

1967

Comments on Salvage and Removal of Man-Made Objects from Outer Space

R. Cargill Hall

Recommended Citation

R. Cargill Hall, *Comments on Salvage and Removal of Man-Made Objects from Outer Space*, 33 J. AIR L. & COM. 288 (1967)

<https://scholar.smu.edu/jalc/vol33/iss2/6>

This International Review is brought to you for free and open access by the Law Journals at SMU Scholar. It has been accepted for inclusion in Journal of Air Law and Commerce by an authorized administrator of SMU Scholar. For more information, please visit <http://digitalrepository.smu.edu>.

INTERNATIONAL REVIEW

COMMENTS ON SALVAGE AND REMOVAL OF MAN-MADE OBJECTS FROM OUTER SPACE

BY R. CARGILL HALL†

I. INTRODUCTION

Space traffic congestion is developing in the near-earth regions of outer space from the increase in space-vehicle traffic and the accumulation of orbiting man-made debris.¹ Before long it will become mandatory for states to remove from orbit unmanned space vehicles and debris that pose a hazard to spacecraft navigation. The need to prevent cluttering of outer space before the requirement for deorbit-removal of this material became necessary was first recognized in 1958. Andrew Haley then recommended that "no objects should be placed in orbit in outer space which cannot be guided back to earth or destroyed by some other means, such as being guided into the sun. . . ."² Although the problems of potential traffic congestion in near-earth space was recognized by Haley and several other observers, it was not acknowledged by those responsible for the space programs in the major states. Since 1958, the proliferation of spacecraft and debris remaining in orbit for extended periods has reached a point where near-term interference with orbital spaceflight can be foreseen, and the problems of congestion has become a popular topic.³ In a recent article, *Life* magazine noted that there are now "some 1,200 satellites, burnt-out rockets, and just plain junk orbiting the earth,"⁴ including a trash bag thrown overboard while in orbit by Gemini astronauts Young and Collins in a manner reminiscent of earth-bound automobile travelers. Coincident with the need for deorbit-removal of debris from orbit,

† B.A., Whitman College; M.A., San Jose State College; Historian, Jet Propulsion Laboratory, California Institute of Technology; recipient of the Goddard Historical Essay Trophy, awarded by the National Space Club, in 1962 and 1963; member of the International Institute of Space Law, International Astronautical Federation.

¹ Although outer space is infinite, most space traffic about the earth is concentrated in a zone below or in the lower reaches of the radiation belts (from 100 to 400 statute miles), in a torus embracing all polar orbits, and in a torus encompassing all low-inclination orbits. Hall, *Comments on Traffic Control of Space Vehicles*, 31 J. AIR L. & COM. 327 (1965).

² Haley, *Space Age Presents Immediate Legal Problems*, in *FIRST COLLOQUIUM ON THE LAW OF OUTER SPACE* 6 (1958).

³ Cf., Doolittle, *Young Man, Be a Space Lawyer*, Esquire, June 1966, p. 118; "Space Trash"—*And an Inventory of Hardware in Orbit*, *Life*, 5 Aug. 1966, p. 29. See also remarks by Hilliard Paige, head of General Electric's Missile & Space Division, at the 1966 American Astronautical Society Goddard Symposium, *Space Highways, Manned Asteroids Among Way Out Symposium Suggestions*, *Missile/Space Daily*, 16 March 1966, p. 84; *Outer Space Laws Needed*, *San Francisco Sunday Examiner & Chronicle*, 28 Aug. 1966, § 1, p. B, col. 1; and *Keeping Law and Order in Space*, *Time*, 30 Sept. 1966, pp. 26-27.

⁴ "Space Trash"—*And an Inventory of Hardware in Orbit*, *supra* note 3.

advanced technology will soon demonstrate that salvage/retrieval⁵ of spacecraft hardware from near-earth orbital altitudes is feasible and economical. While the cost of retrieval is high, salvage of specific items for reuse or analysis (e.g., a J-2 rocket engine from the second stage of a Saturn 1B) can more than pay the cost. At higher altitudes, in circular orbits of fifteen hundred statute miles and beyond, prolonged exposure to radiation in outer space will have damaged or degraded the performance of much of the equipment, and salvage may not prove economical as the major goal. Nevertheless, as the increasing size of spacecraft allows for stowage of additional gear, salvage may also be accomplished at these higher altitudes incidental to deorbit-removal or inspection operations.⁶

Removal of inactive man-made debris from outer space and the salvage of valuable spacecraft hardware involve legal problems that are primarily international in scope and require international attention if disturbances between states are to be avoided in the conduct of space salvage and removal operations. Specifically, with respect to space salvage, when, if ever, is an unmanned orbiting space vehicle considered abandoned (no intent on the part of the launching state to return and reactivate it) and therefore a derelict object? In the event that ownership *and* national jurisdiction continue permanently, what is the status of inactive craft or debris that constitute hazards to spacecraft navigation and are not removed from orbit by the state of registry—would good cause exist for another state to deorbit these objects or otherwise remove them from all traffic patterns? Since a vast majority of space vehicles are public craft, they represent for states “a national asset of the greatest importance, directly related to their most exclusive bases of power.”⁷ These legal questions become, therefore, intimately connected with the politics of national prestige and security.

Space salvage and removal operations will create international friction if they are undertaken in the absence of an international consensus on these questions. The repercussions of unregulated space salvage and removal activity are apparent. Unless the political and legal issues inherent in these questions are amicably resolved and international standards of practice agreed upon, we can expect that any unauthorized attempt on

⁵ Salvage of objects from orbit is here intended to mean that, in the case of items recovered from unmanned foreign spacecraft, a system of reward for services rendered to distressed abandoned property is invoked as in maritime law. See text accompanying note 18, *infra*. This does not apply in cases where an agency “retrieves” its own material for reuse or analysis.

⁶ NASA has already conducted independent investigations during manned flight to determine the exact cause of critical spacecraft failures where telemetered data is in question—made possible by the technical capability to rendezvous and dock with space objects. This occurred during the Gemini 9 flight in June 1966, when the cause of the noseshroud’s failure to separate from the McDonnell target vehicle was determined by first-hand observation. And at the XVIIth Congress of the International Astronautical Federation in Madrid, Spain, Astronaut Charles Conrad reported that, during the flight of Gemini 11, he “had seen the Soviet Union’s Proton 3, photographed it, and could give an exact technical description of its external structure, including undetached propellant tanks.” *The XVIIth IAF Congress in Madrid*, Astronautics and Aeronautics, Jan. 1967, p. 68. Salvage/retrieval of equipment or experiments also may be undertaken during rendezvous operations. An experiment from the Gemini 8-Agena, launched in March 1966, was recovered during the Gemini 10 flight in July of the same year.

⁷ McDUGAL, LASSWELL & VLASIC, *LAW AND PUBLIC ORDER IN SPACE* 585 (1963).

the part of one state covertly or overtly to salvage or remove inactive "abandoned" spacecraft of another state from orbit will trigger international incidents and, possibly, military conflict.

This article will review the legal status presently accorded unmanned spacecraft, discuss the principles of maritime law that may be applied in instances of salvage and removal of these craft or their component parts from earth orbit, and attempt to determine the national rights to and the legality of space salvage and removal activity. Finally, several alternate approaches that can be taken to resolve the political and legal issues involved are investigated and a recommendation is made for the approach which the author believes most appropriate.

II. LEGAL STATUS OF UNMANNED SPACECRAFT IN ORBIT

Most Soviet and American jurists have long agreed that objects launched into outer space belong to the state of registry, that they carry the flag state nationality, and that jurisdiction over them resides with the state of origin. This opinion was reinforced by informal agreement reached in the United Nations General Assembly, Resolution 1962 (XVIII) regarding the legal status of spacecraft in orbit, and by the customary practice of states with respect to public and private vessels and aircraft,⁸ and confirmed by international agreement on the *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*⁹ signed on 27 January 1967. It appears already established beyond doubt in space law that states have immediate title to and jurisdiction and control over all registered manned and unmanned spacecraft in earth orbits and beyond, and may exercise their prerogatives to protect and prescribe policy for these vehicles.

There has not been, however, in the expressed opinion of jurists, in General Assembly Resolution 1962 (XVIII), and in the international deliberation aimed at establishing a convention governing the conduct of activities in outer space, any distinction made between national jurisdiction and control over *active* and *inactive* space vehicles or their parts. At present, with respect to space salvage operations, it is not possible to determine with certainty whether jurisdiction (1) attaches permanently regardless of an absence of continued effective physical control or the state of being of the object,¹⁰ or (2) lapses with the conclusion of effective

⁸ *Id.* at 575-78, 583, reviewing analogies to aviation and maritime law.

⁹ Article VIII provides that:

A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body. Ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the Earth. Such objects or component parts found beyond the limits of the State Party to the Treaty on whose registry they are carried shall be returned to that State Party, which shall, upon request, furnish identifying data prior to their return. U. N. Doc. No. A/RES/2222 (1967).

Complete text of the treaty also appears in 33 J. AIR L. & COM. 132 (1967).

¹⁰ McDougal, Lasswell, and Vlasic observe that some states, based on the doctrine of "primary jurisdiction," assert competence for jurisdiction over a person or thing even in situations where effective control over the person or thing no longer exists in fact. McDougal, Lasswell & Vlasic, *op. cit. supra* note 7, at 735.

physical control—in abandonment of the object—as in maritime law.¹¹ With unqualified national or international fiat on this particular question lacking, it is appropriate to review the characteristics of “active lifespan” exhibited by unmanned spacecraft, and analogous legal precedent that may be applied from maritime law, which may indicate whether national jurisdiction ceases or is nullified when a space vehicle’s useful life is ended. (There is no question raised over national jurisdiction in the case of manned spacecraft.)

Contemporary unmanned space vehicles have an “active lifespan”¹² on earth orbit varying from several weeks to several years, dependent upon the programmed period of performance and the reliability of their mechanical and electronic subassemblies. After this active lifespan is terminated (by ground command, by technical malfunction, or by the breakup of the craft), a space vehicle is in a permanently inactive state; that is, its transmitters are shut down, and all equipment ceases to function. At this time there is no possibility of reactivating the craft’s equipment, effective physical control ceases, and the vehicle is dead and becomes, for all intents and purposes, a large piece of debris—unresponsive to further commands from the launching state. It is allowed to orbit the earth silently, a potential hazard to spacecraft navigation for many years or until the friction of the upper atmosphere slows it sufficiently so that it either incinerates upon reentry or impacts the ground.

In classical maritime law, any piece of property on navigable waters exhibiting the characteristics just enumerated for a permanently inactive unmanned satellite is considered derelict, *i.e.*, “abandoned and deserted by those who are in charge of it, without hope on their part of recovering it (*sine spe recuperandi*), and without intention of returning to it (*sine animo revertendi*).”¹³ To be considered derelict, Judge Story asserted in *Rowe v. The Brig*, “it is sufficient that the thing is found deserted or abandoned upon the seas, whether it arose from accident or necessity or voluntary dereliction.”¹⁴ Fragmented debris also may be equated with

¹¹ In maritime law an instrumentality in distress or abandoned (where jurisdiction has lapsed) is subject to voluntary salvage by another party who, if successful in his efforts, normally is accorded a reward for services rendered; however, title to distressed property is not affected by an absence of effective control and jurisdiction. Article VIII of the treaty on outer space, while noting that ownership of objects launched into outer space is not affected by their presence there or by their return to earth, is not as definitive in regard to the permanence of national jurisdiction. See the second sentence of Article VIII, note 9 *supra*. Accordingly, it can be presumed that analogous maritime law regarding the cessation of national jurisdiction and salvage also may be applied in outer space.

¹² This term designates that period of time in which a spacecraft receives and responds to commands from the state of registry and returns usable information to ground receiving stations. The time in which this effective physical control is exercised over the vehicle by the launching state includes periods of planned deactivation and subsequent reactivation of the craft. The active lifespan is considered to be ended when physical control is no longer possible, at which time the craft is inactive. *Cf.*, Article VIII, note 9 *supra*, which apparently refers to legal control rather than physical control over man-made objects in space. See also Machowski, *The Legal Status of Unmanned Space Vehicles*, in *SECOND COLLOQUIUM ON THE LAW OF OUTER SPACE* 113 (1960); and Levitt, *Space Age Question: Who Owns a Fallen Satellite*, *Army-Navy-Air Force Register*, No. 4102, 19 July 1958 (Part One), and No. 4103, 26 July 1958 (Part Two).

¹³ NORRIS, *THE LAW OF SALVAGE* 221 (1958).

¹⁴ 20 Fed. Cas. 1281 (No. 12093) (C.C. Mass. 1818).

derelict flotsam from a wreck,¹⁵ or, in certain instances, jetsam that is thrown overboard while in orbit. It is significant that derelict property does not have to be lost (its location unknown), only that it be abandoned without intent to return; for inactive unmanned spacecraft in earth orbit are not necessarily lost—most can be tracked and their positions computed and projected into the future for many days. (Smaller pieces of debris or objects in certain trajectories can be lost to ground-based skin-track radar.)

From the preceding analogy, can permanently inactive unmanned spacecraft and debris be juristically considered abandoned? Is it correct to assume that once their active lifespan is ended, and they are at least technically abandoned, that they become derelicts? In 1955 two French lawyers adopted this position—without specifying whether the unmanned spacecraft were physically controlled or inactive—and suggested that they were *res derelicta*, like a shipwreck, or a kind of "bottle in the sea."¹⁶ This approach has been strongly criticized, but not refuted, by the other jurists,¹⁷ and it has not received any international support. In fact, the question of continuity of national jurisdiction and abandonment remains open, and until it is satisfactorily answered it is a potential source of international friction.

III. SALVAGE OF MAN-MADE OBJECTS FROM OUTER SPACE

With the legal question of dereliction of inactive unmanned spacecraft unanswered, can we determine what international rights to salvage of these craft or their component parts do exist? Let us assume, for the purpose of discussion, that these craft are abandoned. Maritime law accords distressed¹⁸ and derelict private vessels or property on navigable waters as subject to salvaging by anyone who, in good faith, takes possession of the property as a salvor. The salvor is not considered an interloper or trespasser, and he may claim a salvage reward if the craft is conveyed to shore. While title to the abandoned or distressed property is not relieved from the legal owner, the salvor may, by the act of successfully salvaging the property, claim a lien against it.¹⁹

¹⁵ "A wreck is considered to be any stranded or sunken vessel which has been *abandoned*, but the term also signifies any part or fragment of ship or cargo, whether afloat or aground." NORRIS, *op. cit. supra* note 13, at 61.

¹⁶ Danier & Saporta, *Un Nouveau Probleme de Droit Aerien, Les Satellites Artificiels*, 1955 REVUE GENERALE DE L'AIR 301, cited by Machowski, *supra* note 12, at 114.

¹⁷ Zyllicz, *Sur Quelques Problemes de Droit Astronautique*, REVUE GENERALE DE DROIT INTERNATIONAL PUBLIC, Oct.-Dec. 1958, reprinted in Senate Comm. on Aeronautical and Space Sciences, *Legal Problems of Space Exploration, A Symposium*, S. Doc. No. 26, 87th Cong., 1st Sess. 1162 (1961); and Machowski, *supra* note 12, at 114.

¹⁸ A marine peril is considered necessary in a valid salvage claim, where a vessel has encountered misfortune which might possibly expose it to destruction if assistance were not forthcoming. Absolute peril does not have to be proven. For inactive unmanned spacecraft in near-earth orbit, the peril of destruction through eventual reentry into the atmosphere may be claimed. Salvage of distressed *manned* spacecraft is not considered in this article.

¹⁹ NORRIS, *op. cit. supra* note 13, at 228, 246. For a general review of aviation and maritime law of salvage as a background against which space salvage activities may be evaluated, see Haley, *Space Salvage—Artifacts and Personnel in Space and On Terrestrial Jurisdictions*, in PROCEEDINGS OF THE EIGHTH COLLOQUIUM ON THE LAW OF OUTER SPACE 119-30 (1965). The possibility of

For public vessels, however, whether derelict or in distress, there is no equivalent international recognition of contract or voluntary salvage. Article 14 of the Brussels Salvage Convention of 1910,²⁰ now ratified by the United States and the Soviet Union, specifically excludes "ships of war or . . . other government ships appropriated exclusively to a public service" from provisions of the Convention. Although this restriction has drawn criticism and proposals for revision to include these vessels,²¹ no international suit to recover a reward, either in rem or in personam, presently is granted for salvage services rendered public craft. (This does not hold true in all municipal law; some states permit suit for recovery of a salvage award where public property is rescued and returned.)²²

Most American and all Soviet unmanned spacecraft are public vehicles, and may be considered akin to government-owned scientific research vessels. By analogy to maritime law, it appears that an international suit for remuneration for salvage services rendered foreign space vehicles or their parts would not be permitted even if they are determined to be in distress or are abandoned and derelict. Foreign spacecraft equipment recovered on earth or returned from outer space would, under customary law, have to be turned over to the state of registry without compensation.²³ Conversely, should it be held that permanently inactive space vehicles are not abandoned and derelict, then any attempt at unauthorized or voluntary salvage by a foreign state becomes trespass,²⁴ international theft and piracy, or an unwarranted act of aggression, depending upon the circumstances.

IV. REMOVAL OF MAN-MADE OBJECTS FROM OUTER SPACE

Municipal laws of maritime states normally require that when a vessel is wrecked or sunk in a navigable channel or territorial water, posing a hazard to navigation, it is the duty of the owner immediately to mark it with a buoy or beacon during the day, and a lighted lantern at night. In United States Admiralty law, if the owner does not diligently remove

applying the international law of wreck and salvage to man-made objects in outer space also has been asserted by Captain W. E. Berg, of the United States Navy. He excludes manned vehicles from salvage, but he does not pursue the thesis by considering the kinds of craft (*i.e.*, public or private) or their states of being (active or inactive) which are involved. Berg, *Weapons and Space*, PROCEEDINGS OF THE CONFERENCE OF SPACE SCIENCE AND SPACE LAW 59 (1963).

²⁰ Convention for the Unification of Certain Rules of Law With Respect to Assistance and Salvage at Sea, 23 Sept. 1910, art. 14, 37 Stat. 1658, T.S. No. 576 (effective 1 March 1913).

²¹ See WILDBOER, *THE BRUSSELS SALVAGE CONVENTION* 30-31 (1965). The author also cites an immediate need for international clarification and distinction between salvage services rendered *to* and those rendered *by* government ships.

²² *E.g.*, the United States has consented to be libeled in personam under the Public Vessels Act of 3 March 1925, for compensation for towage and salvage services provided to public vessels both by United States nationals and nationals of another state *if* reciprocity is accorded United States nationals. Section 5 asserts "that no suit may be brought by a national of any foreign government unless it is proved 'that said government, under similar circumstances, allows nationals of the United States to sue in its courts.'" 2 HACKWORTH, *DIGEST OF INTERNATIONAL LAW* 441-42 (1942).

²³ *Cf.*, the last sentence of Article VIII of the treaty on outer space note 9 *supra* which refers to unreimbursed return of man-made objects "found beyond the limits" of the state on whose registry they are carried.

²⁴ A prohibition of visit and search in time of peace on the high seas is well established. Regarding trespass, see HALEY, *SPACE LAW AND GOVERNMENT* 151 (1963).

the craft "it will be considered abandoned and becomes subject to removal by the United States Government."²⁵ Hazards to navigation on the high seas of a similar nature, however, involve application of norms derived from international custom and compacts.

Derelict objects on the high seas without a legal title or national flag, such as icebergs and unidentifiable flotsam and jetsam, can be destroyed. However, derelict vessels in the same region still carry the indicia of their origin, have a titled owner, and retain some residual value. Neither the multilateral Convention on the High Seas (1958) nor the Convention for the Safety of Life at Sea (1960) accord a legal right to any nation other than the nation of the derelict vessel's nationality to sink or otherwise destroy these vessels irrespective of the hazards they represent for maritime navigation. Chapter V, Part D, Regulation 2(a) of the latter convention directs the master of a ship which encounters "dangerous ice, a dangerous derelict, or any other direct danger to navigation. . . ." to communicate information regarding the hazard to authorities ashore. In maritime law, the legal right to destroy abandoned vessels of another nation on the high seas in peacetime is only received from that flag state, and is normally accorded, if it is a private vessel, after permission is secured from the title owner and insurance company.

Equivalent hazards to spacecraft navigation in near-earth space can be at least temporarily minimized by obtaining precise information on the changing positions of space objects. Vast economic resources and advanced technology permit the major states to establish and maintain large networks of ground-based radar to track and account for most orbiting spacecraft and inactive debris. In the United States, ground-based radar tracking and correlation of spacecraft and debris is handled by the North American Air Defense Command, which maintains a Space Detection and Tracking System (SPADATS) for defense purposes to detect, track, identify, and catalog all satellites and orbiting metallic debris in earth orbit. Although developed for defense purposes, SPADATS tracking information can be employed by American space agencies for launch planning in order to prevent a collision in outer space. Technical limitations to SPADATS, however, restrict the number and kinds of objects that can be successfully observed by skintrack radar; additional difficulties are introduced by the increase in space traffic and by vehicles capable of changing orbits.²⁶

The accumulating debris, the introduction of vehicles that can change orbits, and the technical limitations of ground-based radar systems will eventually force states engaged in space exploration to provide for de-orbit-removal of inactive hardware that remains in orbit for an extended length of time. In the near-earth regions this task may be accomplished by (1) space systems consisting of manned-recoverable spacecraft capable

²⁵ NORRIS, *op. cit. supra* note 13, at 224, citing 33 U.S.C. § 409 (1964); the Secretary of War (now Secretary of the Army) is empowered to remove wrecks in the territorial waters of the United States after advance public notice has been given, 33 U.S.C. § 414 (1964).

²⁶ Hall, *supra* note 1, at 331.

of orbital rendezvous-docking and equipped with spare solid-propellant rockets that can be "strapped on" inactive unmanned vehicles or their fragments by astronauts during extravehicular movement for the purpose of "braking" the objects into a reentry trajectory, and (2) for flights yet to be launched, programming spacecraft with the capability for controlled deorbit at the conclusion of their mission.²⁷ As spacecraft are constructed of more durable metals, however, large pieces will survive to impact the earth.²⁸ The time selected for initiating reentry destruction will have to take into account acceptable reentry zones for given orbital trajectories. Reentry would have to be triggered to occur over uninhabited areas unless the angle of attack can be effectively controlled to ensure that no fragments survive air-friction heating. When deorbit-removal of man-made objects from earth orbit becomes a practical necessity²⁹ and space systems to accomplish this task are created, states will also have to determine what inactive debris may be legitimately removed from orbit if they wish to avert international incidents.

Outer space, like the high seas, is generally acknowledged to be free for the use of all; it is not subject to the exclusive competence of any one state as is national airspace.³⁰ It is reasonable to infer from maritime law that *title* to identifiable, inactive, man-made objects in space is retained by the flag state and is not affected by abandonment. This is made explicit in Article VIII of the treaty on outer space. (The legal question of dereliction and lapse of jurisdiction—central to space salvage operations—does not prevail in the case of deorbit-destruction missions.) The growing number of man-made objects in near-earth space that will remain in orbit for periods ranging up to thousands of years represent a threat to the safety of spacecraft navigation in the future.³¹ Under customary law, and under the wording of Article VIII of the treaty on outer space, authority to deorbit and destroy—or to permit others to deorbit and destroy—identifiable space debris would be confined to the state of registry

²⁷ Other possible approaches that have been suggested include guiding vehicles into the sun or other regions of the solar system, or boosting all inactive craft into a single orbital area about the earth and then vaporizing the debris with a nuclear blast. Although technically possible, these suggestions presently remain economically unfeasible.

²⁸ Reentry to impact of larger portions of space vehicles already has occurred from earth orbit. See, e.g., *Titan III Transstage Comes Down in Argentina*, *Missile/Space Daily*, 20 May 1965.

²⁹ Hilliard W. Page, President of General Electric's Missile and Space Division, recently asserted that deorbit-destruction removal systems will be required by the year 2000, and that "his extrapolation showed a million satellites in orbit by around 1990. . . ." *Space Highways, Manned Asteroids Among Way Out Symposium Suggestions*, *supra* note 3. This writer is of the opinion that removal systems will become necessary long before a million satellites are in earth orbit.

³⁰ A boundary between airspace and outer space has not yet been internationally established. According to Lincoln P. Bloomfield, the United States and the Soviet Union, at a meeting of the International Astronautical Federation on 4 Oct. 1960, agreed to a standard by which space flight records will be judged. The standard specified that "flights [in this case manned rockets] would have to reach 62 miles to qualify as space flights." Bloomfield, *The Prospects for Law and Order, OUTER SPACE, PROSPECTS FOR MAN AND SOCIETY* 156 (1962). During 1964 the United States Department of Defense began awarding astronaut's wings to military pilots of the X-15 rocket plane who had flown above 256,000 feet (50 statute miles). These actions are construed as tentative first steps toward delimitation of a boundary between airspace and outer space.

³¹ In a military sense, moreover, these objects could have the effect of decoys, saturate practical tracking systems, and would degrade ground-based radar-type warning devices such as SPADATS.

in times of peace and in the absence of any additional convention governing the conduct of this activity.

Still, should future traffic congestion in near-earth polar and low-inclination orbits occur so that intolerable navigation difficulties result, and a state refuses to remove its debris, would another state be within its rights to board and deorbit the foreign debris? McDougal, Lasswell, and Vlasic suggest that "states can be expected to claim competence to make applications to the spacecraft of other states for violations of inclusive prescription, such as with respect to minimum order or the authorized exclusive protection of the underlying state."³² While a course of direct interference with identifiable property of another state in outer space may eventually be determined necessary by national policy makers as a result of collisions, it will not be undertaken without carefully balancing the continuing navigation hazards created by the orbiting debris against the tradeoff between the benefits that may be achieved for spacecraft navigation and the potential international disturbance that will result from this action. International protest and threats to take action to deorbit hazardous foreign debris would logically precede the inauguration of such activity, and should afford an interval in which the offending state is permitted an opportunity to take action on its own initiative.

V. CONCLUSION

The contemporary international community is composed of separate, independent states, with the states most active in the exploration of space possessing a preponderance of power. In the absence of an effective centralized authority, resolution of the political and legal issues involved in space salvage and removal activity can be secured by one of two principal modes: through agreement among the states concerned, or by reliance upon custom and precedent derived from actual practice. For these projected operations, however, custom and precedent can only proceed at the risk of conflict. Even if a nation initiating unrestricted salvage and removal activity is willing to accept similar claims against its own inactive craft, reciprocal response is not guaranteed. Direct interference with or destruction of inactive public property of another nation in outer space, instead of establishing a permissive norm, may well cause the state offended to react by implementing sanctions it considers sufficient to force cessation of this activity, such as escalating interference to include removal-destruction of active unmanned spacecraft. The more rational—and more likely—approach to resolution, however, is by formal international agreement in which mutually acceptable standards regulating space salvage and removal operations are formally established in convention. Growing space traffic congestions in near-earth space and a technology that now permits rendezvous and docking in orbit will increase the urgency for recognized acceptable procedures and should work to force international settlement by established standards.

³² McDougal, Lasswell & Vlasic, *op. cit. supra* note 7, at 661.

Should precedent and custom prevail, however, in the case of removal-destruction of inactive man-made objects where a state retains title to its hazardous debris in earth orbit but refuses to remove these objects, and where other states refrain from interfering with the debris to the peril of spacecraft navigation, it would seem that a corresponding corollary should obtain: absolute liability should be imposed upon the state of registry for any damage caused by its debris in outer space, or at least some form of the *res ipsa loquitur* doctrine should follow in which negligence is automatically attributed to the launching state.³³ When related to space salvage operations, reliance upon custom and precedence may influence states to program a capability for controlled deorbit into their vehicles to prevent any opportunity for salvage; this eventuality also would provide direct benefit to future space navigation. However, for spacecraft placed in orbit at higher altitudes, where the weight penalty imposed in carrying additional propellant for deorbit purposes is unacceptable, we may expect that states will begin "booby-trapping" their vehicles in order to discourage foreign tampering or salvage attempts.

In the event nations favor seeking international agreement to resolve the political and legal problems of space salvage and removal activity, any international conference convened for this purpose will, for example, have to arrive at suitable definitions for "spacecraft," "satellite," and fragments thereof, and establish the legal status of these items, including the duration that national jurisdiction is effective, the vehicle type (public or private), and the recognized state of being (active or inactive). Salvage and removal of inactive man-made objects in outer space may be legally prohibited by finding that national jurisdiction over, as well as title to, identifiable material is not affected by the passage of time. This kind of determination, however, should be accompanied by assurances that the state of registry will remove its own inactive debris from earth orbit within a reasonable period or stand liable for any damages they may cause others. Conversely, if some form of space salvage and removal activity is found commonly acceptable, various articles will have to determine, among the more important considerations, when such activity is permissible and for what kinds of vehicles or fragments, and establish procedures for obtaining permission to proceed, for presenting salvage claims, for returning material to the state of registry, and for paying salvage awards.

Space salvage and removal systems are presently under study by several aerospace firms in the United States.³⁴ A definitive answer to the legal

³³ Strict application of the *res ipsa* doctrine to inactive man-made objects in space may be questioned since it implies that the instrumentality causing an injury has remained in the exclusive control of the party accused of negligence, whereas physical control over inactive objects by the state of registry has already terminated. See Staff Report of the Select House Comm. on Astronautics and Space Exploration, *Survey of Space Law*, H.R. Doc. No. 89, 86th Cong., 1st Sess. 24 (1959).

³⁴ E.g., North American Aviation recently announced details of an inflatable, ring-shaped flying wing space recovery system. The full-scale device, a sixty-foot diameter wing, can be employed "to recover spacecraft weighing up to 15,000 lbs." Tests of subscale models are presently underway. *NAA Details Ring-Wing Space Payload Recovery System*, *Missile/Space Daily*, 23 Jan. 1967, p. 86. Other recovery systems are detailed in House Comm. on Science and Astronautics, *Space Flight Emergencies and Space Flight Safety—A Survey*, 90th Cong., 1st Sess. (1967).

question of abandonment of inactive unmanned spacecraft as it affects space salvage operations, and international procedures for removal of hazardous inactive debris from earth-orbit traffic patterns cannot afford to wait on attainment of these technical capabilities and inauguration of these programs if international discord is to be avoided. In a decentralized international political arena, the minimum acceptable resolution is a statement from national policy makers regarding their nation's position on the question of abandonment, together with pledges to remove their own inactive debris from near-earth space. Such statements would provide a basis for community expectations. The final resolution towards which states must work, however, is normative regulation of these activities reached in convention.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT ON THE WORK OF THE SUBCOMMITTEE ON PROBLEMS OF NATIONALITY AND REGISTRATION OF AIRCRAFT OPERATED BY INTERNATIONAL AGENCIES (Second Session)*

The Subcommittee held its second session in Montreal from 4 to 13 January 1967 under the chairmanship of Mr. A. Garnault (France). At the conclusion of its first session in July 1965, the Subcommittee adopted a Report¹ recording the decisions taken at that session.² The present document is the further report contemplated in paragraph 22 of the Report of the first session.

I. SUBJECTS CONSIDERED DURING SECOND SESSION

At the end of the first session, the Subcommittee left for later consideration the following questions:

- (1) methods of application of the principle of joint registration, and
- (2) composition of the international operating agency.

While the above were the main subjects considered during the second session, there were also several related questions, as indicated in the following pages of this Report, including:

- (1) whether the Council will be obliged to recognize certain kinds of registration of aircraft on a non-national basis;
- (2) the essential criteria for such recognition;
- (3) some specific plans for non-national registration of aircraft;
- (4) the importance of uniformity of aeronautical laws and regulations in the case where the aircraft are not registered in any one state;
- (5) whether any amendment to the Convention would be necessary for non-national registration; and
- (6) whether the Council should seek the views of contracting states in certain cases.

All the foregoing questions having been taken into account, the members of the Subcommittee, without prejudice to the views that their

* Those members who during the first session had not shared the majority views concerning joint or international registration of aircraft and the scope of the determination to be made by the Council under Article 77 of the Convention requested that the reasons for the majority view be recalled. A written statement was prepared by the Secretariat, in consultation with the Chairman of the Subcommittee and the Representatives of the Congo (Brazzaville) and Senegal, making clear some of those reasons. This document appears as Appendix I. This statement, however, was not for discussion and should not be regarded as an expression of the views of all members of the Subcommittee.

¹ LC/SC Article 77/Report, 24 July 1965.

² See particularly paras. 7-15 of the Report and the Resolution in Annex B to the Report.

governments may have, arrived at a consensus to the effect that the last sentence of Article 77 of the Chicago Convention would be applicable to cases of joint registration or international registration of aircraft only if certain conditions were fulfilled. The consensus is described in Part XI below.

II. METHODS OF APPLICATION OF PRINCIPAL OF NON-NATIONAL REGISTRATION

To explain the terminology used in this Report, it should be stated that two different kinds of registration were discussed in the Subcommittee. The first was the case of "joint registration" in which the states constituting the operating agency would establish a single register, without there being established, for the purpose of registration, an international organization with a legal personality. On the other hand, the expression "international registration" denotes the cases where the aircraft would be registered with such an international body. One particular system of joint registration was examined in detail by the Subcommittee, as explained below. It should be mentioned that the question here considered relates only to the function of registration of aircraft, as distinct from the functions pertaining to compliance with technical standards or procedures in relation to aircraft.

III. JOINT REGISTRATION

The Subcommittee examined in detail the scheme of joint registration which was set out in the Annex of the Report of the first session.³ The scheme is as follows:

- (1) The states concerned will establish one joint register for registration of aircraft of the operating agency.
- (2) The joint register may consist of several parts; each part will be maintained by one or other of these states.
- (3) An aircraft will be registered only once, namely in that part of the joint register which is maintained by a given state.
- (4) All aircraft registered in any of the parts of the joint register shall have one common marking, in lieu of a nationality mark.
- (5) The functions of a state of registration under the Chicago Convention will be performed by the states mentioned in (3) above. Such action will, however, be done on behalf of all the states jointly.
- (6) The responsibilities of a state of registration with respect to the various provisions of the Chicago Convention will be the joint and several responsibility of all the states concerned. Any complaint by other contracting states will be accepted by any of the states mentioned.

Other possible plans for joint registration were mentioned during the discussion. One was the possibility that while a joint register would be

³ LC/SC Article 77/Discussion Paper No. 2, 20 July 1965.

established by the states concerned, each aircraft would be simultaneously registered in each of the component states. It was agreed that any scheme of this kind would be incompatible with the provisions of Article 18 of the Chicago Convention.

IV. INTERNATIONAL REGISTRATION

The essential idea here is that an internationally constituted body with a legal personality would be the authority for registration of aircraft. Such a body would be distinct and separate from the agency which would be operating air services. Such a body could be established, for the purpose stated, by the states constituting the international operating agency. Mention was also made in this connection of ICAO⁴ or a body established by states on the initiative of ICAO.

V. CRITERIA

At the first session it was agreed⁵ that, whether for joint registration or for international registration, the following criteria must be met:

- (1) the states constituting the international operating agency shall be bound jointly and severally to assume the obligations which the Chicago Convention places on a state of registration of aircraft; and
- (2) the operation of the aircraft must not give rise to any discrimination against aircraft of other contracting states.

Towards the end of the second session it was agreed that certain additional criteria must be met for recognition by the Council of joint registration or international registration of aircraft.⁶

In connection with (1) in the preceding paragraph, it was agreed that no problem would arise under Article 18 (Dual Registration) in the cases where there was *one single* registration, whether on a joint register or with an international body, notwithstanding the responsibility of more than one state.

In connection with (2), the following articles of the Chicago Convention were examined:

Article 7 (Cabotage): It was agreed that the mere fact of joint or international registration under Article 77 would not operate to constitute the geographical area of the multi-national group as a cabotage area.

Article 9 (Prohibited Areas): The Subcommittee agreed that joint or international registration will not affect the application of this Article.

Article 15 (Airport and Similar Charges): The Subcommittee saw no difficulty in the case of this Article.

Article 27 (Patent Claims): The requirement of this Article being that

⁴ See third para. of Part VI *infra*.

⁵ LC/SC Article 77/Report, para. 15, 24 July 1965.

⁶ See second para. of Part XI *infra*.

a given state should be a party not only to the Chicago Convention but also a party to the International Convention for the Protection of Industrial Property, it might be that, in a particular case, one or other of the states constituting an international operating agency was not a party to the latter Convention. In such case the interests of that state are not protected by the terms of Article 27.

VI. CONCLUSIONS ON METHODS OF APPLICATION OF THE PRINCIPLE OF NON-NATIONAL REGISTRATION

The Subcommittee agreed that in the specific case of joint registration described in Part III above, there would be no problem in regard to the fulfillment of the conditions specified in Part V above.

In the case of international registration, any particular scheme would have to be examined in the light of the above-mentioned criteria. In this connection attention is invited to the provisions of item 3 of the consensus described in Part XI below.

With regard to the specific case that ICAO itself might be the body with which aircraft would be registered, it was noted that the Chicago Convention does not contain any provision which militates against such a solution. On the other hand, there being no specific article of the Convention stating that such function, namely, registration of aircraft would be performed by ICAO, it was thought that at least the approval of the Assembly should be obtained before ICAO undertook to register aircraft.

VII. WHETHER COUNCIL WILL BE OBLIGED TO RECOGNIZE ALL KINDS OF REGISTRATION ON A NON-NATIONAL BASIS

It was agreed that in the case of a specific plan of joint registration or international registration, the Council would not be obliged to recognize such registration except to the extent that the criteria mentioned in Part V above were met.

VIII. TWO PHASES OF PROCEDURE FOR DETERMINATION

It was agreed that the process of determination contemplated in Article 77 would include two phases, namely:

- (1) adoption by the Council of general, basic criteria to be applied to cases of joint or international registration of aircraft;⁷ and
- (2) application of the above-mentioned general, basic criteria to a particular plan for joint or international registration which might be brought before the Council.

IX. IMPORTANCE OF UNIFORMITY OF AERONAUTICAL LAWS

It was recognized that the operation of aircraft by a given international agency should be governed by a uniform standard of aeronautical

⁷ These are specified in Part XI.

laws and regulations. This would be in the interest not only of the agency itself but also of other contracting states which might be affected by the operation of such aircraft.

X. COMPOSITION OF THE INTERNATIONAL OPERATING AGENCY

It was noted that while Article 79 of the Chicago Convention speaks of "A State," Article 77 itself speaks only of contracting states in relation to the constitution of an international operating agency. Further, to admit a non-contracting state in an agency in connection with the provisions of Article 77 would be in derogation of the principle that a state not party to a treaty (here the Chicago Convention) can have no claim to benefit from the provisions thereof. A counter-argument mentioned during the discussions was that those states constituting the agency which are parties to the Chicago Convention would be jointly and severally responsible for the fulfillment of those obligations which, under the Chicago Convention, attach to a state of registration.⁸ The answer to such observation was that a given noncontracting state, if it is to benefit from the Chicago Convention, must subscribe to all the obligations laid down by the Convention and not only those obligations which pertain to registration of aircraft, and that the accepted method would be to deposit an instrument of adherence to the Convention. This exchange of views resulted in the conclusion that a contracting state which was not a member of the operating agency, could refuse a noncontracting state the benefits or privileges which the Convention confers only on aircraft of contracting states.

XI. CONSENSUS

During the course of the second session, effort was made by all the members of the Subcommittee to reconcile differing opinions and to find the greatest measure of common agreement. Taking into account the views expressed during the discussions in the Subcommittee at its first and second sessions, the Representatives of Canada, India, the Kingdom of the Netherlands, Sweden, the United Kingdom, and the United States of America submitted for the consideration of the Subcommittee a proposal which appears in LC/SC Article 77/WD No. 11. Due to the importance of defining a solution which would meet with the broadest unanimity, the members of the Subcommittee were able to arrive at a consensus on that proposal the text of which, as unanimously amended during the meeting, is set out in the following paragraph. The consensus refers to cases in which an aircraft of an operating agency is not registered in any one state.

The above-mentioned proposal, as modified during the meeting and on which there was consensus, was as follows:

The Council should be guided by the following basic criteria in arriving at a determination in accordance with Article 77:

⁸ See Part XI, item (1) *infra*.

- (1) The states constituting the international operating agency shall be jointly and severally bound to assume the obligations which, under the Convention, attach to a state of registry.
- (2) The states constituting the international operating agency shall identify for each aircraft, as between the states constituting the agency, an appropriate state which shall be primarily responsible for receiving and replying to representations made by other contracting states of the Convention. This identification shall be without prejudice to the joint and several responsibility assumed by each of the participating states in the agency, the duties assumed by the state so identified being exercised on its own behalf and on behalf of all the other participating states.
- (3) In lieu of (2) above, the states constituting the international operating agency may devise such other system (for example, registration with a public international organization, with legal personality, established for this purpose by the states constituting the international operating agency) as shall satisfy the Council that the other contracting states of the Convention have equivalent guarantees and that the provisions of the Convention are complied with.
- (4) The states constituting the international operating agency shall ensure that their laws, regulations, and procedures relating to air navigation meet in a uniform manner the obligations under the Convention and the Annexes thereto.
- (5) The operation of the aircraft concerned shall not give rise to any discrimination against aircraft registered in other contracting states with respect to the provisions of the Convention.⁹

The foregoing proposal was accompanied by the following explanation which was agreed by the Subcommittee:

It is appreciated that each individual case will need to be considered on its own merits in order for the Council to be able to determine how the provisions of the Convention relating to nationality shall be applied. A case in point arises in the discussion of the plan outlined in the Annex to Discussion Paper No. 2.¹⁰ In such a case, a solution which may well be acceptable to the largest majority of member States would be one along the lines of the approach set out in Article 18 of the Tokyo Convention. For our present purposes, this approach envisages the designation of the State which, under the system outlined in the Annex, administers that part of the common register in which an aircraft is registered. The State identified in paragraph 1B¹¹ would thus be considered as having the duties of the State of registry, acting on its own behalf and on behalf of all the other participating States, for purposes of applying the provisions of the Convention relating to nationality. It would be most appropriate if this identification were made by the participating States themselves. In the light of this identification, the Council could decide to make a determination under Article 77 that the State so identified shall be considered as having the duties of the State of

⁹ See third para. of Part V *supra*.

¹⁰ Set out in Part III *supra*.

¹¹ Part XI, item (2) *supra*.

registry under the circumstances and for the purposes mentioned above. Other cases may well require different approaches.

While the foregoing explanation would relate more particularly to the case contemplated in (2) above, there could be other cases. Thus, the Representative of France brought to the attention of the Subcommittee a case to which (3) could be applied.¹²

In connection with the proposal in the second paragraph of Part XI above, its proponents also suggested a procedure for consultation with contracting states. This particular point, on which there was no consensus, is dealt with in Part XIII below.

XII. OBSERVATIONS ON THE PROPOSAL IN PART XI ABOVE

In connection with the proposal, it should be observed that:

(1) in the case of joint registration or international registration, all the aircraft of a given international operating agency shall have a common mark, and not the nationality mark of any particular state; the provisions of the Convention which refer to nationality marks (Articles 12 and 20) and Annex 7 to the Convention shall be applied accordingly;

(2) each aircraft so registered shall be deemed to be an aircraft of a contracting state for the purposes of the Convention, and, in so far as concerns any provisions of the Convention which speak of, or imply, nationality, such an aircraft shall be treated as having, for such purpose, the nationality of each of the contracting states constituting the agency.

One view expressed in connection with item (2) of Part XI was that its essential purpose would be served if, instead of necessarily identifying a state, there were registered with ICAO the name and the address of an authority of one of the states constituting the international operating agency or, as the case may be, of the international registering body.¹³

XIII. CONSULTATION WITH STATES

In commenting on their proposal, the Delegations mentioned in Part XI stated as follows:

Before the Council actually makes a determination, it would be useful if the views of all member States of ICAO were sought. This should help to avoid any doubts on the binding character of such a determination and the difficulties which might arise from invocation of the provisions of the Convention relating to disputes. In this connection, the Council may wish to circulate a draft of its proposed determination.

This proposal relates to the occasion when the Council would be requested to make a determination in a particular case under item (2) of Part VIII above. On this proposal there was no consensus. In opposition it was stated that it was the specific duty of the Council itself to discharge the function, laid upon it by the last sentence of Article 77 of the Convention, to make a determination. It was also stated that the consensus specified in

¹² The example to which he referred is Appendix D to this report.

¹³ The comments in Part XII do not signify dissent from Part XI.

Part XI represented a legal opinion of the Subcommittee, embodying all necessary safeguards, and that if this opinion were confirmed by the Legal Committee itself, there would be no justification thereafter for the Council to go to the states at large for expression of views on specific cases brought before it.

XIV. AMENDMENTS

At an early stage during the second session, mention was made of the possibility of amendments to the Chicago Convention in the event that the conclusion was reached that the provisions of the Convention could not, without amendment, be applied in the case of joint or international registration of the aircraft of an international operating agency. One suggestion made in this connection was that the following could be possible amendments for such purpose:

- (1) in Article 18 of the Chicago Convention the word "State" be replaced by "register";
- (2) in Article 77 there be inserted a sentence to the effect that:

Nothing in this Convention shall prevent the aircraft operated by an organization or an international agency from being registered in a joint register.¹⁴

However, in view of the consensus, which is essentially to the effect that the provisions of the Convention, as it is, can be applied, subject to fulfillment of certain criteria,¹⁵ to jointly or internationally registered aircraft of an international operating agency constituted by contracting states, the Subcommittee decided not to proceed with consideration of the question of amendments to the Convention.

APPENDIX I

QUESTIONS RELATING TO AMENDMENT OF THE CHICAGO CONVENTION AND SCOPE OF THE DETERMINATION BY THE COUNCIL UNDER ARTICLE 77 OF THE CONVENTION

I. INTRODUCTION

Paragraph 12 and 14 of the Report of the Subcommittee formulated at its first session summarized the conclusions of the Subcommittee on the questions whether an amendment of the Chicago Convention would be necessary for the purpose of joint or international registration of aircraft and the scope of the "determination" by the Council required under Article 77 of the Convention. At the second session, a request was made by the Representatives of the United Kingdom and the United States for amplification of the reasons which led to the conclusions of the Subcom-

¹⁴ This sentence would be inserted just before the existing last sentence of Article 77.

¹⁵ See the second para. of Part I, Part XI, and Part XII *supra*.

mittee recorded in those two paragraphs. Therefore, and as specifically requested, the Secretariat has prepared this paper. In doing so, account has been taken also of the views of those representatives who did not agree with the Subcommittee's conclusions recorded in paragraphs 12 and 14 of the Report of the last session. As agreed in the Subcommittee, the present paper is only for the purpose of recalling explanations and reasons of the above-mentioned decisions taken at the last session. Therefore, this paper is not for discussion.

II. REASONS FOR JOINT OR INTERNATIONAL REGISTRATION OF AIRCRAFT¹

The Subcommittee was convinced of the importance of promoting international cooperation in air transport as envisaged in Article 77, 78, and 79 of the Convention.² It would also be of importance in this connection that aircraft of an international operating agency should be jointly or internationally registered, because that would afford a practical means of attaining the objective of such international cooperation. It was felt that studies of Article 77 made previously by the Air Transport Committee and the Panel of Experts failed to do justice to either the importance of international cooperation or the importance of joint or international registration of aircraft. Those studies seemed to be based, *inter alia*, on the hypothesis: "That, even were it found possible, no effective purpose would be served by two or more Contracting States that have set up an international operating agency, establishing a joint registration authority and arranging for aircraft to bear the joint nationality of the participating States."³ Another hypothesis, this one of the Panel, was to the effect that if the aircraft of an operating agency were registered in a contracting state, there would be no difficulty in regard to the application of the provisions of the Convention relating to nationality of aircraft.⁴ Such hypotheses would serve only to evade, not solve, the problem of the application of the last sentence of Article 77. Their validity is, however, questionable. First, there are in existence, or proposed, a number of international operating agencies for air transport. Secondly, to state that a determination would not be required if the aircraft of such agencies were registered nationally would call into question the mandate of the Council specified in the last sentence of Article 77.

¹ "Joint registration" is described in LC/SC Article 77 Discussion Paper No. 2, 20 July 1965, para. 3B. "International registration" is described in para. 3A.

² See para. 10 of the Report of the first session.

³ C-WP/2284, 15 Nov. 1956, para. 16(4). See LC/SC Article 77/WD No. 1, 28 Dec. 1964, p. 16.

⁴ LC/SC Article 77/WD No. 1, 28 Dec. 1964, p. 149, para. 1 provides:

If all the States which will constitute the proposed Pan Arab Airline were parties to the Chicago Convention, the aircraft operated by the Airline would enjoy all the privileges available under that Convention, subject to compliance with the provisions of the Convention, provided the aircraft were registered in a Contracting State. It is not anticipated that there will be any difficulty in regard to the application of the provisions of the Convention relating to nationality of aircraft so registered, but if in fact it were found that some specific difficulty did arise, the Council would be prepared to examine such difficulty in order to consider the question in accordance with its functions under the last sentence of Article 77 of the Chicago Convention.

An international operating agency is constituted under a treaty between states and not under a national law. Its properties, including its aircraft, being owned by more than one state, the entire concern, including the aircraft would have an international as distinct from a national character. If such aircraft were registered in one particular state and were to have one particular nationality under Article 17 of the Chicago Convention, then that would be inconsistent with their international character.

In the same vein, the Tokyo Convention⁵ specifically provides in Article 18 for the case of aircraft, operated by international operating agencies, which are "not registered in any one State."

The last sentence of Article 77 of the Chicago Convention also is capable of only one interpretation, unless it were to have no meaning. That interpretation is that the framers of the Convention recognized that aircraft operated by international operating agencies would not attract literally, *i.e.*, word for word, the application of "the provisions of this Convention relating to nationality of aircraft . . . operated by international operating agencies." Therefore, the Convention provides in that sentence that the manner of application of the provisions concerning nationality of aircraft to the special case where the aircraft are those of an international operating agency, shall be determined by the Council.

The foregoing shows that it would not only be consistent with, but would be within the scope of, the last sentence of Article 77 that the aircraft of an international operating agency could be other than nationally registered.

III. ARTICLES OF THE CONVENTION

The Subcommittee during its first session examined in detail each and every one of the provisions of the Convention which expressly or by implication refer to nationality of aircraft. For example, it examined Article 17 which provides: "Aircraft have the nationality of the State in which they are registered." It is entirely consistent with this provision to say that the Convention does not require that aircraft must be registered in a state. If they are not registered in a state, they will not correspondingly have the nationality of a state. Again, Article 18 prohibits registration in more than one state. A joint registration of aircraft will be one single registration by two or more states, and therefore will not involve violation of that Article. Similarly, international registration of an aircraft will not entail more than one registration. The object of Article 18 is only to prevent multiple registration, which is not the same thing as a joint registration. It is unnecessary to reflect in this note the details of the examination made during the first session, except to say that in the case of none of the articles, in particular, Articles 7, 9, 12, 15, 18, 20, 21, 25, 26, 27, and 30 to 33, would joint or international registration involve

⁵ Convention on Offenses and Certain Other Acts Committed on Board Aircraft, ICAO Doc. 8364, 14 Sept. 1963.

violation of the Convention. Consequently, no question of amending the Convention arises.

Before concluding on the above topic, it should be specifically mentioned that the provisions of Article 12 of the Convention were closely examined. Under that Article each contracting state is to insure that every aircraft of its nationality, wherever the aircraft may be, shall comply with the rules and regulations relating to the flight and maneuver of aircraft there in force. Each contracting state also undertakes to keep its own regulations in this respect uniform, to the greatest extent possible, with those established under the Convention and to insure the prosecution of all persons violating the regulations applicable. In order that all these requirements would be guaranteed, the Subcommittee, at its first session, specifically stipulated: "The States that constituted the international operating agency shall be jointly and separately bound to assume the obligations which, under the Convention, attach to a State of registry."

IV. FUNCTIONS OF THE COUNCIL UNDER ARTICLE 77

The view, mentioned in paragraph 19 of the Report of the first session, "that it was unlikely that the Contracting States who established the Chicago Convention intended that the Council, by a bare majority of 14 States, should have the power to bind the other 96 Contracting States to accept such important alterations to the provisions of the Convention" is not only speculative but unsustainable in view of the fact that the last sentence of Article 77 specifically requires the Council to make a "determination." It was already agreed unanimously at the first session in paragraph 7 of the Report that "the decision taken by the Council pursuant to Article 77 of the Chicago Convention will be binding on all Contracting States if it is made within the scope of the authority given to the Council by that Article." Reference in this connection to amendments of the Convention or adoption of Annexes by the Council, or to the qualified majority required for those actions, is irrelevant firstly because there is no question of amendment, as explained above, nor of the adoption of any Annex; and secondly, to say that the Council cannot do what the last sentence of Article 77 requires it to do is obviously inadmissible. Elsewhere in the Convention, namely in Article 12, one finds the power bestowed on the Council to make rules applicable over the high seas which involve the creation of law and which cannot be vetoed by any contracting state either generally or even for itself. In fact, the Council, in Annex 2, has already adopted such rules and has expressly pointed out in the Annex that the rules are binding on all contracting states without any exception and without any option of deviating therefrom. It is unnecessary to repeat the refutation, already contained in paragraph 19.1 of the Report of the first session of the arguments concerning qualified majority in relation to decisions of the Council.

The scope of the authority of the Council has already been indicated above. It is to make applicable, by any adaptations as may be required

in the case, to aircraft of international operating agencies, provisions of the Convention which relate to nationality of aircraft. If the Council were to go beyond such functions, it would be acting beyond such authority in the matter. For example, a determination made by the Council under that provision would not warrant the gaining of any special advantage by the aircraft of international agencies under the provisions of the Chicago Convention which would be beyond those available to the aircraft registered in a state. In order to ensure this, the Subcommittee, in paragraph 15 (b) of its Report of the first session specified as a condition that: "The operation of the aircraft concerned shall not give rise to any discrimination against aircraft registered in other Contracting States." This specific condition was stipulated although it was seen, during a close examination of the provisions of Articles 7, 9, 15, and 27, that in fact no discrimination would result in the application of the relevant provisions of the Convention, because these and other provisions contained in themselves safeguards against discrimination.

RECENT CONFERENCES AND MEETINGS

INTERNATIONAL AIR TRANSPORT ASSOCIATION—TWENTY-SECOND ANNUAL GENERAL MEETING—MEXICO CITY (31 October—4 November 1966), prepared by Edwin O. Bailey.[†]

The duties to be performed by the Annual General Meeting (AGM) of IATA are not unlike those of most corporate annual meetings, and, as such, would seem to predestine a rather lacklustre affair. This is, however, seldom the case with IATA AGM's, and the edition which met in Mexico City from 31 October to 4 November 1966 was no exception.

Several elements contributed to a lively meeting. To begin with, the occasion was the first opportunity for many of the airline representatives present to meet and hear IATA's new Director General, Knut Hammar-skjold, who had replaced Sir William Hildred in the association's highest administrative office in May 1966. In his speeches before the meeting, the new Director General emphasized that IATA and its members must help to create a new era of world cooperation—including closer cooperation with governments—if the manifold factors which could encumber the growth of the world's scheduled airlines are to be met. These factors include, *inter alia*, rising labor costs, overcrowded airports and terminals, outmoded customs procedures, increasing airport and route facility charges, fractionalization of the Warsaw Convention passenger liability regime, indecision on vertical separation over the busy North Atlantic, delay in establishing air traffic control at heights above 25,000 feet over Europe, prolonged and inconclusive IATA Traffic Conferences, doubtful competitive compatibility of SST designs, and possibly unacceptable noise by larger jet transports which are about to enter into service.

The next element which made for an interesting assembly was the debate on and adoption of an amendment to Article V (Termination of Membership) of IATA's Articles of Association. By this amendment the Executive Committee shall, with certain qualifications, terminate the membership of any member operating under the flag of a state excluded from membership in ICAO.¹ This change in the bylaws, which had been proposed at a succession of AGM's, finally won support as a means of preventing IATA from becoming an arena for political discussions. In

[†] Assistant to General Counsel, IATA. A.B., Princeton; J.D., Washington University; McGill Institute of Air and Space Law; Member of the Missouri Bar.

¹ IATA Articles of Association art. V, § 2(b) (i) provides:

The Executive Committee shall terminate the active or associate membership of any Member operating under the flag of a State excluded from membership of the International Civil Aviation Organization; provided that all the members of the said Organization under whose flag scheduled air services are operated by the Members of the Association, other than the State excluded, recognize such exclusion as valid and binding upon them.

effect, the amendment constitutes a recognition of the wide acceptance by states of Article 93 bis of the Chicago Convention.²

Another point of particular interest was a proposal by the Legal Committee asking that the AGM go on record in favor of additional ratification of the Rome Convention.³ The Report of the Legal Committee explained to the representatives that ICAO efforts to revise this Convention seemed to have gained little support from states.⁴ In the light of this situation, the Committee believed it to be in the interest of the world's airlines for states to extend the liability regime of the Rome Convention as far as possible, even though that regime may not be entirely free from criticism. The representatives unanimously passed a resolution adopting the Legal Committee's proposal.⁵

The meeting also heard a Legal Committee recommendation encouraging all members to participate in the \$75,000 interim passenger liability agreement for international carriage involving a point in the United States.⁶ While the Committee recognized that this would mean higher insurance premiums for carriers, it would at least restore uniformity to the liability rules governing this important carriage.

² Convention on International Civil Aviation, 7 Dec. 1944, art. 93 bis, 61 Stat. 1180, T.I.A.S. No. 1591 (effective 4 April 1947) provides:

(a) Notwithstanding the provisions of Article 91, 92 and 93 above,

(1) A State whose government the General Assembly of the United Nations has recommended be debarred from membership in international agencies established by or brought into relationship with the United Nations shall automatically cease to be a member of the International Civil Aviation Organization;

(2) A State which has been expelled from membership in the United Nations shall automatically cease to be a member of the International Civil Aviation Organization unless the General Assembly of the United Nations attaches to its act of expulsion a recommendation to the contrary.

(b) A State which ceases to be a member of the International Civil Aviation Organization as a result of the provisions of paragraph (a) above may, after approval by the General Assembly of the United Nations, be readmitted to the International Civil Aviation Organization upon application and upon approval by a majority of the Council.

(c) Members of the Organization which are suspended from the exercise of the rights and privileges of membership of the United Nations shall, upon the request of the latter, be suspended from the rights and privileges of membership in this Organization.

Fifty-eight states have ratified Article 93 bis.

³ Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface, 7 Oct. 1952, 310 U.N.T.S. 181 (1958).

⁴ Report of the ICAO Subcommittee on the Rome Convention, ICAO Doc. No. LC/SC/Rev. Rome No. 3 (1966).

⁵ The resolution provides:

NOTING THAT in 1965 the International Civil Aviation Organization undertook to review the Convention on Damage caused by Foreign Aircraft to Third Parties on the Surface and that there appears to be little support for an early revision of that Convention.

BELIEVING THAT it is important to the development of international air transportation that there should be a convention regulating liability of foreign aircraft to third parties on the surface, in order to avoid conflicts of law and establish uniform rules of liability and jurisdiction, and that, notwithstanding the defects in the Convention, it represents a workable compromise among the interests involved.

BE IT RESOLVED THAT this Annual General Meeting recommends the ratification of the Rome Convention of 1952, as in the interest of the sound and proper development of international air transportation, and urges the Members of International Air Transport Association to bring the matter to the attention of their respective governments with a view to early ratification.

⁶ Agreement Relating to Liability Limitations of the Warsaw Convention and the Hague Protocol, CAB Docket No. 17325, CAB Order No. E-23680 (13 May 1966).

The final significant ingredient in the twenty-second AGM was a many-faceted discussion on ways and means of reinstating the atmosphere of compromise which is vital to successful Traffic Conferences. Representatives recalled that in recent years the Conferences seemed to have become needlessly cumbersome and inconclusive. This, in turn, had subjected the whole Conference system to the criticism of the press, to the suspicion of certain governments, and to the impatience of travel agents who fear postponed bookings because of delayed fare agreements. The meeting, therefore, adopted a resolution commissioning all responsible bodies within IATA to study the Conference machinery; as amongst themselves, the representatives undertook to demonstrate a new willingness to compromise.^{7*}

⁷ The following resolution was passed:

Recognizing that the absence of agreement by Members in the Traffic Conferences may constitute a serious threat to the development of air transport and to the future of IATA;

BE IT RESOLVED

(1) that a Traffic Conference meeting should be convened as soon as possible for the purpose of closing international fares and rates,

(2) that the executives of the airlines here present are requested to demonstrate the indispensable spirit of compromise which is necessary in order to achieve this objective, and

(3) that the Executive Committee, the Traffic Conferences and other appropriate IATA bodies shall undertake to study forthwith the various problems raised in the course of this meeting in particular the problems relating to charters.

* Readers desiring further information should address inquiries to: International Air Transport Association, 1155 Mansfield Street, Montreal 2, P.Q., Canada.