Zealand for the time being (hereinafter called the Governor) shall be the Governor of the Ross Dependency; and all the

powers and authorities which by this Order are given and granted to the Governor for the time being of the Ross Dependency are hereby vested in him...'

Subsequently in November 1923 the then Governor-General of New Zealand, the new Governor of the Dependency, exercised his powers.

As Governor of the Dependency, he decreed that 'all laws and usages' in force in the Dominion of New Zealand should from then be applicable in the Dependency except in so far as the same were inapplicable by virtue of the conditions of the Dependency.(53)

He also provided that: (54)

'... All laws hereafter enacted by the Legislature of the said Dominion shall, as far as applicable, have the same force and effect as if they had been duly enacted for such Dependency unless disallowed or modified by myself or the Governor for the time being of such Dependency.'

In 1931 the Civil Aviation Act was passed to give effect to the Paris Convention inter alia yet that Act contained no definition of 'New Zealand'. The Acts Interpretation Act 1924 stated however that such

legislative expressions were to mean 'the Dominion of New Zealand, comprising all islands and territories within the limits thereof for the time being other than the Cook Islands'.(55) Thus one could take the view that the Civil Aviation Act 1931 extended to the Dependency by virtue of the Governor's regulations or because of the ambiguous definition of New Zealand in the Interpretation Act.

Whether it was on either or both of the foregoing bases or perhaps on principles of customary international law, the New Zealand Government clearly expressed in 1934 its sovereignty in the airspace of the Dependency. In a Note, the British Ambassador in Washington D.C. advised the Secretary of State with regard to Admiral Byrd's expedition:-

> '... Although it is understood that the expedition is operating a wireless station in the Ross Dependency, no licence for such a station was applied for, and similarly although it is understood that United States aircraft are being imported into the dependency for the purpose of making flights in or over its (New Zealand) territory, the competent authorities received no application for permission for such flights. Since on

> his previous expedition Admiral Byrd established a wireless station at his base and carried aircraft to the Dependency, and was not then required to obtain a licence or formal permission, he may have thought it unnecessary to do so on this occasion. His Majesty's Government in New Zealand are indeed willing to regard their offer of facilities as covering now, as on the previous expedition, permission both for the wireless station and for the flights over the Dependency, but they would nevertheless point out that they would have preferred prior application to have been made to the competent authority by or on behalf of the expedition in accordance with the relevant legislation applicable...'
> (my emphasis)(56)

New Zealand was also a party to the 1938 agreement between France and certain Commonwealth countries regarding mutual overflight of Antarctic territories.

In 1948 the old Civil Aviation Act was repealed by the Civil Aviation Act 1948 designed primarily to give effect to the Chicago Convention. The new Act contained a definition of New Zealand:

> '... 'New Zealand' includes the Cook Islands, Western Samoa, the Tokelau Islands, and any other territory subject to the protection, trusteeship or authority of the Government of New Zealand...'(57)

Regulations made under that Act apply without any specific limitations(58) to 'all aircraft in or over New Zealand territory.'(59)

In 1964 the civil aviation laws were consolidated by the passage of the Civil Aviation Act 1964. The definition of New Zealand therein is simply

> 'New Zealand' includes the Cook Islands and Tokelau Islands.(60)

and as with it's predecessors no mention is made of application to the Ross Dependency. The Carriage by Air Act 1967 is pivoted on the definition of New Zealand in the Acts Interpretation Act 1924 as set out above.(61)

The conclusion which seems apparent from the foregoing is that legislatively, New Zealand, like the other claimants, has kept its options open. In view of its earlier interpretation of legislation as extending to

the Dependency, if necessary such a stand is likely to be repeated.

Mention should be made here of two other very important New Zealand Acts. The first is the Antarctica Act 1960 which confers jurisdiction on New Zealand courts to deal with crimes committed in the Ross Dependency and which restricts jurisdiction of those Courts in respect of observers, exchanged scientists etc. pursuant to Article VIII of the Antarctic Treaty. The second is the Antarctica Amendment Act 1970 designed to implement the Agreed Measures for the Conservation of Antarctic Fauna and Flora. These Acts are discussed infra particularly in relation to the problems of jurisdiction and rules of the air.(62)

7. Norway

The Norwegian claim was formally asserted in January 1939 in a Proclamation to the effect:-

> '... That part of the mainland coast in the Antarctic extending from the limits of the Falkland Islands and Dependencies in the west (the boundary of Coates Land) to the limits of the Australian Antarctic Dependency in the east (45° E Long) with the land lying

> within this coast and the environing sea, shall be brought under Norwegian sovereignty ...'(63)

In contrast to the other Antarctic claims, the Norwegian is not expressed in terms of a sector and the outer limit does not rest on a high seas base line. The claim ambiguously refers to 'that part of the mainland coast' and 'the land laying within this coast'. This implied rejection of the sector principle is confirmed by a report by the U.S. Minister in Norway who is said to have been assured by the Minister for Foreign Affairs:

> '... Norway has no intention of annexing territory charted by the Norvegia but that it would object to applying the sector principle to the south polar regions and that freedom of the seas would be claimed ...'(64)

The basic legal rules regulating Norwegian airspace are to be found in the Law on Aviation of December 1960. That law provides inter alia:

> '... Within the Realm aviation may take place only in accordance with this law and the regulations enacted on the basis of this law ...'(65)

The Law also uses a concept of 'territory' in a number of it's provisions (66) however neither that expression

nor the word 'Realm' are defined in Norwegian statutory law.

In Norwegian constitutional law 'territory' is a concept which comprises both 'realm' and 'biland'. This division has arisen because of the constitutional proviso that 'The Kingdom of Norway is free, indivisable and inalienable'(67) The 'realm' consists today of Norwegian territory as it was in 1814 plus some after acquired islands. (Spitsbergan and the Jan Mayen Islands)(68)

Areas of 'biland', of which Norwegian Antarctic Territory is one, are not part of the 'realm' but are still subject to Norwegian sovereignty. The status of the Norwegian Antarctic claim was determined by a statute of 27 February 1930.(as amended)

That statute determines inter alia to what extent Norwegian law applies to the Antarctic possession (Dronning Maud Land):

> '... Norwegian private law, and criminal law and the Norwegian procedural laws apply to Bouvet Island, Peter I Island and Dronning Maud Land. To what extent other laws apply is determined by the King in Council. The King in Council may make changes in these laws when the local conditions make it necessary ...'(69)

This means that parts of the Aviation Law of 1960 which fall within the Norwegian categories of private, criminal and procedural laws apply in Antarctica. The Warsaw Convention, the 1948 Geneva Convention and the Aviation Law's provisions regarding surface damage are thus clearly applicable.

Other provisions such as the right to flight, access to airports, accident investigation etc. are left to the King in Council. He does not have to apply the metropolitan criteria.(70) No action has yet been taken in this respect.

8. The United Kingdom

For many years, the British Government has maintained that it has sovereign rights over a number of islands and areas in the Antarctic.(71) Until 1962 the British claim was expressed legislatively in the entity 'Falkland Islands and Dependencies' to which of course both Chile and Argentina have, in part, long laid claims.(72) Portion of the Falkland Islands and Dependencies lies outside the Antarctic Treaty area and thus, of course, is not subject to the provisions of the Treaty.(73) In 1962 the old Falkland Islands and Dependencies were divided by the British Antarctic Territory Order-in-Council 1962 which provided:-

> '... all the islands and territories whatsoever which were immediately before such commencement comprised in the Dependencies of the Colony of the Falkland Islands as defined in the Letters Patent dated the 21st day of July, 1908 ... and the 28th day of March, 1917 ... and are situated south of the 60th parallel of south latitude between the 20th degree of west longitude and the 80th degree of west longitude shall form a separate colony which shall be known as the British Antarctic Territory.'(74)

The creation of the new entity was prompted by the political need to separate the non-controversial area of the Falkland Islands and Dependencies and to give effect to the Antarctic Treaty.(75)

The basis for the application of the Chicago Convention to British overseas possessions is found in the Civil Aviation Act 1949.(76) Section 66 of that Act provides that stipulated provisions of the Act may be extended by Order in Council to 'any colony (or) any British protectorate' with such exceptions, adoptions and modifications, if any, as may be specified in the Order. The provisions of the Act which may be extended are extremely wide.(77)

The legislation was first extended to the Falkland Islands and Dependencies by an Order in 1952 and essentially gave the Governor of the colony power to make regulations for the carrying out of the Chicago Convention.(78) The Order also created ipso facto a number of statutory offences in relation to aviation.(79) The substance of the Order indicates that the British authorities clearly believe that the Chicago Convention should be applicable in the colony.

In 1962 some significant changes were made. As mentioned above a new entity - the British Antarctic Territory - was created and the post of High Commissioner of the Territory was established with the power to make, by Regulations, laws for the peace order and good government of the Territory.(80) The High Commissioner was however given instructions as to how his powers should be exercised.(81) In particular he is prohibited from enacting any Regulation inconsistent with the treaty obligations of the United Kingdom. However, unless and until his powers are exercised, the laws in force in the Territory while it still formed part of the Falkland Islands and Dependencies were still to continue in effect.(82) An Order-in-Council later applied provisions of the Civil Aviation Act 1949 (as amended) to the new Territory. That Order also contained sections creating statutory offences.(83)

Other British legislation extending to British Antarctic Territory arises from the Carriage by Air Act 1961.(84) Suitable Orders in Council may extend, subject to such adaptions as may be notified, the Act to any colony or protectorate or protected state of the United Kingdom both in respect of international and non-international carriage.(85) A number of such Orders have been made.(86) Before 1962 the legislation extended simply to the Falkland Islands and Dependencies and, of course, after, to both British Antarctic Territory and the former colony.(87)

From time to time an Order is issued certifying for the purposes of British law the High Contracting Parties to the Warsaw and Warsaw-Hague instruments and the territories in respect of which they are parties.(88) Notably, the Orders have included British Antarctic Territory specifically and have expressed the territories of Australia, France and Norway in wide terms. Certainly wide enough to allow the interpretation that these countries' Antarctic 'possessions' are recognised by the United Kingdom as 'territories' for the purpose of the Warsaw Convention. As regards the Argentine and New Zealand, the definitions are quite bland.(89)

The Tokoyo Convention is also applied to British Antarctic Territory. The Tokoyo Convention Act 1967 provides inter alia that certain provisions of the Act may

be extended by Order in Council to ...'any other territory outside the United Kingdom for the international relations of which Her Majesty's Government in the United Kingdom are responsible...'(90) On that basis the essentials of the Tokoyo Convention have been extended to British Antarctic Territory by The Tokoyo Convention Act 1967 (Overseas Territories) Order 1968.(91) Although the Order leave certain matters to the High Commissioner of the British Antarctic Territory he is bound by his Instructions mentioned above. The majority of the Order is devoted to procedural matters which clearly assume territorial sovereignty.

An extremely important piece of British legislation is the Antarctic Treaty Act 1967.(92) Primarily, the Act is meant to give effect to the Agreed Measures for the Protection of Antarctic Flora and Fauna (discussed infra) but it also provides for the application of criminal law to observers, and exchanged scientists in accordance with the Treaty. In contrast to High Commissioner's Instructions, the Act is limited in scope and carefully avoids any territorial basis for jurisdiction. Sections of this Act are discussed below in relation to jurisdiction and the rules of the air.

The conclusion to be drawn from the foregoing is that the United Kingdom is the most explicit claimant in respect of portion of the Antarctic airspace.

9. National Attitudes - The United States

Since the 1930's the United States has reserved '... all rights which the United States or its citizens may have with respect to this matter.'(93) It has objected to the claims of the sector states.(94) Before the I.G.Y. the U.S. Government entered into co-operative arrangements with Argentina, Australia, New Zealand and Chile but such arrangements were to have no effect on rights and claims asserted in Antarctica - 'Each Government maintains its traditional position in such matters...'(95)

The United States actively encouraged the Ellsworth and Byrd expeditions to assert claims which might assist in supporting a claim of sovereignty by the United States Government.(96)

The U.S. Note proposing an Antarctic Conference recognised that the diverse legal, political and administrative concepts rendered friendly co-operation difficult in the absence of an understanding among the countries involved. It also noted that some countries have a direct interest in the Continent because of their geographic proximity and 'sea and air transportation routes'.(97) The note re-iterated the long standing U.S. position that

> '... (the U.S. Government) reserves all of the rights of the United States with respect to the Antarctic region including the right to assert a territorial claim or claims'.(98)

Since conclusion of the Antarctic Treaty U.S. activity in the area has increased progressively. In October 1970 the President announced that he had completed a review of U.S. policy for Antarctica. Certain changes were to be made in U.S. funding and administrative arrangements. The President also spelt out the several objectives of U.S. policy:

> '... - To maintain the Antarctic Treaty and ensure that the Continent will continue to be used only for peaceful purposes and shall not become an area or object of international discord.
> - To foster co-operative scientific research for the solution of world wide regional problems.
> - To protect the Antarctic environment and develop appropriate measures to ensure the equitable and wise use of living and non-living resources...'(98)

The latter portion represents a new twist and may demonstrate that the U.S. has begun to consider the problem of resource allocation under the Treaty.

Thus, while supporting the Treaty, the U.S. has kept its options open. The U.S. position is little different from that of the Soviet Union.

10. National Attitudes - U.S.S.R.

The Soviet Union first showed persistent concern for the Antarctic in 1946 after the conclusion of the International Whaling Convention.(99) In justifying their interest in the area the Soviets have from time to time pointed to the historic rights derived from the voyages of Bellingshausen and Lazarev, to the importance to the world generally of the area's biological resources and to the meteorological relevance of the Continent.(100) Indeed it was basically for the foregoing reasons, that the Soviet Government pressed for its participation in the 1959 Washington Conference:

> '... The Soviet Government cannot recognize as lawful any decision on the Antarctic regime taken without its participation. It holds that insofar as the destiny of the Antarctic is of interest to so many countries, it would be expedient at the present time (1950) to discuss the question of the Antarctic regime on an international plane, with a view to reaching such an agreement as would accord with the legitimate interests of all States concerned.'(101)

Not surprisingly, the USSR has rejected 'unilateral establishment of polar sectors' and has never agreed to

the territorial claims made by the seven 'sector' states.(102) In a Note to Norway in 1939 the USSR explicitly reserved its position with regard to the activities of Billingshausen and Lazarev.(103)

Consistent with this position the Soviets have rejected the application of the sector theory (which they apply in the Arctic) on a number of grounds. Briefly their traditional argument is that the Arctic regions have high defence and economic importance because of their proximity to the neighbouring population centres of the Arctic States. Hence a sector apportionment of the Arctic should be made.(104)

The sector system for Antarctica is also rejected on the ground that 'this continent strategically controls the common international route around Cape Horn and air communications between South Africa and South America...' Of course this point is equally valid for the trans Arctic air routes.(105)

In accepting the invitation of the United States to participate in the Washington Antarctic Conference, the USSR re-iterated its former position and noted:-

> '... The Soviet Union reserves to itself all rights based on discoveries and explorations of Russian navigators and scientists including the right to present corresponding territorial claims in the Antarctic...'(106)

In summary the Soviets have kept their options open and they regard the Treaty as an expression of the principles but forward by the Soviet Union.(107) Discussions of Soviet writers in connection with the Outer Space Treaty suggest that the U.S.S.R. is not unhappy with the status quo in Antarctica.

11. National Attitudes - Japan

It is not widely realised that Japan, has long had an interest in the Antarctic. A Japanese expedition visited the area 151°-156°W in 1911 and 1912 and named certain features of the terrain. However no territorial declaration was made based on this expedition.(108)

In 1938 the Japanese Embassy in the United States is reported to have verbally advised the State Department that the Japanese Government reserved the right to a voice in territorial matters concerning the Antarctic region and noting that it expected to be a party to negotiations when the problem of Antarctica was discussed internationally.(109)

However it was provided in Article 1(e) of the Peace Treaty:-

> '... Japan renounces all claim to any right or title or to any interest in connection with any part of the Antarctic area, whether deriving from the activities of Japanese nationals or otherwise...'(110)

This has been interpreted as a renunciation of rights which may have accrued before the Peace Treaty but does not extend to the rights which may have been later derived.

Currently Japan is very active in Antarctica (111) - indeed it has sent expeditions to the area since the 1956-57 season. The Showa Base was established in 1957 - before the conclusion of the Antarctic Treaty.

Active Japanese political interest in the Antarctic has been practically non-existent and is not likely to be forthcoming unless Japanese whaling interests are threatened. The very remoteness of the Japanese mainland from the Continent has resulted in little Japanese concern in the wider strategic implications of the area.

Chapter V

PAST, CURRENT AND FUTURE USES OF THE ANTARCTIC AIRSPACE

Past, Current and Future Uses of the Antarctic Airspace

The uses, as much as circumstances outside the Continent, must influence the legal regime applicable in the Antarctic airspace. There is considerable similiarity between past and current uses but the future may well be radically different.

1. The Past

The Antarctic explorers, having before them the lessons of the Arctic, were quick to realise the opportunity provided by the 'free' Antarctic airspace. Captain Scott in January 1902 was the first man to be airborne in the Antarctic. He used a small Army captive balloon on one occasion for reconnaisance purposes.(1)

The Australian explorer Sir Herbert Wilkins is credited with the first aeroplane flight in Antarctica in November 1928. Wilkins flew some 1300 miles in the Antarctic Peninsula area on exploratory surveys of the outer fringes of the Continent.(2)

In 1929 Richard Byrd (later Admiral Byrd) set out with three aeroplanes and two base ships to maintain an all year base on the Continent. On 28 November 1929 Byrd flew over the South Pole.(3)

The results to be gained from the use of aircraft were readily appreciated and some seven pre war expeditions used aircraft of various types. However, the United States pioneered the extensive day to day use of Antarctic air transportation with Operation 'Highjump' beginning in 1946(4)

In 1957 Pan American Airlines demonstrated its ability to fly a commercial aircraft from Christchurch, N.Z. to the Antarctic. The aircraft, replete with stewardesses landed on an ice strip adjacent to the U.S. Naval Air Facility at McMurdo Sound.(5)

Although the Antarctic airspace is mostly a preserve for state aircraft and activities, from time to time private ventures have come into the area. In November 1966, a privately leased Flying Tigers Boeing 707 made a flight over the South Pole as part of a round the world flight.(6) In 1970 a privately owned Piper Aztec made the first solo flight from N.Z. to the South Pole but crashed on takeoff from the South Pole. A Norwegian group in a private aircraft successfully made the same trip a few days later.(7)

2. Current

Today aviation is still the greatest user of the Antarctic airspace. The United States certainly makes major use of aircraft as it has the largest and most diverse programme. During the early part of the austral

summer season, before ships can penetrate the Antarctic ice pack, urgently needed cargo and personnel are flown to Antarctica. Personnel who have wintered over are also flown out. The magnitude of this U.S. effort can be gauged from the projected usage figures for the 1970-71 season:

Hercules:	590 flight hours
Super-Constallations:	550 flight hours
Starlifters:	140 flight hours
RNZAF Hercules:	48 flight hours (8)

The scope of the operation can also be appreciated by the fact that in the same season it was expected that some 1,700 passengers and 582 tons of cargo would have to be flown to McMurdo Station from New Zealand. Intra continental air operations are also on an extensive scale. For the 1970-71 season it was estimated that the 17 available aircraft would be used for a total of a little over 1800 flight hours.(9) Besides servicing inland stations and parties in the field U.S. aircraft annually are engaged on an extensive mapping programme, and on various biological, geological and geophysical surveys. These activities extend to all sectors of Antarctica.

The meteorological importance of the Continent has also prompted the use by some expeditions of rockets. Balloons are sometimes used.(10)

Briefly then, the Antarctic airspace is mostly used by state aircraft for logistic and scientific purposes in connection with national scientific programmes. As yet there is no commercial use of the Continent's airspace and, as already noted, the strategic possibilities have been virtually eliminated by the demilitarisation provisions of the Antarctic Treaty.

3. The Future

The growing scientific exploration of the Antarctic will doubtless produce an increase in the use of aircraft. However the most significant developments for the future lie in the commercial exploitation of the Antarctic airspace. This resource is mentioned in nearly every economic analysis of the utility of the area but today, developments in aviation technology and avionics make it far less of a distant possibility.(11) The complex of economic factors which must prudently be considered in assessing the practicability of a particular route are more adequately discussed elsewhere but those factors are today not the sole determinents.(12) International civil aviation is becoming progressively more nationally oriented and national prestige and political considerations are of great relevance in any route decisions.(13) Indeed many airline operations are based initially more on the latter notion rather than cost/profit economics.

Attached at Appendix II is a map of the Great Southern Circle routes and the following points should be noted in respect of each segment.(14)

Capetown - Buenos Aires. Of the three Great Circle routes, this is the farthest from Antarctica - no closer than about 2,000 miles. It would pass over Gough Island, near Tristan du Cunha and is well within the range of current generation aircraft.(15)

Capetown - Sydney. Qantas already flies this route via Perth, Cocos Islands and Maurituis but, if the Great Circle route was available, route mileage could be reduced by some 2,000 miles. With current technology, an Antarctic fuel stop would be needed for the sake of saving some 4 hours flying time. The difficulties and consequent expenses in building and manning such facilities would today appear to be uneconomic having regard to current traffic growth rates on the route. This route might well pass, for some distance, south of 60° south latitude - thus fall within the Antarctic Treaty area. It would certainly pass over the Antarctic pack ice.(16)

Buenos Aires - Sydney. This route passes closest to the continental land mass and, of course, is within the Antarctic Treaty area and over the Antarctic pack ice. It probably would also transit the most controversial segment of the Antarctic airspace - the 'South American' sector. Use of this route would roughly halve the present route and by landing at Tierra del Fuego and Christchurch the flight could be done in three legs of about 1,500 miles, 4,470 miles and 1,400 miles. Hence this Great Circle Route could now be flown by today's aircraft.(17)

The development of commercial international supersonic transport may well create problems in the Antarctic. The Concorde would, on current performance figures, be suitable for the Buenos Aires - Sydney route as a form of premium high speed transportation.(18) The environmental aspects of such flights are discussed infra.(19)

The possibilities of the Great Circle Routes have been realised for many years by the United States. In 1957 the air transport agreement between the U.S. and Australia (20) was amended, inter alia, to give the U.S. designated airline certain transpacific rights and rights beyond Sydney to:-

'(c) Melbourne and New Zealand and beyond to Antarctica and beyond'(21)

To date the U.S. has negotiated no connecting rights in Southern Africa.

However a U.S.-Brazil bilateral gives the designated U.S. carrier rights to operate in both directions on a route from the United States via intermediate points in the Carribean, Panama and countries on the north and east coasts of South America to six Brazilian cities and 'beyond Brazil to Uruguay and Argentina and beyond to Antarctica and beyond'. These rights have not been utilised.(22)

The U.S. Antarctic Policy Group considered the implications and possibilities of future use of the Antarctic and its airspace for commercial aircraft flying austral routes in 1965 and their conclusions are perhaps equally valid today:-

> '... The enormous expense of constructing and maintaining such facilities (refuelling points) rules them out as a likelihood in the next 5 years. By the time, the population density of the Southern Hemisphere could support transantarctic flights, aircraft technology will undoubtedly have made non-stop intercontinental flights practicable. Regular scheduled transpolar flights in the southern Hemisphere will require alternate airfields and adequate search and rescue facilities. In any case, Antarctica will provide communication paths, weather data, and navigational guidance for overflights.'(23)

Finally, it should be noted that the demilitarisation of the Antarctic has meant that large scale military airfields and air navigation facilities have not been created. The existence of such facilities in the Arctic gave a great impetus to Arctic civil flight - comparatively few facilities now exist in the Antarctic and that impetus is absent.

Antarctic tourism may make feasible commercial flights to, and in the vicinity of, the Continent. At an international level measures for the control of tourism have already been agreed upon for environmental purposes.(24) However, the United States, as operator of the only major airfield in Antarctica, has been forced to look to wider considerations in deciding whether to facilitate private commercial aviation. Generally U.S. policy has been to refuse support for proposals because of the absence of a permanent runway for wheeled aircraft, the search and rescue responsibilities of the United States implicit in each request and the disruption to scheduled logistic activities.(25) Charges are made for support when rendered.(26)

Thus the scope for expansion in this regard looks more limited than the possibilities of transpolar flight on the Great Circle Routes.(27)

Chapter VI

THE REGIME OF THE ANTARCTIC AIRSPACE

The Regime of the Antarctic Airspace.

In the space available it is only possible to summarise the basic and more important aspects of the current Antarctic airspace regime. Apart from the pre-eminent question of airspace sovereignty, the subsequent topics are arranged in no particular order of importance.

1. Airspace Sovereignty

The Paris, Havana and Chicago Conventions all recognise that every State, not merely signatories to those Conventions, has complete and exclusive sovereignty over the airspace above its territory. However each Convention has adopted a different definition of 'territory'.

The Paris Convention, to which all the Antarctic claimants were parties, provided:-(1)

> '... For the purposes of the present Convention, the territory of a State shall be understood as including the national territory, both that of the mother country and the colonies and the territorial waters adjacent thereto ...'

The Havana Convention spoke only of 'territory and territorial waters'.(2)

The Chicago Convention contains the most sophisticated 'extent' clause in Article 1:

> '... For the purposes of this Convention the territory of a State shall be deemed to be all the land areas and territorial waters adjacent thereto, under the sovereignty, suzerainty, protection or mandate of such State ...'(3)

All the Antarctic claimant States and all others conducting scientific activities on the Continent are now Parties to the Chicago Convention.

Australia and the United Kingdom are the only two States which today unambiguously assert sovereignty in the airspace of their respective claims. As has already been noted also,(4) Argentina, Chile, France and New Zealand can readily interpret their aviation legislation as applying in the Antarctic airspace.

Are such claims legitimate in international law and consistent with the Antarctic Treaty?

To acquire sovereignty in the airspace it is not necessary to possess territorial sovereignty in the usual sense. The Chicago Convention recognises that lesser forms of surface control (suzerainty, protection or mandate) can equally be a basis for airspace sovereignty. The meaning of legal concepts of suzerainty, protection and mandate is however, subject to as many divisions of legal opinion as is the content of 'sovereignty'.(5)

The Antarctic Treaty speaks solely of territorial sovereignty and fails to explicitly recognise the possibility of a division between surface and airspace sovereignty concepts.

Thus, legitimately, the sector States can assert sovereignty in the airspace of their sector claims without projudice of course to the freedom of aerial inspection and blanket freedom of scientific investigation given by the Antarctic Treaty. Today's claims by the sector States do not differentiate between these bases of airspace sovereignty. Equally the opportunity of asserting certain such airspace rights is also before the United States, the Soviet Union and indeed any other State active in Antarctica.

Argentina and Chile have explicitly recognised the legality of their respective claims (although delimitation has not been agreed) and hence, in accordance with general principles of international law, their mutual airspace sovereignty.(6)

France has recognised the Australian territorial claim and Norway has recognised the United Kingdom and Australian claims. The New Zealand territorial claim is recognised by Australia and the United Kingdom.(7) All these recognitions of territorial sovereignty bring with them consequent recognition of sovereignty in the

Antarctic airspace in accordance with general principles of international law.

Mutual and specific recognition of airspace sovereignty also exists between the United Kingdom, France, New Zealand and Australia by virtue of the 1938 Overflight Agreement.(8)

Assertion of these previously recognised rights in the airspace may not be contrary to the Antarctic Treaty. It has already been noted that the Treaty is confined to regulating 'territorial sovereignty' claims and this would be the basis of the foregoing rights in the airspace. However only 'new' claims or 'enlargements' of existing claims are prohibited. Whether re-iteration of these old claims is thus banned, is an open question.(9)

To briefly summarise the situation, today there is no widely recognised sovereign in any part of the Antarctic airspace. Limited claims and limited recognition thereof have produced a legally fractionalised and weak regime. This situation thus affects many other aspects of aviation's legal structure on the Continent.(10)

Before leaving this topic, mention should be made of one theory which, while largely disregarding the legal history involved, offers a unique solution. Wassenbergh in arguing for a functional theory of airspace sovereignty notes that airspace outside the present frontiers of States

is to be regarded as res communis and hence as free and open to all. He thus suggests that the Antarctic airspace, being 'outside' the sovereignty of any State, will thus acquire this changed content. Although this reasoning is fallacious, the objective of creating wide and objective freedom in the Antarctic airspace has much to recommend it.(11)

2. Transit

As has been outlined already, transpolar transit is the most likely future use of the Antarctic airspace. The legal situation in this regard is uncertain in view of the various claims of airspace sovereignty and their partial recognition.

Certain rights of aerial transit throughout Antarctica are guaranteed by the Antarctic Treaty. Article VII confers certain rights of aerial observation and Article II by providing for freedom of scientific investigation, implicitly gives a right of transit to aircraft engaged in scientific work relating to the area.

Besides giving these rights, the Treaty also imposes limitations. Non peaceful aircraft are banned from the Antarctic airspace. Even if the Treaty in this respect is not valid erga omnes, the Treaty States would probably take steps against clearly 'non peaceful' transit activities by acting under Article X of the Treaty.

As regards the transit rights of other than State aircraft - scheduled and non-scheduled international services - the difference between the theoretical legal regime and practical fact becomes obvious. Most of the claimant States cannot directly control 'their' airspace and, of course insufficient motive now exists to do so. Indirect controls (if necessary) could readily be applied and not disturb the delicate political balance of the Antarctic Treaty. Australia, Argentina, Chile and New Zealand - all strategically placed - can, for instance, respectively exert control by varying their metropolitan entry and exit regulations in respect of services destined for or coming from certain of the Great Circle Routes.(12)

If the various categories of overflying aircraft are to be regulated by subjacent sector States, the effectiveness and recognition of any regulations will depend on the flag State of the aircraft concerned. For example a U.S. or Soviet aircraft would certainly not recognise the validity of any Australian directions in respect of the airspace above Australian Antarctic Territory yet those same directions might be obeyed by British, French, New Zealand, and Norwegian aircraft as these States have recognised the Australian claim.

From an air safety point of view alone, the absence of an authoritative and uniform regime in this respect may have serious implications particularly as traffic expands.

3. Supersonic Flight

The delicate ecological balance in the Antarctic area suggests that there will be a need for special regulations regarding supersonic flight in the Antarctic airspace.(13) This could well be achieved by suitable specific amendments of the Agreed Measures or indeed the creation of additional special regulations by the Treaty States. The absence of an objective and widely recognised airspace sovereign obviously complicates matters. In addition, current provisions of international law and national legislation applicable in the Antarctic are hardly a guaranteed means of protecting the unique conditions.

At the international level, there are as yet no rules regulating aircraft noise levels over the high seas or places of undetermined sovereignty.(14) This problem was discussed at the sixteenth session of the ICAO Assembly (Buenos Aires 1968) and a resolution was passed.(15) The Council later agreed on a four stage resolution, the first three stages calling for study of the measurement, assess-

ment, and limits of supersonic noise and the fourth for a world wide meeting for the purpose of recommending appropriate amendments of ICAO Annexes and associated documents.(16) The ICAO Sonic Boom Panel has been working on the first three matters above and two of their four measuring criteria are effects on 'the animal kingdom' and 'unstable terrain'. The minimum acceptable sonic boom values obtained according to even these standards may well be inadequate for the special circumstances of Antarctica.(17) One can hardly expect that Antarctica's problems will figure prominently in the Panel's considerations.

As the law stands today, surface damage liability may be regulated by the Rome Convention of 1952 which has been ratified only by one Treaty State (Australia)(18) Under Article 1 of that Convention there is no right to compensation if the damage results from the mere fact of passage of the aircraft through the airspace 'in conformity with existing air traffic regulations'.(19) The Convention is not postulated as a means of regulating general environmental damage because it assumes in its liability provisions that all damage can be quantified in money.(20)

At the national level, the legislation of a number of Antarctic claimant states contain provisions regarding noise and damage caused by aircraft. The

weaknesses of these rules as modes of preserving the Antarctic environment are:

- The application of national aviation legislation is not widely recognised.
- Most such legislation is referable only to damage to private property.
- The concept of damage generally adopted is quantifiable money damages.(21)

4. Prohibited Areas

In the Paris and Havana Conventions the right of States to impose controls on non-State aircraft in certain parts of their airspace for 'non safety' reasons was recognised.(22) The Chicago Convention gives such a right on the basis of 'military necessity' or 'public safety' subject to several vague limitations.(23)

However the Antarctic Treaty States have created some prohibited areas not on any of the foregoing bases but for purely environmental reasons.

The now 'effective' Agreed Measures for the Conservation of Antarctic Flora and Fauna (24) provide that each Participating Government shall take inter alia 'appropriate measures to minimize harmful interference within the Treaty area'. An example of 'harmful interference' is:-

'b) flying helicopters or other aircraft in a manner which would unnecessarily disturb bird and seal concentrations or landing close to such concentrations (e.g. within 200 meters)'(25)

In listed areas of outstanding scientific interest (designated 'Specially Protected Areas') a further prohibition applies:-(26)

'b) the driving of any vehicle'.

The term 'vehicle' is not defined. Thus, in those areas, whether or not a 'vehicle' is an 'aircraft', aviation activity is, at the least, prohibited from causing 'harmful interference'.

These rules have been adopted and slightly enlarged by legislation put into effect by New Zealand and the United Kingdom.(27)

The United Kingdom Antarctic Treaty Act 1967(28) applies these prohibitions to the various categories of British subjects in all parts of Antarctica. The Act defines a 'vehicle' as including:-

'... An aircraft while it is on the ground and any reference to driving a vehicle shall be construed as a reference to being in charge of it while it is in motion, whether it is mechanically propelled or not ...'(29)

The implication that the Treaty Parties mean to regulate aircraft especially within Specially Protected Areas is partly confirmed by the New Zealand Antarctica (Amendment) Act 1970.(30) Although the Act authorises regulations to implement the Agreed Measures it states that such regulations may be made to apply:-

> 'b) To any person who is for the time being the owner or master or a member of the crew of a New Zealand ship or the pilot in command or a member of the crew of a New Zealand aircraft ...'(31)

In respect of the Ross Dependency, the Act authorises the regulations to extend 'to any person who is not a national of any Contracting Party to the Treaty'.(32)

Thus in the Antarctica a new rationale for the control of flight appears to be emerging quite distinct from the military, public safety and navigational safety criteria generally recognised in public international law.

The effect of these Measures will ultimately be probably wider than their legal scope. The Measures contain an Article analogous to Article X of the Treaty.(33)

5. The Rules of the Air.

In most aspects of public international air law there is some difference between legalities and realities. This is particularly true as regards rules of the air in Antarctica.

The first point which should be noted is that Article 12 of the Chicago Convention, in providing that over the high seas the rules in force shall be those established under the Convention, assumes (falsely) that there is a clear division between the high seas and territorial areas.(34)

Secondly, McMurdo Air Traffic Control (maintained by the U.S. Navy) functions as the air traffic control facility for all flights approaching or leaving the Continent as far north as 60° south latitude. Thus, aircraft of non U.S. registration which wish to use the U.S. facilities at McMurdo will naturally conform to McMurdo ATC directions. Such directions in a sense become, then, de facto law.(35)

Third, the rules of the air created pursuant to the Chicago Convention only extend to civil aircraft. However in certain respects they may have a wider effect under customary international law. The majority of air traffic in the Treaty area is non civil.

Bearing the foregoing in mind, aircraft of Treaty States which do not recognise any national claims in Antarctica will fly subject to their national rules of the

air (as derived from Annex 2) and to the rules of the Treaty. The rules of the Treaty will be equally applicable to aircraft of Treaty States recognising claims in the Treaty area.

As the Antarctic conservation movement progresses, it is reasonable to assume that the various environmental rules will more and more regulate uses of the airspace and hence flight. Today the principles of the Agreed Measures are the primary example of the foregoing. Two such specific rules, which, in the truest sense, operate as rules of the air have already been noted.

An additional difficulty is the interpretation of national rules of the air in the Antarctic context. Take the Australian rules of the air for example. In the area of the Australian Antarctic Territory an Australian civil aircraft is undoubtedly subject to Part XI of the Air Navigation Regulations.(36) Many of the rules therein are universal but others require observance with directions of 'Air Traffic Control'(37) (a service created by the Australian Minister for Civil Aviation).(38) No such Australian facility exists in the area and thus many rules are legally irrelevant.(39) Obviously the more realistic alternative is to extend the rules simply as set out in Annex 2 to the area but that could be easily interpreted as a partial abrogation of the national claim.

In summary, there are no uniform and widely recognised rules of the air in Antarctica. Any future rules should perhaps recognise both the basic international norms and the peculiar conditions of the area (e.g. the need to protect the environment, the underdeveloped aviation facilities and the climatic conditions). Without an objectively recognised sovereign in the airspace the difficulties in producing such a code are perhaps insurmountable.

6. Jurisdiction.

A necessary concomitant of rules is jurisdiction to apply and enforce. In the Antarctic, jurisdiction has been one of the most difficult problems for many years; it was covered at the Washington Conference in 1958 but no final solution was agreed upon.(40) As has already been noted, this was left to be discussed by Consultative Meetings, and in the interim, States agreed to immediately consult together with a view to reaching a mutually acceptable solution should problems arise. The matter has not been so discussed.(41)

A claim of jurisdiction based on territorial sovereignty can be construed as a claim of that sovereignty - prohibited under the Treaty if it is a 'new' claim or an 'enlargement' of an existing claim. Thus although the various national air laws surveyed purport

to rest jurisdiction in national courts, exercise of such power is perhaps limited by the Antarctic Treaty.

On the other hand the arrangement of Article VIII in creating a special immunity for designated observers, exchanged scientific personnel and their staffs was 'without prejudice to the respective positions of the Contracting Parties relating to jurisdiction over all other persons in Antarctica'.

In this situation, whether jurisdiction is to be objected to by the State of the person concerned will depend on in practice:-

- whether that State has recognised the national claim concerned;
- the nature of the law being enforced - whether it reflects 'criminal' as opposed to 'political' values.

Among the Treaty States there has in fact been some agreement on jurisdiction. Article X of the Treaty can be interpreted as giving the States a certain universal jurisdiction and similarly the mirror provision in the Agreed Measures may have a like effect. The United Kingdom legislation adopting these Measures for example applies to certain categories of British subjects while in <u>any</u> part of Antarctica. The New Zealand legislation has a wider basis purporting to also authorise inter alia regulations extending to any person who is not a national

of any Contracting Party to the Treaty in the Ross Dependency.

The jurisdiction situation, in brief, is that there is no one single jurisdiction on the continent - and under present arrangements it seems there is no pressure to create one. The enormous expansion in activity in the continent and the inevitable need to create a regime for the future should prompt re-consideration of this matter.

7. Air Navigation Facilities

The vastness of the Antarctic Continent, its rugged geography and turbulent weather require the provision of adequate air navigation services if international civil aviation is to ever use Antarctic air routes on any regular basis.

The initial problem of radio communications in the Antarctic generally has received considerable attention from the Treaty States. At the First Consultative Meeting at Canberra in 1961, the representatives recommended that a conference of specialists in Antarctic radio communications be held.(42) Such a meeting took place in 1964. Radio aids to air navigation were discussed and the conference agreed to recommend that certain types of navigational aids be provided at certain stations with landing facilities. ICAO was not represented at the meeting(43), although other international organisations sent observers.

Circumstances, however, may soon force some ICAO interest in Antarctic aviation - perhaps first in the field of joint financing of air navigation services.

Chapter XV of the Chicago Convention gives the ICAO Council certain powers with regard to the financing and improvement of air navigation facilities. Those powers are of course the bases of the well known Denmark/ Iceland Agreements and the North Atlantic Ocean Stations Agreements(44), but fundamental difficulties may face ICAO action in the Antarctic.

> Article 69 of the Convention provides in part: 'If the Council is of the opinion that the airports or other navigation facilities, including radio and meteorological services, of a Contracting State are not reasonably adequate for the safe regular, efficient and economical operations of international air services, present or contemplated, the Council shall consult with the State directly concerned, and other States affected with a view to finding means by which the situation may be remedied, and may make recommendations for that purpose ...'

The basis of the powers given above is, of course, the Contracting State and this is the basis of the other relevant Articles in the Chapter. What, then, is the ICAO Council's position in a situation where air navigation facilities must be provided in Antarctica assuming no sector State or States have 'territory' in Antarctica within the special definition in Article 2 of the Convention?(45)

This problem has received some attention within ICAO although in relation to facilities in non-Contracting States and on the high seas. The question of the application of Article 69 to facilities outside the jurisdiction of a Contracting State was first considered by the Interim Council which interpreted Article 69 as 'extending the responsibility of the Organization to areas of undetermined sovereignty and on the high seas'; this view was shared by the PICAO Assembly. The Interim Council reported to the First Session of the Assembly that 'Article 44 of the Convention imposes on the Organisation a universal responsibility which should not be interpreted geographically. Also, non-Contracting States should be included in the scheme when safety of international air services, one of the ultimate objectives of the Organisation, is in question. Article 69 and the following provisions of Chapter XV of the Convention may be interpreted as extend-

ing the responsibilities of the Council to territories of non-Contracting States ...'

However, upon the request of Commission n°6 (Financial and Technical Aid through ICAO) of the Assembly, First Session, Commission n°4 (Legal Questions) expressed the opinion that 'in respect to furnishing support for international air services, ICAO is empowered by Chapter XV of the Convention to develop in all places existing facilities and aids to air navigation of a Contracting State.'

On the advice by the Legal Commission, it was reported to the Assembly 'that the Convention is lacking certain explicit provisions for the application of joint support schemes in such areas of undetermined sovereignty and in the territory of non-Contracting States'.

The Commission therefore agreed to recommend to the First Assembly, Second Session, 'that it is undesirable that the Second Assembly approve any amendment to Chapter XV of the Convention', expecting that the Assembly at its Fourth Session would deal with various amendments to the Convention, including amendments to Chapter XV. No amendment to Chapter XV has as yet been brought before a session of the Assembly.

Thereafter the Assembly, on the recommendation of Commission N°6, decided that 'ICAO will, when required,

initiate collective action toward the provision of necessary facilities and services on the high seas, in areas of undetermined sovereignty and, exceptionally, in the territory of a non-Contracting State'.

Of course, ICAO has since concluded the various North Atlantic Ocean Station Agreements but it has never taken part in joint financing of facilities in areas of undetermined sovereignty or in the territory of a non-Contracting State.

The pattern of NAOS Agreements appears to be apt for Antarctica but negotiation of any such arrangement will be complicated by the unique, if not delicate, status of the Continent.

States Party to the Antarctic Treaty would be bound, because of their obligations under that Treaty (46) to press for clauses analogous to, but wider than Article IV of the Antarctic Treaty. Treaty States would also be forced to demand that any such facilities be used by all nations in accordance with Article I of the Antarctic Treaty and certainly in accordance with 'effective recommendations' of the Consultative Meetings.

In the alternative, of course, it is open to the States active in Antarctica to create, subject to their Antarctic Treaty obligations, their own air navigation regime. However their scope of action is, as in the case

above, limited to arrangements not inconsistent with the provisions of the Chicago Convention.(47)

8. ICAO

The few writers who have considered the topic of the Antarctic airspace have considered that many of the potential problems, essentially arising from the non recognition of sovereignty, could be readily solved by the 'internationalization' of the airspace. It is also suggested that ICAO be given responsibilities in this regard.(48)

In the foregoing section some of the difficulties which may impose restrictions on ICAO's power to provide air navigation facilities were noted and it seems that analogous problems may arise in relation to giving ICAO a wider operational role in the area. Article 44 of the Chicago Convention setting out the objectives of the Organisation does not preclude the body from taking on operational functions. However, even the broadest interpretation of the functions of the Assembly, Council and Air Navigation Commission suggest that the framers of the Chicago Convention envisaged more an executive rather than operational body.

The practice of ICAO has since 1947 tended to the former rather than the latter. Because of the profound political interests which would be stirred by any suggestion of a solution in the Antarctic airspace it is reasonable to assume on previous experience that the Assembly would be reluctant to become involved unless there was a prior international agreement removing that aspect of Antarctica from bitter contention.

Thus, it is suggested that unless and until the status of the Antarctic airspace is otherwise settled authoratively, there is little chance of ICAO itself moving to legislate in this area. A solution must first be found in other forums.

Chapter VII

SOME THOUGHTS FOR THE FUTURE.

Some Thoughts for the Future

The Antarctic Treaty has, in effect, only some 20 years to run and attention must soon be directed to the period after 1990. How can an effective regime be created for the Antarctic airspace? Should the present patterns be merely adjusted to solve the problems already outlined or should a more radical approach be taken which might contribute to a peaceful, final and equitable solution to the Antarctic problem?

Perhaps we should first set down some assumptions for the future based, of course, on the factual background already sketched.

First, the area will not achieve significant military strategic value. The difficulties of the natural environment together with the regime of conventional and nuclear demilitarisation and, of course, better military options suggest this conclusion. In view also of the political risks, it is unlikely that any State will try to militarise the area.

Second, granting the curiosity, ingenuity and burgeoning numbers of mankind, with the area's lack of suitable mineral, biological, climate and energy resources, it is doubtful whether the Continent will ever develop industrial or urban concentrations.

Conversely there is little doubt that the adjacent land masses (Australasia, Southern Africa and Southern America) will generate demands for transportation over the southern Great Circle Routes. The inevitable growth of scientific activity within the Continent will probably see a parallel increase in aviation in the area.

With the improvement of aviation and general facilities, it seems reasonable to expect that more and more aircraft borne tourists will be attracted to Antarctica. This development will pose some crucial questions of resource allocation generally but also invigorate interest in the legal status of the airspace.

Perhaps we should ask whether, in these unique circumstances present patterns of approach to the allocation and regulation of the airspace should really be applicable in Antarctica?

The cumulative reasons for having national airspace regimes would appear to be generally:-

- the maintenance of State security;
- the preservation of safety of citizens; and
- the pursuit of the economic interests of the State.

Given the continuance of the demilitarisation arrangements affecting the area, foreseeably the primary reason for national airspace regimes is thus irrelevant in this context.

Similarly, the gradual creation of safety rules for the airspace on an increasingly international and uniform basis, reduces the need for any State to have an initiative on a safety basis. This is even more true in Antarctica where the interests of very few are at risk in conditions uniquely remote from those elsewhere.

The economic rationale is also minimal in the Antarctic airspace today. However the development of tourism may first promote change in this respect.

The foregoing suggest some negative reasons for seriously considering whether some new basis of airspace regulation should be found. There are, however, two very basic positive factors.

Firstly, a non-national airspace regime could perhaps more readily reflect the growing international concern over maintaining the Antarctic environment.

Secondly, such a regime might materially assist in the final settlement of the status of the subjacent territory.

Can the status of the airspace be settled separately from that of the subjacent land? It is not unusual for the airspace above certain areas to be given a special status and it seems quite possible that this could be done in Antarctica provided, of course, there is sufficiently wide international support.

A multi-lateral agreement on the status of the Antarctic airspace must reflect the prohibitions and freedoms of the Antarctic Treaty but it must also fill the gaps in that Treaty. It should also be a forward looking instrument.

Such an airspace arrangement would, desirably, definitively delineate the Antarctic airspace - at least laterally - and should also come to grips with the problem of allocation of the airspace as an economic resource. As there are diverse commercial philosophies among the interested States in the latter regard, each may have to be prepared to compromise in certain aspects.

Another fundamental need which should be met is regulation of the airspace for the protection and sound use of the Antarctic environment. The current trend does not suggest that the basic problems of equitably regulating the location of routes, aircraft noise, and the placement of aviation facilities etc. having regard to the environment, will receive sufficient attention if present patterns are followed.

A wider and deeper consideration by air lawyers of the problems and possibilities of the Antarctic airspace could decisively mould the future status of the continental surface area and, hopefully, produce a uniquely functional airspace regime.

Chapter I

NOTES

Chapter I

1. Three legal writers who have considered this topic incidentally are:

Matte — De la Mer Territoriale a l'Air 'Territorial', 1965 130-131;

Wassenbergh, — Post War Civil Aviation Policy and the Law of the Air, 1962 150, 153-157;

Kriss, — The Legal Status of the Polar Regions. (unpublished thesis at the Arctic Institute of North America, Montreal) 1969. The author notes:-

> '... The Antarctic Treaty does not contain explicit provisions for the legal status of the Antarctic airspace. The right of aerial observation indicates, however, that - in conformity with the general rule - the subjacent area determines the legal status of the airspace in Antarctica too. The Antarctic regime extends thus to the Antarctic airspace too. Accordingly, the relevant provisions of the Antarctic Treaty are appropriately applicable also to the airspace above the Antarctic continent, islands and ice shelves. Furthermore, the airspace above the Antarctic seas has the status of the airspace above the high seas. Just as well as in the case of the Antarctic seas themselves, those provisions of the Antarctic Treaty which are not contrary to the freedom of flight above the high seas are applicable also to the airspace above the Antarctic seas ...' 20-21.

2. The basis for this trend is outlined by Lissitzyn, International Air Transport and National Policy, 1942 16. A more contemporary analysis is to be found in Wassenbergh, Aspects of Air Law and Civil Air Policy in the Seventies, 1970 11-16.

3. There is also a similar trend by States in control (akin to sovereignty) over international airspace. For a recent survey in this regard see Robinson, Military Requirements for International Airspace: Emerging claims to exclusive uses of a res communes natural resource (1971) 11 Nat. Res.J. 162-176.

Chapter II

NOTES

Chapter II

1. Introduction to Antarctica, Department of the Navy - U.S. Naval Support Force Antarctica 1969.

2. For details of this theory see (1970) Antarctic Journal of the U.S. Volume 5, 53-76 (hereinafter cited in the style (1970) V Ant J 53-76).

3. The largest ice shelf is the Ross Ice Shelf in the sector claimed by N.Z. It is roughly the size of California. For a detailed analysis of aspects of the Ross structure see Zumberge, Ross Ice Shelf Studies 1970 (1970) V Ant J 153. It moves at about 1 foot per day.

4. Swithinbank & Zumberge, The Ice Shelves (Hatherton (ed), Antarctica 1968).

5. Heap, Antarctic Pack Ice (Hatherton (ed) Antarctica 1968) 187,188.

6. This survey was drawn from information in the Antarctic Journal of the United States.

7. See Whiteman, Digest of International Law Vol 2 1244-1245 (hereinafter cited in the style 2 Whiteman 1244-1245). The N.Z./U.S. Agreement regarding operations in Antarctica (signed at Wellington 24 December 1958) pointedly leaves the recognition of N.Z. rights aside. See (1958) 9 U.S.T. 1502; TIAS 4151.

8. Law, Techniques of Living, Transport and Communication (Hatherton (ed)) 55-58. op cit n4.; See also Barber, Williams Field Redevelopment, Plans & Progress (1969) IV Ant J 77.

9. Law ibid.

10. J. Parker Van Zandt, The New Geography (Emme (ed), The Impact of Air Power 1959) 111-118. See also Sealy, The Geography of Air Transport 1968 22-29.

11. Grierson, Challenge to the Poles 1964 634. A discussion of savings in distance by the use of Polar routes is also available in Jessup & Taubenfeld, Controls for Outer Space 1959 166.

12. Long term weather forecasting is frequently cited as a prime example.

13. Potter, Economic Potentials of the Antarctic (1969) IV Ant J 61-62. See also Taubenfeld, A Treaty for Antarctica (1961) 531 Int Conc 246.

14. Potter op cit n13.

15. For some facts about more recent developments in this theory see various articles collected in (1970) V Ant J 53-76.

16. Potter op cit n13 64-67.

17. Potter op cit n13 65.

18. For a general survey of this resource and the legal rules relating thereto see M.W. Mouton, The International Regime of the Polar Areas (1962) 107 Recueil des Cours 218-226.

19. Pelagic sealing was discussed at the 5th and 6th Consultative Meetings. At the latter meeting draft international regulations were discussed. See (1971) VI Ant J 23.

20. Potter op cit n13 69.

21. Potter op cit n13 69.

22. See the following notes in the Antarctic Journal:

(1966) 1 Ant J 149:	projected visit of tourist party aboard Argentine Naval transport Lapataia to U.S. Palmer Station.
(1967) II Ant J 82-83:	resume of activities of a 48 member tourist group during 1967. The author makes the point in the conclusion that high insurance rates and weather limitations makes Antarctic tour enterprises an 'extreme financial risk'.

(1968) III Ant J 149-150: description of two shipborne tours sponsored by a New York Travel agency with some 102 tourists taking part. The parties visited Palmer Station (U.S.) and a Chilean base at Paradise Harbour.

(1969) IV Ant J 82-83: summary of the problem in the visit of some 100 tourists to Palmer Station (U.S.)

23. The first definitive Recommendations were made at the Fourth Consultative Meeting (TIAS 6668) in 1966 - Recommendation IV Effects of Antarctic Tourism. The Agreed Measures for the Protection of Antarctic Flora & Fauna were also, in part, prompted by the problem posed by tourism. The more important of these Recommendations are set out in Appendix I.

24. The naval importance of Drake Passage was summarised by one writer:-

> '... Great Britain might well lose any war in which she failed to keep open the ports of the east and west coasts of South America. The Falkland Islands are the key to the maritime control of this area and the three major fleet actions fought in two world wars by squadrons based on Port Stanley have demonstrated this point in a most convincing manner ...'

E.W. Hunter-Christie, The Antarctic Problem 1951 293-294. The same author also discusses Argentinian and Chilean strategic interests 291-292 and U.S. views 294. See also Laurence M. Gould, The Polar Regions in their Relation to Human Affairs 20-23.

25. See M.W. Mouton, The International Regime of Polar Regions (1962) 107 Recueil des Cours 236-237.

26. See Taubenfeld A Treaty for Antarctica (1960-61) 531 Int Conc at 261. John Hanessian Jr. National Interests in Antarctica in Antarctica (Hatherton ed) 1966 5.

27. The factors involved are discussed by G.C.L. Bertram in Antarctica Today & Tomorrow 1958 8-10.

28. Note to Ambassador Leche printed in E.W. Hunter-Christie, The Antarctic Problem 1951 314-316, 316.

29. 2 Whiteman 1238.

30. Inter American Treaty of Reciprocal Assistance (signed at Rio de Janeiro 2 September 1947) - Article 4.

> '... thence due south to a point 20° north latitude; thence by a rhumb line to a point 5° north latitude, 24° west longitude; thence due south to the South Pole ...'
> (21 UNTS 93)

31. Article 3(3).

32. See Ronald I. Spiers (Director, Bureau of Politico-Military Affairs) U.S. National Security Policy and the Indian Ocean Area (1971) LXV U.S. Dept. of State Bull. 199-208 (23 August 1971). Ceylonese initiatives for the neutralisation of the Indian Ocean also extend to the airspace in the Antarctic Treaty region.

Chapter III

NOTES

Chapter III

1. For a summary of the limited meaning of this phrase see 1 Whiteman 90.

2. See, for instance, Jessup, The Subjects of a Modern Law of Nations (1947) 45 Mich.L. R.383.

3. A comprehensive survey of the many theories and opinions as to the need, utility and basis of such a division is available in McDougal, Lasswell and Vlasic, Law and Public Order in Space, 1963 323-359. (hereinafter cited as McDougal, 1963). More recent surveys of the arguments for definitive limitation are available in Proceedings of the Colloquiums of the Law of Outer Space (International Institute of Space Law of the International Astronautical Federation). See particularly 1967 (10th Colloquium), Gallaway, The definition of outer space 268-270 for a U.S. view and Zhukov, The problem of definition of outer space 271-274 for a Soviet view. See also 1968 (11th Colloquium) Round table on the determination of the scientific factors for defining outer space 371-395; and Kopal, What is 'Outer Space' in Astronautics and Space Law, 275-279

4. The following assumes, of course, that a zonal division does not eventually emerge between the two regimes.

5. The major differences arise over the meaning of Article IV of the Space Treaty. The Soviet Union and some authors have taken the view that 'peaceful' means 'non-military'. The United States has viewed the expression to mean 'non-aggresive'. See Goedhuis, An Evaluation of the Leading Principles of the Treaty of Outer Space of 27 January 1967 (1968) 15 Netherlands Tjidschrift Voor International Recht 17-41 especially 33-38; Alex Meyer, Interpretation of the Term 'Peaceful' in the light of the Space Treaty. 11th Colloquium op cit n3 24-29; Marko G. Markov, The Juridical Meaning of the Term 'Peaceful' in the 1967 Space Treaty. 11th Colloquium op cit n3 30-33; Dr. G.P. Zhukov, On the Question of Interpretation of the Term 'Peaceful Use of Outer Space' contained in the Space Treaty. 11th Colloquium op cit n3 36-39.

6. The Antarctic Treaty only speaks expressly of 'freedom of scientific investigation' Article II. On the other hand the Space Treaty covers both exploration and use e.g. Article 1 paras 1 and 2; certainly the Space Treaty confers a wider express freedom than the Antarctic Treaty.

7. Before airspace problems arise, it is more likely that such a limit will have to be set as the basis of any system of allocating the natural resources of the adjacent sea and sea bed. For an outline of problems in this regard see Marcoux, Natural Resources Jurisdiction on the Antarctic Continental Margin (1971) 3 Virg Int L.R. 374-405. See also Huet, La Frontière Aérienne, Limite des Compétences de L'Etat dans L'Espace Atmosphérique (1971) LXXV R.G.D.I.P. 122-133.

8. Article VI.

9. See supra page 4.

10. Gustav Smedal, Skrifter om Svalbard og Ishavet (Acquisition of Sovereignty over Polar Areas) 1931 31-32; 2 Whiteman 1263-1268.

11. For the background to these claims see Lakhtine, Rights over the Arctic (1930) 24 A.J.I.L. 703. Also 1 Hackworth 461. The Soviet position is also examined by Cooper, Airspace Rights over the Arctic produced in Vlasic, Explorations in Aerospace Law 1968 172-193 (hereinafter cited as Vlasic 1968). Note that solely the Chilean Antarctic claim purports to include 'pack' ice - see supra page 56.

12. Waldock, Disputed Sovereignty in the Falkland Islands Dependencies (1948) XXV B.Y.I.L. 311,318.

13. Vlasic, 1968 172-193; For a contrary view see Ivan L. Head, Canadian Claims to Territorial Sovereignty in the Arctic Regions (1963) 3 McGill L.J. 200-226 especially 220-224.

14. Note that at the Hague Conference of 1930 the following clause was agreed upon:

> '... Il est bien évident que les dispositions de la présente convention ne sont pas en général, applicables aux côtes ordinairement ou constamment prises par les glaces ...'
> (Documents Official La Haye v1 131)

15. Donat Pharand, The Legal Status of Ice Shelves and Ice Islands in the Arctic (1969) 10 Cahiers de Droit 461; See also Nicole Trudeau - Bernard, Souverainte et Passage du Nord-Oust (1970) 1 Themis 47-63 especially at 52-53. L.C. Green, Canada and Arctic Sovereignty (1970) XLVII Canadian B.R. 740-775 750-757. Note that Green concludes (at 760)

> '... sufficient time has enured for Canadian sovereignty over the entire Canadian Arctic as far as the Pole and embracing land, islands, sea and pack ice, to have become a fact in law...';

F.M. Auburn, International Law - Sea Ice - Jurisdiction (1970) XLVII Canadian B.R. 776-782; Raymond W. Konan, The 'Manhatten's' Arctic Conquest and Canada's Response in Legal Diplomacy (1971) 3 Cornell Int. L.J. 189-204; The author makes two very relevant points:

> 1) There is unlikely to be a co-incidence of interests on the ice as land rules when only a small number of State stand to gain.(193)
>
> 2) Canadian leaders have come to recognize the lack of general interest in the 'ice as land' rule and have not carried out their announced campaign to sell it to the world as a desirable new principle of law.(194)

16. Continental Shelf Convention Article 5(4).

17. Donat Pharand op cit n15 473-474.

18. (1970) 71 W.W.R. 435-444.

19. Taubenfeld, A Treaty for Antarctica (1961) 531 Int. Conc. 243 at 286 concludes that 'floating ice islands, however large, are excluded from the Treaty by inference ...'

20. Smedal op cit n10 30-31.

21. Richardson, New Zealand's Claims in the Antarctic (1957) 33 N.Z.L.J. 38, 39-40. The status of the shelves is also discussed by F.M. Auburn, The White Desert (1970) 19 I.C.L.Q. 229. Pharand, op cit n15 notes that the disintegration of the relatively small Arctic ice shelves would make it 'somewhat unrealistic for Canada to assimilate the remaining ice shelves to land in the measurement of its territorial belt ...' 467.

22. Antarctic Treaty, Article VII.

23. The general background to the IGY is traced by Walter Sullivan The International Geophysical Year (1959) 521. Int. Conc. 259-336. The Antarctic segment of the IGY programme is discussed at 318-326. The article also traces the evolution of SCAR (Scientific Committee on Antarctic Research) a subsidiary organ of the non-governmental International Council of Scientific Unions (ICSU). See also Taubenfeld, A Treaty for Antarctica (1961) 531 Int. Conc. 243-322; Hayton, The Antarctic Settlement of 1959 (1960) 54 A.J.I.L. 349-371; Hanessian, The Antarctic Treaty 1959 (1960) 9 I.C.L.Q. 436-480.

24. See page 38.

25. Article XII (2).

26. This leads McDougal, 1963 to conclude that the 'recent Antarctic settlement is explicitly limited to a term of years' (at 862). Taubenfeld op cit n23 suggests that even this formula might be too inflexible (292) on the experience of colonial arrangements in fast changing political power positions.

27. Article VI.

28. A Czech author for example has given a wide interpretation to this clause. (Gejza Mencer, Mezinarodne Pravni Problemy Antarkity 1963). Regarding demilitarisation he notes:-

> '... It covers all areas - the mainland, the islands, the airspace and the sea - conventional and nuclear - it may be assumed from the extensive interpretation of the sentence, Antarctica shall be used for peaceful purposes only, that the ban applies not only to military measures but in general to any activity which is contrary to the interests of peace even if such activity does not involve armed or military action ...'(my emphasis)

Hanessian op cit n23 notes that paragraph 2 of Article 1 was inserted primarily on the behalf of the United States which uses military ships and aircraft for logistic support (at 468). Most other nations use military personnel and equipment in the area.

29. Article V(1).

30. This basis for the possible French violation of international law appears not to have been fully pursued. For a survey of the illegality of the French programme see James E. Mann, French Nuclear Testing and International Law (1969) Rutgers L.R. 144-170. Whether 'fallout' can be considered 'disposal' is an obvious problem but such waste would certainly be contrary to a number of environmental Measures agreed to pursuant to the Treaty. Note that Chile has signed the Treaty for the Prohibition of Nuclear Weapons in Latin America (signed at Mexico City 14 February 1967) 6 Int Legal Mat. 521. For the purposes of that Treaty 'territory' in respect of which a State is bound includes 'the territorial sea, air space and any other space over which the State exercises sovereignty in accordance with its own legislation...' (Article 3).

31. See Sullivan op cit n23 for a survey of the freedom arranged in the Antarctic for the IGY.

32. It is often said that this approach is unique in international law. However there is precedent in the Convention between Denmark and Norway concerning East Greenland and the exchange of Notes relating thereto of 9 July 1924, (1924) 27 L of N Treaty Series 207 (No 684). In the exchange of Notes each informed the other:-

> '... having signed on this day an Agreement regarding East Greenland, with a view to preventing possible disputes and to strengthening the friendly relations between Norway and Denmark, nevertheless declares that it maintains its point of view in regard to questions affecting Greenland which are not dealt with by the present Agreement, and that its rights are in no way prejudiced, renounced or forfeited thereby...'

The Convention left the sovereignty question unresolved. There are striking similarities in other parts of the Convention.

The same technique is adopted in the Treaty of the Hague of 8 April 1960 between the Netherlands and the Federal Republic of Germany regarding the Emms estuary:-

> 'The provisions of this Treaty shall not affect the question of the course of the international frontier in the Emms estuary. Each Contracting Party reserves its legal position in this respect...'

Article 46(1) (1964) 509 UNTS 1 (No 7404)

33. See page 89.

34. See Taubenfeld op cit n23 298 who concludes that 'such niggling contributions would be contrary to the spirit if not the letter of the Treaty...'

35. See Hanessian op cit n23 470. He also suggests a claim to the Continent by all signatories could be made as a means of enforcing the arrangements against third parties.

36. Article VII.

37. Article VII(4). Note that this inspection does not have to be made by suitably designated observers. It is a general right of inspection.

38. Henry M. Dater, The Antarctic Treaty in Action 1961-1971 (1971) VI Ant J 67-72, 72.

39. Article VII(3).

40. Article VIII(1) - but only in respect of 'all acts or omissions occurring while they are in Antarctica for the purpose of exercising their functions...'

41. Article IX(1)(e).

42. Article VIII(2).

43. Argentina and Chile used claim that their criminal Codes applied in their respective sectors. United States personnel of the military services are subject to the Uniform Code of Military Justice and civilian visitors to U.S. Antarctic installations used to be requested to sign waivers subjecting themselves to those rules. See Taubenfeld op cit n23 at 288.

44. See Australia at page 53; New Zealand at page 62; and United Kingdom at page 70.

45. Lauterpacht (ed) British Practice in International Law 1965 notes that the importance of these recommendations as a source of international legislation can be gathered from Recommendation III-VI adopted at Brussels in 1964:-

> '... Since the Recommendations approved by the Contracting Parties ... are so much part of the overall structure of co-operation

established by the Treaty, the Representatives recommend to their governments that any new Contracting Party entitled to participate in such meetings should be urged to accept these recommendations and to inform other Contracting Parties of its intentions to apply and be bound by them ...'

(91-92) However the reluctance of some Governments to apply some effective Recommendations has caused Consultative Meetings to reiterate certain resolutions.

46. (1962) 13 UST 1349 (TIAS 5094).

47. (1964) 14 UST 99 (TIAS 5274).

48. (1966) 17 UST 991 (TIAS 6058).

49. (1969) 20 UST 614 (TIAS 6668).

50. Recommendation IV.

51.

52. (1971) 6 Ant J 23-24.

53. See O'Connell, International Law 1970 v1 (2nd ed) 21.; McNair, The Law of Treaties 1961 309-321.

54. Note also Articles 35-38 of the Vienna Convention. The later Article provides:-

'... Nothing in Articles 34-37 precludes a rule set forth in a treaty from becoming binding upon a third State as a customary rule of international law, recognised as such ...'

See too 14 Whiteman 331-353.

55. Pollock, Sources of International Law (1902) 18 L.Q.R. 418-419. The emphasis placed on this method of evolution of customary international law by Western writers contrasts slightly with Soviet views. Krylov has stated:-

'... I believe that all the rules of international law are binding on all States, if such rules correspond to the real needs of a peace policy. The Soviets, as I made it clear at my lecture at the Academy of The Hague,

((1947) 70 Recueil des Cours 436-443) prefer to base their doctrine on bilateral and multi-lateral treaties of an equalitarian character. Practice is not a source of the same significance as the treaty ...'

1 Whiteman 71.

56. Waldock, General Course on Public International Law (1962) 106 Recueil des Cours 70-87.

57. Mc Nair op cit n53 259.

58. Mc Nair op cit n53 260.

59. Mc Nair op cit n53 263.

60. Mc Nair op cit n53 264.

61. Mc Nair op cit n53 266.

62. O'Connell op cit n53 24-25.

63. North Sea Continental Shelf Cases (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands) 1969 ICJ Reports.

64. ibid 41-42.

65. ibid 42 (para 73).

66. ibid 43 (para 74).

67. 1949 ICJ.R. 179 (Majority opinion).

68. In this sense, the Antarctic Treaty differs from the other multi-lateral treaties which are popularly said to have created customary international law:-

The Slave Trade Conventions.

The Declaration of Paris 1856.

The Hague Conventions 1899 and 1907.

The Red Cross Conventions.

The U.N. Charter.

The Genocide Convention.

68.(Cont.) McDougal, 1963 notes that the 'recent Antarctic Settlement (is) explicitly limited to a term of years ...'(at 862).

69. A more thorough survey of the fundamental principles (although pre-Continental Shelf Cases) is to be found in R.R. Baxter, Multi-lateral Treaties as Evidence of Customary International Law (1965-66) XLI B.Y.I.L. 275-300; V.A. Jordan, Creation of Customary International Law by Way of Treaty (1967) IX J.A.G.L.R. 38 who notes:

> '... A new rule of customary international law cannot come into existence when a leading state resists it e.g. the 'sector principle' of the acquisition of sovereignty over polar regions has not become a new norm of customary international law because the United States has not accepted it ...' !(at 42)

70. The conclusion of the Treaty having legislative effect is accepted by Kriss, The Legal Status of the Polar Regions 1969:

> '... Certain fundamental legal institutions ensuring the public order of Antarctica are of a universal nature binding on all States - whether or not parties to the Antarctic Treaty ...'

24.(unpublished thesis at the Arctic Institute of North America, Montreal).

71. See Robert H. Neuman, Oil on Troubled Waters : The International Control of Marine Pollution (1971) J. of Maritime L and Comm 349 especially 358-359; Also the Statement by Prime Minister Trudeau 8 April 1970 H.C. Debates (Canada) 8 April 1970 5623-24.

72. See discussions in Symposium on International Legal Aspects of Pollution Control (1971) XXI University of Toronto L.J. 173-251; M.W. Mouton, The Impact of Science on International Law (1966) 119 Recueil des Cours 191-257 especially 250-254.

73. See UNGA Resolution 2398 (XXIII) 3 December 1968.
UNGA Resolution 2581 (XXIV) 15 December 1969.
UNGA Resolution 2566 (XXIV) 12 January 1970.
UNGA Resolution 2657 (XXV) 7 December 1970.

74. See the Declaration on the Management of the Natural Environment of Europe by the European Conservation Conference Strasbourg 9-12 February 1970.

President Nixon's message to Congress on 8 February 1971 regarding International Aspects of the 1971 Environmental Programme expressed inter alia his Administration's determination to move towards an 'effective fabric' of international environmental co-operation. He also outlined the idea of a World Heritage Trust:

> '... It would be fitting by 1972 for the nations of the world to agree to the principle that there are certain areas of such unique world wide value that they should be treated as part of the heritage of all mankind and accorded special recognition as part of a World Heritage Trust. Such an arrangement would impose no limitations on the sovereignty of those nations which choose to participate, but would extend special international recognition to the areas which qualify and would make available technical and other assistance whether appropriate to assist in their protection and management ...'

(1971) LXIV Dept of State Bull 253-256, 256.

Chapter IV

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Chapter IV

1. (1948-49) XLVI International Law Documents - US Naval War College, 218.

2. International Law Documents ibid.

3. International Law Documents ibid 226.

4. International Law Documents ibid 227.

5. Boletin Oficial. 30 June 1955 1. Decree of 28 June 1955 No 14.408. See also 2 Whiteman 1251; Hayton, The American Antarctic (1956) 50 A.J.I.L. 583, 587-589; L.M. Moreno Quitana, Tratado de Derecho Internacional 1963 maintains that the claimed sector is an integral part of Argentina (subject to the Antarctic Treaty) (See Book II 185-191).

6. Article 1 Codigo Aeronautico Ley 17.285 of 1967. Article 1 of the previous Code (Ley 14.307) provided:

> '... This Code shall govern civil aviation within the territory of the Republic of Argentina and the space over it as circumscribed by vertical lines at its perimeter ...'

Article 2 expanded the definition of territory:-

> 'For the purposes of the Code, the term 'territory' shall include bodies of water under the jurisdiction of the State ...'

7. The view that the Argentine Antarctic is part of the Republic was taken by Lichtschien, La Custion de la soverania estatal y del dominio privado en la Antartida (1960). It is noted that Article 2342 of the Civil Code extends to the Argentine Sector. It is noted in (1961) 17 Revue TAAF 36-50 that Argentine authorities had advised that:

> '... La loi 13.908 et le Décret de Réglementation No. 15501/53 protègent complètement toute la faune endigène de l'Antarctique et des territoires sous la jurisdiction de cet état ...
>
> Il existe aussi en Argentine des réglementations précises concernant la pêche, l'exploitation des algues et autres activities apparentées quelques-unes d'entre elles s'appliquant particulièrement aux territoires situés au Sud du 60° parrallèle Sud ...'

(G de Q Robin, Formes de mesures suggérées pour encourager la conservation de la nature dans l'Antarctique)

The emotional and nationalistic implications of both the Chilean and Argentine claims are traced by Hayton op cit n5. Argentina has adopted an expansionist attitude to the sea with its 200 mile territorial limit covering too the sea bed and submarine zones. Freedom of air navigation is not affected. Law No 17.094 of 29 December 1966 - 6 Int. Legal Mat. 663-664 (1967).

8. Lauterpacht, British Practice in International Law 1967 83-84.

9. (1948-49) XLVI International Law Documents - U.S. Naval War College 236; 1 Hackworth 462; The history of the Australian claim is reviewed in O'Connell (ed), International Law in Australia - 1965; R.A. Swan, Australia in the Antarctic 1961; Chataris, Australian Claims in Antarctica (1929) 11 J.C.L. and I.L.

10. Commonwealth Acts Vol 1 (1901-1950) 227 s2.

11. ibid s3.

12. Commonwealth Acts, 1954, 140 s3.

13. ibid s6(1).

14. ibid s10.

15. ibid s11.

16. ibid s8(1).

17. Antarctic Treaty Act No 48 of 1960.

18. See page 49.

19. Air Navigation Act 1920 (as amended) s2. In relation to the Australian Antarctic Territory the Air Navigation Act commenced on 19 April 1956 (Commonwealth Gazette 1956 p.1068). The application of this legislation to the Australian Antarctic Territory is mentioned briefly by Tadao Kuribayashi, The Basic Structure of Australian Air Law 1970 154.

20. Regulation 6(1) of the Air Navigation Regulations states:

'Subject to these Regulations, these Regulations apply to and in relation to -

...c) air navigation with the Territories.

d) air navigation to or from the Territories...'

21. See Civil Aviation (Carriers Liability) Act 1959-62 s6.

22. Civil Aviation (Damage by Aircraft) Act 1958 s5.

23. Civil Aviation (Offenders on International Aircraft) Act 1970 s4 and the Crimes (Aircraft) Act 1963 s4.

24. See page 50.

25. (1948-49) XLVI International Law Documents - U.S. Naval War College 224-226.

26. For a discussion of the status of 'pack' ice see page 19.

27. Diario Oficial 21 June 1955. See also 2 Whiteman 1252 for the text of the U.S. protest.

28. Decree No. 298 of 17 July 1956 (Diario Oficial 3 October 1956). The law vested administration in the 'Intendant' of the Province of the Magallanes.

29. Decree Law No 675 of 17 October 1925 (as amended to 1965) Article 22. For a survey of Chilean air navigation legislation see Hamilton, Manual de Derecho Aero 1960 especially 'La Legislacion Nacional' 104-123.

30. Decree - Law No 675 Article 23. The Antarctic Treaty could be construed as such an agreement in respect of scientific and inspecting aircraft.

31. Civil Aeronautics Board Resolution No 902 of 17 August 1961. (Printed in Air Laws and Treaties of the World, 1965 v1 428-432.)

32. For a resume of this idea see 8 I.T.A. Bulletin (21 February 1966) 213-215. Also Wassenbergh, Aspects of Air Law and Civil Air Policy in the Seventies, 1970 29.

33. Presidential Decree 27 March 1924; Journal Officiel 29 March 1924 p.3004 Article 1. This provision has been abrogated by Loi No 66-400 of 18 June 1966. (J.O. 21 June 1966, 5035). That law regulates fishing, the taking of marine life and products of the sea in the TAAF area:-

Article 1 provides in part:

'... Celles-ci s'appliquent sur toute l'étendue du territoire et, en mer, le long des côtes, sur toute la zone de juridiction française en matière d'exercise de la pêche ...'

Decree No 69-408 of 25 April 1969 (J.O. 3 May 1969 4422-4423) sets out more detailed sub rules. This legislation has apparently not been objected by other Governments. It illustrates how the whole TAAF area (including Terre Adélie) is gradually being assimilated to normal French Territory.

34. ibid Article 2.

35. Presidential Decree 21 November 1924 (J.O. 27 November 1924 10452.) See also the Report of the Minister for Colonies justifying these administrative changes - Journal Officiel of the same date.

36. Presidential Decree 1 April 1938 'Limites des territoires français de la région antarctique dite 'Terre Adélie'. The United States objected to this assertion of sovereignty on the basis that sovereignty cannot accrue from 'mere discovery' 1 Hackworth 459-460.

37. The text of the Agreement is set out at Appendix III. Again the United States reserved its rights - 1 Hackworth 459. Note also Dollot, Le Droit International des espaces Polaires (1949) 75 Recueil des Cours 114,179.

38. Loi No 55-1052 6 August 1955 (J.O. 9 August 1955) 7979) Also reproduced in (1957) 1 Revue T.A.A.F. (Revue T.A.A.F. is a valuable source of legal and scientific information regarding developments in the southern and Antarctic territories. It is an official publication produced by the administration of the Territories.)

39. Loi No 55 - 1052 ibid Articles 2 and 3.

40. Décret No 59-935 of 18 September 1955.(1957) 1 Revue T.A.A.F. 24:-

> 'Article Premier: L'Administrateur supérieur des terres australes et antarctiques françaises nomme par décret est le dépositaire des pouvoirs de la Républiqdans le territoire.

41. Décret No 59 - 935 ibid Articles 2, 4 and 5.

42. Arrêté No 10 L'Administrateur supérieur des terres australes et antarctiques françaises. (1958) 2 Revue T.A.A.F. 28. This instrument also divided T.A.A.F. into four districts the fourth of which was Adelie Land. (Article 1). The power of delegation is in Article 5:

> 'A défaut d'establishment administratif local, le chef de la mission en Terre Adélie peut être habilité par l'administrateur supérieur à exercer les fonctions de chef du district Terre Adélie s'il réunit les conditions exigées par la réglementation en vigeur...'

43. (1960) 4 Revue T.A.A.F. 64. Appointment of l'ingénieur des travaux météorologiques' as chief of mission.

44. The French attitude was expressed clearly by the chief of the French delegation after the Washington Conference in 1959:-

> '... A l'occasion de la signature du Traité sur l'Antarctique la République Française entend affirmer à nouveau la souveraineté qu'elle exerce sur la terre Adélie...' !!

45. As amended to 1968 - texts of the latest major changes are to be found in (1968) 31 R.G.A. 280-345 See also Du Pontavice, Navigation Aérienne et Droit International' (1968) 31 R.G.A. 365 especially 375 et seq.

46. Cartou, Droit Aérien 1963 124-133, especially at 125.

47. Cartou, ibid 126.

48. Suel, Le Code de l'Aviation Civile (1968) 31 R.G.A., 264 at 274-275.

49. Title VI On Treaties and International Agreements Articles 52-55.

50. Ministère Public et Administration des Douanes c. Schreiber et Air France (1957) 11 R.G.A. 355 especially at 368.

51. See particularly Richardson, New Zealand's Claim in the Antarctic 1957 N.Z.L.J. 38-42. F.M. Auburn, The White Desert (1970) 14 I.C.L.Q. 229-256. A concise resume of the legal background and geographic features of the Dependency is available in the 1970 New Zealand Official Yearbook 996-997.

52. (1948-49) XLVI International Law Documents - U.S. Naval War College 234. Note Richardson's point that technically there is no N.Z. 'claim' but merely 'administration' Richardson ibid 40.

53. Ross Dependency (Regulations Respecting) New Zealand Gazette November 1923 Regulation I.

54. ibid Regulation II. A further regulation of the same date appointed a Magistrate for the Dependency.

55. s4.

56. 1 Hackworth 456-457.

57. s2. See also s12(1) 'Except as otherwise provided in this section, this Act shall extend to and be in force in the Cook Islands, Western Samoa, the Tokelau Islands and any other territory subject to the protection, trusteeship or authority of the Government of New Zealand...'

58. In s9(1) it is provided:

> '... Any proclamation, Order in Council, or regulations under this Act may apply generally throughout New Zealand, or within any specified part or parts thereof and may apply to all aircraft or to any specified class or classes of aircraft...'

59. Civil Aviation Regulations 1953 (Reprint 1970/173)

60. s2.

61. See s19. The operation of this Act is explained by T.J. Kelliher, Air Carriers Liability in New Zealand 1968 N.Z.L.J. 60-63. The commentator simply notes that the legislation applies to carriage 'in New Zealand and the Cook Islands'.

62. The Antarctica Amendment Bill was discussed by the House of Representatives of the N.Z. General Assembly on 30 September 1970. There was no dissention on the need to preserve the Antarctic environment. See Parliamentary Debates V 369 3667-3670.

63. (1948-49) XLVI International Law Documents - US Naval War College, 239-243. The claim was apparently mainly prompted by the need to protect Norwegian whaling interests. See the recommendation of the Ministry of Foreign Affairs 239-242 ibid.

64. ibid 463. See also 1 Hackworth 460.

65. Article 1.

66. See, for instance, Article 4.

67. Constitution Article 1.

68. See F. Castberg, Norges Statsforfatning 1. (3rd edn) 1964. 152-154. J. Andenaes, Statsforfatningen i Norge (3rd edn) 1962. 62-63.

69. Article 2 of the Statute of 27 February 1930 (as amended).

70. See Odelstingsproposisjon nr 52 1959-60, 7-8 (Proposition to the First Chamber of Parliament). Utkast til lov om luftfart med motiver Department of Transport 1957 134-135 and 145 (Draft and proposal from a Commission to revise the law of Aviation). Note also a Statute (No 38) of 13 June 1969 Law concerning launching of objects into Space from Norwegian Territory. Article 1:

> 'It is not allowed without permission of the relevant Department of State to launch any object into space from:
>
> a) Norwegian territory including Svalbard, Jan Mayen and the Norwegian 'Biland'.
>
> b) Norwegian ships, aircraft and similar objects ...'

71. For an outline of British claims see 1956 I.C.J. The Antarctica Cases. The basic British claim is set out at 14-16.

72. The scope of these claims is explained in 2 Whiteman 1258-1259; (1948-49) XLVI International Law Documents - U.S. Naval War College 217-245. In July 1971 the British and Argentine Governments reconciled some of their differences with the signing of an agreement in respect of the Falkland Islands and Dependencies. A summary of this dispute is set out in Chapters XVI, XVII, and XVIII of E.W. Hunter-Christie's, The Antarctic Problem, 1951.

73. Antarctic Treaty Article VI.

74. 2 Whiteman 1262

75. This was the general aim of the move as explained by the then Secretary of State for Colonies in the House of Commons:

> '... We are not in any way seeking to extend our territory but to rename and divide a particular part of it, the reason being that our Antarctic territory bore previously a name derived from the disputed area outside the Treaty area. We thought it better to change it in the interests of general agreement and working together in the area.'

2 Whiteman 1262-1263.

76. 1949 c67.

77. Ninth Schedule Part II, Provisions which may be extended to the Colonies etc.

78. The Colonial Civil Aviation (Application of Act) Order 1952. S.I. 1952/868.

79. For example 4. Section 11 Dangerous flying.
8. Section 38 Trespassing on aerodromes.

80. British Antarctic Territory Order in Council 1962. S.I. 1962/400. The administrative arrangements for the Territory are briefly outlined in British Antarctic Territory Report 1961 - 31 March 1967, 1-3.

81. British Antarctic Territory Royal Instructions 1962.

82. He is also given power to establish courts of justice in the Territory which may act not only in the Territory, but also within any other British territory south of the 50th parallel of South latitude.

83. The Colonial Civil Aviation (Application of Act) (Amendment) Order 1965. S.I. 1965/980.

84. 1961 c27.

85. ibid s9.

86. For details of these extensions see The Carriage by Air Acts (Application of Provisions) Order 1967. S.I. 1967/480. The Carriage by Air Acts (Application of Provisions) (Overseas Territories) Order 1967. S.I. 1967/810. That Order also extends the legislation giving effect to the Guadalajara Convention. (See Carriage by Air (Supplementary Provisions) Act 1962-s5).

87. It should be noted that under Article 6 of the Order ibid the Governor of an Overseas Territory has the power to restrict the Application of the Order.

88. See The Carriage by Air (Parties to Convention) Order 1967. S.I. 1967/976. The following are definitions of the Territories in respect of which Australia, France and Norway are, in the British view, High Contracting Parties to the Warsaw and Warsaw-Hague instruments:

Australia: '... Australia and all external territories for the international affairs of which Australia is responsible and the trust territories of New Guinea and Nauru*...' (* since independent)

France: '... France and all Overseas Departments and Territories subject to the sovereignty or authority of the French Republic...'

Norway: '... Norway and all Territories subject to the sovereignty or authority of the Kingdom of Norway ...'

89. The Order defines the territory of Argentina as 'Argentina' and that of New Zealand as 'New Zealand (including the Cook Islands and the Tokelau Islands)'. Chile is not a High Contracting Party.

90. 1967 c52, s58.

91. S.I. 1968/1864 - See also the Tokoyo Convention (Certification of Countries) Order 1970. S.I. 1970/825.

92. 1967 c65.

93. See 1 Hackworth 457 and 459 in relation to the N.Z. claim; 1 Hackworth 459 regarding British Commonwealth and French claims; 1 Hackworth 460 concerning Norwegian claims; 2 Whiteman 1251 re Argentinian claims; 2 Whiteman 1252 regarding purported Australian application of the WMO Convention in its sector; 2 Whiteman 1252-53 in relation to Chilean claims; 2 Whiteman 1253-54 in relation to certain British claims; 2 Whiteman 1244 - refutation of certain Australian claims.

94. See the U.S. statements ibid.

95. Argentina and the United States 2 Whiteman 1239; Australia and the United States 2 Whiteman 1240; New Zealand and the United States 2 Whiteman 1241 (see also N.Z.-U.S. Antarctic Co-operation Agreement TIAS 4151) Chile and the United States 2 Whiteman 1241.

96. See 2 Whiteman 1245-1247.

97. (1959) Dept of State Bulletin 911; State Department Legal Advisor Becker in 1959 stated:

> '... the fact that the United States has not based a claim of sovereignty over one or more areas of Antarctica, upon the basis of activities it has engaged in there, in no way derogates from the rights that were established by its activities ...'

(1959) 53 A.J.I.L. 128.

98. (1970) LXIV Dept of State Bulletin 572. It is noteworthy that President Nixon carefully summarised the historic interest of U.S. explorers and scientists in the area. This was later repeated in both the State Department's and President's statements on the 20th Anniversary of the Treaty - but reference to U.S. objectives was avoided ((1971) LXV Dept of State Bulletin 82-83).

99. Peter A. Toma Soviet Attitudes Towards the Acquisition of Territorial Sovereignty in the Antarctic (1956) 50 A.J.I.L. 611-626; A.P. Movchan, The Legal Status of Antarctica : An International Problem 1959 Soviet Yearbook of Int. Law 356-359.

100. Movchan ibid 357.

101. Memorandum of the Soviet Government on the Question of the Regime of the Antarctic. Toma ibid 624-625; 2 Whiteman 1255-6.

102. Toma ibid 619-620.

103. Movchan ibid 357.

104. Toma ibid 619-620.

105. Toma ibid 621.

106. 2 Whiteman 1255.

107. Ivo Lapenna, International Law Viewed Through Soviet Eyes 1961 Yearbook of World Affairs 204-232 esp 229.

In the discussions and comments of Soviet experts towards the formulation of the Outer Space Treaty one detects general Soviet satisfaction with the Antarctic Treaty. See for example Zhukov The Moon Politics and Law (1966) 9 Int. Affairs 32-37 esp. 36-37. The Soviets seem to be particularly pleased with the demilitarisation provisions of the Treaty - see Kosygin's speech on the signing of the Non-Proliferation Treaty. Vol XX, 27 Current Digest of the Soviet Press 3-4.

A summary of Soviet activities in the Antarctic is available in (1968) 44 Revue T.A.A.F. 5-31. (Korotkevitch Les Recherchs Sovietiques Antarctiques.)

108. Kanae Taijudo, Japan and the Problems of Sovereignty over the Polar Regions (1959) 3 Japanese Annual of Int Law 12-19.

109. Taijudo ibid 15; See also the exchange of notes in November 1940 between the Chilean Ministry of Foreign Relations and the Japanese Legation (Santiago). In response to a Chilean Decree of 6 November 1940 (printed in (1948-49) XLVI International Law Documents - U.S. Naval War College 224) the Japanese noted:-

> '... that Japan considers itself one of the countries which have an interest and rights in the said zone, for which reason it reserves the right to assert its point of view in this matter...'

2 Whiteman 1260.

110. 136 U.N.T.S. 45, 50.

111. Herman R. Friis, With the Japanese Antarctic Research Expedition to Antarctica 1969-1970 (1970) V Ant J 232-239 provides a brief but thorough history of Japanese interest. It is pertinent to note that 'continued success has encouraged the Japanese Government to promote the program (Antarctic Program) to a nearly autonomous position within the Ministry of Education ...' 232-233.

The J.A.R.E. makes extensive use of aircraft. The Japanese have launched ionospheric rockets from a pad on East Ongul Island.

Henry S. Francis Jnr, With the Japanese to Antarctica (1966) 1 Ant J 235-238.

Wakefield Dort Jnr, The 8th Japanese Antarctic Research Expedition (1967) II Ant J. 78-80.

Chapter V

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Chapter V

1. Grierson, Challenge to the Poles - Highlights of Arctic and Antarctic Aviation 1964 179. This is the most thorough survey of Antarctic flight yet published.

2. Grierson ibid 177-185.

3. Grierson ibid 548-561.

4. Grierson ibid Appendix 6, 662-671.

5. Jessup and Taubenfeld, Controls for Outer Space 1959 323-324.

6. (1966) 1 Ant J 34.

7. (1970) V Ant J 40. The short note comments that 'such private ventures are charged for fuel and other services'.

8. Plans and Projects for the 1970-1971 Season (1970) V Ant J 210.

9. Plans and Projects ... ibid 214-215.

10. U.S. Antarctic Research Programme 1969-1970 (1970) V Ant J 81, 82. The French have launched a two stage Dragon sounding rocket with an altitude 350 km.(1969) 37 Revue TAAF 59. It might be noted also that even the Argentine Air Force has demonstrated its ability to fly to and land at the South Sole (1966) 1 Ant J 33-34.

11. See for instance Grierson, op cit n1 632-633; Potter, Economic Potentials of the Antarctic (1969) IV Ant J 61, 72; Hanessian, The Antarctic Treaty 1959 (1960) 9 I.C.L.Q. 436, 469; Jessup and Taubenfeld, op cit n5 Taubenfeld, A Treaty for Antarctica (1961) 531 Int Conc 245; Mouton, The International Regime of the Polar Areas (1962) 107 Recueil des Cours 175, 214-215; Wassenbergh, Post War Civil Aviation Policy and the Law of the Air 1962 150, 153-157.

12. Sealy, The Geography of Air Transport 1968, 88.

13. Wassenbergh op cit n11.

14. This map is taken from Grierson op cit n1.

15. Grierson op cit n1 634. As long ago as 1938 Deutsche Lufthansa ran a South Atlantic service between West Africa and Brazil. Flying boats operating from a specially equipped, mid route depot ship the Schwaberland were used. See Grierson op cit n1 493-494; The activities of the Schwaberland are briefly discussed in an article Rebuilding an Airline - Profile of Deutsche Lufthansa (1966) 11 Interavia 174, 175.

16. Grierson op cit n1 634.

17. Grierson op cit n1 634.

18. From 4 September 1971 - 18 September 1971 the Concorde was engaged in sales demonstrations in South America. It visited Rio de Janeiro and Buenos Aires, inter alia.

19. See page 95.

20. Signed in Washington in 1946 - 7 UNTS 201.

21. 290 UNTS 280, 282. New Zealand may be omitted at the option of the designated airline.

22. TIAS 6672 or 9 U.S.T. 1468. See also the following arrangements:

Argentina	Bilateral of 1 May 1947 never implemented.
Chile	55 UNTS 21.
Ecuador	22 UNTS 119.
South Africa	66 UNTS 233.

23. United States Antarctic Activities - Long Range Projection 1965-1970 (1966) 1 Ant J 79, 84.

24. See page 35.

25. (1966) 1 Ant J 79, 84.

26. (1970) V Ant J 40.

27. There has been some debate in the N.Z. Parliament of the touristic possibilities of Antarctica. In reply to a question in the House of Representatives on 15 October 1968 the Minister of Science noted:-

> '... Policy towards tourist traffic in the Antarctic is largely dictated by the interests of other signatories to the Antarctic Treaty. No visiting can be carried out by ship or

> aircraft without consultation with other Governments which have facilities in the Antarctic. No significant build up in traffic is anticipated in the next few years, partly, of course because of the rough weather conditions encountered between New Zealand and the Antarctic, and also because of the costs of such visits. Air New Zealand and the Holm Shipping Company have discussed the use of air transport with the appropriate Government departments although it is understood that no such flights are planned for this season...'
> (Parliamentary Debates Vol 357 2300)

The Annual Report of the N.Z. Ministry of Foreign Affairs habitually contains a portion devoted to Antarctica. In the 1969-70 Report, exploitation is given prominent attention:-

> '... The possibility of commercial exploitation of the Antarctic landmass is looming. Tourist interests already wish to develop travel arrangements to certain of the more accessible parts of the continent, and to provide accommodation and other facilities there; but formidable problems in the fields of logistics and safety have yet to be solved by the promoters if their ventures are to be self-sufficient. Recent developments in mineral exploitation techniques in the Arctic are stimulating interest in prospecting for the development of economic mineral deposits in Antarctica. The impact of such matters on Antarctic science programmes and the disturbance of the biosphere which extensive commercial exploitation might cause, together with the pressing need to preserve historic vestiges from loss or damage at the hands of the increasing numbers of visitors to Antarctica are all questions currently under consideration by the Government, in consultation with interested parties within New Zealand and its Antarctic Treaty partners overseas...'

Chapter VI

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Chapter VI

1. International Convention for the Regulation of Air Navigation signed at Paris, 1919, Article 1.

2. Convention on Commercial Aviation signed at Havana 20 February 1938, Article 1.

3. Convention on International Civil Aviation signed at Chicago 7 December 1944.

4. See Chapter IV.

5. The definition of 'territory' was produced in out of session negotiations at the Chicago Conference. Hence the official Conference records give little assistance with the meaning of the clause. It is a result of a compromise between U.S. and U.K. views. The Canadian draft covered this point - see Chicago Documents: Document 16: Article 1(10). The U.S. draft is to be found in Chicago Document 50: Article XLVI (e). See also the Report of the Drafting Committee : Chicago Document 356 and the Proceedings Vol II 1381. Some of the difficulties of the meaning of these words are examined by Baty, Protectorates and Mandates (1921-22) B.Y.I.L. 109, 114-115. John Cobb Cooper also looked at this matter - see Cooper, Backgrounds of International Public Law 1965 Y.B.A.S.L. 3, 24.

6. See supra pages 50 and 56.

7. See supra pages 53, 58, 67 and 70.

8. See Appendix III.

9. See supra page 29.

10. Although, in the absence of a sovereign in the airspace many provisions of the Chicago Convention are strictly inapplicable, certain resolutions of the Consultative Meetings have created analogous rules. See Appendix I.

11. Wassenbergh, Post War Civil Aviation Policy and the Law of the Air 1962 154-156.

12. Chicago Convention Article 11. Certain 'rights' of entry are given by the Chicago Convention and by the International Air Services Transit Agreement. The freedom of overflight and non traffic stops given to non scheduled services by Chicago Article 5 is qualified inter alia by the following:

> '... Each contracting State nevertheless reserves the right, for reasons of safety of flight, to require aircraft desiring to proceed over regions which are inaccessible or without adequate air navigation facilities to follow prescribed routes or to obtain special permission for such flights ...'

An analogous reservation appears in Article 1 Section 4(1) of the International Air Services Transit Agreement in respect of scheduled services. It should also be noted that all the States active in Antarctica, except for Chile are parties to the Transit Agreement.

13. The unique considerations of the Antarctic environment are outlined in Dasmann, Conservation in the Antarctic (1968) III Ant J 1-6; Parker, Preserving the Environment in Antarctica (1971) VI Ant J 49-52 (the same number contains a special section, 'preserving the environment'). Some basic facts about sonic boom damage are readily available in Ortner, 'Sonic Boom : Containment or Confrontation (1968) 34 JALC 208, 211-213. The most recent survey of the environmental pros and cons appears in 1971 (No 7) 26 Interavia 813-815, The SST Threat to the environment : Facts or guesswork?'

14. The author of the Interavia article noted above comes to the conclusion:

> '... It now appears that supersonic flight will only be permitted over oceans and certain sparsely populated territories and if this is the case the boom ceases to present a social problem' (at 815)

See Montgomery, The Age of the Supersonic Jet Transport : Its Environmental and Legal Impact. (1970) 36 JALC 577 - especially the international law aspects 602-609; Fitzgerald, Aircraft Noise in the Vicinity of Aerodromes and Sonic Boom (1971) XXI Uni of Toronto L.J. 227 especially 230-240; Robinson, The Regulatory Prohibition of International Supersonic Flights (1969) 18 I.C.L.Q. 833-846.

15. Resolution A16-4.

16. The Councils decision is set out in Action of the Council - 66th Session, 33-34: In regard to Stage 2 it is noted 'This technical assessment is to cover a representative range of environments, including the high seas ...'

17. But basically of course it depends on how widely these phases are interpreted. It is doubtful whether the special problems of Antarctica in this respect have been considered by the panel. Progress in formulating rules is outlined in 1971 R.C.A. at 221.

18. See Civil Aviation (Damage by Aircraft) Act 1958 Act No. 81 of 1958. The Act applies to every Territory of the Commonwealth - s5.

19. Article 11.

20. See Chapter II 'Extent of Liability' Articles 11-14.

21. The following national legislation is of relevance in this regard:-

Argentina: Codigo Aeronautico Art 6:

'Nadie puede, en razon de un derecho de propriedad, al paso de una aeronave. Si le prodiyese perjuico tendra derecho a indemnizacion.

Australia: See n6 supra.

Chile: The Air Code has no specific provision.

France: Code De L'Aviation Civile (to 21 Septembre 1968). Article L 131-2:

'Le droit pour un aéronef de survoler les propriétés privées ne peut s'exercer dans des conditions telles qu'il en traverait l'exercise du droit du propriétaire ...'

Article L 141-2:

'... L'exploitant d'un aéronef est responsable de plein droit des dommages causés par les évolutions de l'aéronef ou les objets qui s'en détacheraient aux personnes et aux biens situés à la surface.

Cette responsabilité ne peut être atténuée ou ecartée que par la preuve de la faute de la victime ...'(1968) 31 R.G.A. 286.

New Zealand - Civil Aviation Act 1964. s23.

23(3) No action shall lie in respect of trespass, or in respect of nuisance, by reason only of the flight of aircraft over any property at a height above the ground which having regard to wind, weather, and all the circumstances of the case is reasonable, or the ordinary incidents of any such flight, so long as the provisions of this Act and of any regulations or Proclamation made thereunder are duly complied with; but where material damage or loss is caused by an aircraft in flight, taking off, landing, or alighting, or by any person in any such aircraft, or by any article or person falling from any such aircraft, to any person or property on land or water, damages shall be recoverable from the owner of the aircraft in respect of the damage or loss, without proof of negligence or intention or other cause of action, as if the damage or loss had been caused by his fault, except where the damage or loss was caused by or contributed to by the fault of the person by whom the same was suffered: ...

Norway. Law of Aviation of 16 December 1960 Chapter X.

'Article 153: The owner of an aircraft, or the user who operates it on his own account, shall be liable for damages for an injury to a person or object outside the aircraft, if the injury results from using the aircraft for aviation, even if nobody is guilty of causing the injury.

Article 154: The provisions of Article 153 shall not apply to injury of persons or things within an approved landing area.

Article 155: Damages in accordance with Article 153 may not be claimed when the person who sustained the injury is guilty of causing the injury intentionally or by gross negligence.

Article 158: The provisions of this Chapter shall not restrict the right to claim damages pursuant to the general rules on damages.'

United Kingdom. Civil Aviation Act 1949 (Overseas Territories) Order 1969 (S.I. 592/1969) Part V. Basically the same as the New Zealand text above.

22. See the following provisions: Paris, Article 3, Havana, Article 5.

23. Article 9.

24. (1966) U.S.T. 992, 996 (TIAS 6058). The Measures are also set out in full in Schedule 1 of the New Zealand Antarctica (Amendment) Act 1970 (1970 No 34).

25. Agreed Measures Article VII.

26. Agreed Measures Article VIII 2(b).

27. They have been implemented in Adelie Land by L'Arrete No 17 of 7 September, 1966. (1966) 36 Revue TAAF 36.

28. Antarctic Treaty Act 1967 (1967, 65)

29. Section 10(5).

30. op cit n24.

31. Section 6A(4)(b). The Antarctic Treaty States still however recognise that the environmental interest is not supreme - Article V of the Agreed Measures provides:

> '... The provisions of these Agreed Measures shall not apply in cases of extreme emergency involving possible loss of human life or involving the safety of ships or aircraft.'

Entry to Specially Protected Areas is by permit. The limited grounds for a permit are set out in Article VIII(4) of the Agreed Measures.

32. Section 6A(4)(d). This authorisation could be interpreted as a further claim of sovereignty. The New Zealand Parliamentary Draftsman appears to believe that the Treaty does not prohibit claims of Antarctic sovereignty in respect of non-Treaty States.

33. Agreed Measures Article X.

34. See Jean Carroz, International Legislation on Air Navigation over the High Seas (1959) 26 JALC 158-172. The difficult problem of the status of the ice structures has been discussed supra.

35. See Navy Air Controlmen Responsible for Vital Operations in Antarctica (1965) 6. Bulletin of the U.S. Antarctic Projects Officer 8-9. In other contexts the legality of enforcement of such rules over the high seas is upheld on the basis that they amount to permissible entry and exit regulations under Article 11 of the Chicago Convention. (9 Whiteman 320-321).

Annex 11. Air Traffic Services provides for the extension of air traffic control facilities beyond the airspace of contracting States: The formal steps envisioned do not appear to have been taken with respect to Antarctica.

36. Australian Air Navigation Regulations: Regulation 6(4) and (4A).

37. See for example Regulation 139(2); 143(1)(c)(ii); 146(2)(b).

38. Regulation 5(1).

39. For example Regulation 165:-

> '(1) Where aerodromes are equipped with two way radio telephony apparatus, Air Traffic Control shall give control instructions by this means to all aircraft equipped to receive radio-telephony messages.
>
> (2) All such communications between aircraft and an Air Traffic Control Unit shall be in the English language provided that ...'

40. Hanessian, The Antarctic Treaty 1959 (1960) 9 I.C.L.Q. 436, 467, 472; Taubenfeld, A Treaty for Antarctica (1961) 531 Int/ Conc 245 notes 'Argentina and Chile have criminal Codes they claim are effective in Antarctica. New Zealand also purports to apply its criminal code in its sector.'

Taubenfeld also discusses what law, if any, is applicable to U.S. personnel in Antarctica. Military personnel are subject to the Uniform Code of Military Justice and civilian visitors to U.S. installations have been asked to sign waivers subjecting themselves to these rules.

41. Dater, The Antarctic Treaty in Action 1961-1971 (1971) VI Ant J 67, 72.

42. Recommendation I-XI (1962) 13 UST 1349 (TIAS 5094) Note the difficulties in application of the I.T.U. Convention as illustrated by the Argentine/United Kingdom dispute outlined at p.52 above.

43. (1963) XL U.S. Dept of State Bull 107-108.

44. For a survey of the legal arrangements behind these Agreements see 1965 Yearbook of Air and Space Law 99-115.

45. See ICAO Document C-WP/3924 of 28 January 1964 especially 41-51.

46. Article X.

47. Chicago Convention Article 83.

48. For instance, Taubenfeld op cit n40 316-317; Grierson, Challenge to the Poles - Highlights of Arctic and Antarctic Aviation 1964, 633.

Appendix I

SELECTED RECOMMENDATIONS OF CONSULTATIVE MEETINGS PURSUANT TO THE ANTARCTIC TREATY

I-VII

Preservation and conservation of Living Resources

The Representatives recommend to their Governments that:

i. they recognize the urgent need for measures to conserve the living resources of the Treaty area and to protect them from uncontrolled destruction or interference by man;

ii. they encourage the interchange of information and international co-operation with a view to promoting scientific studies of Antarctic life as the essential basis for long term conservation measures;

iii. they bring to the attention of all persons entering the area the need for the protection of living resources;

iv. they consult on the form in which it would be most suitable to establish in due course internationally agreed measures for the preservation and conservation of the living resources of the Antarctic, taking into account the discussion at and documents submitted to the First Consultative Meeting;

v. as an interim measure, and to the extent possible under national legislation and binding international conventions, they issue general rules of conduct on the lines of the attached statement extracted from the recommendations of SCAR as contained in the report of the Meeting held at Cambridge in August 1960;

vi. they exchange information on any major steps taken in accordance with this recommendation with respect to the next Antarctic season;

vii. this question be included in the Agenda of the next Consultative Meeting.

General Rules of Conduct for Preservation and Conservation of Living Resources in Antarctica

1. Animals and plants indigenous to Antarctica shall not be unnecessarily disturbed and shall not be destroyed or injured. Exceptions shall be permitted on a strictly controlled scale which will not deplete the local stock and only for the following purposes:

a. connections and studies for scientific purposes;

b. food (e.g. meat, eggs) for men and dogs;

c. living specimens for zoological gardens;

d. taking a strictly limited number of specimens, especially natural casualties, for private purposes.

Exceptions (c) and (d) shall not apply for the time being to fur seals.

2. Alien forms of flora and fauna should not be deliberately introduced except when rigidly controlled having regard to their chances of survival, capacity of reproduction and utilization by man.

3. The following activities should be regulated with a view to preventing serious harm to wildlife:

a. allowing dogs to run free,

b. flying helicopters or other aircraft in a manner which would unnecessarily disturb bird and seal colonies, or landing near (e.g. within 200 yards) such colonies,

c. driving vehicles unnecessarily close to breeding colonies of birds and seals.

d. use of explosive or discharge of firearms close to breeding colonies of birds and seals,

e. disturbance of bird and seal colonies by persistent attention from people on foot,

f. the discharge of oil from ships in a manner harmful to animals and plants indigenous to Antarctica.

I-X

Reciprocal Assistance among Expeditions

The Representatives reaffirm the traditional Antarctic principle that expeditions render all assistance feasible in the event of an emergency request for help and recommend to their Governments that consideration should be given to arranging consultations among them, and to the matter being discussed at the appropriate time at any meeting of experts qualified to discuss it.

III-I

Information on Facilities for the Landing of Aircraft

The Representatives, taking into account Recommendation I-VI (8) of the First Consultative Meeting, recommend to their Governments that they exchange, within the framework of Recommendation I-VI (8), information on airfield facilities in the Antarctic Treaty Area. This information should include particulars of location, operating conditions and limitations, radio aids to navigation, facilities for radio communications and instrument landing, and be in detail sufficient to enable an aircraft to make a safe landing.

III-VII

Acceptance of Approved Recommendations

Since the Recommendations approved by the Contracting Parties entitled to participate in meetings held in accordance with Article IX of the Antarctic Treaty are so much a part of the overall structure of co-operation established by the Treaty, the Representatives recommend to the Governments that any new Contracting Party entitled to participate in such meetings should be urged to accept

these recommendations and to inform other Contracting Parties of its intention to apply and be bound by them.

The Representatives recommend further that their Governments agree that existing Contracting Parties and any new Contracting Parties other than those entitled to participate in meetings held in accordance with Article IX of the Treaty be invited to consider accepting these recommendations and to inform other Contracting Parties of their intention to apply and be bound by them.

III-VIII

Agreed Measures for the Conservation of Antarctic Fauna and Flora

The Representatives, taking into consideration Article IX of the Antarctic Treaty, and recalling Recommendation I-VIII of the First Consultative Meeting and Recommendation II-II of the Second Consultative Meeting, recommend to their governments that they approve as soon as possible and implement without delay the annexed 'Agreed Measures for the Conservation of Antarctic Fauna and Flora'.

IV-20

Interim Guide-Lines for the Conservation of Fauna and Flora

The Representatives recommend to their Governments that, until such time as the Agreed Measures for the Conservation of Antarctic Fauna and Flora may become effective in accordance with Article IX of the Antarctic Treaty, the following Recommendations as far as feasible be considered as guide-lines in the interim period:

Recommendation IV-1 to IV-19 inclusive.

IV-27

Effects of Antarctic Tourism

Recognizing that the effects of tourist activities may prejudice the conduct of scientific research, conservation of fauna and flora and the operation of Antarctic stations.

The Representatives recommend to their Governments that:

1. The Government of a country in which a tourist or other non-scientific expedition is being organized furnish notice of the expedition as soon as possible through diplomatic channels to any other Government whose station the expedition plans to visit;

2. A Government provide on request information as promptly as possible regarding the conditions upon which it would grant permission for tourist groups to visit Antarctic stations which it maintains; and

3. Such permission be withheld unless reasonable assurances are given of compliance with the provisions of the Treaty, the Recommendations then effective and the conditions applicable at stations to be visited.

Explanatory Statement Concerning Recommendation III-VII

During their discussion of Recommendation III-VII, under which Parties by accession would be urged or invited to accept Approved Recommendations, Representatives to the Fourth Consultative Meeting agreed that the following considerations are pertinent to the application of Recommendation III-VII:

1. In becoming Parties to the Antarctic Treaty, States bind themselves to carry out its provisions and to uphold its purposes and principles;

2. Recommendations which become effective in accordance with Article IX or the Treaty area, in terms of that Article, 'measures in furtherance of the principles and objectives of the Treaty';

3. Approved Recommendations are an essential part of the overall structure of co-operation established by the Treaty;

4. In pursuance of the principles and objectives of the Treaty there should be uniformity of practice in the activity of all Parties active in Antarctica; and

5. Approved Recommendations are to be viewed in the light of the obligations assumed by Contracting Parties under the Treaty and in particular Article X.

VI-4

Man's Impact on the Antarctic Environment

The Representatives,
Considering and Recognizing that:

(1) in the Antarctic Treaty area the ecosystem is particularly vulnerable to human interference;

(2) the Antarctic derives much of its scientific importance from its uncontaminated and undisturbed condition;

(3) there is an increasingly urgent need to protect the environment from human interference;

(4) the Consultative Parties should assume responsibility for the protection of the environment and the wise use of the Treaty area;

Recommend to their Governments that:

1. They invite the Scientific Committee for Antarctic Research through their National Antarctic Committees:

   a. to identify the types and assess the extent of human interference which has occurred in the Treaty area as a result of man's activities;

   b. to propose measures which might be taken to minimize harmful interference;

   c. to consider and recommend scientific programmes which will detect and measure changes occurring in the Antarctic environment;

2. They encourage research on the impact of man on the Antarctic ecosystem;

3. They take interim measures to reduce known causes of harmful environmental interference;

4. They consider including on the agenda for the Seventh Antarctic Treaty Consultative Meeting an examination of this matter in the light of any further available information.

VI-7

Effects of Tourists and Non-Government Expeditions to the Antarctic Treaty Area

The Representatives,
Noting the increase in recent years in the number of tourists and also in the number of visitors who are not sponsored by the Consultative Parties to the Antarctic Treaty area;

Considering that the activities of such visitors can have lasting and harmful effects on scientific programmes, on the Antarctic environment, particularly in Specially Protected Areas, and on historic monuments;

Desiring to ensure that such visitors are afforded the best view of stations in the Antarctic compatible with the research programmes being undertaken;

Recalling paragraph 5 of the Article VII and Article X of the Antarctic Treaty, and Recommendations I-VI and IV-27;

Recommend to their Governments that:

1. They should exert appropriate efforts to ensure that all tourists and other visitors do not engage in any activity in the Treaty area which is contrary to the principles and purposes of the Antarctic Treaty or Recommendations made under it;

2. They should inform, in so far as they are able, those responsible for expeditions to the Treaty area which are not organized by a Consultative Party but organized in, proceeding from, or calling at, their territory, of the following:

    a. that final arrangements to visit any station be made with that station between twenty four and seventy two hours in advance of the expected time of arrival;

b. that all tourists and other visitors comply with any conditions or restrictions on their movements which the station commander may stipulate for their safety or to safeguard scientific programmes being undertaken at or near the station;

c. that visitors must not enter Specially Protected Areas and must respect designated historic monuments;

3. Advance notice of all expeditions to the Treaty area not organized by a Consultative Party, but organized in, proceeding from or calling at that Party's territory, shall be given, in so far as is possible, to the other Consultative Parties. Such notice shall include the relevant information listed in Recommendation I-VI;

4. Until such time as this Recommendation becomes effective in accordance with Article IX of the Antarctic Treaty, it shall be considered, as far as feasible, as a guide-line.

VI-12

Scientific Research Rockets

The Representatives,
Considering that:

(1) in recent years a number of countries have launched scientific research rockets (sounding rockets) from the Antarctic Treaty area and that the number of such launchings is expected to increase along with the scale and importance of scientific research activities in the Antarctic;

(2) it will be necessary to adopt adequate safety measures to prevent possible damage or injury to persons, fauna and flora, facilities, vessels and aircraft in the Antarctic Treaty area and in adjacent areas which might result from the launching of rockets from the Treaty area or from their residual elements;

Recommend to their Governments that;

1. Each Government which plans to launch rockets from the Antarctic Treaty area include in its annual exchange of information under paragraph 5 of Article VII of the Antarctic Treaty details of each planned launching, including inter alia the following information;

a. the geographic co-ordinates of the place of launching;

b. the time and date of launching or, alternatively, the approximate period of time during which it is planned to carry out the launchings;

c. the direction of launching;

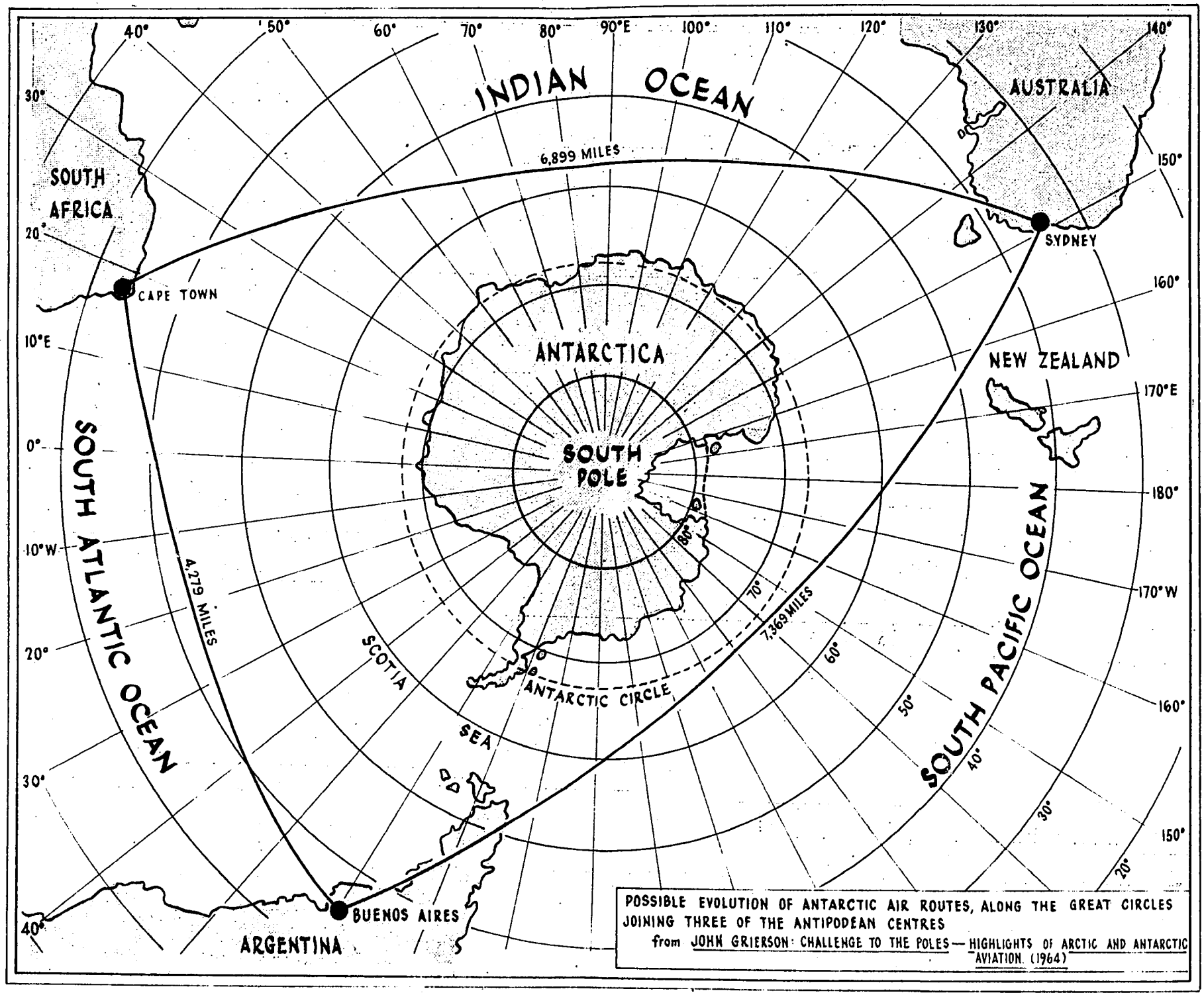
d. the planned maximum altitude;

e. the planned impact area;

f. the type and other specifications of the rockets to be launched, including possible residual hazards.

g. the purpose and research programme of the rocket.

2. During summer operations, and at other times when there are operations in it's area, each station use it's radio facilities to keep neighbouring stations informed, on a daily basis as appropriate, of its launching schedules.



POSSIBLE EVOLUTION OF ANTARCTIC AIR ROUTES, ALONG THE GREAT CIRCLES JOINING THREE OF THE ANTIPODEAN CENTRES

from JOHN GRIERSON: CHALLENGE TO THE POLES — HIGHLIGHTS OF ARCTIC AND ANTARCTIC AVIATION. (1964)

Appendix III

No. 4482 - EXCHANGE OF NOTES BETWEEN HIS MAJESTY'S GOVERNMENTS IN THE UNITED KINGDOM, IN THE COMMONWEALTH OF AUSTRALIA AND IN NEW ZEALAND AND THE GOVERNMENT OF THE FRENCH REPUBLIC CONSTITUTING AN AGREEMENT REGARDING THE FREE RIGHT OF PASSAGE TO AIRCRAFT OVER BRITISH AND FRENCH TERRITORIES IN THE ANTARCTIC. PARIS, OCTOBER 25th, 1938.

(English and French official texts communicated by His Majesty's Secretary of State for Foreign Affairs in Great Britain. The registration of this Exchange of Notes took place November 26th, 1938.)

British Embassy.

No. 699.
(245/10/38)

Paris, October 25th, 1938.

Monsieur Le Ministre,

In their memorandum (Direction politique) of the 5th March last, the Ministry of Foreign Affairs were so good as to inform His Majesty's Embassy that the Government of the Republic were prepared to recognise the free right of passage of British Commonwealth aircraft over Adelie Land on the understanding that reciprocal rights would be accorded to French aircraft over British Commonwealth territories in the Antarctic.

2. I have the honour to state that His Majesty's Governments in the United Kingdom, the Commonwealth of Australia, and New Zealand accept an arrangement on the abovementioned basis.

3. I have the honour to suggest that the present note and Your Excellency's acknowledgment thereof shall be regarded as placing the understanding on record.

I have the honour to be, with the highest consideration Monsieur le Ministre, Your Excellency's most obedient, humble Servant.

Eric Phipps.

His Excellency
Monsieur Georges Bonnet,
Minister for Foreign Affairs.

(The reciprocal French Note of the same date is in similar terms and is thus omitted. (1938-39) 192 L of NTS 324-326.)

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