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Book Review of Report to the National Aeronautics and Space Administration on the Law of Outer Space

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REPORT TO THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ON THE LAW OF OUTER SPACE

By LEON LIPSON AND NICHOLAS DEB. KATZENBACH, Project Reporters. American Bar Foundation, Chicago, 1961, 179 pp. $5.00

A lucid analysis of existing literature on outer space and an excellent reference work that contains cogent abstracts of source materials and a bibliography, this report deals with areas from which principles of international law and multilateral agreements may evolve as space explorations continue to develop.

There is no question that the states now capable of launching space programs, as well as scholars and jurists, all agree to the need of a legal regime, however limited in scope, for the creation and standardization of norms and practices which may benefit all nations. Political and military considerations in the name of either national security or national prestige have, however, prevented, at least for the present, effective international cooperation in the development of space law. So long as space projects are used primarily as vehicles of the Cold War, the delay, even the retardation, of the effort to create a meaningful legal framework in this field may become unavoidable. Independent national practices will precede cooperative efforts among nations in producing precedents for space law.

On the other hand, the paucity of rules, the uncertainty of space technology, as well as the political overtone of space projects, have not dampened the spirit of either publicists, or national authorities, or international bodies, in their efforts to discover areas of fruitful discussion. There seems to be general agreement that space, somewhat similar to the high seas, should be open to use by all nations and that no state should extend its national sovereignty into outer space. It is also generally accepted, as did the United Nations *ad hoc* Committee on Peaceful Use of Outer Space, that such questions as liability for injury or damage caused by space vehicles, allocation of radio frequencies for the control of such vehicles, avoidance of interference between space vehicles and aircraft, identification

and registration of space vehicles and coordination of launchings, protection of public health and safety, and safeguards against contamination of outer space, may be given "priority treatment" so as to reduce the hazards of space explorations and to facilitate international cooperation.

Since the complete and exclusive sovereignty of nation-states in the "air space" above their territories is now a well established principle of international law, the question is: Where does "air space" cease and where does outer space begin? The Report points out that attempts made to draw a boundary between "air space" and outer space have been inconsequential. On the basis of various theories discussed in the Report, it is safe to conclude that such a boundary is not necessarily the most crucial question in the development of space law. Indeed, any attempt to set a ceiling to air sovereignty at a time when new scientific information may invalidate the very premises on which a boundary is to be based is not only premature but impedient to the progress of space programs.

It is significant to note that "some typical air activities may at some future time be conducted at altitudes higher than some typical space activities," while "typical space uses may move downward toward present conventional air space." Thus, "the exact boundary is scientifically uncertain and not physically measurable." The United Nations *ad hoc* Committee eventually classified the boundary problem among those not susceptible of priority treatment, suggesting the possibility of using functional rather than spatial criteria to regulate and control activities in space. Suffice it to say that immediate problems are such matters as peaceful use of outer space, the sharing of information and resources gathered from space and measures to insure safety rather than the question of a definite boundary.

In spite of the wealth of information contained in the Report, no attempt is made to single out the Soviet theories of space law for analysis. It is known, for instance, that some Soviet commentators have favored the gravitational field theory, namely, that a state's sovereignty over its superjacent air space should be extended to a point at which the gravitational pull of the earth ceases, or a height of approximately 60 miles. This ceiling seems to lie in the middle of the lowest (30 miles) and

the highest (7,000 miles) lines of demarcation suggested by other Western publicists. The obvious defects of the gravitational field theory are that it would be impossible for all states to exercise effective control along the boundary and that some space experiments may be conducted below any arbitrary line.

The Report concludes that the only customary rule of international law that is likely to emerge from continuous space explorations conducted since 1957 will be a limitation to claims of air sovereignty to relatively low altitudes (within a hundred miles). Inasmuch as space technology is still in its embryonic stage, the exact contents of space law must remain in the realm of academic discussion. It is reasonable to expect, however, that as space experiments continue to develop, the problems arising from them will automatically lead to the growth of space law, whether customary or conventional.

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