

5th Eilene M. Galloway Symposium on Critical Issues in Space Law
Art. IX of the Outer Space Treaty and Peaceful Purposes:
Issues and Implementation
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***Consideration of 'Heavenly Matters' and
the Evolution of Article IX***

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- Protecting natural celestial environments was among the earliest policies articulated at the dawn of the space age
- Considered in 1956 at the Congress of the International Astronautical Federation in Rome, under the foresight of Andrew Haley
- There are three basic interests which are sought to be safeguarded by the planetary protection policy:
 - prevention of contamination of pristine celestial environments by terrestrial sources
 - prevention of the contamination of the Earth by the return of extraterrestrial materials
 - prevention of interference with the activities of states in the peaceful exploration and use of outer space

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- 1957 U.S. National Academy of Sciences requested the International Council of Scientific Unions (ICSU) to assist in the development of means to prevent contaminating celestial environments
- ICSU formed the *Ad Hoc* Committee on Contamination by Extraterrestrial Exploration (CETEX)
- CETEX considered celestial bodies to be scientific preserves
- Established four primary objectives:
 - freedom of exploration of celestial bodies, subject to limitations such as planetary quarantine requirements
 - disclosure to COSPAR of information concerning activities and experiments
 - nuclear explosions should not occur near the surface of celestial bodies
 - experiments should be conducted only if likely to yield useful scientific data

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- 1959 Report of the Ad Hoc Committee on the Peaceful Uses of Outer Space
- "Scientific studies indicate that certain activities related to lunar and planetary impacts might result in biological, chemical, and radiation contamination jeopardizing subsequent physical and chemical studies and endangering possible living organisms. . . It will probably be desirable to continue such studies of this problem as are already under way, for example, in COSPAR, with a view to arriving at appropriate agreements to minimize the adverse effects of possible biological, radiological, and chemical contamination."

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- 1961 COSPAR formed the Consultive Group on Potentially Harmful Effects of Space Experiments
- 1964 COSPAR Consultive Group published recommended planetary quarantine requirements
 - decontamination techniques were to be employed to reduce the probability of contamination of a celestial environment by a single viable terrestrial organism aboard any spacecraft intended for planetary landing or atmospheric penetration to less than 1×10^{-4} , and the probability limit for an accidental planetary impact by an unsterilized fly-by or orbiting spacecraft was to be 3×10^{-5} or less
- These planetary quarantine requirements were to apply for the initial period of planetary exploration of ten years
- Nations were allocated specific fractions of the overall probability limits which were apportioned by the recipient state among the missions planned to be conducted under its jurisdiction

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- The planetary quarantine requirements have been re-examined periodically and revised
- 1984 planetary quarantine requirements were transformed to a planetary protection policy
- Applicable guidelines were relaxed to provide that planetary protection constraints may be imposed, depending upon the nature of the mission and the target body or bodies to be explored
- Further revisions to the policy based on whether the mission objectives included life-detection experiments
- More recent revisions based on categories of missions, depending upon the pre-determined "planetary protection status" of the target body, and the mission plan
- Category of a "special region" has been established, where it is believed that water, in the form of surface or subsurface ice, may be present
- Landing craft for special regions must achieve higher levels of decontamination, even where the craft is not intended to conduct life detection experiments

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- Early 1962 exchange of correspondence between USA and USSR on space cooperation
- Letter of 20 March 1962 from Chairman Khrushchev to President Kennedy
- "The growth of space research by individual States undoubtedly makes it necessary to come to an agreement that in carrying out experiments in outer space, no one should create obstacles to the study and use of space for peaceful purposes by other States. **It should, perhaps, be specified that any experiments in outer space which may hinder the exploration of space by other countries should be the subject of preliminary discussion and of an agreement concluded on a proper international basis.**"
- "Those, Mr. President, are our views on, as it were, heavenly matters."

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- Linked matters of contamination of celestial environments to interference with activities of states
- Expressly linked space cooperation to broad issue of disarmament – “Considerably greater prospects for cooperation, for pooling our scientific and technical efforts, including even joint development of space-ships which can be sent to other planets – the moon, Venus, Mars – will be opened up when agreement is reached on disarmament.”

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- Significant developments in 1962:
- COPUOS agreed to conduct activities by consensus
- agreed to establish 2 subcommittees
 - Legal
 - Scientific and technical
- September 1962 USSR presented a proposal for Declaration of the Basic Principles governing the Activities of States pertaining to the Exploration and Use of Outer Space
- "6. Co-operation and mutual assistance in the conquest of outer space shall be a duty incumbent on all States; the implementation of any measures that might in any way hinder the exploration or use of outer space for peaceful purposes by other countries shall be permitted only after prior discussion of and agreement upon such measures between the countries concerned."

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- Soviet proposal took into account the conclusion of the scientific sub-committee that it was urgent that consideration be given to the problem of preventing potentially harmful interference with the peaceful uses of outer space
- Canadian delegation observed that states were not specifically asked to engage in consultations if an experiment would harm natural environment of Earth, but was confident any state contemplating such an experiment would spontaneously undertake consultation - would be required if experiment would alter environment and thereby interfere with activities of other states
- Report of the Legal Sub-Committee suggested other legal problems for future study, including "prevention of contamination of or from outer space and celestial bodies"
- 22 November, 1963, COPUOS unanimously decided to submit Declaration of Principles to the General Assembly

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- 1964 COPUOS Scientific and Technical Sub-Committee recommended a form of resolution to be adopted by COPUOS, "Urges that all Member States proposing to carry out experiments in space should give full consideration to the problem of possible interference with other peaceful uses of outer space, as well as of possible harmful changes in the natural environment caused by space activities and, where Member States consider it appropriate, should seek a scientific analysis of the qualitative and quantitative aspects of those experiments from the COSPAR Consultative Group on Potentially Harmful Effects of Space Experiments, and should give due consideration to the results of this analysis; this does not preclude other recourse to international consultations as provided for in General Assembly resolution 1962 (XVIII)."
- Noted the COSPAR Consultative Group on Potentially Harmful Effects of Space Experiments "recommends early action to declare Mars a biological preserve to ensure that in the exploration of this planet, considerations of biological research receive priority over others."

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- General Assembly Res. 1963 urged that the principles in Res. 1962 be incorporated into an international agreement form
- May 1966 Letter from Pres. Johnson proposing treaty
- 10 point outline of major provisions

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- US submitted a Draft Treaty Governing the Exploration of the Moon and Other Celestial Bodies 17 June 1966
- Article 10 of Draft Treaty, "States shall pursue studies of, and, as appropriate, take steps to avoid harmful contamination of celestial bodies and adverse changes in the environment of the Earth resulting from the return of extraterrestrial matter."
- This Draft Treaty, while expressing the rights of all states to freedom for scientific exploration, did not provide for consultations for activities which may cause interference

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- Soviet Delegation proposed Draft Treaty of Principles Governing the Activities of States in the Exploration and Use of Outer Space, The Moon and Other Celestial Bodies June 16, 1966
- Article VIII repeated substance of Declaration of Principles re consultations, and inserted new second sentence: "States Parties to the Treaty shall conduct research on celestial bodies in such a manner as to avoid harmful contamination."
- Significantly both US and USSR went beyond the Declaration of Principles by obligating states to avoid harmful contamination

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- Japan expressed concern that neither draft was sufficient to protect natural celestial environments. “Great care must therefore be taken to preserve their resources and their natural milieu.”
 - Proposed amendment that states should exercise maximum care for the preservation and conservation of the natural resources and environments of celestial bodies
 - Proposed that draft be amended to expand protection of outer space to specifically include celestial bodies

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- USSR had no objection to the US draft article 10, and no objection to Japanese amendment to expand reference of contamination of outer space to include celestial bodies
- US welcomed the USSR merging of the two drafts, and also concurred with the Japanese amendment to add celestial bodies. Amb. Goldberg noted that "Knowledge of the questions dealt with in the two texts was still meager and they required scientific study. Consultations were being conducted on the subject, particularly through the COSPAR Consultative Group. **Care must be taken, however, not to establish too rigid procedures, which might hinder research.**"

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- Japanese delegation "was not convinced that the text, as adopted, covered the substance of the amendment to the effect that States parties to the treaty should exercise maximum care for the preservation and conservation of the natural resources and environment of celestial bodies. It suspected that the space Powers had not accepted its amendment mainly because they feared that it might tie their hands in future activities on celestial bodies. In his delegation's view such fears were groundless, but in a spirit of co-operation it would not press the amendment."

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- USSR could not agree to a Japanese proposal for advance notification to the Secretary General of an activity that may cause harmful interference with the activities of other states, insisting on its proposal incorporating the voluntary, direct disclosure and consultations
 - No agreement on nature of information to be disclosed
 - Not prepared to entrust the Secretary General with functions connected with the implementation of the treaty
 - Secretary General was not to be a depository of the treaty
 - Information would be given to parties more quickly if direct rather than through the Secretary General
 - Information could be given voluntarily to the Secretary General
 - Information was of a special nature, to be provided in advance
 - to be distinguished from information to be provided after the fact concerning activities conducted

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- Bulgaria concurred that there was no link between voluntary disclosure of results of activities conducted and advance disclosure of activities which could cause interference
- Lebanon raised question concerning the absence of an obligation of a state to agree to a request to engage in consultations
- USSR was of opinion that as part of a treaty having compulsory force, a state would be required to comply with a request for consultations

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- Canada considered that the principle that states should conduct activities with due regard for the corresponding interest of other states constituted one of the most important points of international law concerning the exploration and use of outer space
 - Task of subcommittee was to reach agreement on as many points as possible so that general principles could be drawn up as the basis for the development of international space law
 - Liability
 - Return of astronauts
 - Prohibition on orbiting weapons of mass destruction
 - Prohibition on placement of such weapons on celestial bodies

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- Japan explained its proposal that since the number of states participating in space activities would certainly increase, considered simplest and surest method of providing prior notice would be through the Secretary General
- Offered compromise that information could be given directly to states or alternatively through the Secretary General
- Consensus was not obtained as the USSR would not accept the alternative formulation
- Japan declined to press the proposal in view of the circumstances

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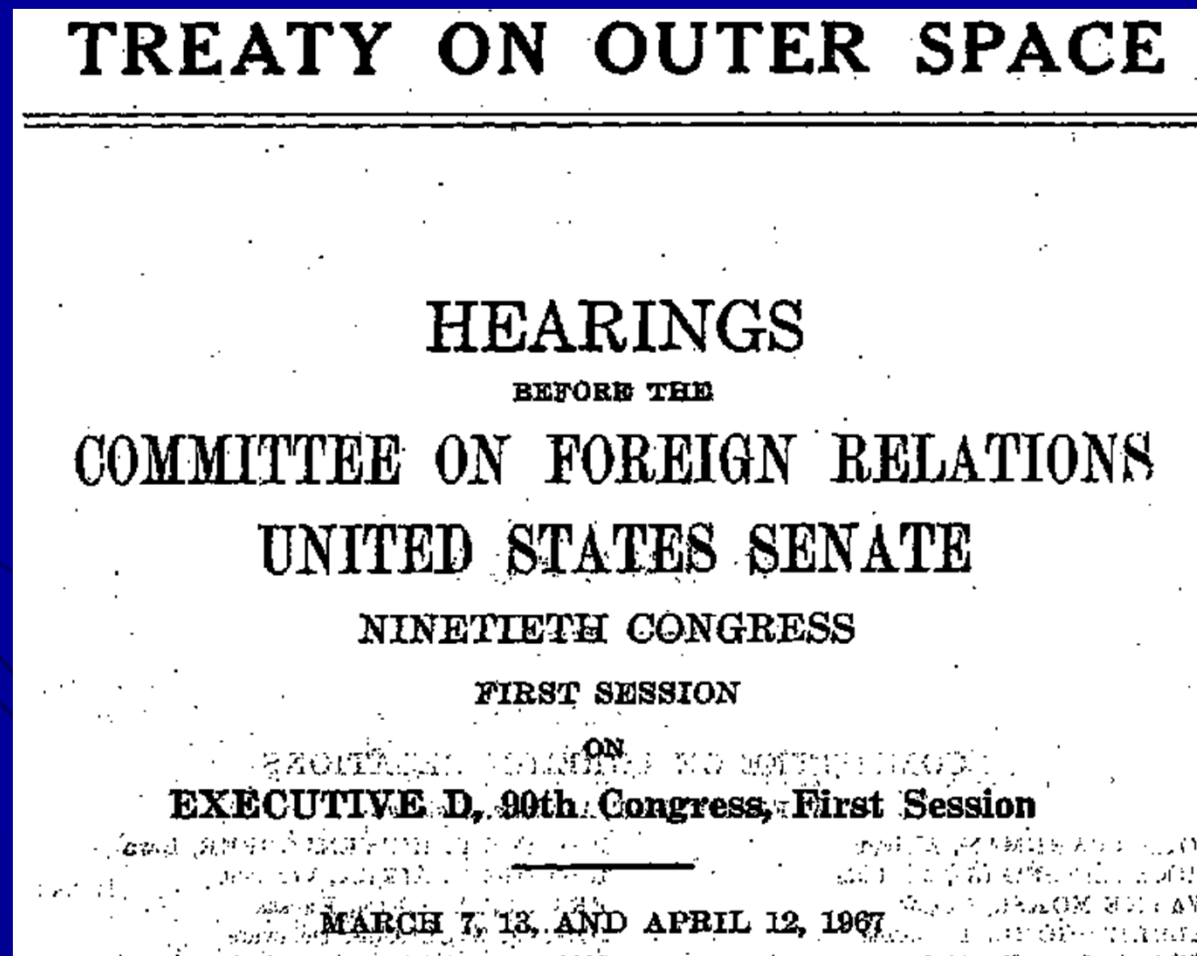
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- Working Group blended the U.S. and Soviet drafts into Article IX
- Modifications in article IX to the text of paragraph 6 of the Declaration of Principles:
 - incorporated the terminology proposed by the Soviets to protect against forward and back contamination
 - minor grammatical adjustments
 - phrase “including the moon and other celestial bodies” was added to the reference to outer space
 - restricted the applicability of the paragraph to “states parties,” that is, all other states party to the treaty, rather than “other states” as referenced in the Declaration

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- Testimony by Amb. A. Goldberg before U.S. Senate Committee on Foreign Relations consisted only of 2 brief paragraphs
 - Provides for mutual assistance
 - Provisions to take measures to “provide against contamination of the environment”
 - Conduct experiments in space in manner so that atmosphere of earth not contaminated

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- Liability for damages confined to terra firma damage
- Not commitment for damages for electrical interference or jamming of satellites
- International consultations for interference with activities are alternative to a rule of liability
- Matter of international concourse for states involved to discuss through diplomatic channels

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- Principle of due regard for corresponding interests of other states protects states which are not space active
- “The framers of this treaty did not try to peer into the unforeseeable; but rather we tried to insure, by laying down broad principles, that all concerned will enter this unknown realm as friends and **partners in peace.**”

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Thank You

