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THE EQUATION OF AVIATION POLICY

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I.

OUR STATIC CIVIL AVIATION POLICY (1939-1960)

UNITED STATES civil aviation policy has changed very little in the last
twenty years. It has veered slightly from side to side and we have
made some costly concessions in terms of traffic and routes, but on the whole
we have clung to certain so-called "Bermuda principles."

Our international aviation policy making procedures have changed hardly
at all since they were originated fifteen years ago.

During this same period the whole world has been undergoing the great-
est upheaval since the Ice Ages—not only in aviation, but in politics,
commerce, agriculture, and in science and technology.

This strange lack of policy change in this new, vital, dynamic institution
of international civil air transportation leads to questions:
Is our present international civil aviation policy working so well that
there is no need for a change?

Is our static international civil aviation policy due to lack of under-
standing of international civil aviation's importance in world affairs?

Is it due to a preoccupation with intercontinental ballistic missiles, satel-
lites, supersonic military jets?

These are a few of the questions which haunt us today, beset as we are
by "jet age" problems and clear and unmistakable signs that United States
leadership and prestige in international civil aviation is weakening.2

There is some truth in all the charges implied in these above questions.
We have been preoccupied with intercontinental missiles, nuclear bombs and
satellites, and this is only natural since survival is the principal reason for
us to exist as a nation, and we are faced with a huge, powerful nation
armed with nuclear weapons and committed to our destruction.

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1 This seems a good place to define the word "policy." National interests are
the ends for which a nation exists and acts. Survival of a nation and its people is
the basic national interest. Betterment of the life conditions of the people of a
nation is second in importance. A national objective is a goal which, if achieved,
would further the national interest. It is our national interest to survive as a
nation. To realize survival we must prevent Communist conquest—this is an
objective. To achieve this objective we must adopt plans or policies. Rehabilitating
Europe (The Marshall Plan); alliance such as NATO; encouraging Free World
commercial integration, are examples of policy.

2 Our airlines hauled better than 61% of the transatlantic traffic in 1950.
They hauled about 40% in 1969.
However, the greater weakness in our international civil aviation policy making seems to be the failure on our part to appreciate international civil aviation's great importance in our over-all foreign policy.

II.
THE IMPORTANCE OF INTERNATIONAL CIVIL AVIATION

The major objectives and policies of United States foreign policy are, of course: (a) military preparedness to deter attack and destruction by Russia; (b) military alliances with the other free nations of the world, some of them involving military aid; and (c) the establishment of international cooperation, mutual assistance, and peace among the free nations of the world. Because the United States is the only nation large and powerful enough to oppose Russian aggression, it has naturally fallen to our lot to lead the hegemony of free world nations. It would seem elemental that transportation, and particularly transportation by air, is basic, not only to military preparedness and alliances but to peaceful international cooperation, mutual assistance, commerce and trade and the spread of peaceful industrialism.

Professor Arnold J. Toynbee pointed this out in his "Study of History." Communication by means of rapid and efficient transportation of people, property, mail, books and other recorded matter, he observed, had been the most important and basic of all the institutions of the societies of nations from the beginning of recorded time. He gave, as an example, the network of roads of the Roman Empire, the Ottoman Empire and the Inca Empire. He pointed out that without rapid communication there would have been little person-to-person communication and understanding between the nations making up an empire; no dissemination of administrative decisions; little spreading of information or knowledge by the written or spoken word; no rule of law and order.

The United States has no imperialistic ambitions, but if Toynbee's thesis be true in respect to a society or empire comprised of subject nations, it is doubly true with regard to that loosely bound hegemony of nations which we call the "Free World," led by the United States. The hegemony constituting the free world has none of the "bonds of empire." It has no centrally commanded army; no universal law and law courts; no capital city, central police force, or official language.

The free world nations are held together only by their common national interests, mutual assistance and cooperation, and military alliances. It seems obvious that communication by means of rapid and efficient transportation of persons, property, and information is of absolute necessity to the existence of such communities of nations; and since the leadership of these hegemonies has been entrusted to the United States, it follows that the United States must establish and maintain a foremost place in this most flexible, rapid and efficient means of transportation—civil air transport.

A brief review of the history of our international aviation policy might aid understanding as to why our policy makers seem to have lost sight of the heart of the matter. However, before we touch the high spots of international aviation history since the turn of the century, it might first be profitable to consider certain international "terms of reference" or international "social laws" which have had a lot to do with controlling the events recited.

III.
THE EQUATION OF INTERNATIONAL POLITICS

Throughout history there are certain factors which appear so constantly in the dealings between nations that they seem common to all times and to

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all nations. They are so sequential that they seem "laws." If we keep them in mind and comprehend the variables when they occur, we may better understand the particular problems to be solved.

These "constants" seem to be:

(a) National Interests. The ultimate national interest of all nations is to survive as a nation. It stems from Man's urge to stay alive.

The penultimate national interest is to better the life conditions of the nation's people.

The third basic national interest—(and the one that paradoxically has been the heartland reason for the start of most wars) is the urge to expand territorially or commercially in order to provide for increasing or excessive population growth. For example: Since it is our national interest to survive, we must be prepared to defeat Communist conquest—an objective. To achieve this we have adopted many policies such as rehabilitating Europe; military preparedness; alliances such as NATO and SEATO; and encouraging the commercial integration of Europe.

(b) National Comprehension. A second constant, which also seems to have the inevitability of a scientific law, is that nations do not and cannot comprehend or understand anything beyond what each particular nation thinks is its own national interest—no matter how enlightened. And this national interest may be very short term and very expedient.

(c) This leads to a third constant or "law." Since our interests, objectives and policies (plans) which we believe vital to our national survival or betterment (leadership in civil aviation, for example) must inevitably clash with what other nations believe to be in their own national interest, our power or capability of achieving our complete objectives (international civil aviation, for instance) and to carry out our policies is relative and limited. We may believe it is essential in our national interest to operate national airlines to and over the territory of another nation, although that nation is geographically and economically incapable of operating an efficient international airline itself. The other nation may, and usually does, think otherwise. If she believes it is in her national interest to fly, she will demand reciprocal rights to fly to cities in the United States, even at a huge loss. She cannot comprehend facts to the contrary.

(d) National Pride and Prejudice. Still another singular "behavior" pattern of Man, reflected in international relations to such a degree that it may be accepted as a constant factor in the equation of international politics, and in some degree related to the above, is the collective belief of the peoples of a nation that his town, his community and his nation is the best in the world, and his nation must and should have a national airline or two.

We shall see that these four constant factors have colored, and even to a large extent controlled the negotiations between nations relative to international civil air transport.

As we said, these factors seem constant and common to all nations; however, there are several peculiarly American concepts which run like a red thread through all of our own international aviation history. They might well be called "American dreams."


6 There were approximately 200 airlines flying international routes on January 1, 1960.
IV.

AMERICAN DREAMS

We cannot really understand our conduct regarding international aviation diplomacy during the past forty years unless we take into consideration what James Truslow Adams has called the "American dream"—a dream which we have attempted to carry over into our international treaties and agreements. It is the belief in the value of the common man, and the hope of opening every fair avenue of opportunity to the individual. We sometimes call a phase of it "equal opportunity" and "free enterprise." Our businessmen (and our policy makers are often businessmen on leave) often see no reason why this belief should not be transposed to our diplomatic dealings and the concept adopted by the rest of the world. The corollary of the "American dream," of course, is fierce competition.

Now, the older and more sophisticated nations of the Eurasian land mass cannot and do not embrace this concept. There are just too many people, too little land, and too few opportunities to go around. These nations are adjusted to divide the opportunities.

A second "dream" is our "legalistic-moral" concept of world diplomatic relations. We often choose to ordain a simple treaty or agreement, arrived at by bargain and compromise, with some sort of legal or moral value—in aviation, for example, the "Bermuda principles." Often the "principle" seems to be in the image of some domiciliary law of the United States, such as our laws against monopoly—which serve very well to govern the relations of individuals and businesses in the United States, but are incomprehensible to the nations of the Arab League, or the nations of cartel-minded Western Europe.

A third myth or dream common to most nations but particularly cherished by Americans, is that we have an inherent superiority in the scientific and technological fields—"the know-how." Sputnik and the "Moon Rocket" rudely shattered this dream.

Although these three American "dreams" cannot possibly be accepted by most of the one hundred nations of the five existing civilizations, yet our international aviation concepts and plans often seem to have been shaped within the context of them.

V.

A REVIEW OF OUR PAST AVIATION POLICY

Homer, one of the wisest of the Greeks, observed that it is well to look both forward and backward, "that the best may come to pass." A brief review of our own civil international aviation policy over the past forty years and a glimpse of the future may help us understand our present problems and to plan better.


(1) The Western Civilization—our own;
(2) The Orthodox Christendom, including Russia and Eastern Europe, greatly influenced by Communism;
(3) The Hindu Civilization;
(4) The Islamic Society, including Egypt and the Middle East;
(5) The Far Eastern Society, including Red China, Japan, Indonesia, Indo-China, etc.
The First World War and the Paris Convention. Before World War I, heavier-than-air aircraft was just a fantastic plaything. Our armed forces were not even aware of its military implications in 1908, when the U. S. Army Signal Corps bought one “Wright machine.” World War I took aircraft out of the category of an exciting toy. With the memory of bombings and smoking cities in their minds, the statesmen of Europe and America met in Paris in 1919 and drafted a Convention for the Regulation of Air Navigation.

The “problem” the statesmen faced at Paris was not a new one. The control of boundaries and communications (and certainly the transportation of persons and property must be considered communications) has been recognized as a matter of national sovereignty for thousands of years. Only the vehicle of communication was new. It was unique, and it possessed very lethal qualities. Pragmatically, the European statesmen were more concerned with the dangers than the benefits.

One thing could be counted on for certain—each nation at the Paris Conference would act for what it considered its own national self-interest in the matter.

The treaty drafted at Paris recognized that every nation had exclusive sovereignty over the air space above its territory.

The United States signed it, but it was not ratified. Not because it thought the concept wrong or evil, we were just too preoccupied with the League of Nations and other matters. Later, in 1929, the United States did sign and ratify the treaty growing out of the Havana Conference, which also guaranteed national sovereignty of air space. We reasserted this same concept again in the Chicago Convention in 1944, the first article of which provides that: “The contracting States recognize that every state has complete and exclusive sovereignty over the air space above its territory.”

It would have been incredible if any convention on civil aviation could have agreed upon any other rule. So long as civil aircraft are capable of carrying implements of war—nuclear bombs, cameras, biological weapons—we must accept the doctrine of the sovereignty of air space. We must also accept it as the cornerstone of any nation’s bargaining power in all civil international aviation negotiations.

Europe Before World War II. We know now that neither the Paris Convention nor the Havana Convention safeguarded the life and safety of human beings, or maintained national sovereignty. It was totally ineffective when war broke out again in 1939. About the only thing it had accomplished was to foster twenty years of restrictive policies among the European nations in the field of peaceful transportation, commerce and trade. Most of the European nations considered the whole matter of aviation, both civil and military, a purely political problem. They did not think there was enough potential commercial market among the nineteen states of Western Europe to justify civil aviation as a profitable business enterprise.\(^\text{10}\) The European nations thought, however, that it was very important to operate a national airline as a matter of national politics, prestige and pride and in some cases as a potential weapon.

The great colonial powers on the other hand, such as Great Britain and Holland, considered civil aviation as a binder of empire. Insofar as Europe was concerned, the United Kingdom and Holland were restrictionists, although Great Britain had advocated “freedom of the air” at the Paris Conference. Insofar as routes to their colonies or dominions were concerned, they were very liberal, indeed, because liberalality was needed on long trunk routes.

Absolutely, Mr. Brown. 1927-1939. In the United States the picture was different. The political hatreds and economic rivalries of the European nations which so retarded international aviation in Europe in the two decades, 1920-1940, did not apply to the Western Hemisphere. Competition, free enterprise, the hope of profits, and a people already accustomed to mechanized travel by rail and automobile, gave incentive to the rapid growth of our domestic civil aviation. When Juan Trippe, organizer and president of Pan American World Airways, assisted by Mr. Postmaster General Brown, began flying from Miami to the Caribbean and to Latin America in 1927, our domestic lines were already criss-crossing the United States. Mr. Trippe and General Brown went ahead in Latin America, and elsewhere. Mr. Trippe, acting as a sort of "secretary of state, pro tem," stretched Pan American's operation all over the world. It is a good thing he did, because United States international civil aviation got little help from the other governmental department heads, and Pan American's pioneering was to prove invaluable in the war to come.

The Department of State's contribution was not negligible during the latter part of this period, however. True, most of the bilateral aviation agreements had been negotiated by Pan American itself, with the approval of State; but extensive bilateral negotiations with Great Britain were conducted by the Department, and only bogged down because Great Britain was not yet ready to fly the Atlantic.

The Chosen Instrument and International Competition. International aviation is expensive, but every sovereign government seems bent to operate, or to encourage private persons to operate international airlines.

Because it is so expensive, and because European nations regard international aviation as a political matter, most nations chose one airline as its chosen instrument, nationalized it or covered all its losses from the public treasury. Competition was between nations. It was not "private competition" as we know it in the United States.

The United States, following the "American Dream" of free and individual enterprise, believed that competition on high density international routes between two or more private American carriers should engender better operations than competition between a single "chosen" American carrier and the national airlines of other states. Pan American World Airways, having negotiated over sixty contracts for operating rights in Latin America, Europe, Africa and the Pacific area, believed to the contrary. She naturally thought she was entitled to be "chosen" as the United States flag carrier. It was a battle royal while it lasted. Pan American World Airways lost and, for better or worse, the United States had transposed the "American dream" of competitive, private business and free enterprise into our international civil aviation picture.

Despite all these internal and external aviation problems a remarkable network of international airways existed by the year 1939, and Pan American, assisted by the Post Office Department, was largely responsible. Over one hundred ten thousand route miles had been established intercontinentally and almost every major power was flying them, or intended to fly them. The traffic over the Pacific and Atlantic in 1938 was infinitesimal (three thousand passengers) compared with the traffic carried today, but the art was new and the capacity to fly was limited.

This was about the picture when World War II intervened.

The War Years. 1940-1946. Ordinarily, there is little civil aviation activity during wartime. Civil aircraft and personnel are drafted by the armed services for military purposes. This was true during the first four years of World War II.

11 Supra Note 7, p. 9.
Early in 1942 the United Kingdom and the United States allocated their aviation responsibilities. The United Kingdom concentrated on tactical aircraft—fighters mostly—although it produced and flew some strategic night bombers; the United States concentrated on building and flying large strategic bombers and large military transport aircraft. In an incredibly short time (assisted greatly by contracts with our major airlines) the United States was operating a world-wide military aircraft delivery and air transport system, equipped with navigational aids, airdromes, and hundreds of transport aircraft. In 1944, when it became apparent that the Allied Forces would win the war, the then Assistant Secretary of State, Adolf A. Berle, and the then Chairman of the Civil Aeronautics Board, Welch Pogue, urged an early meeting of Allied Nations to prevent this wartime aviation system from disintegrating at war's end.

The Chicago Aviation Conference. The conference was held at Chicago in November 1944. Delegations from fifty-four nations attended.

Russia accepted an invitation, but she had no real intention to participate. She accepted the invitation because she wanted to prolong as long as possible the deception that she was cooperating with the Allies. The Russian delegation turned back at San Francisco, using the very lame excuse that certain invited nations had pro-fascist tendencies, although Russia had the list of invitees when she accepted.

The Chicago Conference is a classical demonstration of the postulate that nations, no matter how enlightened, are not capable of understanding and comprehending anything beyond their own national interest.

The United States had the capability to operate a worldwide system, and it deemed it in its own national interest: (a) to have access to this international route pattern; (b) with the least possible control of frequencies, rates, or carrying capacity; and (c) an international aviation organization having the sketchiest of political and economic authority. In other words, the United States wanted free enterprise and "freedom of the air."

Great Britain, her dominions and colonies, needed a large measure of "freedom of the air," too, but they had few large, modern, long distance aircraft, and few trained people capable of operating international airlines. She needed time to catch up and she intended to "drag her feet" until she had caught up.

The other Western powers were in even worse condition in this respect. They naturally shared London's alarm. They also needed time to catch up.

No nation had any intention of tossing "sovereignty of air space" out of the window. It was their chief bargaining asset in the "horse trading" to come.

There was no disagreement among the nations in the scientific and technical fields, because they all wanted to fly internationally eventually. There was a community of national interest in aircraft, airports, airways, procedures and safety—and besides, the United States either had paid, or would pay for the greater part of it.

The Plans Offered at the Chicago Conference. It might be well to describe somewhat in detail the principal plans offered for international

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12 Russia had imprisoned crews of Allied bombers forced to land in her territory during the war, and had even held instructors sent by the Allies to teach her the operation of aircraft and navigational facilities. We learn the hard way.
14 Frequency of schedules.
aviation at the Chicago Conference. They covered most of the possibilities then, and continue to pop up occasionally now:

(a) The United States Plan. A United Nations type of organization with considerable power in technical matters, but only a consultative function in economic and political matters; freedom of the air for peaceful civil aircraft, with as little regulation as possible; no delegation to any international authority to fix rates, routes, frequencies or capacity;

(b) The United Kingdom Plan. An “International Air Authority” to determine and distribute frequencies, capacity, and to fix rates, routes to be agreed upon bilaterally or multilaterally, between nations; the “authority” to allocate frequencies among the nations flying each particular route, and to take action to maintain “broad equilibrium between the world’s air transport capacity and the traffic offering”; elimination of wasteful practices, unfair competition, and the control of subsidies;

(c) The Canadian Plan. An international authority to grant international routes; to determine frequencies and rates; to issue permits or franchises to international civil operators; arrange interchange of transit and transport privilege between airlines; to control subsidies by prohibiting rate cutting, or over-scheduling. A formula was presented for the initial allocation of capacity to be determined by the “authority,” i.e. 50% of the traffic taken on by the state of origin and destined for the territory of the other state;

(d) Australian and New Zealand Plan. An international air transport authority responsible for the operation of air services on prescribed international trunk routes. Ownership of the aircraft and facilities on these routes to be in the Authority.

It must be remembered that liberal governments were in power in the United Kingdom, Australia and New Zealand, and a liberal government controlled Canada.

No formal plan was put forward by the European powers. Most of them were represented by governments in exile, and could hardly speak with authority. The record reveals, however, that (then as now) most of the European nations, except the Scandinavian States, Switzerland and Portugal, favored some sort of European cartel arrangement to restrict competition, and apportion traffic.

It was apparent from the start that none of the “plans” were acceptable or were intended to be acceptable. Accordingly, two draft “agreements” were attached to the Convention to be acted upon by the states individually: (a) a transit agreement, generally necessary for any state which wished to engage in international aviation; and (b) a transport agreement broadening and liberalizing the “freedoms of the air,” which was not generally acceptable, and was only offered as a sop to the United States.

The treaty finally adopted followed the conventional United Nations design with one significant departure: The establishment of an Air Navigation Commission of twelve well-qualified experts to draft and keep up to date annexes to the treaty which would establish the rules, procedures,

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16 The annexes covered: (1) rules of the air; (2) airworthiness of aircraft; (3) aircraft nationality and registration marks; (4) dimensional units to be used in air ground communications; (5) operation of aircraft; (6) aeronautical information services and aeronautical communications; (7) accident inquiries; (8) air traffic control, service in flight information and service alerting service; (9) meteorology; aircraft personnel licensing; (10) airfields; (11) aeronautical charts; search and rescue; and (12) facilitation, or border crossing, which is a field in itself.
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qualifications and specifications necessary to establish a world-wide operational aviation system.

Frankly, this is about all we could have expected of the Conference. Economic and political questions in a world of over eighty sovereign nations with a war going on cannot be settled by a single multilateral treaty. The conflict of national interest is always too great.

The Chicago Conference demonstrated one thing very clearly—that while each nation cannot comprehend anything beyond its own national interest, where these national interests coincide (as they did in the technical field) then mountains may be moved. If the Chicago Conference had not been held when it was held, the great wartime complex of international air transport routes, facilities, airdromes and operational procedures might have been lost for years.

Insofar as the United States was concerned, we were forced to "line out" our own national interest at Chicago—our objectives and policies (plans) regarding international civil aviation.

The United States had already sensed that it would be called upon to lead the so-called "Free World" in the century to come, and about the only bond between the free world nations was reciprocal trade and commerce, person-to-person contact, mutual assistance, and loose military alliances.

Since our own survival hinged on this arrangement, it seemed imperative that we establish a foremost place in the air, including civil international air transport.

Great Britain, with her dominions and colonies on her mind, felt the same about her own national interest, and she had no intention of dismembering the Empire. She intended to delay until she too was ready and capable of taking a leading part in international civil aviation—and the Commonwealth controlled the long, intercontinental routes by reason of sovereignty of air space.

Since it was obviously impossible with the equipment and facilities available at that time to engage in long, international flights without "pickup" traffic along the way, London seized upon this weak link. Any real decision relative to the "fifth freedom" or long route pickup traffic was just deferred.18

A third realization driven home at Chicago was that the United States did not have the policy making machinery necessary to create and carry out an effective policy in an industry which moved with incredible rapidity. International aviation policy making responsibility was scattered through all the executive departments and committees of Congress. This was true generally of all our foreign policy making at that time. It did not apply to international aviation alone. George F. Kennan, an experienced and very capable career diplomat, was given the job of creating a Policy Planning Staff, in the Department of State to remedy the situation. An Air Coordinating Committee was formed composed of Assistant Secretaries of State, War, Commerce and Navy, Chairman of the CAB, and later an Assistant

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17 Marquess of Londonderry in House of Lords; reported in London Times, October 13, 1944, p. 8.

18 The five freedoms are:
(1) Innocent passage above a sovereign state;
(2) Freedom to land in a sovereign state for non-traffic purposes, such as repairs, or refueling;
(3) Freedom to discharge passengers and property from state of origin of flight in a sovereign state;
(4) Freedom to take on passengers and property destined for the state of origin on the aircraft;
(5) Freedom to pick up passengers and property on a reasonably through route destined for any other contracting state and to discharge passengers and property coming from any such state.
Postmaster General and non-voting representative of the Bureau of the Budget. An office of Transport and Communications was organized in the Department of State reporting in the beginning to an Assistant Secretary of State, but later to an assistant to an assistant secretary of State.

Insofar as aviation policy planning was concerned it was better than nothing. In any event, when we went into the ring with Great Britain and her dominions for the second round of the battle for the "right to fly," we were better equipped.

The Bermuda Air Conference, 1946. The follow-up of the Chicago Convention to decide the all important problem of "capacity" or "fifth freedom" was held in Bermuda in February 1946—a salubrious clime. Professor George F. Baker,19a Director of the then recently organized Transport and Communications Division in the Department of State, headed the delegation. The astute and knowledgeable L. Welch Pogue, Chairman of the Civil Aeronautics Board, and the other members of the CAB were included. Lieut. Gen. Laurence S. Kuter, later United States Representative to ICAO, and Vice Admiral Forrest Sherman represented the armed forces. John Kenney, later Assistant Secretary of the Navy, knowledgeable and well-versed in the ways of Washington, was there, as well as numerous others. Short of a formal presidential approval of action, the United States delegation was high-powered enough to act on the spot.

The British delegation had equal authority.

The American objective was the same as at Chicago—as much freedom of the air as possible with as little regulation as possible.20 The British objective, too, was about the same as at Chicago—obtaining aircraft and facilities, regulation of rates, and some sort of check on capacity and frequency of flights to prevent cutthroat competition.

Loans and equipment priorities solved the first British problem, but the United States could not yield to the direct regulation of rates, capacity, or frequency of flights, because capacity and frequency regulation was contrary to our concept of free enterprise, and Congress had condemned such restrictions in the Civil Aeronautics Act of 1938. Moreover, rate regulation, while acceptable domestically, had not been included in the 1938 Act so far as foreign transportation was concerned.

The Bermuda Conference took several weeks but the results were predictable. The British long-term policy was that she should have equal status with the United States in civil aviation. To achieve this Britain was quite willing to work out a liberal construction of the "fifth freedom" or capacity problems where they applied to long haul, intercontinental operations, since Britain needed pickup traffic, too.

The United States still held its hope for the "American dream"—freedom of the air, opportunity for every airline, and no restriction on "honest competition"; in other words, our concept of private business under slightly regulated free enterprise, transposed to international aviation all over the world.

The British Commonwealth and the United States were fully conscious that the Bermuda Aviation Conference was going to have a very powerful impact on international civil aviation and world affairs. Both participants recognized the problems of international aviation as they then existed. They had been plainly stated at Chicago only two years before. They were:

(a) The "fifth freedom" or "pickup" problem for nations operating long-stage operations passing over and stopping at many nations;

19a He is now director of the Baker Foundation, Harvard Graduate School of Business Administration.
20 Ironically, this was the British position in 1919 and 1920.
(b) The problem of frequencies and capacity where the nation of embarkation had large traffic generating potentiality (such as the United States), and the nations along the line had very little return traffic to offer—countries such as France, Italy and India, with cities like Paris, Rome and Delhi where United States air tourists wanted to visit. These nations believed that competition by American carriers under America's free enterprise concept would divert such traffic as they themselves might generate, and drive their own airlines out of the air;

(c) The peripheral nations such as Scandinavia, which generated little international traffic, but where international airline operations like sea operations was a traditional income-making enterprise;

(d) The nations which believed it necessary to fly, no matter how expensive, if only for prestige and political reasons.

With the foregoing in mind, the two great powers worked out a compromise. Words were found to satisfy the philosophies of both powers and a practical method was worked out to prevent cutthroat competition:

1. The United States agreed to permit the fares to be fixed by a rate conference method conducted by the airlines through the International Air Transport Association (IATA), subject to review as it related to our carriers by the Civil Aeronautics Board;

2. Capacity was to be regulated on the principle that the primary objective of each nation's airlines should be the provision of capacity adequate to the traffic demands between the country of which such air carrier was a national and the countries of ultimate destination of the traffic, that is, third and fourth freedom traffic. Pickup traffic, or fifth freedom traffic, was to be allowed subject to this general principle, and subject to review and renegotiations if a nation thought, retroactively, that this freedom had been abused.

The Race Is On. The language of the Bermuda agreement was very flexible and seemed to find favor all over the world. The language was so broad that it could be interpreted by nations with nationalistic or restrictive philosophies as "protectionist"; and "liberal" by those nations advocating more freedom for civil aviation.21

One other convincing reason for its acceptance, of course, was time and the fear of the establishment of an international aviation monopoly by the United States and Great Britain. Nations desiring to establish and fly intercontinental routes could either accept the so-called "Bermuda principles" and "get into the act" at once on Bermuda terms (changing them at their leisure) or they could dicker until the United States and the Commonwealth nations were so firmly entrenched in international civil air transportation that it would be almost impossible to compete.

One other most forcible reason, of course, was financial. All the intercontinental airlines were losing money. The fat North Atlantic route which supplied about 72% of profitable long-haul inter-ocean traffic was a market that had to be "tapped" by any nation conducting or intending to conduct east-west intercontinental civil air transportation. Besides, it was a "dollar" route and dollar exchange was badly needed.

In all, about two hundred agreements between states, airlines and other entities were concluded by the end of the year 1949.22 More than fifty agreements had been concluded in Europe alone, but not all of them embraced the so-called Bermuda principles. In fact, most of them were restrictionist in

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21 P. van der Tuuk Adriani; The "Bermuda" Capacity Clauses; The Journal of Air Law and Commerce, Northwestern University, Autumn 1955.

22 ICAO Doc. 7460; Aeronautical Agreements and Arrangements.
character, limiting and allocating capacity and frequency. Agreements recit-
ing the Bermuda principles were more often than not qualified by words such
as "at a reasonable load factor."

The insistence of a strict interpretation of such a clause often led to a
situation where any increase in capacity was claimed "unfair," "unreason-
able," and to deny "equal opportunity," unless the average load factor
hovered around 90%—an impractical figure.

The most amazing thing about the "Bermuda principles" was that the
United States came to believe that the capacity clauses were indeed "prin-
ciples," possessing some sort of moral or legal sanction, when they were, in
fact, only political-commercial clauses drafted in a very special agreement
to meet a unique situation existing between the two great contracting
powers. They were certainly less statements of principle than the clause
reading: "There shall be a fair and equal opportunity for the carriers of
the two nations to operate on any route between their respective territories."
Certainly, the United Kingdom did not consider the capacity clauses as
"principles," nor did the Commonwealth nations. The United Kingdom
continued to make agreements with European nations (France, for example)
limiting and allocating capacity and frequencies.

It will do no harm to repeat—the acceptance of the wording of the
Bermuda principle clauses was remarkable, but the fact that the United
States concluded about forty important Bermuda type bilateral agreements
in two years is misleading. Other factors were really much more responsible.
The United States generated about 70% of all North Atlantic traffic—a fat
dollar market to share indeed. Moreover, we had money to give and lend
and equipment and facilities galore. We had concluded a world-wide aviation
agreement with the British Commonwealth. We had what the other nations
needed, so we got the air transport agreements we needed, but we hadn't
changed the basic civil air transport concepts of most of the European
nations one iota, and we were soon to find this out.

United States Establishes a World System. The wide acceptance of the
Bermuda type agreement made it possible for the United States to create
its contemplated world circling east-west air route system for our civil
carriers. The Civil Aeronautics Board, under the leadership of Chairman
Welch Pogue, had spelled out these routes as early as 1944. The implications
of free world leadership and its dependence on flight, including civil air
transport, were not so clear at that time as they are now, but at least a few
knowledgeable leaders of our government appreciated them.23

Hope Springs Eternal. A multilateral agreement permitting one or more
United States airlines to fly anywhere, any time, had been our position at
the Chicago Convention, but the Transport Agreement attached to the char-
ter had been a failure. The unforeseen success had in negotiating "fifth
freedom agreements" with other nations following the Bermuda Air Con-
vention again raised our hopes for multilateralism. Accordingly, a confer-
ence was called at Geneva in 1947 to consider multilateralism and the fifth
freedom concept. It received little more support than it had at the Chicago
Conference three years before. The participating nations took about the
same positions taken at Chicago, but this time the European nations took
the lead. Few of them considered the "Bermuda principles" either principles
or desirable.

It was a fortunate thing that the Bermuda Agreement was concluded
when it was. A year or two later would have been too late. The United
States and the British Commonwealth got the world-wide system they
sought—broad traffic rights at eighteen major Commonwealth traffic centers
for the United States; seventeen for the British; eleven in Continental

Office, 1945, p. 15.
United States and six points in United States territories, and bilateral agreements throughout the world excepting the Communist nations. As it was, the ink was hardly dry on their Bermuda type bilateral agreements with the United States before the European nations began requesting renegotiations.


The CAB advised the President not to approve the acquisition. The President did not follow the Board’s recommendation. He approved it conditionally, giving TWA and PAA additional and often parallel routes in Europe and the East. For example, on the Paris-Rome route. France, Italy, India and others had not been in favor of “fifth freedom” privileges in the first place and this new arrangement exposed their most important traffic to two American carriers. They and other nations immediately demanded review of their bilateral agreements with the United States.

Another reason for their insistence was that their capability to fly had greatly improved since 1946. The Marshall Plan proposed in June 1947 had taken hold. The Economic Cooperation Act and the Economic Cooperation Administration (ECA) had pumped billions of dollars into Europe, making possible, either directly or indirectly, the acquisition of working capital, equipment and facilities which France and Italy needed to engage in international aviation on a substantial scale. The fact that America furnished about 70% of the North Atlantic and Middle Atlantic traffic was not persuasive. Nor the fact that Yankee tourists furnished from 30% to 50% of intra-European airline travelers, or that for every airline ticket dollar spent by the American tourist and businessman, he spent ten times that much for food, shelter and goods in France or Italy, and that these dollars went to the very heart of their national economies.

The United States argument that as the leader of the free world hegemony, it was essential that the United States maintain a foremost place in one of the most important institutions of hegemonies, i.e. communication by the transportation of persons, property and information by aircraft, might appeal to political scholars and philosophers, but Ministers of Transport gave it little attention. The smaller nations believed it imperative in their national interest to fly, too, and that the diversion of their own slim traffic generating potentiality would damage this national interest.

In any event, during this last decade a large percentage of the nations with which the United States has bilateral agreements have asked for a review of the agreements and stressed new and tortured interpretations of the “Bermuda principles.”

The Leg of the Dog. As we pointed out before, the Bermuda agreement was clear enough in the minds of the two powers concerned, but many of the nations with which we made bilateral air transport agreements believed they had little to gain by fifth freedom from the United States so long as their flights turned around at New York, if transatlantic; or at Los Angeles, Seattle or San Francisco, if transpacific. They did not “pick up” much United States traffic to carry beyond the United States to other countries. Fifth freedom or “pickup traffic” on a reasonably direct trunk route seemed hardly a quid pro quo for allowing two United States carriers to fly to London, Paris and Amsterdam, for example, and there “pick up” traffic

24 About 11 billion dollars to aid Western Europe 1948-1950. Europe’s industrial production had increased by one-third and was higher than pre-war.
25 The International Trade Organization (ITO) and the General Agreement on Tariff & Trade (GATT, created in 1948 and 1947, respectively, also stimulated world trade and airline traffic.
destined for other Eurasian traffic centers such as Rome, Cairo, Ankara, Basra, Karachi, New Delhi, Bombay, Calcutta, Bangkok, Tokyo and beyond around the world. Air France, KLM, BOAC, Air India and others resented this diversion. Accordingly, they began to step up their price for fifth freedom.

Beginning in 1950, France, Italy, India and others threatened to cancel their bilateral agreements with us—unless some sort of arrangement could be made whereby frequency of schedules and capacity were determined in advance; in other words, unless the Bermuda fifth freedom “principles” were abandoned. We made some concessions but did not surrender.

The nations then shifted their approach. They stressed instead: (a) “equality of opportunity,” which they interpreted to mean reciprocity in routes on a route-for-route basis and reciprocity in traffic centers served; and (b) dog leg “beyond” routes—for example, to New York and beyond to Latin America, which is in fact a separate route hinged on New York, and almost 2,000 miles longer to the heart of Latin America. A lot of traffic could be picked up at New York destined for Latin America.

The Netherlands, France and West Germany won new routes to New York and beyond to Latin America. They also requested (as a quid pro quo for fifth freedom privileges) the right to serve five or more of our cities: Boston, New York, Philadelphia, Chicago and either San Francisco or Los Angeles, either by “dog leg” routes, or on polar routes. Australia’s Qantas Airlines asked for and got a route across the United States to New York and “beyond.”

The sacred “Bermuda principles” were beginning to cost the United States a lot of money. They were fine in 1946 when we generated about 70% of the transatlantic and transpacific traffic, and carried about 80% of it. Now, these same “principles,”—“fifth freedom,” plus “reciprocity of routes,” “reciprocity of traffic centers” and “dog leg routes” exposed the great United States traffic market to dozens of international airlines of other nations, many of which generated little traffic, operating chiefly for reasons of politics and pride, and dependent on the American tourist dollar. Our own airlines were carrying about 40% of the transatlantic traffic, although the United States generated about 71% of it. Were we trading transatlantic dollars for Paris and Rome “fifth freedom” nickels?

The numbers of our competitors were increasing too. More than seventy-five new international airlines entered the scheduled international field in the years 1954-1958. Thirty of them folded up or were absorbed by merger or sale, but forty-five new airlines (mostly small and ambitious) continued operating as of January 1, 1959. The Ghana Airways, for example, jointly financed by BOAC and Ghana, operating Boeing Stratocruisers leased from BOAC, and with Russian Turbojets on order. TSA-Transcontinental, privately owned Argentine airline, inaugurated service to New York in 1958 is another good example. This airline has on order four Convair 880 jets costing twenty-one million dollars.26

Russian competition promised to become serious in Europe and Asia. Sabena inaugurated service between New York and Moscow via Brussels. BOAC, KLM, Air France, SAS and Austrian airlines began operating to Moscow in conjunction with the USSR Aeroflot, which also operates direct flights to Cairo with TU-104 turbojets. Most of these operations are interline, but BOAC and Aeroflot fly directly from London to Moscow.

Flying obsolete DC-4s, war surplus C-46s, C-47s, thirty-five nonscheduled airlines were competing with regular IATA member airlines in Latin America. The newcomers cut the IATA rates about 50%. A considerable number of nonskeds were operating in the “package tour,” and “auto and driver”

field in Europe—a highly competitive device when tied to a transatlantic ticket on a regular scheduled airline.

Many more “scheduled-nonscheduled” airlines will follow the market glut of piston engine aircraft replaced by turboprop and turbojet aircraft. There will be many “fly-by-night” airlines operating at bargain store rates for many years to come.

Extent of Competition. (Jan. 1, 1959). In the United States all of our large traffic generating centers on both the Atlantic and Pacific seaboards were being served by four or more major foreign air carriers by January 1, 1959 in spite of the fact that airline traffic had fallen off to only a 4% annual increase—the lowest increase since 1948—due largely to no increase at all in the United States.

This was approximately our situation when the large, long-range jets entered service in number, and the airline blocs or combinations began to solidify in Europe and elsewhere. Events overshadowing the Convention of Paris, the Chicago Convention, and the Bermuda Conference were coming to pass.

VI.

TRADING BLOCS AND AIRLINE COMBINATIONS

The recent emergencies in Europe of competitive trading blocs paralleled by concomitant international airline combinations, when viewed against the economic and political implications of the operation by our foreign airline competitors of large, fast, long-range jet aircraft serving most of our major traffic centers, present a real and present danger to our own aviation policy and as the leader of the free world.

The problem is important enough to entitle it to special treatment.

In this article we have followed the play of what I styled the “equation of aviation policy” and the weakening under it of our policy in the clash and conflict of national interests and other factors. It is apparent that even before the start of the “jet age” the Bermuda principles were beginning to be very expensive, but our international aviation policy might have stood the strain until the two new factors in the “equation” appeared.

The first factor was the placing of the large, long-range civil jet aircraft in sizable numbers into intercontinental operation. This will be dealt with in the final part of this article. The second factor was the splitting of western Europe into three powerful airline blocs competing with each other, and both designed to compete with the United States.

The threat had existed for a long time—since 1950 to be exact. It only became pressing following the recent developments dividing the free world into powerful trading blocs—especially the European Common Market, the so-called “Outer Seven,” and the British Commonwealth Community.

Airline pools, combinations, or consortiums must follow common markets as night follows day. A common industrial and trading market is impossible without integrated transportation. For example, if Germany and France agreed to eliminate tariff barriers, but Germany increased transportation rates and fares and set transportation quotas, or gave rebates to other nations, the common market tariff agreement would mean nothing.

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27 ICAO Doc. 7960, A12-P/1.
28 Traffic Center Foreign Airlines
Boston 4
New York 23
Miami 21
Los Angeles 6
San Francisco 4
(Official Airlines Guide, June 1960)
29 Fortune, October 1959.
Again, if the common market nations (France, Benelux, West Germany and Italy) agreed to a common tariff barrier to imports from the United States, but German shipping and air transport cut fares and rates to the United States, the cuts and rebates could cancel the effect of common import duties. In other words, markets, trade and transportation are inseparable.

With this postulate in mind, let us study the history of European airline pools, combinations, and consortiums.

European Airline Pools and Combines. The economic integration of the Western European states and the Latin American states has been a major project of the United States foreign policy since 1947. We encouraged the "Steel and Coal Community," the pooling of other basic materials, the Organization for European Economic Cooperation (OEEC), and other developments of regional trading areas within Western Europe for freer trade and closer integration.\(^{30}\) We hoped that these movements would encompass the whole North Atlantic group of nations. However, we feared exactly what now seems to be happening—a split of the Western European states into two rival and competing trade groups, competing not only with each other but with the United States and Canada. We shall deal here, however, only with European civil aviation combinations.

Shortly after the Schuman Steel and Coal Community plan was approved (1948), three major plans designed to integrate air transport in Europe were presented:

(a) The Bonnepous (French) proposal; (b) the Count Sforza (Italian) proposal; and (c) the Van de Kieft (Council of Europe) proposal.\(^{31}\)

The Bonnepous proposal (1949) first recommended that the seventeen governments, then comprising the Council of Europe, set up a supernational authority to plan, promote and coordinate all transportation in Europe. Later intercontinental civil air transport was excepted.

The Count Sforza proposal (1951) envisaged one common air space over Western Europe with a supernational authority to promote, plan and coordinate civil air transport, plus an European syndicate of airlines to conduct all civil air transport in and from this common air space.

The Van de Kieft plan (1952) also proposed a single air transport corporation to operate all intra-European routes under a legislative code similar to our Civil Aeronautics Act. Certain intercontinental routes were to be operated by the European nations independently.

Each of the plans were considered by the Council of Europe from time to time, but no agreement could be reached. France, Italy and the Benelux favored them. Great Britain, the Scandinavian states and Portugal were against the proposals.

A third meeting of European aviation experts was held by the Council of Europe at Strasbourg in April 1954. The results were about the same as before and the alignment of the states had not changed. The meeting did, however, create an European Civil Aviation Conference with headquarters at Paris, which was to study European aviation problems.

The heart of the matter considered at all these meetings and implicit in each of the plans presented was the same. The six nations of Europe now constituting the common market organized in 1957 and forming a tight geographical group with adjoining frontiers, a population of 168 million people enjoying an immense prosperity, were seeking a competitive situation which would overcome the great disadvantages of European aviation which we have already discussed—too many small nations, too many airlines, too little traffic, too much politics.

\(^{30}\) Major Problems of United States Foreign Policy, 1950-1951; Brookings Institution, p. 79, etc.

\(^{31}\) ICAO Circular 28—AT/4, pp. 187-190.
The common aviation market was also designed to offset the aviation advantages possessed by the United States, the British Commonwealth, and to some extent the Scandinavian nations. The common market nations looked with envy upon the advanced state of United States aviation, where forty-eight (now fifty) states lived as a united whole with no boundary problems, and a federal authority to control competition to some extent, limit the number of airlines operating, and to police unfair practices.

Italy explained that her airlines could fly from Rome to New York but once there her aircraft must turn around and fly back. She could not continue on across the United States from east to west or north to south picking up traffic at the great American cities such as Chicago, St. Louis, Dallas, Kansas City, San Francisco and Los Angeles. On the other hand, the United States airlines, because of the many sovereign nations with which she had bilateral air agreements, could fly from New York picking up traffic at all the major traffic centers in Europe and continuing on to the Middle East, the Far East and around the world.

What Europe needed (Italy said) was an analogous situation—a “United States of Europe” in an aviation sense, with a common air space, an European authority somewhat similar to the Civil Aeronautics Board, and a sort of “European cabotage.” The idea of European cabotage was not specifically spelled out even in closed meetings, but it was always there. Cabotage need not necessarily be a matter of treaty or international law. A very effective monopoly of intra-European traffic by European carriers could be achieved by pooling arrangements, interchange arrangements, common ticket service arrangements, border crossing arrangements and other devices.

Neither was the idea put forth that Western Europe would fly one or two carriers representing the “United States of Europe.” All major European carriers would continue to serve the United States. This was “double tracking” in a big way.

There was also considerable discussion of cartel methods; increasing the utilization of aircraft, fixing of differential fares and rates, profit pools and uniform equipment.

All this, of course, was restrictionist doctrinaire and inimical to multilateralism in its true sense as the United States viewed it. We saw it coming, but there was little we could do about it.

*Common Market Split.* In 1957, France, Germany, Italy, Holland, Belgium and Luxembourg adopted the European Common Market—the same nations that favored the integrated European air transport proposals. Great Britain, the Scandinavian states, Switzerland, Austria and Portugal—the states that had opposed a close integration of air transport in Europe—submitted (October 1959) a counter-draft convention—the “European Free Trade Association”—designed to operate alongside but not in the European Common Market.

Prior to this, deputy ministers for air of the European Common Market nations (Germany, Benelux, France and Italy) had met at The Hague (April 26, 1959) to draft a proposal to integrate all civil air transport in Continental Europe under a single consortium to be known as Air Union.

This action was undoubtedly spurred by the SAS-Swissair inter-airline arrangement, which had been blessed by the “Outer Seven.” Swissair had seven intermediate Convair 600s on order, and SAS eighteen intermediate Caravelles and two Convair 600s. Both companies had long-range DC-8s ordered (ten DC-8s), for delivery in 1960-62. In order to balance their

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32 Cabotage: Restriction of air transport within the boundaries of a nation to carriage by domestic carriers.

33 A broad discussion in which the United States domestic system is compared with the intra-aviation system in Europe is found in “Internal Air Transport in Europe,” report by Air Research Bureau, November 1953; DeGroot.
fleets and to avoid "unnecessary competition," the two companies agreed on a cross lease, equipment interchange, and maintenance arrangement.\(^{34}\)

The formation of Air Union by the common market states envisaged an amalgamation of Sabena, Alitalia, Air France, Deutsch Lufthansa and KLM. It was basically a by-product of the common market, but it was also a countermove: (a) against American competition; and (b) against competition from the "seven nations" European bloc—Great Britain, Scandinavia, Austria, Portugal, and Switzerland, and the British Commonwealth Community. The plan was to become effective in 1960.\(^ {85}\) Air Union follows the old concept of the European cartel. Revenues will be pooled and redistributed to the members according to allocated ton-mile quotas. The nationality of each member airline will be preserved for competitive, political and prestige purposes. Presumably each national airline will claim all the rights and privileges due it under bilateral agreements with "outside" nations, such as the United States. Inside Europe, equipment, frequencies, capacity, fares, losses and earnings will be fixed and controlled by the combine.

The combine's bloc bargaining position in negotiating new air transport agreements and revising the existing ones will be very powerful indeed. The "common market" air traffic potentiality, while not as large as the United States, is very important.

Other supernational "common markets" and common air blocs seem to be in the making in Latin America and the Middle East.

In Latin America negotiations have been going on between Colombia, Chile, Ecuador, Panama and Peru for the creation of a single Latin American airline, possibly named Flota Aerea Latino Americana (FALA). Each nation in the consortium would participate equally.

The Arab League has been pondering a medium and short-haul Pan-Arab airline, to be expanded intercontinentally at a later date.

The British Commonwealth Community have been entering into interline agreements between themselves and with the airlines of other nations—Greece and Portugal, for example.\(^ {36}\) BOAC, Air India and Qantas have agreed to pool services over a combined network eastward to India, Australia, Hong Kong and Japan; westward to New York.

In the Far East, Thai Airways and SAS have combined, with SAS as a minority stockholder, and Japan Airlines has entered into an interline pooling agreement with Air France.

As we said, it would appear that the formation of competitive trading blocs and transportation combines is inherent in this scientific stage of the world industrial revolution. The industrialized community must produce goods and provide services (including air service) at prices low enough for the producers to buy them and to dispose of the excess production in the world markets; and the area comprising the bloc must contain the raw materials, capital, working force, and transportation facilities to make it possible. This means competition between nations and between blocs of nations.

Paradoxically, it was our foreign policy of cooperation—mutual assistance and integration—which brought home to Europe by experience, that industrial blocs were in their common national interest if they were to compete with more favored areas in the world, and that industrialism could only be attained, in many instances, by the formation of trading blocs.

There seem to be eight potential trading blocs (overlapping in some respects) in the making: (a) North America; (b) South America; (c) The


\(^{35}\) KLM withdrew from Air Union over a dispute about her share of traffic returns. She may re-enter.

Outer Seven—the United Kingdom, Austria, Portugal, Scandinavia and Switzerland; (d) the European common market nations; (e) USSR and her satellites; (f) the Middle East; (g) the Far East; and (h) the British Commonwealth Community.

Against this background of “Bermuda principles,” the trading blocs and airline combinations, a look at the implications of large, long-range jet aircraft is in order.

VII.

THE ADVENT OF LARGE TURBOJET AIRCRAFT IN INTERNATIONAL AVIATION

Many excellent studies have been made regarding the implications of the employment of large, long-range jets in international aviation, but the past year and a half experience in operating them seems the best teacher.

The first of the modern large jet aircraft departed from London Airport on October 4, 1958 to inaugurate BOAC London-New York Comet IV service. On October 26, 1958 a Pan American World Airways Boeing 707 departed from Idlewild to inaugurate Pan American's New York-Paris service, which was later extended to nonstop flights to London and Rome.

The London-New York route had been previously operated by both BOAC and Pan American airlines and TWA with DC-7 aircraft and Lockheed 1649A aircraft, both piston engined. The scheduled time for both aircraft was approximately eleven hours.

The public had long anticipated turbojet passenger aircraft. However, the acceptance of these large, fast jet transports by the traveling public was amazing. During the first eighteen months of operations Pan American operated its B-707s at an average load factor of over 90%, with flights sometimes booked up a month or more in advance. The public appeal of the new equipment was, of course, based on speed, comfort and novelty, but another factor often disregarded seems to have played an important part—that is the absence of flight fatigue. Transatlantic travel, while increasing, had been doing so in a gradual manner for several years but the Transatlantic airlines, including those using large piston aircraft such as the DC-7C and the Lockheed 1649A, carried over 1,100,000 passengers in the first nine months' period of 1959 as compared with approximately 961,000 passengers in the same period in 1958. In part, this was due to the increased carrying capacity of the jet aircraft, but most of it can be ascribed to the stimulating effect of the jet aircraft on air travel in general.

As of December 31, 1960 only approximately one-half of the turbopowered aircraft ordered will have been delivered. The number to be delivered by December 31, 1962 is approximately 1550, of which about 700 will be turbojet and the remainder turboprop. They will represent a capital investment of over three billion dollars besides ancillary funds. They will be flown by eighty carriers.

Capacity. The Boeing 707 and DC-8 have a passenger carrying capacity from one hundred ten to one hundred sixty passengers, depending upon the seating configuration. One DC-8 or Boeing 707, with a one hundred sixty seat configuration can, with five weekly round trips, carry more passengers

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88 El-Al has been operating the run with a turboprop Britannia in about nine hours. The Boeing's scheduled time is approximately six hours and thirty minutes from New York to London, although it has flown the route nonstop in approximately five hours and thirty minutes.
annually than a 40,000 ton passenger ocean liner. It can also carry, with the same utilization, a little over three times as many passengers as a DC-7C or Lockheed 1649A. The experience record for 1959 shows that both the DC-8 and Boeing 707 largely exceeded the standard of utilization mentioned above, and exceeded the passenger-seat miles predicted. With approximately three hundred of these two larger type turbojet aircraft to be delivered as of year end 1962, it is only a mathematical exercise to estimate that they alone will be offering seats equivalent in number to fifteen hundred DC-7s and five hundred Queen Marys. When the whole turbopowered fleet is considered, the imagination is staggered. There will be an abundance of seats available.

Excess Aircraft. Allowing for losses, there will also be forty Lockheed 1649 Starliners, three hundred seventeen Douglas DC-7s, Bs and As, and two hundred twelve Lockheed Superconstellations around as of December 31, 1962 trying to compete with Boeing 707s, Douglas DC-8s, Comet IVs, and Convair 600s and 880s, besides the turboprop aircraft in operation. The large turbojets alone will be offering twice as many jet seat miles as now offered by the best piston engine aircraft. Since traffic is estimated to increase only about 15% annually, the filling of these seats poses a problem which admits of no easy solution.

Drawing from experience, while some of these excess piston engine aircraft may be used on routes of low density not served by jets, most of the large piston engine aircraft will be driven out of the air on the routes they now fly. There will be an almost certain sale or transfer of the smaller aircraft, Lockheed 749 Constellations, and DC-6Bs and Cs for example, of which approximately six hundred thirty-eight will be available, not to mention the Convair 340s and 440s, of which about three hundred ten will be present, to smaller airlines and airlines with short haul route patterns. In fact, it is already happening. Approximately thirty-five new airlines (mostly small) went into operation in Latin America in 1958 using older equipment and cutting IATA fares in half.

The biggest problem is the disposal of the large piston engine aircraft, very few of which have been sold to date. They will, no doubt, be used for charter and nonsked flying.

Fares. The more than 100% increase in passenger seat miles available over the long intercontinental routes cannot possibly be absorbed by an increase in flying at present fare levels.

At the Honolulu traffic conference held in the Fall of 1959, it was obvious that there would be no IATA approved rate cut of much significance until the smaller nations and nations less advantageously situated got turbojet aircraft, or some cartel-like arrangement whereby a sufficient share of the world's traffic was allocated to them whether they flew the traffic or not. In other words, some system such as the common market states created in Air Union. How ever you look at it, fares will be lower by January 1, 1961.

Supersonic Jet Transport. Our two years experience with the large subsonic turbojet transport has proven one thing—a large, long-range (3,000-5,000 miles), high altitude (60,000-70,000 feet), high speed (2,000 miles per hour) aircraft is perfectly feasible, could operate from present large jet airports, at an economical direct operating cost. It could be in operation by 1967, but it will cost a lot of money. The scientists of the National Aeronautics and Space Administration estimate development cost and ancillary cost, such as navigational and traffic control facilities, would be in the neighborhood of one billion dollars. Since a small number (150-300) of supersonic transports could supply the world's long stage needs for a long time, the air industry could not finance, develop and build it, even with the

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89 The stop-gap arrangement made at the IATA-Paris meeting in March 1960 only put off the problem. It did not solve it.
knowledge gained from supersonic bombers like the B-70. It will be built, however, and paid for by the government; because of the Russian challenge if for no other reason.\footnote{Report of Committee on Science and Astronautics, U. S. House of Representatives, May 17-24, 1960.}

Its introduction into operations will be opposed, of course, by nations who cannot afford to develop one. The U.S.S.R. will probably build a competitive supersonic transport. No matter how one looks at it, the supersonic transport will create difficult policy problems. A supersonic jet could fly from London to New York to Sao Paulo and back to London, with stops for fueling and servicing, in about eight hours. The route pattern for the supersonic jet will be revolutionary.

\section*{VIII.
 A Glimpse at the Future}

The purpose of the article is to see how the "Equation of Aviation Policy" may affect the international aviation problems of today, and tomorrow two of the most important variable factors are the large, long-range jets of the present, and the supersonic jet aircraft soon to come, and the trading blocs. A responsible committee of bankers has called the operation of turbojet aircraft in numbers a "jet revolution"—and indeed it is.\footnote{Report of Aviation Securities Committee, Investment Bankers of America, Dec. 1957.} As we have seen, every economic implication has political significance in the field of international aviation relations. For example, if the traffic from New York to Shangri-La increases 50\% in the next four years, but if 100\% more seats will be offered, most of them in the very fast, comfortable jet aircraft, then the political relations in the field of civil aviation between Shangri-La and the United States, may be in for a radical overhauling.

The foregoing may be tersely summed up as follows:

(a) Shangri-La feels that it is in her national interest to fly to New York. Her capital city is an important traffic center. She has limited resources, and little traffic generating potential;

(b) The United States believes it must maintain a foremost place in world aviation as part of its objective to lead the free world. Shangri-La is important to this objective;

(c) The United States has transposed into the international field her domestic concept of slightly regulated free enterprise spelled out in the Civil Aeronautics Act, with as little restriction on schedules and equipment as possible as long as competition remains fair;

(d) Shangri-La believes in the cartel or planned state operations. An orderly pooling and sharing of business arranged by the governments involved, or with a supernational agency, seems sensible to her.

This problem presented by the New York-Shangri-La route is present over every trunk route. As the large jets, intermediate jets, and fast comfortable smaller jets and turboprop jets take over the routes of the Big Fourteen,\footnote{Report of Committee on Science and Astronautics, U. S. House of Representatives, May 17-24, 1960.} the airlines of the less capable nations operating in areas like the Arab states or Latin America, and flying bargain price piston engine aircraft, will strive to restrict the operations of the large and intermediary jet aircraft in the area in which they operate, and to cut fares lower and lower. In order to compete, many of these smaller airlines will purchase turbojet aircraft themselves although they cannot afford them or fill them.

42 United States, United Kingdom, France, Canada, Italy, Brazil, Australia, Netherlands, Scandinavia, Mexico, Belgium, West Germany, Switzerland, Russia. (There are sixty other countries with national airlines.)
Now, if this urge on the part of the smaller nations and underdeveloped nations was economic or reasonable, it could be dealt with. However, it is not economic and it is not reasonable. It is based on one of those human constants we must accept in our “equation.”

Thus, the main international political problem will continue to be as it was at Chicago in 1944, Montreal in 1946, Geneva in 1947, and at Strasbourg in 1954; the problem of the division of scheduling and capacity in such a manner and in such amounts as might rationalize the operation of an intercontinental airline by any small nation or consortium of small nations which considered it necessary to fly, but are not really capable of competing with the major flying nations.

Professor Antonio Ambrosini of Italy described the positions of the nations comprising the European Common Market in regard to international aviation shortly after the Council of Europe meeting at Strasbourg in 1954. He explained that many countries, large and small, had decided to operate and were operating civil airlines. Further, that certain countries had “gone headlong and with great power into the conquest of the world’s airlines, while other countries in attempting to oppose the formation of monopolies similar to those that once operated on the sea lanes, are raising whatever barriers they can, barriers which in many cases, alas, are only formalities intended especially to curtail the exercise of that freedom which a conventionality by now firmly established is called ‘fifth freedom of the air’; that is to say, the freedom to land and unload mail, cargo and passengers at any point along the route of the airlines.”

“Economic aspects,” Professor Ambrosini stated, “present political problems. The so-called economic problem, involving as we shall soon see the exchange of the fifth freedom and the search for means leading to an eventual close cooperation between the countries of Europe, is in fact a problem eminently political or, if you wish, politico-economic in its nature.”

This basic politico-economic problem of capacity and scheduling will be the heartland of most of the international aviation problems presented to us by the operation of the large, fast, jet-powered aircraft on the world’s airlines. The United States has long been committed to multilateral transportation agreements, and to the integration of free world trade and commerce, but the division of world aviation into transportation blocs parallel to trading blocs such as the European Common Market and the European Free Trade Association, is inimical to true multilateralism and true trade integration. It is also inimical to the interest of the United States or any nation which wishes to promote the growth and betterment of peaceful communications between the people of the earth by means of air travel.

**Predictable Revisement of Route Patterns and Operations.** It should be observed that even if the trading blocs and airline consortiums had not been established, many knowledgeable airline executives have predicted that the placing into operation of the very large turbojet aircraft, to be followed by even larger and faster jet aircraft and probably supplemented by V/STOL aircraft for short haul operations, would have changed the international airline route patterns and practices by reason of their operational implications alone. It might be helpful to consider these implications.

There have been suggestions that it might be more sensible to employ large jet aircraft on long nonstop flights to basic traffic centers, turn them around and fly back. An example would be New York-Rome. It has also been suggested that eventually the large supersonic jet together with the V/STOL aircraft will develop an area, wheel and spoke pattern—the very fast, large supersonic jets flying to the hub of an area on long 1,000 miles

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44 Speech delivered at Air Transport Development Center, Rome, May 28, 1954.
or more stages, and the V/STOL furnishing the shorter stage gathering service. Either operation, however, could spell the abandonment of "fifth freedom" and multilateralism.

It has also been proposed that the airlines could operate a different type of service between points which are now intermediate stops parallel to such long-stage, nonstop services—for example, services by a short range aircraft between London, Paris and Rome, to connect with the nonstop New York-Rome schedules. Such a system would not be an abandonment of fifth freedom but it would make it less important. In addition, there are political facts to be considered. As we have pointed out before, the whole history of foreign aviation relations has been divided between two conflicting philosophies: (a) a strong desire for a large amount of freedom for aviation activity, particularly the operation of world-girdling through trunk lines, with many intermediate stops; and (b) an equally strong desire, evidenced largely in Europe, for protection of the nationalistic civil aviation interests. Trading blocs and airline combinations must of necessity emphasize this conflict. Further, this type of area operation would require a "change of gauge" since it would be impractical to fly large, fast jet aircraft over the short stages of such a system, even if permitted. The use of aircraft of smaller capacity, such as the Caravelle, on the shorter stages of a single route would present many difficult operational and political problems. The smaller aircraft and their crews, if confined to fifth freedom traffic, would remain idle most of the time and cost an immense amount of money. But these are basically operational problems. We are concerned with policy problems, and they are basically political problems.

IX.
WHERE DO WE GO FROM HERE?
THE BASIC POLITICAL PROBLEMS

As we have observed, the United States of America has led the world in civil international aviation more by reason of our situation rather than because of any "thought out" "plan" or "policy." Now, it seems high time to have a clear national purpose, and sound plans and policies to achieve it if we are to continue our leadership.

The intercontinental ballistic missile may overshadow aircraft in the popular mind at this time, but the great probabilities are that we will have a long period of "protracted conflict"; small wars contained in limited areas such as Korea and Southeast Asia in which aircraft will perform its tripartite role as a weapon, a means of commerce and a means of communication.

Its most important functions, as the historian Toynbee pointed out, will continue to be those of commerce and communication. Militarily, aircraft can deter Communism and stamp out brush fires started by the Communist arsonists, but deterrence is not peace. Lasting peace can only come about by world-wide face-to-face communication and peaceful commerce among men.

At the beginning of this article it was suggested that there were many who advocated no change in our so-called civil aviation policy on the theory that any change might be for the worse, but our "review of the past and glance into the future" compels us to accept the fact that our international aviation policy is in need of change. There are many reasons for this opinion, but three or four should be sufficient. They are:

Firstly, Uncontrolled and unregulated world civil airline competition fostered in many cases by national pride and political urge, has created a serious problem. At present some 40 foreign airlines operate to and from United States traffic centers, particularly New York, Washington, Chicago,
Miami, New Orleans, Los Angeles and San Francisco. The great United States traffic potentiality cannot long stand this dilution. Paradoxically enough, we often provide the funds through the Export-Import Bank and other agencies which support this competition. Since encouragement of nationalism, industrialism and international cooperation in undeveloped areas has been the cornerstone of the United States foreign policy for a decade, it is hard to deny a small or new state its “right to fly” to and from the United States.

Secondly. The politico-economic implication of the introduction into international service of a large number of long-range and medium jet aircraft has changed the whole pattern of the industry and must be accommodated. The development of the supersonic jet, which will come about within this decade, will aggravate this problem.

Thirdly. The growth of international trading blocs, such as the European Common Market, and the British Commonwealth community, paralleled by transportation combines, such as Air Union and the British Commonwealth Air Pool, must force us to re-examine our aviation policies. For example, BOAC, Air-India International, Qantas and TCA have announced that they intend to pool their services and operate 200 flights a week across the Atlantic during the summer peak season. Add these flights to the pooled flights of Air Union and the SAS-Swissair consortium, and the number of flights by these two blocs alone feeding on the American tourist market is frightening.

Fourthly. The emergence of the U.S.S.R. as an important civil air transport manufacturer and world operator. It is offering well designed turbojet aircraft, notably the Tupelov TU-104A and the Ilyushin 11-18 Moskva (aircraft) to Middle Eastern and newly created African nations at bargain prices. Aeroflot, the Russian national airline, now connects Moscow with London, Paris and other cities such as Cairo, Kabul, Delhi and Peking. Russia has also announced that it is developing a supersonic jet in the Mach 3.2 class. It is unnecessary to emphasize the effect upon United States aviation leadership if Russia placed into successful operation a large supersonic civil jet aircraft.

A Steadfast Purpose. A strong national purpose, clearly understood and accepted by our citizenry, to have the best United States international air service possible, is an absolute necessity if we continue to lead in international civil aviation.

We must also have the executive and administrative machinery to achieve the objective and to develop clear, adequate policies to this end. Lacking such a purpose and executive and administrative capacity to pursue it to its end, our civil aviation history will undoubtedly parallel the recent history of the United States maritime industry. It will become non-competitive, expensive, and totally inadequate.

The other major air powers with which we compete do enjoy a firm policy of government purpose and government support. The executive and administrative authority to achieve the purpose is usually lodged in an official with cabinet member status. Great Britain, for example, has a Minister of Aviation.

With a strong national purpose and adequate authority and funds to achieve this purpose, our own plans and policies will fall into line. Obviously, there is no single master plan. An aviation policy which might work in Western Europe might not fit the politico-economic necessities of Latin America, or the Near East. Our new “Secretary for Civil Aviation” and his planning staff will be called upon to “think up” and carry out different policies to meet each particular area situation, both on a short term basis and a long term basis.
Knowledgeable men engaged in international aviation planning here and abroad have expressed opinions as to what they think might work. For example:

(a) A cooperative arrangement between the United States and the British Commonwealth Community, open to other free world nations, recognizing and regulating to the extent necessary the political and economic implications of the long and intermediate range subsonic jet aircraft now flying, and the supersonic jet aircraft in the 5,000 mile stage and 2,000 mile an hour speed category, soon to come;

(b) Arrangements whereby the United States, as the “hub” of the civil air transport world (feeding over four million air passengers to the world airlines in this year of 1960 and spending approximately two and a half billion dollars on foreign travel) assert this reality and work out separate cooperative agreements with various air transport “blocs” such as, for example, Air Union and SAS-Swissair. These agreements, with the separate commerce and air transport “blocs” to meet the particular needs of each region and the United States;

(c) The United States concentrate on the development and operation of the big jets, both subsonic and supersonic, to serve the principal traffic centers and capital cities of the world on a non-stop, turn around basis, or “wheel and spoke” basis, leaving local traffic to the local areas;

(d) The United States continue with the present plan of bilateral agreements, with spot adjustments, such as more closely relating “fifth freedom” traffic to actual traffic originated.

It is clear these proposals are not solutions. They are only offered to evoke thought. But it seems obvious that our international aviation policy needs a realistic appraisal calling for a good deal more flexibility. Other major flying powers have made substantial policy changes from time to time in the past fifteen years, and especially to anticipate the “jet age.”

Take Great Britain, for example. Of course, Great Britain has historically followed a very flexible pattern in aviation policy making, treating each situation differently as the occasion justified. It does not torture the British conscience to agree with France to monopolize the Paris-London run, dividing total revenues according to the seat capacity offered by their chosen instruments, nor does it hurt the British conscience to charge 10¢ a mile over this route as against the 5¢ a mile ordinarily charged.

It seems only sensible to Great Britain to enter into interline agreements with smaller nations such as Greece, Ghana, Portugal, etc., providing for integrated aircraft procurement and maintenance programs, besides “orderly” scheduling and offering of “capacity.” Cooperative arrangements with the Commonwealth nations, such as India, Australia and Canada, to permit pooling of air services of all companies over a combined network from London eastward; India, Australia, Hong Kong and Japan westward to New York; each line to act as sales outlet for each other, make sense to Great Britain.

One thing is certain: When our new “Secretary of Civil Aviation” takes office, he and his staff will be faced with the constant factors in the Equation of Aviation Policy:

1. If we are to survive as a nation, we must continue leadership of the free world since the United States is the only nation strong enough to assume such leadership. This leadership must include leadership in civil air transportation;

2. No nation, no matter how enlightened, can understand or comprehend anything beyond its own national interest—and almost all sovereign nations believe it is in their own national interest to fly;
3. In this conflicting and clashing of objectives—to fly—our own objective and policy must be subject to some limitation;

4. Every nation believes itself to be better or as good as any other nation—“we, the people”—and this includes the art of flying.

In addition to these constant factors in the equation of aviation policy, we have to deal with our own particular American dreams, such as freedom of opportunity for the individual (and the civil airlines) even though all other major powers may regard and use their airlines as politico-economic institutions of government.

It is only against this simple but basic background that our aviation policy makers can weigh the variables, such as the jet age, the immense material improvements in Europe and Russia due to world industrialism, the by-products of industrialism such as common markets and transportation combines, the resurgence of nationalism in underdeveloped nations, and realignment of political ideologies.