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G. Reynolds & R. Merges, Outer Space: Problems of Law and Policy

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G. Reynolds & R. Merges, *Outer Space: Problems of Law and Policy*

Edward S. Binkowski

Abstract

This Book Review reviews the casebook: “Outer Space: Problems of Law and Policy” by G. Reynolds & R. Merges. The reviewer gives the book a favorable review but warns that the book is lacking in certain areas that it could spend more time on and is subject to change considering how the area is often shifting with new treaties.

BOOK REVIEW

OUTER SPACE: PROBLEMS OF LAW AND POLICY. By G. Reynolds & R. Merges. Boulder: Westview Press, 1989. xvi + 349 pp. ISBN 0-8133-7622-X. US\$52.50.

*Reviewed by Edward S. Binkowski**

According to its authors, *Outer Space: Problems of Law and Policy* ("Outer Space")¹ grew out of a review of two founding works of space law, both published in 1963.² Several treatments of the law of outer space published since that time also remain valuable, including an American Bar Association-sponsored overview,³ an exhaustive study of public international law on the subject,⁴ a comprehensive compilation of basic documents,⁵ a monograph on current topics,⁶ and a business primer.⁷ Nonetheless, the passage of time and the level of coverage limit their usefulness, and a recent review correctly laments that "[t]he time is long past for a good, well-researched and scholarly text for American space law courses."⁸ With the advent of the Reynolds and Merges casebook, the wait is now over.

The entire field owes much of its credibility and structure to the "realist" stance of Myres McDougal, through not only his prolific contributions but also those of his former students, most notably Stephen Gorove, who heads the space law pro-

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1. G. Reynolds & R. Merges, *Outer Space: Problems of Law and Policy* (1989) [hereinafter *Outer Space*].

2. *Id.* at xiii; see A. HALEY, *SPACE LAW AND GOVERNMENT* (1963); M. McDOUGAL, H. LASSWELL, I. VLASIC, *LAW AND PUBLIC ORDER IN SPACE* (1963).

3. S. LAY, H. TAUBENFELD, *THE LAW RELATING TO ACTIVITIES OF MAN IN SPACE* (1970).

4. C. CHRISTOL, *THE MODERN INTERNATIONAL LAW OF OUTER SPACE* (1982).

5. S. GOROVE, *UNITED STATES SPACE LAW: NATIONAL AND INTERNATIONAL REGULATION* (1989).

6. J. FAWCETT, *OUTER SPACE: NEW CHALLENGES TO LAW AND POLICY* (1984).

7. E. FINCH & A. MOORE, *ASTROBUSINESS: A GUIDE TO THE COMMERCE AND LAW OF OUTER SPACE* (1985).

8. Robinson, Book Review, 29 *JURIMETRICS* 365, 366 (1989) (reviewing N. GOLDMAN, *AMERICAN SPACE LAW: DOMESTIC AND INTERNATIONAL* (1988)).

gram at the University of Mississippi and its *Journal of Space Law*, and Ivan Vlasic, with the same roles at McGill and *The Annals of Air and Space Law*. *Outer Space* owes a similar debt, in its acknowledged stance;⁹ the detailed discussion of context and development for all major issues; the frank consideration of political motives and consequences; and the detailed, pragmatic, and provocative notes accompanying the wide range of materials excerpted in the book.

The first chapter, "Some History and Background," offers a brief but indispensable political and technological review. In a manner typical of the book's strengths, the early days of space research are traced for not only the United States, but also the Soviet Union, Great Britain, and Germany, as influenced, respectively, by adaptability to Bolshevik theory, government bans on private ordinance research, and evasion of World War I treaty stipulations.¹⁰ Also discussed are the political, commercial, and military interests in outer space being designated as *res nullius* (no man's land, subject to appropriation on a first come, first served basis, as in the "discovery" of new territory), *res communis omnium* (jointly held by all parties to their mutual benefit, the "common heritage of mankind"), and *res extra commercium* (open to commercial use by any party, but without any explicit national control, as on the high seas).¹¹ These traditional international law distinctions still color the ongoing debate over national, multinational, or transnational control of development of outer space.

Reynolds and Merges also provide the reader with a valuable service in their summary description of various physical characteristics of a space environment, especially with respect to geostationary or "Clarke" orbits:¹² satellites orbiting 23,000 miles high that, given the velocity required to maintain such an altitude, appear to match the earth's own rotation and so hover over the same location on the earth's surface. Three such satellites in a linked network can provide coverage to the

9. OUTER SPACE, *supra* note 1, at 7-8.

10. *Id.* at 1-5. Much of this material is based on selections from the outstanding book W. McDougall [no relation to Myres McDougal], *THE HEAVENS AND THE EARTH: A POLITICAL HISTORY OF THE SPACE AGE* (1985).

11. OUTER SPACE, *supra* note 1, at 5-8.

12. See Clarke, *Extra-Terrestrial Relays*, 51 WIRELESS WORLD 305 (Oct. 1984) (reprinting the original March 1945 proposal).

entire globe and so may occupy valuable, and hotly competed for, locations in the void.

The second chapter, "The International Law of Outer Space: Basic Principles," opens with a restatement and defense of the McDougal "realist" view of international law. That view submits that while a stable legal regime is in the interests of all countries, conformance with any standard will be imperfect and any state will ultimately place its own interest above any normative rules.¹³ Careful study of the development of space law in this context is especially revealing in that the (re)interpretations, borrowings, and outright misuses of familiar principles are not consigned to the musty historical record but continue to happen on a daily basis. This selective process is discussed in the light of (not quite) parallelisms with air and sea law,¹⁴ though the authors do not treat the development of the Antarctic legal regime, which is frequently cited as another, albeit an ill-fitting, model for the law of outer space.

"Early Treaties Governing Activities in Outer Space," chapter 3, is devoted to a discussion of the Nuclear Test Ban Treaty¹⁵ and the Outer Space Treaty,¹⁶ the first of the five United Nations space treaties.¹⁷ The Outer Space Treaty was negotiated and approved by consensus by the Committee on Peaceful Uses of Outer Space ("COPUOS"), formed in 1959. The casebook is particularly helpful in reviewing in detail the eight years of treaty negotiation and the slow conciliation of the interests of the then two space powers, the United States and the Soviet Union, with each other and with non-space-capable countries. Hard won unanimity was reached on central non-appropriation language: "Outer Space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occu-

13. Outer Space, *supra* note 1, at 25-27.

14. *See id.* at 27-42.

15. Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space, and Under Water, Aug. 5, 1963, 14 U.S.T. 1313, T.I.A.S. No. 5433, 480 U.N.T.S. 43.

16. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty].

17. *See* OUTER SPACE, *supra* note 1, at 62-93.

pation, or by any other means."¹⁸

Several desirable restrictions in the Outer Space Treaty are intentionally narrow, such as article IV, which states that nuclear weapons must not be stationed in outer space or placed in orbit (although intercontinental ballistic missiles deliberately do not meet these qualifications) and that the moon and other celestial bodies are to be used exclusively for peaceful purposes (but not so outer space itself). Many unintentional ambiguities also remain in the treaty, including the exact meaning of "nuclear weapon" and "weapon of mass destruction," now of special concern regarding the Strategic Defense Initiative ("SDI," or popularly known as "Star Wars") as well as "peaceful uses" generally.¹⁹ Indeed, the phrase "outer space" itself is nowhere defined, with technological advances undreamt of in 1967 making this a not irrelevant matter.²⁰

"Development and Defense: Treaties of the 1970s," chapter 4, is somewhat misnamed since it does not consider three intervening COPUOS treaties but concentrates on the Moon Treaty,²¹ not ratified until 1984, and, to a lesser extent, on the Anti-Ballistic Missile Treaty ("ABM Treaty").²² With respect to the latter, which on its face appears to apply to the testing of *any* anti-ballistic missile system, the so-called "broad interpretation" of the ABM Treaty to allow SDI field testing is given appropriately short shrift.²³ The Moon Treaty, largely modeled on the draft treaty produced by the Third United Nations Conference on the Law of the Sea, has its most controversial provisions relating to the exploitation of mineral resources on the moon.²⁴ While ideological tempers run high over confrontations of "free enterprise" versus "common heritage of mankind," in this reviewer's mind the fatal flaw of the

18. Outer Space Treaty, *supra* note 16, art. II, 18 U.S.T. at 2413, T.I.A.S. No. 6347, at 4, 610 U.N.T.S. at 208.

19. OUTER SPACE, *supra* note 1, at 83-93.

20. *Id.* at 86-88.

21. Treaty Governing the Activities of States on the Moon and Other Celestial Bodies, *opened for signature* Dec. 18, 1979, U.N. Doc. A/34/664, 18 I.L.M. 1434 [hereinafter Moon Treaty].

22. Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems, May 26, 1972, 23 U.S.T. 3435, T.I.A.S. No. 7503.

23. *See* OUTER SPACE, *supra* note 1, at 98-102.

24. *See id.* at 110-55.

Moon Treaty is its vagueness in that the regime to preside ultimately over extraction of mineral resources is to be determined only after the treaty is in operation.²⁵ Also, I disagree with the authors' statement that some countries that have already signed the Moon Treaty are rapidly developing the capability to challenge the effective hegemony of the United States and Soviet Union over exploitation of the moon.²⁶

Chapter 5 is a miscellany of "Other Treaties, Agreements, and Issues." Included are extended treatments of the COPUOS Liability Treaty,²⁷ as a result of the Cosmos 954 incident the only space treaty to have been invoked,²⁸ and the Draft United Nations Principles on Remote Sensing.²⁹ More briefly covered are the COPUOS Return and Rescue³⁰ and Registration Treaties³¹ and several environmental issues.³²

Chapter 6 deals with "Space Communications." Following a basic description of the International Telecommunications Union (the "ITU"), which presides over allocation of frequencies and orbits for all communications satellites, and the International Telecommunications Satellite Consortium ("INTELSAT"), the bulk of this chapter is concerned with recent abortive attempts to promote competition with INTELSAT by private parties. By INTELSAT's governing agreements, its Member States undertake not to permit any international satellite communications unless and until INTELSAT determines that no economic harm to its own networks is threatened (and

25. *Id.* at 120-30.

26. *Id.* at 117. The treaty has been ratified by Australia, Austria, Chile, the Netherlands, Pakistan, the Philippines, and Uruguay. It has been signed but not ratified by France, Guatemala, India, Iran, Morocco, Papau, and Romania.

27. Convention on the International Liability for Damage Caused by Space Objects, *opened for signature* Mar. 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762, 961 U.N.T.S. 187 [hereinafter Liability Treaty].

28. OUTER SPACE, *supra* note 1, at 167-77.

29. *Id.* at 178-94; *see* Committee on the Peaceful Uses of Outer Space, Report of the Legal Sub-Committee on the Work of its Twenty-Fifth Session, U.N. Doc. A/AC.105/370 (1986) Annex I, 25 I.L.M. 1331 (1986).

30. Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, *opened for signature* Apr. 22, 1968, 19 U.S.T. 7570, T.I.A.S. No. 6599, 672 U.N.T.S. 119 [hereinafter Return and Rescue Treaty].

31. Convention on the Registration of Objects Launched into Outer Space, *opened for signature* Jan. 14, 1975, 28 U.S.T. 695, T.I.A.S. No. 8480, 1023 U.N.T.S. 15 [hereinafter Registration Treaty].

32. OUTER SPACE, *supra* note 1, at 195-98.

all Member States satellite communications systems, domestic or international, must defer to INTELSAT for technical coordination). In the 1980s, a series of U.S. executive branch initiatives seemed to call for direct competition with INTELSAT as in the national interest. Prompted by pressures from a pervasive deregulatory trend and by a less appealing dissatisfaction with COMSAT, the quasi-public corporation representing U.S. interests to INTELSAT, these initiatives provoked international uproar and a stark confrontation with the U.S. Congress and were ultimately and completely repudiated.³³ The chapter closes with a discussion of direct broadcasting satellites, where ongoing technological enhancements have the salutary effect of leapfrogging decades of heated cries for censorship by simply making access to even broadcast satellite communications more and more open to the general population.

Chapter 7 provides a rapid review of "Space-Related International Trade Issues." The material offers a study in contrasts of the degree to which space activities find a ready home in quotidian commercial law. For example, a "business-as-usual" attitude is evident in the filing of an antitrust "dumping" complaint³⁴ by a would-be private U.S. launch provider against Arianespace, the government-subsidized launch service of the European Space Agency.³⁵ A reluctance to come to terms with the space age, however, is apparent in the fact that until 1984 any launch of any object was considered an "export" by the United States. More realistic are the technology transfer issues involved in any satellite system, as represented at this writing in the current tug-of-war between President Bush and the Congress over licensing U.S. satellite payloads for launch by the People's Republic of China.

"The Law of Private Commercial Activities in Outer Space," chapter 8, is the most rewarding and ground-breaking portion of the book. This is largely due to the treatment of intellectual property issues and those involving private access to remote sensing data. Patentability of space processes is at best an open question; patent infringement by space activities

33. See generally Colino, *A Chronicle of Policy and Procedure: The Formulation of the Reagan Administration Policy on International Satellite Telecommunications*, 13 *J. SPACE L.* 103 (1985) (providing an exhaustive review of this unpleasant episode).

34. Trade Act of 1974, § 301 (codified as amended 19 U.S.C. § 2411 (1988)).

35. *OUTER SPACE*, *supra* note 1, at 230-38.

is already a mare's nest of conflicting interests³⁶ that can only be further exacerbated by multistate ventures such as the proposed space station. With respect to remote sensing, the chief regulatory concern for almost thirty years had been possession of information about natural resources in place by another state or private exploiters. Almost overnight, given international competition and orders-of-magnitude increases in the quantity and quality of available images, attention is now focused on real-time observation of events by the news media and other private parties without any effective government participation. These possibilities are in their infancy, but represent an extraordinarily powerful genie that cannot be put back into its bottle; such communications played a not inconsiderable part in the upheavals in China and Eastern Europe during 1989. The attention given to these two leading-edge applications, unconsidered in nearly all other studies of space law and unimagined in traditional international law texts, demonstrates the value of this casebook at its best.³⁷

The ninth and last substantive chapter of the book is "Some Issues of the Future," which, other than a short section on extraterrestrial contact, is devoted to one of the most familiar topics from the early space law literature: governance of space societies. The authors are uncharacteristically disputative with regard to the vagueness of a particular set of draft principles,³⁸ but are nonetheless characteristically sensitive to the problems inherent in any such effort and to countervailing viewpoints. The book's conclusion is a deservedly optimistic rendition of the potential benefits of space expansion, and the role that a carefully structured legal regime can play for world peace, scientific achievement, and, most of all, an opportunity for humanity that is "a drama and a challenge for which there is no real counterpart in recorded history."³⁹

36. See, e.g., *Decca Ltd. v. United States*, 544 F.2d 1070 (Ct. Cl. 1976) (finding location of ground station controlling a satellite to be basis for infringement).

37. This chapter also treats more than satisfactorily the traditional problem areas, such as jurisdiction, torts, and liability, as well as offering a sample launch services agreement.

38. OUTER SPACE, *supra* note 1, at 311-14; see Ragosta & Reynolds, *In Search of Governing Principles*, 28 JURIMETRICS 473 (1988) (excerpted in text at 309-10); see also G. ROBINSON & H. WHITE, JR., *ENVOYS OF MANKIND: A DECLARATION OF FIRST PRINCIPLES FOR THE GOVERNANCE OF SPACE SOCIETIES* (1986).

39. OUTER SPACE, *supra* note 1, at 325.

The only reservations an appreciative reader might have about this casebook are ones that are almost certainly shared by the authors: that it might be twice as long, with an annual supplement. As with any such text, considerations on length dictate increasingly fine decisions. The most important agreements are given in full (*e.g.*, the Outer Space⁴⁰ and Moon Treaties⁴¹); it would still be helpful to have a more complete reference to the few other instances of black-letter law (*e.g.*, the Liability,⁴² Registration,⁴³ and Return and Rescue Treaties⁴⁴). The contexts of negotiations for those major agreements are described in fascinating detail; the authors' store of information on the role of the Federal Communications Commission in deregulation of space communications, tantalizingly referenced,⁴⁵ could easily bear extension, as could the untold story behind the Land Remote Sensing Commercialization Act.⁴⁶ Ever shifting influences of factors ranging from renegotiation of the Antarctic legal regime to the near disappearance of the launch insurance market might provide additional insights.

Lastly, in such a rapidly changing field, any book is at the mercy of passing events, such as the 1988 Space WARC (World Administrative Radio Conference) establishing allocation rules for the geostationary orbit,⁴⁷ which just made it into the text at press time, and the near simultaneous signing of the space station agreements among the United States, Japan, Canada, and Member States of the European Space Agency, which did not. Regardless of any such quibbles, Reynolds' and Merges' *Outer Space* is the finest review of the law of outer space now available, and is likely to remain so for some time.

40. See Outer Space Treaty, *supra* note 16, 18 U.S.T. 2410, T.I.A.S. No. 6347, 610 U.N.T.S. 205 (1967).

41. See Moon Treaty, *supra* note 21, U.N. Doc. A/34/664, 18 I.L.M. 1434 (1979).

42. See Liability Treaty, *supra* note 27, 24 U.S.T. 2389, T.I.A.S. No. 7762, 961 U.N.T.S. 187 (1972).

43. See Registration Treaty, *supra* note 31, 28 U.S.T. 695, T.I.A.S. No. 8480, 1023 U.N.T.S. 15 (1976).

44. See Return and Rescue Treaty, *supra* note 30, 19 U.S.T. 7570, T.I.A.S. No. 6599, 672 U.N.T.S. 119 (1968).

45. OUTER SPACE, *supra* note 1, at 217-18.

46. Land Remote Sensing Commercialization Act of 1984, Pub. L. No. 98-365, 98 Stat. 451 (codified at 15 U.S.C. § 4201 *et seq.*, and scattered sections of 49 U.S.C.). For a discussion of this Act, see OUTER SPACE, *supra* note 1, at 299-305.

47. International Telecommunications Union, ORB-88 Final Acts (1988). For a discussion of this agreement, see OUTER SPACE, *supra* note 1, at 218.

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