

Notes

Law's Empire and the Final Frontier: Legalizing the Future in the Early *Corpus Juris Spatialis*

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I. INTRODUCTION: THE "GOLDEN AGE" OF SPACE LAW

"Who owns the universe?"¹ What is the legal status of "advanced forms of non-earth life?"² "To transfer title of *Moonacre* (a privately-owned space-platform) from A to B would a lawyer use a 'bill of sale' or would he use a 'deed?'"³ "What kind of twig-breaking will be sufficient to establish seisen where no twig has ever grown?"⁴ "What law . . . would be that to rule over us in common with one-, bi-, tetra-, or multi-dimensional races?"⁵ Is "*trespass in vacuo*"⁶ actionable, and does "Earth law"⁷ provide useful analogies? "What law would govern in a world where a man is able to carry a ten story building?"⁸ Should the profession launch an inquiry into

1. Oscar Schachter, *Who Owns the Universe?*, COLLIER'S, Mar. 22, 1952, at 36, 36.

2. MYRES S. MCDUGAL ET AL., LAW AND PUBLIC ORDER IN SPACE 974 (1963).

3. John Charles Hogan, *Man and Law in Space*, CASE & COM., Nov.-Dec. 1956, at 12, 14-15.

4. Samuel D. Potter, *The Moon—Usque Ad Coelum?*, BOSTON B.J., Nov. 1957, at 28, 28.

5. J. ESCOBAR FARIA, COMENTÁRIOS AO TRANSDIREITO/REMARKS ON THE METALAW 20 (1960).

6. A.B., *Trespass in Vacuo*, 107 LAW J. 627, 627 (1957).

7. Philip B. Yeager, *The Moon—Can Earth Claim It?*, in SENATE COMM. ON AERONAUTICAL & SPACE SCIENCES, LEGAL PROBLEMS OF SPACE EXPLORATION: A SYMPOSIUM, S. REP. NO. 87-26, at 757 (1961) [hereinafter SYMPOSIUM 1961]; see also Bin Cheng, *International Law and High Altitude Flights: Balloons, Rockets and Man-Made Satellites*, 6 INT'L & COMP. L.Q. 487, 493 (1957) (describing contemporary international law as "earth-bound and land-minded").

8. JULIAN G. VERPLAESTE, INTERNATIONAL LAW IN VERTICAL SPACE: AIR, OUTER SPACE, ETHER 402 (1960) ("What rules of law should be contrived to cope with the situation where a man needs machinery to carry his handkerchief? What would be movable and immovable, mortgage and pawn? What would be consent and negligence?").

“the legal aspects of rainmaking?”⁹ What are the career prospects for the “space lawyer,”¹⁰ and to what extent should she prepare for “relativity problems?”¹¹

As improbable as they may sound to modern readers, such questions were highly fashionable in legal thought and law school classrooms during the “golden age”¹² of space law. Roughly contemporaneous with the “Space Age” itself, this period began with the Sputnik and Explorer launches of the late 1950s, reached its height with the “space boom” of the mid-1960s, and ended with the latter stages of the Apollo program and the “space bust” of the mid-1970s.¹³ During this period, an international *Corpus Juris Spatialis*, or body of space law, quickly developed. Despite the tensions of the Cold War and the spacepowers’ difficulties in predicting their own interests in outer space, Apollo-era space law managed several substantive achievements: the 1959 Report of the Ad Hoc Committee on the Peaceful Uses of Outer Space,¹⁴ the 1963 Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space,¹⁵ and the near-legendary Outer Space Treaty of 1967.¹⁶ These advances were followed by a period of consolidation,¹⁷ in the Rescue

9. Derek H. Hene, *The Legal Aspects of Rainmaking*, 19 MOD. L. REV. 285, 285 (1956); see also Vaughn C. Ball, *Shaping the Law of Weather Control*, 58 YALE L.J. 213, 214 (1949) (analyzing “legal problems involved in artificial modification or control of the weather”).

10. Albert P. Blaustein, *Space Lawyer*, CASE & COM., Mar.-Apr. 1956, at 16; see also Lawrence H. Berlin, *Just the Man To See If You Get Sued by a Martian*, REPORTER, Nov. 28, 1957, at 26; Jerome Doolittle, *Young Man, Be a Space Lawyer*, ESQUIRE, June 1966, at 118.

11. Lewis C. Bohn, *Space Policy Outline*, reprinted in John C. Hogan, *A Guide to the Study of Space Law*, 5 ST. LOUIS U. L.J. 79, 85-93 (1958); see also Myres S. McDougal & Leon Lipson, *Perspectives for a Law of Outer Space*, 52 AM. J. INT’L L. 407, 411 (1958) (discussing relativity).

12. Harold Caplan, *Anarchy for Beginners: A Primer for Spacemen*, in INTERNATIONAL ASTRONAUTICAL FEDERATION, PROCEEDINGS OF THE FIFTH COLLOQUIUM ON THE LAW OF OUTER SPACE 3, 6 (1963) [hereinafter FIFTH COLLOQUIUM].

13. For histories of NASA and the Space Age, see generally RIP BULKELEY, *THE SPUTNIKS CRISIS AND EARLY UNITED STATES SPACE POLICY: A CRITIQUE OF THE HISTORIOGRAPHY OF SPACE* (1991); ROGER D. LAUNIUS, *FRONTIERS OF SPACE EXPLORATION* (1998); ALAN J. LEVINE, *THE MISSILE AND SPACE RACE* (1994); and WALTER A. MCDUGALL, . . . THE HEAVENS AND THE EARTH: A POLITICAL HISTORY OF THE SPACE AGE (1985).

14. *Report to the United Nations General Assembly*, U.N. Ad Hoc Committee on the Peaceful Uses of Outer Space, 14th Sess., U.N. Doc. A/4141 (1959).

15. G.A. Res. 1962, 18 U.N. GAOR, 18th Sess., Supp. No. 15, at 15, U.N. Doc. A/5515 (1963).

16. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, *opened for signature* Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205; see GENNADY ZHUKOV & YURI KOLOSOV, INTERNATIONAL SPACE LAW 38 (Boris Belitzky trans., 1984) (calling the Outer Space Treaty a “landmark in the establishment and progressive development of . . . international space law”). For more on the Treaty, see generally IMRE ANTHONY CSABAFI, *THE CONCEPT OF STATE JURISDICTION IN INTERNATIONAL SPACE LAW: A STUDY IN THE PROGRESSIVE DEVELOPMENT OF SPACE LAW IN THE UNITED NATIONS* (1971).

17. See Ivan A. Vlasic, *The Space Treaty: A Preliminary Evaluation*, 55 CAL. L. REV. 507, 507 (1967) (“The adoption of [the Outer Space Treaty] can be regarded as terminating the first phase in the evolution of space law, a phase characterized more by emphasis upon the

Agreement (1968),¹⁸ the Liability Convention (1972),¹⁹ and the Registration Convention (1975),²⁰ and then by the still-controversial Moon Treaty (1978).²¹ “[A]rrived at by nations operating behind an almost Rawlsian veil of ignorance,”²² the Cold War *Corpus Juris Spatialis* was, for many, an inspiring experiment in peace through the rule of law.²³

This Note explores an alternative, somewhat less monumental dimension of early space law, one that was an experiment not so much in the rule of law as in the rule of lawyers. The subject of this Note is the diverse, profuse, sometimes brilliant, and often bizarre discourse of Apollo-era legal commentary on outer space. This discourse is remarkable above all for its sheer, forgotten mass. The British barrister Harold Caplan began his address to the *Fifth Colloquium on the Law of Outer Space* (1964) by diagnosing the “logorhoea which is endemic wherever Lawyers and Space meet.”²⁴ He then admitted his own “infection,” yet enthusiastically observed that “[a]s long ago as March 1961” the U.S. Senate’s *Legal Problems of Space Exploration: A Symposium*²⁵ showed “no less than 16 distinct *Bibliographies* devoted to Space Law.”²⁶ As early as 1958, Leon Lipson and Myres McDougal also noted, though not so enthusiastically, the legal community’s considerable interest in space law in their seminal article *Perspectives for a Law of Outer Space*.²⁷ There, the two sought to arrest the

development of general principles than by the elaboration of more detailed rules and procedures.”).

18. 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, 672 U.N.T.S. 119.

19. Convention on International Liability for Damage Caused by Space Objects, *opened for signature* Mar. 29, 1972, 24 U.S.T. 2389, 961 U.N.T.S. 187.

20. Convention on Registration of Objects Launched into Outer Space, *opened for signature* Jan. 14, 1975, 28 U.S.T. 695, 1023 U.N.T.S. 15.

21. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 34 U.N. GAOR, 34th Sess., Supp. No. 46, at 77, U.N. Doc. A/Res. 34/68 (1979); *see also* NATHAN C. GOLDMAN, *AMERICAN SPACE LAW: INTERNATIONAL & DOMESTIC* 86-91 (1988) (asserting that the Moon Treaty marks a “Second Era” in outer space law).

22. GLENN H. REYNOLDS & ROBERT P. MERGES, *OUTER SPACE: PROBLEMS OF LAW AND POLICY* 49 (1989) (referring specifically to the Outer Space Treaty).

23. *See* Heidi Keefe, *Making the Final Frontier Feasible: A Critical Look at the Current Body of Outer Space Law*, 11 *SANTA CLARA COMPUTER & HIGH TECH. L.J.* 345, 346 (1995) (“The treaties were perhaps one of the first real attempts at establishing a global community that would work together to accomplish a goal. Space would not be divided up, as were the land masses on earth, through conquest and colonialism. Rather, the vision for space was one of humans working in harmony to better the lives of all mankind by exploring and possibly exploiting space resources for the good of all, in the spirit of cooperation and harmony.”).

24. Caplan, *supra* note 12, at 3.

25. *SYMPOSIUM* 1961, *supra* note 7.

26. Caplan, *supra* note 12, at 3. For bibliographies of Apollo-era space law, *see, for example*, KUO LEE LI, *WORLD WIDE SPACE LAW BIBLIOGRAPHY* 647-51 (1978); JOHN J. LOONEY, *BIBLIOGRAPHY OF SPACE BOOKS AND ARTICLES FROM NON-AEROSPACE JOURNALS, 1957-77* (1979); and IRVIN L. WHITE ET AL., *LAW AND POLITICS IN OUTER SPACE: A BIBLIOGRAPHY* 43-46 (1972).

27. McDougal & Lipson, *supra* note 11, at 407.

momentum of the movement “[b]efore legal speculation reaches escape velocity.”²⁸ Even then they were apparently too late, and it was left to Nicholas Katzenbach to acknowledge the full scope of lawyerly hubris in the pages of the June 1958 *Bulletin of the Atomic Scientists*: “We have already explored Space, the Moon, Mars, and other bodies and are fast reducing the whole universe to a purely legal problem. . . . By comparison the scientists are barely off the ground.”²⁹

The “extensive and chaotic body of literature” on the law of outer space, which broke in “the midtwentieth century . . . the monopoly of science fiction writers,”³⁰ was indeed controversial. Its critics seem to have enjoyed ridiculing it, and in ever more hyperbolic terms. Thus, space law’s Cold War context produced “the political bedlam of space law.”³¹ Its naïveté before the language of *realpolitik* risked “suicide by semantics.”³² Its tendency towards prescription was symptomatic of a “Mosaic Syndrome”³³ and threatened to unleash the “psychoses of a gold rush.”³⁴ To make matters worse, a young reviewer writing in the pages of the *Harvard Law Review* anxiously denounced the movement’s most revered text, Myres McDougal, Harold Lasswell, and Ivan Vlasic’s *Law and Public Order in Space*.³⁵ The treatise’s “excessive conceptualism”³⁶ and “heavy

28. *Id.* at 407.

29. Nicholas Katzenbach, *Law and Lawyers in Space*, 14 BULL. ATOM. SCI. 220 (1958); see also AMERICAN BAR FOUND., REPORT TO THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ON THE LAW OF OUTER SPACE 3 (Leon Lipson & Nicholas deB. Katzenbach, project reporters, 1961) [hereinafter REPORT TO NASA] (noting the “considerable interest [in space law] . . . shown by the organized Bar, governments, and universities in many countries”); Eilene Galloway, *Preface to SENATE SPECIAL COMM. ON SPACE AND ASTRONAUTICS, 85TH CONG., SPACE LAW: A SYMPOSIUM* at v, v (Comm. Print 1958) [hereinafter SYMPOSIUM 1958] (“[T]he quality and quantity of published articles in this field are a matter of amazement to those who have only recently become aware of the impact of satellite development upon society.”); Arnold W. Knauth, *Legal Problems of Outer Space in Relation to the United Nations*, in SYMPOSIUM 1961, *supra* note 7, at 252, 252 (describing political and academic attention to space-law issues).

30. WHITE, *supra* note 26, at 6.

31. F.B. Schick, *The Political Bedlam of Space Law*, in INTERNATIONAL ASTRONAUTICAL FEDERATION, PROCEEDINGS OF THE SIXTH COLLOQUIUM ON THE LAW OF OUTER SPACE at 1, n.p. (1964).

32. Chester Ward, *Space Law as a Way to World Peace*, in SYMPOSIUM 1961, *supra* note 7, at 476, 483.

33. Caplan, *supra* note 12, at 6; see also Nicholas M. Poulantzas, *Synopsis of Recent Developments in Extra Atmospheric Law and Some Relevant Theoretical Problems*, in INTERNATIONAL ASTRONAUTICAL FEDERATION, PROCEEDINGS OF THE SEVENTH COLLOQUIUM ON THE LAW OF OUTER SPACE at 24, 28 (1965) [hereinafter SEVENTH COLLOQUIUM] (“An epidemic tendency today of publicists of outer space law is the formulation and proposal of more and more general principles of law. A cure should be applied to stop this trend.”).

34. L.F.E. Goldie, *Extra-terrestrial Privileges, Immunities, and Exposures*, 36 S. CAL. L. REV. 396, 411 (1963).

35. MCDUGAL ET AL., *supra* note 2.

36. Richard Posner, *Law and Public Order in Space*, 77 HARV. L. REV. 1370, 1373 (1964) (reviewing MCDUGAL ET AL., *supra* note 2).

layers of rules and generalities of dubious value”³⁷ resulted in a “handbook of analogies”³⁸ that was “high-sounding, but on examination almost meaningless,”³⁹ “even casuistic.”⁴⁰ The book, in Richard Posner’s view, was a failure; “the tough questions for the most part get swept under the rug.”⁴¹ Nor did the magnitude of the movement escape the somewhat derisive notice of the popular media. Early space law earned for itself such dubious honors as a center column article in the *Wall Street Journal*,⁴² an appearance in *Grin & Bear It*,⁴³ and a misprint to which the *New Yorker* called attention: “Every 24 hours many thousand meteorites approach the earth from outer space, but many fail to survive contact with the outer lawyers of the atmosphere.”⁴⁴

It is appropriate that the early years of space law should be described with images of psychosis and escape, for Apollo-era space law was a talking cure. The disease was the rise of science and the prognosis was the death of law. In seeking to make sense of the extraordinary outpouring of legal commentary on outer space in the late 1950s and early 1960s, this Note interprets early space law as a means by which the legal profession sought to assert its continued vitality in an age of science and technocracy. Part II shows how the overriding positivism and technological spectaculars of the Space Age were perceived to threaten the prestige of legal practice and the utility of legal knowledge. The image of outer space itself—as a “legal vacuum,” as the scientized, utopian future of humanity—posed a radical challenge to law’s claims to universality. The result was the law’s own, professional “Sputnik Crisis.” Part III evaluates the legal estate’s efforts to coopt what threatened it. Early space law sought to reduce outer space to the familiar rhetoric of property and sovereignty, and to develop a legal code for scientific custom in space. In assimilating to the law the very space that science identified as its own, the legal profession resisted the 1960s’ orthodox image of the future as one of technological heavens and

37. *Id.* at 1371.

38. *Id.* at 1373.

39. *Id.* at 1371.

40. *Id.* at 1373.

41. *Id.* at 1371. *But see* C. WILFRED JENKS, *SPACE LAW* 125 (1965) (calling *Law and Public Order in Space* “a major intellectual achievement”).

42. Jerrold L. Schechter, *Space Lawyers Ponder Ownership of Moon, Plot Spatial Borders*, WALL ST. J., Jan. 20, 1958, at 1. The front-page center column of the *Wall Street Journal* is, writes Louis Trager, “a spot the paper has reserved since time immemorial for stories on the off-beat, weird and just plain goofy.” Louis Trager, *Is S.F. Exotic or Just Goofy? Article Has Some Concerned How City Plays in Peoria*, S.F. EXAMINER, Feb. 3, 1995, at B1. The *Journal* editorialized the next day about “interstellar legal minds” who “don’t have their feet on the ground.” Editorial, *Moonlight and Legal Light*, WALL ST. J., Jan. 21, 1958, at 10.

43. The cartoon showed an expert telling a conference of generals that “[t]here are bound to be legal squabbles about claims on the moon, gentlemen. I think the first astronaut we land there should be a lawyer.” The cartoon is cited in Albert M. Kuhfeld, *The Space Age Legal Dilemma*, in SYMPOSIUM 1961, *supra* note 7, at 773, 775.

44. *See id.* at 774.

technological earth. Space law set in its place an image of the future in which law would function as the countercultural, humanist antidote to the proliferation of perfect technology. Perhaps visionary, perhaps opportunistic, early space law sought to acculturate the future to the law, and to claim that future's utopian largesse as new, professional property. In conclusion, Part IV speculates on what early space law has to say about the legal futurist impulse in our own new age of digital and genetic information.

II. LAW AND THE ROCKET STATE

In an infamous phrase, President Nixon called Apollo 11 the "greatest week in the history of the world since the Creation."⁴⁵ If the mythmakers at NASA were to be believed, then Nixon was not far off the mark. For a democracy capable of Hiroshima, NASA introduced the rocket launch as the new spectacle of state power and the surveillance satellite as the new symbol of state knowledge.⁴⁶ For a nation fearful of communist expansion, Tranquility Base confirmed the full reach of Manifest Destiny. For a postwar culture aspiring to make sense of its momentum in the world, the frontier epic of space exploration valorized American exceptionalism and interpreted it as foreordained by the gods.⁴⁷ Yet the space program held out the promise of something greater still. As a vehicle for what David Nye has called the "American technological sublime,"⁴⁸ NASA presented itself as

45. James T. Wooten, *Nixon Sees Crew, Splashdown in Pacific Is 11 Miles from Carrier Hornet*, N.Y. TIMES, July 25, 1969, at 1.

46. William Atwill proposes an interesting reading of the space program along these lines: Add to this ambivalence [about the Manichean nature of technology] the very public (televised) history of the space age and you have, perhaps, the best example of Guy Debord's postmodernist "Society of the Spectacle" as well as this century's benign version of Michel Foucault's "spectacle of the scaffold" in the sense that the space program served as a public stage on which a sovereign's power and control were inscribed on the hearts and minds of the assembled though a mediated enactment upon representative individuals. . . . [T]he space program was the most effective display of power in this century, a dispersed, nearly invisible coercion of the souls of people by way of a technological display apparently benign in its application. We were thrilled at the technological possibilities of communications satellites, weather satellites, probes to distant planets, and voyages of men to the moon, but all those years of admonition to "watch the skies" hovered at the edge of our consciousness to remind us that more sinister payloads could also be delivered.

WILLIAM D. ATWILL, *FIRE AND POWER: THE AMERICAN SPACE PROGRAM AS POSTMODERN NARRATIVE* 7 (1994); cf. Leonard S. Silk, *Values and Goals of Space Exploration*, in *SPACE AND SOCIETY* 43, 48 (Howard J. Taubenfeld ed., 1964) (calling the space race a "new version of the Medieval tournament").

47. See generally JAMES L. KAUFMANN, *SELLING OUTER SPACE: KENNEDY, THE MEDIA, AND FUNDING FOR PROJECT APOLLO, 1961-1963* (1994) (discussing NASA's public relations strategies); HOWARD E. MCCURDY, *SPACE AND THE AMERICAN IMAGINATION* 139-61 (1997) (discussing the frontier imagery used to promote space exploration in America).

48. DAVID T. NYE, *AMERICAN TECHNOLOGICAL SUBLIME* 256 (1994) ("In an atomic age, the pilgrimage to the Kennedy Space Center promised a sublime experience that renewed faith in

an image of the nation's technological future. In Houston, Cape Kennedy, Washington, and now on the Moon, the promise of the Great Society would be fulfilled by America's "new priesthood"⁴⁹ of scientists and technicians, a caste of "saviors and miracle workers"⁵⁰ who could command enormous instrumental power and symbolic capital⁵¹ with an aura of total competence.

Of course, that "Whitey's on the moon"⁵² meant different things to different people. For many of its critics, the space program represented the birth of a new, technocratic order in society. As the defining moment in the history of the American Rocket State,⁵³ Apollo 11 could be understood as the prodigy not of miracle workers, but of specialists without spirit. At NASA and elsewhere, the nation's new class of "technologues"⁵⁴ promised neutral technical means towards self-evident political ends and fashioned a legitimating ideology out of the "end of ideology" itself. In doing so, they made the dream of escape into space all the more appealing as they created on Earth the material conditions for the "technocratic consciousness"⁵⁵ of "one-dimensional man."⁵⁶ No wonder American liberal intellectuals responded to the space program's "behemoth piece of American

America and in the ultimate beneficence of advanced industrialization. This final avatar of the technological sublime is a literal escape from the threatened life-world.").

49. RALPH E. LAPP, *THE NEW PRIESTHOOD: THE SCIENTIFIC ELITE AND THE USES OF POWER* (1965); see also SPENCER KLAU, *THE NEW BRAHMINS: SCIENTIFIC LIFE IN AMERICA* (1969); DON K. PRICE, *THE SCIENTIFIC ESTATE* (1965); Jack Raymond, *The "Military-Industrial Complex": An Analysis*, N.Y. TIMES, Jan. 22, 1961, at 4E (citing Eisenhower's reference to the "scientific-technological elite"); Robert C. Wood, *Scientists and Politics: The Rise of an Apolitical Elite*, in *SCIENTISTS AND NATIONAL POLICY-MAKING* 41 (Robert Gilpin & Christopher Wright eds., 1964).

50. Meg Greenfield, *Science Goes to Washington*, in *THE POLITICS OF SCIENCE: READINGS IN SCIENCE, TECHNOLOGY AND GOVERNMENT* 124, 133 (William R. Nelson ed., 1968).

51. This term is adapted from Pierre Bourdieu. See generally Richard Terdiman, *Translator's Introduction of Pierre Bourdieu, The Force of Law: Toward a Sociology of the Juridical Field*, 38 HASTINGS L.J. 805, 812 (1987) ("*Symbolic capital*, for Bourdieu, designates the wealth (hence implicitly the productive capacity) which an individual or group has accumulated—not in the form of money or industrial machinery, but in symbolic form. Authority, knowledge, prestige, reputation, academic degrees, debts of gratitude owed by those to whom we have given gifts or favors: all these are forms of symbolic capital.").

52. GIL SCOTT-HERON, *Whitey on the Moon*, in *SMALL TALK AT 125TH AND LENNOX* 26 (1970); see also *The Ones Who . . .*, in SCOTT-HERON, *supra*, at 10 (discussing government spending on space exploration).

53. The term "Rocket State" is adapted from the "*Raketen-Stadt*," THOMAS PYNCHON, *GRAVITY'S RAINBOW* 297 (1973), a place that William Atwill describes as "a 'Rocket City' of the psyche, a world shaped not by geography and national origin but by the intricately multinational lines of technocracy that emerged after World War II and burgeoned in the Cold War climate of the next two decades," ATWILL, *supra* note 46, at 6-7.

54. See ALVIN W. GOULDNER, *THE DIALECTIC OF IDEOLOGY AND TECHNOLOGY: THE ORIGINS, GRAMMAR, AND FUTURE OF IDEOLOGY* 250 (1976).

55. JÜRGEN HABERMAS, *TOWARD A RATIONAL SOCIETY: STUDENT PROTEST, SCIENCE, AND POLITICS* 111 (Jeremy J. Shapiro trans., Heinemann Educ. Books 1971) (1968).

56. See generally HERBERT MARCUSE, *ONE-DIMENSIONAL MAN: STUDIES IN THE IDEOLOGY OF ADVANCED INDUSTRIAL SOCIETY* (1964) (analyzing the decadence of critical rationality in Western technological societies).

calculus,”⁵⁷ says Tom Wolfe, with “amazing hostility.”⁵⁸ No wonder the nation’s poets tended to ignore the whole thing.⁵⁹ The nation’s lawyers, however, did not have that luxury. For them, or at least for those who called themselves “space lawyers,” the Space Age threatened the art of legal practice and the scope of legal knowledge. Indeed, for some, it meant the death of law.

Section A surveys the rise of the American Rocket State as a technocratic ideology. After a review of the Sputnik Crisis, the Section considers the American space program’s evolving mandate as a model for national progress. It then assesses contemporary criticisms of technocracy and space exploration. Section B describes how the American legal profession responded to Sputnik and to the sudden clamor for scientific supremacy that followed in its wake. Section C speculates on why the legal profession reacted as nervously as it did to the onset of the Space Age. As in the scientific future it predicted, so in the scientific frontier it opened up and explored, the Space Age promoted a world in which legal knowledge would become obsolete.

A. *The Birth of the American Rocket State*

The origins of the American Rocket State have been traced to wartime Germany.⁶⁰ The more conventional account begins on October 4, 1957, when the Soviet Union successfully orbited *Sputnik I*, and the American “Sputnik Crisis” began.⁶¹ Within a month, the Soviets orbited *Sputnik II*, which carried the dog Laika, earning the satellite the popular name “Muttnik.”⁶² More ominously, the weight of *Sputnik II* implied a Soviet

57. TOM WOLFE, *THE KANDY-KOLORED TANGERINE-FLAKE STREAMLINE BABY* 17 (1973).

58. See Tom Wolfe, *Foreword* to ARNOLD BEICHMAN, *NINE LIES ABOUT AMERICA* at xi, xxiv (1972).

59. See generally RONALD WEBER, *SEEING EARTH: LITERARY RESPONSES TO SPACE EXPLORATION* 81-91 (1985) (describing the ironic and dismissive view of the space program held by various American poets in the 1960s and 1970s).

60. See, for example, Dale Carter’s detailed reading of Pynchon and postwar America, in DALE CARTER, *THE FINAL FRONTIER: THE RISE AND FALL OF THE AMERICAN ROCKET STATE* (1988). Consider also McDougall’s authoritative remarks concerning the legacy of wartime Germany’s *Vergeltungswaffen* (or “vengeance weapons”), the V-1 and V-2:

By investing the dwindling resources of the Nazi Empire in these technical adventures, which, without atomic warheads, could only stoke the determination of the enemy, Hitler did achieve a vengeance of sorts. He hastened the day when staggering costs and numbing fear accompanied the efforts of his conquerors to refine the V-2’s offspring into engines of terrible destruction.

MCDUGALL, *supra* note 13, at 41.

61. For background information on Sputnik, see BULKELEY, *supra* note 13; ROBERT A. DIVINE, *THE SPUTNIK CHALLENGE* (1993); and Roger D. Launius, *Sputnik and the Origins of the Space Age* (visited Feb. 7, 1999) <<http://www.hq.nasa.gov/office/pao/History/sputnik/sputorig.html>>.

62. See LEVINE, *supra* note 13, at 57; cf. *The Shaggiest Dog*, N.Y. TIMES, Nov. 5, 1957, at L31 (“The whole future of our own race, Communists and bourgeois alike, the bound and the

ability to deliver nuclear warheads to any spot on the globe.⁶³ On December 6, America attempted its first, hurried response. In a now famous image, the U.S. Navy's Vanguard TV-3 rocket, the American "Kaputnik," exploded on the launch pad while the world media watched. This series of events was a "propaganda triumph"⁶⁴ for the Soviet Union and probably its finest hour on the world stage. For the United States, it was declared an unthinkable reversal.⁶⁵ The Soviets had refuted in an instant what America's postwar "victory culture"⁶⁶ had taken for granted: the nation's overwhelming technological superiority, the preeminence of its democratic institutions, and the unrivaled ingenuity of American capitalism. Or so said congressional Democrats,⁶⁷ and as President Eisenhower recovered from his stroke of November 1957, his popularity fell as much as twenty-five points from its postelection high.⁶⁸

The immediate effect of the Sputnik Crisis in America was a call for total mobilization, for "blood, sweat and tears,"⁶⁹ in pursuit of scientific and technological superiority. This call extended to the nation's educational system, to its industrial base, to its commodity culture, and, of course, to its methods of governance. Ever prudent, Eisenhower refused to be carried away by the panic. In his 1958 State of the Union Address, he declared that the Soviet Union had begun to wage "total cold war,"⁷⁰ but proposed only modest reforms. It was left to the Kennedy and Johnson Administrations, to the New Frontier and the Great Society, to wage total cold war in return.

free, is at stake. Little Lemon [sic], the shaggiest dog, the first real space dog, may be more fortunate than those who sent him aloft, luckier than those in other lands who have to read his portent and take measures accordingly.").

63. See DIVINE, *supra* note 61, at 43-44.

64. *A Propaganda Triumph: A View that the Soviet Union Will Stress Satellite To Buttress Claims of Military Power*, N.Y. TIMES, Oct. 6, 1957, at L43.

65. *The Reporter's* alarmism was typical: "Sputnik as a name for a great national emergency is to Pearl Harbor what Pearl Harbor was to the sinking of the *Maine*." *The Expendable*, REPORTER, Nov. 28, 1957, at 2; see also ERIC HOFFER, *BEFORE THE SABBATH 55* (1970) ("What were the terrible 1960s and where did they come from? To begin with, the 1960s did not start in 1960. They started in 1957. . . . The Russians placed a medicine-ball sized satellite in orbit. . . . And we reacted hysterically.").

66. TOM ENGELHARDT, *THE END OF VICTORY CULTURE: COLD WAR AMERICA AND THE DISILLUSIONING OF A GENERATION* (1995).

67. See DIVINE, *supra* note 61, at 61-76; MCDUGALL, *supra* note 13, at 141-56.

68. See DIVINE, *supra* note 61, at 119.

69. *Senators Attack Missile Fund Cut: Satellite Delay Is Attributed to Administration—White House Disclaims "Race"*, N.Y. TIMES, Oct. 6, 1957, at 1 (quoting Sen. Bridges).

70. Eisenhower explained what he meant by the phrase:

"But what makes the Soviet threat unique in its history is its all-inclusiveness. Every human activity is pressed into service as a weapon of expansion. Trade, economic development, military power, arts, science, education, the whole world of ideas—all are harnessed to this same chariot of expansion.

The Soviets are, in short, waging total cold war."

MCDUGALL, *supra* note 13, at 158 & 487 n.2 (quoting Eisenhower and discussing the origins of the phrase).

One result was that by the mid-1960s, science became “the major Establishment in the American political system,”⁷¹ and the technocratic rhetoric of systems theory,⁷² cybernetics,⁷³ and synoptic decisionmaking⁷⁴ became the new language of power. As Hans Morgenthau wrote in 1964, “[i]n the eyes both of the political authorities and the public at large, the scientific elites appear as the guardians of the *arcana imperii*, the secret remedies for public ills.”⁷⁵ It was one such guardian, Secretary of Defense Robert S. McNamara, who probably expressed the new technocratic ethos best in *The Essence of Security*: “[T]he real threat to democracy comes not from overmanagement, but from undermanagement. To undermanage reality is not to keep it free. It is simply to let some force other than reason shape reality. . . . [I]f it is not reason that rules man, then man falls short of his potential.”⁷⁶ Truly, it was, for some, an Apollonian age—one that began and would end in war.

The rise of NASA both contributed to and reflected the more general rise of technocracy in American society. In March 1958, NASA was established as a civilian agency charged with defending American prestige in the eyes of the world. With its famed “aura of competence,”⁷⁷ the space program soon came to represent big, expensive government that worked. NASA chief James E. Webb called his agency a “prototype for tomorrow,” the “pattern needed by this nation” in which progress obtained through

71. Don K. Price, *The Scientific Establishment*, in *THE POLITICS OF SCIENCE*, *supra* note 50, at 70, 71. Meg Greenfield offers her own account of the rise of science:

In the beginning, a current saying in Washington goes, were the lawyers; next came the economists; and then came the businessmen. Now it is the scientists' turn. This new breed, or more precisely, these new hybrids, who began their more or less reluctant ascent to power during the Second World War, are now so thoroughly enmeshed and infiltrated into every level of government that no one seems capable of stating with any precision just what their function is.

Greenfield, *supra* note 50, at 124. Later in the article, Greenfield makes explicit reference to Sputnik: “What has happened since Sputnik rattled the china in 1957 has been an elevation of scientists, who were for the most part already there, to posts of new responsibility with access to the top.” *Id.* at 132. A survey of postwar literature on the relation between science and government may be found in Sanford A. Lakoff, *Scientists, Technologists and Political Power*, in *SCIENCE, TECHNOLOGY AND SOCIETY: A CROSS-DISCIPLINARY PERSPECTIVE* 355 (Ina Spiegel-Rösing & Derek de Solla Price eds., 1977).

72. On systems theory as a technocratic ideology, see ROBERT BOGUSLAW, *THE NEW UTOPIANS: A STUDY OF SYSTEM DESIGN AND SOCIAL CHANGE* (1965); and ROBERT LILLENFELD, *THE RISE OF SYSTEMS THEORY: AN IDEOLOGICAL ANALYSIS* (1978).

73. See generally NORBERT WIENER, *THE HUMAN USE OF HUMAN BEINGS: CYBERNETICS AND SOCIETY* (1967).

74. See generally NOMOS VII: RATIONAL DECISION (1964).

75. Hans J. Morgenthau, *Modern Science and Political Power*, 64 *COLUM. L. REV.* 1386, 1402 (1964).

76. ROBERT S. MCNAMARA, *THE ESSENCE OF SECURITY* 109 (1968); cf. NEIL SHEEHAN, *A BRIGHT SHINING LIE: JOHN PAUL VANN AND AMERICA IN VIETNAM* 290 (1988) (quoting McNamara's statement that “[e]very quantitative measurement we have shows that we're winning this war”).

77. See generally MCCURDY, *supra* note 47, at 83-107 (discussing how NASA developed a reputation for competence during the 1960s).

“adaptive, problem-solving, temporary systems of diverse specialists, linked together by coordinating executives in organic flux.”⁷⁸ As Webb’s exotic rhetoric suggests, and as Walter McDougall has persuasively argued, NASA helped to convert American politics over to the “technocratic temptation”⁷⁹ by serving as a “model for the application of the technocratic method to civilian goals.”⁸⁰ Despite the protestations of many in the American scientific community, NASA was also popularized as the archetype of state-sponsored “command technology” and as proof, however tenuous, of the material, intellectual, and spiritual advantages that would flow from it.⁸¹

Though the American space program became a cultural icon in the 1960s, the technocratic worldview that it came to symbolize was not without its detractors. For Hannah Arendt, space exploration abetted modernity’s “rebellion against human existence.”⁸² The narrator of Norman Mailer’s *Of a Fire on the Moon* offered a subtle, though hardly reassuring, variation on this theme. For him, space exploration held out the hope of humanistic rebellion against modernity: “[T]echnology had penetrated the modern mind to such a depth that voyages in space might have become the last way to discover the metaphysical pits of that world of technique which choked the pores of modern consciousness.”⁸³ When the likes of Arendt or Mailer criticized the space program in these terms, they did so as part of the Space Age’s wide-ranging and oftentimes best-selling literature on the specter of technocracy in the industrialized world.⁸⁴ This literature took a

78. JAMES E. WEBB, *SPACE AGE MANAGEMENT: THE LARGE-SCALE APPROACH* 29 (1969) (quoting Warren G. Bennis, *New Patterns of Leadership for Tomorrow’s Organizations*, *TECH. REV.*, Apr. 1968, at 37).

79. MCDUGALL, *supra* note 13, at 306 (“For the commitment to go to the moon did more than accelerate existing trends in space. It served as a bridge over which technocratic methods passed from the military to the civilian realm in the United States, to political problems at home as well as abroad. Sharp disagreements arose over the goals that government ought to pursue, but by 1964 little dissent remained over the methods. Under the impact of total Cold War, with the space program serving as lever, Left and Right, dove and hawk succumbed to the technocratic temptation.”).

80. *Id.* at 194.

81. Cf. VERNON VAN DYKE, *PRIDE AND POWER: THE RATIONALE OF THE SPACE PROGRAM* (1964) (analyzing various justifications for the space program offered during the 1960s). See generally RAYMOND A. BAUER, *SECOND-ORDER CONSEQUENCES: A METHODOLOGICAL ESSAY ON THE IMPACT OF TECHNOLOGY* (1969) (assessing and predicting the effects of the space program on the political economy and culture of the United States); MARY A. HOLMAN, *THE POLITICAL ECONOMY OF THE SPACE PROGRAM* (1974) (same).

82. HANNAH ARENDT, *THE HUMAN CONDITION* 2 (1958); see HANNAH ARENDT, *The Conquest of Space and the Stature of Man*, in *BETWEEN PAST AND FUTURE: EIGHT EXERCISES IN POLITICAL THOUGHT* 265 (1977); cf. DONALD COX & MICHAEL STOIKO, *SPACEPOWER: WHAT IT MEANS TO YOU* 1-20 (1958) (discussing favorably the goal of “Exodus Earth”). But see Bruce Mazlish, *The Idea of Progress*, 92 *DAEDALUS* 447 (1963) (asserting that space exploration is not an escape from, but an efflorescence of the human condition).

83. NORMAN MAILER, *OF A FIRE ON THE MOON* 471 (1970).

84. See, e.g., GUY BENVENISTE, *THE POLITICS OF EXPERTISE* (1972); JACQUES ELLUL, *THE TECHNOLOGICAL SOCIETY* (John Wilkinson trans., 1967); VICTOR C. FERKISS, *TECHNOLOGICAL*

variety of forms. In its more precise incarnations, it predicted—and sometimes purported to expose—the devolution of political authority upon the bureaucratic expert and the reordering of political values according to the imperatives of scientific/technological convergence.⁸⁵ In its more ambitious incarnations, it also criticized the totalitarian spirit of the age⁸⁶ and declared the death of the subject.⁸⁷ For those who subscribed to this critique, the space program was little more than technocratic pyramid-building and a well-orchestrated distraction from the discontents of technological civilization. The astronaut, meanwhile, became the controversial ideal type of the technocratic *Zeitgeist*—a scientific superman to his many admirers, a soulless organization man, the consummate “cheerful robot,”⁸⁸ to the few who begrudged him his fame.

B. *The Death of Law?*

1. *The Sputnik Crisis in American Law*

Given the degree to which the Sputnik Crisis permeated American life, it may not surprise that the American legal profession experienced its own Sputnik Crisis, one that took the form of a sudden flood of legal commentary on space exploration in seminars⁸⁹ and symposia,⁹⁰ in bar journals, both local⁹¹ and national,⁹² in law journals,⁹³ in legal newspapers,⁹⁴

MAN: THE MYTH AND THE REALITY (1969); HABERMAS, *supra* note 55; MARCUSE, *supra* note 56; JEAN MEYNAUD, *TECHNOCRACY* (Paul Barnes trans., 1968); THEODORE ROSZAK, *THE MAKING OF A COUNTER CULTURE: REFLECTIONS ON THE TECHNOCRATIC SOCIETY AND ITS YOUTHFUL OPPOSITION* (1969).

85. See GOULDNER, *supra* note 54, at 251-52.

86. See MARCUSE, *supra* note 56, at 3 (“By virtue of the way it has organized its technological base, contemporary industrial society tends to be totalitarian.”); see also Morgenthau, *supra* note 75, at 1390 (citing HANNAH ARENDT, *THE ORIGINS OF TOTALITARIANISM* (2d ed. 1958) to support the claim that totalitarianism is a consequence of modern technology).

87. See MAX HORKHEIMER & THEODOR W. ADORNO, *DIALECTIC OF ENLIGHTENMENT* 37 (John Cumming trans., Continuum 1998) (1944) (“On the way from mythology to logistics, thought has lost the element of self-reflection, and today machinery disables men even as it nurtures them.”).

88. The phrase is taken from C. WRIGHT MILLS, *WHITE COLLAR: THE AMERICAN MIDDLE CLASSES* 233 (1951).

89. See, e.g., *Seminar on the Law of Outer Space*, A.B.A. SEC. INT’L & COMP. L. BULL., May 1958, at 3 (first A.B.A. seminar, held in Atlanta, Georgia, Feb. 22, 1958); *Second Seminar on the Law of Outer Space*, A.B.A. SEC. INT’L & COMP. L. BULL., Dec. 1958, at 6 (held in Los Angeles, Aug. 26, 1958, to an “overflow audience”); *Third Seminar on the Law of Outer Space*, A.B.A. SEC. INT’L & COMP. L. BULL., July, 1959, at 7 (held in Washington, D.C., May 19, 1959).

90. See, e.g., *The Law and Upper Space: A Symposium*, 5 ST. LOUIS U. L.J. 1 (1958); *A Symposium on Space Law*, JAG J., Feb. 1959, at 3; *Outer Space: A Symposium*, 4 N.Y.L.F. 257 (1958).

91. See, e.g., Wolf Haber, *A Draft Convention on International Law of Space*, MICH. ST. B.J., Mar. 1959, at 24; Kenneth B. Keating, *The Law and the Conquest of Space*, 30 N.Y. ST. B. BULL. J. 72 (1958); G. Vernon Leopold & Allison L. Scafuri, *Law for the Space Age*, MICH. ST. B.J.,

and in the popular media.⁹⁵ To be sure, this was a distinctively professional rather than patriotic crisis. The “rival system[]”⁹⁶ was not communism, but science. The remarks of Senator Kenneth B. Keating are representative in this regard. In a January 1958 address before the New York State Bar, Keating spoke of the “recent Buck Rogerish achievements”⁹⁷ in space exploration and the “new-found glamor of the sciences.” “Technology with a capital ‘T’ is on every tongue. Definitely, the sciences are on the ascendancy. There is no question about that.”⁹⁸ He then cautioned: “The lawyer should not resent this.”⁹⁹

Resentment was nevertheless the order of the day, and for good reason. Not only did science reveal in the satellite orbits of 1957 and 1958 the rhetorical force of its achievements, but it was perceived to have done so in a profoundly lawless fashion. In one respect, the spacepowers neither sought nor expressed any opinion on the legality of their acts. Thus the “Chairman’s Message” in the May 1958 issue of the American Bar Association’s *Section of International and Comparative Law Bulletin* complained: “In 1957 the U.S.S.R. launched its sputniks into space. Later, American satellites joined in circling the earth in flights completely free from even the pretense of legal control.”¹⁰⁰ In another respect, science ostensibly extended itself beyond the rule of law into a “realm where no

Mar. 1959, at 19; Richard T. Murphy, Jr., *Air Sovereignty Considerations in Terms of Outer Space*, ALABAMA LAW., Jan. 1958, at 11; Potter, *supra* note 4; Maurice Rubin, *Physical Problems of the Laws of Space*, 10 BROOKLYN BARRISTER 96 (1959); Frank Simpson III, *Into Deep Space*, 32 L.A. B. BULL. 355 (1957).

92. See, e.g., Max Chopnick, *Satellites and the Law of Space*, A.B.A. SEC. INT’L. & COMP. L. BULL., Dec., 1957, at 4; John Cobb Cooper, *Flight-Space and the Satellites*, 17 FED. B.J. 460 (1957); John Cobb Cooper, *Missiles and Satellites: The Law and Our National Policy*, 44 A.B.A. J. 317 (1958).

93. See, e.g., John Cobb Cooper, *Flight-Space and the Satellites*, 7 INT’L & COMP. L.Q. 82 (1958); John Cobb Cooper, *The Russian Satellite—Legal and Political Problems*, 24 J. AIR L. & COM. 379 (1957); C.G. Fenwick, *How High Is the Sky?*, 52 AM. J. INT’L. L. 96 (1958); H.B. Jacobini, *Effective Control as Related to the Extension of Sovereignty in Space*, 7 J. PUB. L. 97 (1958); E. Pépin, *Legal Problems Created by the Sputnik*, 4 MCGILL L.J. 66 (1957); P.B. Potter, *International Law of Outer Space*, 52 AM. J. INT’L. L. 304 (1958); Oscar Svarlien, *Legal Problems in the Extraterrestrial Age*, 12 U. FLA. L. REV. 1 (1959); Seymour W. Wurfel, *Space Law—Is There Any?*, 37 N.C. L. REV. 269 (1959).

94. See, e.g., Michael Aaronson, *Aspects of the Law of Space*, LAW TIMES, Oct. 25, 1957, at 219; *Space Law*, SOLIC. J. 964 (1957); A.B., *supra* note 6; A.S. Wisdom, *Bleep Law*, JUST. PEACE 740 (1957); A.S. Wisdom, *A Question of Space*, 122 JUST. PEACE 56 (1958).

95. See, e.g., J.A. Joyce, *A Citizenship of Space?*, SATURDAY REV., Jan. 4, 1958, at 18; *Law Up Above*, NEWSWEEK, Oct. 21, 1957, at 34; Ernest K. Lindley, *Cooperation in Space*, NEWSWEEK, Jan. 20, 1958, at 28; Leslie Munro, *Law for the ‘Heav’ns Pathless Way*, N.Y. TIMES MAG., Feb. 16, 1958, at 15; *Outer Space: How To Behave There*, LIFE, Mar. 17, 1958, at 36.

96. Lee Loevinger, *Law and Science as Rival Systems*, 19 U. FLA. L. REV. 530, 530 (1966-67).

97. Keating, *supra* note 91, at 72.

98. *Id.* at 73.

99. *Id.*

100. Homer G. Angelo, *Chairman’s Message*, A.B.A. SEC. INT’L & COMP. L. BULL., May 1958, at 1.

law exists.”¹⁰¹ In early 1957, Eugène Pépin admonished his colleagues to update existing international air law in anticipation of satellite overflights: “It is to be hoped that jurists will not let themselves be outdistanced by technicians.”¹⁰² Yet with the satellite orbits of the late 1950s, this is precisely what had happened, or so it seemed to those lawyers for whom “legal vacuum” was a favored expression of self-reproach.¹⁰³

This identification of science as the antagonist, combined with the spacepowers’ reticence, created the conditions for a surprisingly altruistic, cosmopolitan discussion of space law in the months following Sputnik. This altruism was tempered, however, by the legal profession’s insistent rhetoric of prerogative and entitlement, of exclusive competency over “the domain of the space lawyers.”¹⁰⁴ Alarmist statements were typical. Lawyers declared that the franchise was now imperiled, if not on Earth, then certainly in outer space:

Admittedly, most of the space-law problems are still in the future. However, this is not in itself a reason why lawyers should not concern themselves with the questions that may arise or their possible solutions. If lawyers do not concern themselves with these questions, others will—and we may some day find ourselves confronted, by default, with undesirable laws or regulations or, by the same token, we may find that non-lawyers have entered the field to our disadvantage.¹⁰⁵

101. Eilene Galloway, *The Community of Law and Science*, in SYMPOSIUM 1961, *supra* note 7, at 450, 451; *see also* Matthew J. Corrigan, *Outer Space Lawyers: Eagles or Turtles?*, 51 A.B.A. J. 858, 858 (1965) (“[T]he launching of Sputnik I precipitated us into the outer space with immediateness and something of a state of shock. There were no laws for outer space.”).

102. Eugène Pépin, *The Legal Status of the Airspace in the Light of Progress in Aviation and Astronautics*, in SYMPOSIUM 1961, *supra* note 7, at 188, 194.

103. *See, e.g.*, SURVEY OF SPACE LAW, H.R. DOC. NO. 86-89, at 1 (1959) (characterizing outer space as “a politico-legal void”); Ralph R. Mickelson, *Space Law and Air Rights from the Ground up*, 49 ILL. B.J. 812, 821 (1961) (“Essentially, we are in a legal vacuum demanding and requiring clarification of the legal positions of nations as they reach into outer space.”); Joseph J. Simeone, Jr., *Space—A Legal Vacuum*, MIL. L. REV., Apr. 1962, at 43; *cf.* Imre Csabafi, *Current Problems of Space Law in 1962*, in FIFTH COLLOQUIUM, *supra* note 12, at n.p., 8 (“outer space was a virgin space before man entered it, to which in absence of human activities the provisions of law did not apply”); Schacter, *supra* note 1, at 71 (characterizing outer space as “legally . . . a no man’s world”); Simpson, *supra* note 91, at 356 n.5 (“At least one husband is apparently depending upon space travel to solve his marital problems. He has enthusiastically volunteered his wife as a passenger in the first rocket ship to the moon.”); Wurfel, *supra* note 93, at 271 (characterizing outer space as a “Pandora’s box of space facts with the lid ajar”).

104. Overton Brooks, *Space Law and International Cooperation*, in SYMPOSIUM 1961, *supra* note 7, at 664, 665.

105. Frank Simpson III, *Are Lawyers Ready To Write the Law for Space?*, Speech Before the Second Seminar on the Law of Outer Space (Aug. 26, 1958), in A.B.A. SEC. INT’L & COMP. L. BULL., Dec. 1958, at 6, 7.

In this sense, the Space Age would be “a turning point in our honored profession,”¹⁰⁶ one in which lawyers were going to be either “Eagles or Turtles.”¹⁰⁷ Some would eventually counsel against this paranoid style. Others, such as the irrepressible William Hyman, were far less restrained: “The void in space is law. This must be filled and it must be filled immediately. The time for launching is now! Go! Go!! Go!”¹⁰⁸ Such enthusiasm had a predictable result. “Many scientists like to jibe their lawyer friends for what they allege is an unnecessary desire to ‘get into the space act,’” wrote Philip B. Yeager in the *American Bar Association Journal*.¹⁰⁹ Yet, as far as Senator Keating was concerned, the very fate of the bar demanded immediate action: “[A]t the threshold of a new age of exploration and discovery. . . the American lawyer . . . must lead the way. . . . We choose between greatness—and oblivion.”¹¹⁰

2. *Big Science and the Law's “Cultural Cringe”*

The legal profession's Sputnik Crisis soon expanded beyond mere calls for the rule of law in outer space. As American society turned to science, American lawyers began to suggest that the choice between greatness and oblivion had already been made—if not in outer space, then certainly on Earth. “The technocrat is *not* the new messiah,” declared Arthur Selwyn Miller in the *Buffalo Law Review*, “and it is high-time lawyers recognized it.”¹¹¹ Yet many legal commentators openly acknowledged the ascendancy of the scientific estate in the early 1960s and acceded to its privileging of technical “competence” over “customary knowledge.”¹¹²

In an act perhaps best described as “cultural cringe,”¹¹³ to borrow a term from postcolonial studies, various lawyers declared their loss of status, if not their outright “abdication”¹¹⁴ of social and political authority. “The

106. Kenneth Anderson Finch, *Territorial Claims to Celestial Bodies*, in SYMPOSIUM 1961, *supra* note 7, at 626, 636g.

107. Corrigan, *supra* note 101, at 859.

108. William A. Hyman, *Wanted—Law and Police in Space!*, in SEVENTH COLLOQUIUM, *supra* note 33, at 206, 236.

109. Philip B. Yeager, *The Politico-Legal Needs of Space Exploration*, 47 A.B.A. J. 275, 277 (1961).

110. Keating, *supra* note 91, at 80.

111. Arthur Selwyn Miller, *Science vs. Law: Some Legal Problems Raised by “Big Science,”* 17 BUFF. L. REV. 591, 603-04 (1968).

112. JEAN-FRANÇOIS LYOTARD, *THE POSTMODERN CONDITION: A REPORT ON KNOWLEDGE* 19 (Geoff Bennington & Brian Massumi trans., 1984) (1979).

113. A.A. PHILLIPS, *The Cultural Cringe*, in *THE AUSTRALIAN TRADITION: STUDIES IN A COLONIAL CULTURE* 112, 112 (2d ed. 1966); *see also* BILL ASHCROFT ET AL., *THE EMPIRE WRITES BACK: THEORY AND PRACTICE IN POST-COLONIAL LITERATURES* 12 (1989) (citing Arthur Phillips).

114. *See, e.g.*, Samuel D. Estep, *International Lawmakers in a Technological World: Space Communications and Nuclear Energy*, 33 GEO. WASH. L. REV. 162, 162-63 (1964) (“Unless lawyers begin to concern themselves with these policy and legal problems [raised by new

simple fact is that law has not kept abreast of science," reported Chief Justice Warren in his 1963 address on the subject.¹¹⁵ Others spoke of the lawyer's "inertia,"¹¹⁶ scientific illiteracy,¹¹⁷ irrational devotion to an "ancient common law tradition,"¹¹⁸ and blindness to the social implications of science.¹¹⁹ These were the source of "embarrassing contrasts in a society in which the hallmark of science is impatience with the status quo."¹²⁰ This embarrassment had basic guild implications, as one commentator noted: "The notion of the omnicompetence of the lawyer, cherished by the profession for centuries, is a myth."¹²¹ Given this state of affairs, the coming of the Washington "superlawyers"¹²² must have seemed far off indeed. In the near term, an altogether different story was being told: "Lawyers are losing caste"¹²³ and are "on the verge of plummeting in social importance,"¹²⁴ though it remained to be seen whether science would, in fact, "reduce [them] to nothing more than electricians' helpers" ¹²⁵

The rise of the scientific estate did more than threaten the prestige and independence of lawyers. It also challenged law's cherished self-conception as an instrumental, even constitutive force in society. An orbit around the moon convinced Frank Borman, of Apollo 8, that "[m]an can now do

technology], the profession will abdicate its position of primary responsibility for creating and enforcing the rules by which society governs itself."); Morgenthau, *supra* note 75, at 1406 ("The ascendancy of the scientific elites, then, is a function not only of their monopoly of esoteric knowledge, but also of the abdication, in the face of it, of the politically responsible authorities and of the politically conscious public.").

115. Earl Warren, *Science and the Law: Change and the Constitution*, 12 J. PUB. L. 3, 4 (1963).

116. *Foreword to Law, Science, and Technology: A Symposium*, 33 GEO. WASH. L. REV. 1, 1 (1964) ("Lawyers are members of a profession devoted to precedents and relying heavily upon stare decisis, and they are particularly susceptible to inertia.").

117. See Spencer M. Beresford, *Lawyers, Science, and the Government*, 33 GEO. WASH. L. REV. 181, 207-08 (1964) ("At present, the legal profession is one of the last strongholds of the scientifically illiterate. Like the British Civil Service, the American legal profession, in spite of all that science has accomplished in this century, is still dominated by men trained almost exclusively in literature and the social sciences.").

118. W. Carey Parker, *The Levels of Confrontation of Science and the Law*, 19 CASE W. RES. L. REV. 40, 41 (1967).

119. See Gordon Brewster Baldwin, *Law in Support of Science: Legal Control of Basic Research Resources*, 54 GEO. L.J. 559, 590 (1966) ("Lawyers, reflecting their own education, the immediate interests of their clients, and the political concerns of the lay public, have long been unconscious of the active and passive role of law affecting science. Therefore, it is not surprising that they are usually blind to the interactions of science and society.").

120. Parker, *supra* note 118, at 41.

121. Miller, *supra* note 111, at 619.

122. See generally JOSEPH GOULDEN, *THE SUPERLAWYERS* (1972) (describing the influence of Washington lawyers and law firms on the federal government); MARK J. GREEN, *THE OTHER GOVERNMENT* (1975) (same).

123. Miller, *supra* note 111, at 615.

124. Arthur Selwyn Miller, *Science and Legal Education*, 19 CASE W. RES. L. REV. 29, 38 (1967).

125. Loevinger, *supra* note 96, at 541.

anything he wants to technically.”¹²⁶ This was to some extent the technocrat’s article of faith, one that “subtly shifts the emphasis of the persistent political question ‘Can we do this?’ from the consideration of legal constraints to consideration of physical constraints.”¹²⁷ In this limited sense, the technocrat’s “one best method” participated in the postwar period’s notorious “end of ideology”¹²⁸ both at home and abroad. Instrumental reason promised to depoliticize the management of public affairs and render obsolete—or at least inconsequential—the kind of complex normative disputes in whose resolution lawyers claimed to specialize.¹²⁹ In the view of some, the legal estate had already yielded its traditional authority to this false promise of positivism and engineered consensus, at the very least in the realm of technology policy,¹³⁰ if not in American governance more generally.

C. *Scientific Space and the Mythology of Modern Law*

Leon Lipson was reportedly fond of saying that “[s]pace is a place, not a topic.”¹³¹ Lipson’s remark may be understood as part of his attempt to reign in some of the especially fantastic ideations that characterized early space law. Yet outer space was more than just a geographical concept in the 1960s. The recent “spatial turn in critical thinking”¹³² in the law and

126. NIGEL CALDER, *TECHNOPOLIS* 23 (1969) (quoting Borman).

127. Wood, *supra* note 49, at 41, 54.

128. See generally DANIEL BELL, *THE END OF IDEOLOGY: ON THE EXHAUSTION OF POLITICAL IDEAS IN THE FIFTIES* (1960); *THE END OF IDEOLOGY DEBATE* (Chaim I. Waxman ed., 1968).

129. This version of the end-of-ideology thesis was emphasized most often by critiques of the thesis. See, e.g., Robert A. Haber, *The End of Ideology as Ideology*, in *THE END OF IDEOLOGY DEBATE*, *supra* note 128, at 182, 183 (attributing to the end-of-ideology thesis the argument that “the problems which are pressing for the society are of high complexity, do not have clear solutions, and political methods don’t appear the most fruitful means of treatment”); Stephen W. Rousseas & James Farganis, *American Politics and the End of Ideology*, in *THE END OF IDEOLOGY DEBATE*, *supra* note 128, at 206, 207 (citing Lipset’s claim that “the ideological issues dividing left and right [have] been reduced to a little more or a little less government ownership and economic planning”).

130. See Harold P. Green, *The New Technological Era: A View from the Law*, *BULL. ATOMIC SCIENTISTS*, Nov. 1967, at 17 (“[O]ur decisions [concerning government-sponsored technological programs] are made within small, closed circles of specialists on the basis of their expert judgments and predictions of the magnitude of the social consequences and the feasibility of their being controlled through technological means. . . . [T]he effect of our present obsession with technological advance is to displace the courts as the forum for protecting and vindicating individual rights which are disturbed by technology . . .”).

131. See Richard N. Gardner, *Introductory Remarks*, *PROC. AM. SOC. INT’L L.* 163, 164 (1961) (quoting Lipson).

132. Edward Soja, *Symposium: Surveying Law and Borders—Afterword*, 48 *STAN. L. REV.* 1421, 1423 (1996) (“The spatial turn—or what might be called the spatialization of critical studies—reflects the growing interest in the power of space and spatial thinking as a way of interpreting not just the contemporary world, but of dealing with critical questions of all kinds—including those addressed by critical legal scholars. Increasing attention is being given to the problems of the city, urban and regional issues, to locality, to the body, to place, to the

elsewhere should help us to appreciate that outer space was also a thoroughly politicized and socially constructed realm. As the Soviet and American culture industries of the time knew all too well, space functioned primarily as a metaphor for the future, and for the scientific worldview—be it capitalist or communist—that would dominate that future. Ludwig Teller attested to this construction of space in the *New York Law Forum*:

Space is no longer an ordinary word of the English language. It has taken on a secondary meaning identified with the science and technology of astronautics and expressive of the awesome responsibilities which missiles and satellites and flight beyond the earth's atmosphere and into the mysterious reaches of outer regions have imposed upon us. Who controls space controls the world.¹³³

Indeed, “space” was a topic. To the extent that it was a metaphor for the scientific future, outer space was also a metaphor for the profound challenges that this future presented to the status of legal knowledge. By the unparalleled force of its technological spectacles, space exploration helped establish science as a center of political and normative authority. At the same time, it opened up a new geography, the geography of the future, that seemed intelligible only to scientific knowledge. This put the legal estate on the defensive, and challenged the traditional prerogatives of law's empire itself. The scientific frontier in outer space promoted in the popular imagination on Earth an alternative language of command, a new standard of authority and competence, and a new force for the construction of the future. As the Sputnik crisis suggests, space exploration was local, as much for the scientific culture in orbit as for the legal culture on the ground.

Two factors help to explain why the legal estate reacted so closely to the arrival of the Space Age. The first was that Apollo-era space-law commentators failed to realize, as did most of the world at the time, that the imminence of extraterrestrial colonization, industrialization, and militarization was a “fabricated illusion.”¹³⁴ This illusion was fostered in order to justify the enormous sacrifice of public capital necessary to fuel space exploration and win the space race.¹³⁵ The astrophysicist James Van Allen did his best to debunk this illusion in testimony before Congress: “I do not subscribe to some 99% of what is written about this subject—space

relationships between the local and the global, to boundaries, to borders, to what can most broadly be described as the spatiality of human life.”).

133. Ludwig Teller, *Peace and National Security in the New Space Age: The National Aeronautics and Space Act of 1958*, 4 N.Y.L.F. 275, 275 (1958).

134. Thomas Merton, Comment to *Why Some Look Up to Planets and Heroes*, 108 AMERICA 433, 433 (1963).

135. See generally KAUFFMAN, *supra* note 47 (discussing NASA's public relations strategies); MCCURDY, *supra* note 47 (same).

exploration—as having any validity.”¹³⁶ Notwithstanding such voices of dissent, space lawyers believed the hype (indeed, contributed to it) and sought to acculturate to the law the ninety-nine percent that Van Allen ridiculed. To be sure, this was a losing proposition. After all, how do you reduce to an object of law the utopian visions of science fiction? The ninety-nine percent described a future dedicated to “[t]he accelerating momentum of history, the figurative shrinking of the globe, the telescoping of time,”¹³⁷ a future that would transcend the law’s traditional dictum *ex facto jus oritur*, that the law arises out of the fact. As the space politician Emilio Daddario urged, “we must build a body of law which can be reconciled with facts we have yet to learn about the world of outer space.”¹³⁸ The legal profession’s fate, in other words, would henceforth be a struggle to anticipate and bring within the law a new era of overwhelming technological, cultural, and geographical discontinuity—an era, in more recent terms, of “cyberspace” and “cybertime.”¹³⁹

A second, closely related condition concerned what this seemingly inevitable future implied about the law’s present. The common aphorism of the Space Age, “Who controls space controls the world,”¹⁴⁰ was underwritten by a subtle post-Orwellian message: Who controls the future controls the present. Space was the new high ground in more than just military terms. It was also an ethical or normative high ground, the blankness on which Space Age culture could project its “image of the

136. JAMES VAN ALLEN, HOUSE COMM. ON APPROPRIATIONS, SUBCOMM. ON INDEP. OFFICES, REPORT ON INTERNATIONAL GEOPHYSICAL YEAR 91 (1957).

137. Kenneth B. Keating, *Space Law and the Fourth Dimension of Our Age*, in SYMPOSIUM 1961, *supra* note 7, at 432, 432.

138. Emilio Q. Daddario, *Public Understanding and the Need for Space Law*, in SYMPOSIUM 1961, *supra* note 7, at 657, 657.

139. See M. Ethan Katsch, *Cybertime, Cyberspace and Cyberlaw*, 1995 J. ONLINE L. art. 1, ¶ 56 (“Our relatively brief experience with cyberspace indicates clearly that the computer is a space machine, negating physical distance and creating new spaces in which novel relationships and activities can occur. . . . [T]he computer should also be considered to be a time machine, creating a new environment in which our relationship with time becomes different from what it has been. Just as cyberspace calls upon us to explore what it means to be able to work in and with virtual spaces, cybertime should make us sensitive to issues of time that are in the background of much legal work.”); cf. Michel Foucault, *Of Other Spaces*, in THE VISUAL CULTURE READER 237, 237 (Nicholas Mirzoeff ed., 1998) (“The present epoch will perhaps be above all the epoch of space. We are in the epoch of simultaneity: we are in the epoch of juxtaposition, the epoch of the near and far, of the side-by-side, of the dispersed. We are at a moment, I believe, when our experience of the world is less that of a long life developing through time than that of a network that connects points and intersects with its own skein. One could perhaps say that certain ideological conflicts animating present-day polemics oppose the pious descendants of time and the determined inhabitants of space.”).

140. Teller, *supra* note 133, at 275; see also Stephen Gorove, *On the Threshold of Space: Toward a Cosmic Law*, 4 N.Y.L.F. 305, 307-08 (1958) (“He who controls the Cosmic Space, rules not only the Earth but the whole Universe.”); William A. Hyman, *Sovereignty over Space*, in INTERNATIONAL ASTRONAUTICAL FEDERATION, PROCEEDINGS OF THE THIRD COLLOQUIUM ON THE LAW OF OUTER SPACE 26, 35 (1960) [hereinafter THIRD COLLOQUIUM] (“The nation which controls space will control the world.”).

future.”¹⁴¹ To its great credit, early space law seems to have operated according to this principle. It feared the dominance of science and technology not only in the future as it would be lived, but also in the future as it was currently being imagined, mapped out, advertised—the future as it existed in the present. In this sense, the legal profession sought to intervene in the construction of a purely scientific image of the future, lest this prophesy become self-fulfilling. The law’s post-Sputnik reaction may appear comical to our eyes, in that it lent credence to the fabulous ninety-nine percent,¹⁴² in that it took the eccentric worldview of science fiction at its word. Yet this merely indicated the extent to which lawyers at the time understood the stakes involved. Fearful of being augured out of the Space Age, and mindful of the popularity of Futures Studies in the 1960s,¹⁴³ they shrewdly sought to exploit the possibility that, as one space lawyer wrote, “the idea of law is a picture of the future.”¹⁴⁴

In thus calling into question the sufficiency and scope of legal knowledge, the Rocket State posed a profound challenge to what Peter Fitzpatrick has called the “mythology of modern law.” Fitzpatrick locates this mythology within the framework of the colonial imagination.¹⁴⁵

Thus modern law emerges, in a negative exaltation, as universal in opposition to the particular, as unified in opposition to the diverse, as omniscient in contrast to the incompetent, and as controlling of what has to be controlled. . . . Law is imbued with this negative transcendence in its own myth of origin where it is imperiously set against certain “others” who concentrate the qualities it opposes. Such others are themselves creatures of an Occidental mythology, a

141. Cf. 1 FRED L. POLAK, *THE IMAGE OF THE FUTURE: ENLIGHTENING THE PAST, ORIENTATING THE PRESENT, FORECASTING THE FUTURE* 31 (Elise Boulding trans., 1961) (“It is the *positive* ideas and ideals of man, cast in the form of images of the future, picturing another and better world to come, which have here largely made history what it is. . . . [T]o the extent that these perfectionist and idealistic images of the future have served as predominating motifs and guiding stars to the societies which have held them, they have indeed been active in shaping the future for those societies.”); 2 *id.* at 115 (“The prevailing positive images of the future, perpetually breaking through the frontiers of time, have formed powerful—often the most powerful—long-range dynamic force pushing history through time. . . . [T]he history of culture is the history of its images of the future.”).

142. See *supra* note 136 and accompanying text.

143. See 1 WENDELL BELL, *FOUNDATIONS OF FUTURES STUDIES: HUMAN SCIENCE FOR A NEW ERA* 60-61 (1997) (describing the rise of futures studies by the 1960s).

144. Dionyssios M. Poulantzas, *Some Remarks on the Potential Sources of the Law of Outer Space*, in INTERNATIONAL ASTRONAUTICAL FEDERATION, *PROCEEDINGS OF THE EIGHTH COLLOQUIUM ON THE LAW OF OUTER SPACE* 379, 379 (1966).

145. See generally ASHCROFT ET AL., *supra* note 113; BILL ASHCROFT ET AL., *KEY CONCEPTS IN POST-COLONIAL STUDIES* (1998) (discussing various concepts in postcolonial studies); BART MOORE-GILBERT, *POSTCOLONIAL THEORY: CONTEXTS, PRACTICES, POLITICS* (1997) (comparing the postcolonial theory of Edward Said, Gayatri Spivak, and Homi Bhabha).

mythology which denies its own foundation by consigning myth in general to the world of these others.¹⁴⁶

This “negative transcendence” is the “fateful dimension” that the Enlightenment project sets for itself, explains Fitzpatrick. “[W]ith its claims to a sole rationality, to universality, comprehensiveness and consistency . . . [i]t can only relate to that part of nature which persistently stands outside of its project, which persistently denies it, as something essentially ‘other.’”¹⁴⁷

The culture of space exploration made untenable law’s claim to universal modernity. If the rhetoric of the Rocket State was to be believed—and for the most part it was believed—then law itself had become a kind of colonial other. It had begun to “concentrate the qualities it opposes.” In the judgment of science, its mentality was “savage, primitive, underdeveloped.”¹⁴⁸ In its own judgment, its origins were “ancient,” its “omnicompetence” was a “myth,” its likely fate was “oblivion.” No longer could it claim possession of “the *arcana imperii*.”¹⁴⁹ Instead, to expound legal knowledge in the Space Age was to preach the beliefs of the “stone age.”¹⁵⁰ To restore legal knowledge was to demand that it “give up its present unscientific form and join with science in *the cooperation of man with man in the conquest of nature*.”¹⁵¹

In the most general terms, then, the Space Age violated, however briefly, law’s traditional sense of empire. In the blankness of outer space, legal knowledge confronted a twentieth-century heart of darkness that formed an all-encompassing periphery to its claims to universality, omnicompetence, and centralism. This periphery was no savage darkness, however. On the contrary, it described the “endless frontier”¹⁵² of scientific enlightenment. It was a kind of empire unto itself, and one with a future.

146. PETER FITZPATRICK, *THE MYTHOLOGY OF MODERN LAW* 10 (1992); cf. JACQUES DERRIDA, *MARGINS OF PHILOSOPHY* 213 (Alan Bass trans., 1982) (“Metaphysics—the white mythology which reassembles and reflects the culture of the West . . . has erased within itself the fabulous scene that has produced it, the scene that nevertheless remains active and stirring, inscribed in white ink, an invisible design covered over in the palimpsest.”).

147. Peter Fitzpatrick, *‘The Desperate Vacuum’: Imperialism and Law in the Experience of Enlightenment*, in *POST-MODERN LAW: ENLIGHTENMENT, REVOLUTION AND THE DEATH OF MAN* 90, 94 (Anthony Carty ed., 1990).

148. LYOTARD, *supra* note 112, at 27.

149. See *supra* note 75 and accompanying text.

150. D.G. Brennan, *Why Outer Space Control?*, in *SYMPOSIUM 1961*, *supra* note 7, at 511, 511 (“We are rapidly entering the space age with an international political and legal structure better suited to the stone age.”).

151. Thomas A. Cowan, *Law and Technology: Uneasy Leaders of Modern Life*, 19 *CASE W. RES. L. REV.* 120, 124 (1967).

152. VANNEVAR BUSH, *SCIENCE: THE ENDLESS FRONTIER* (1960).

The result was that the “everywhereness”¹⁵³ of law, its universality which “exceeds [sic] all finitude,”¹⁵⁴ had been undone by the Rocket State. Law’s empire had become merely “local knowledge.”¹⁵⁵

III. LEGALIZING SPACE: THE EMPIRE WRITES BACK

Commenting on the outpouring of writing on space law in the wake of Sputnik, Euthymène Georgiades observed that “jurists, it appears, like nature, abhor a vacuum.”¹⁵⁶ This Part examines the ways in which legal knowledge rushed in to fill this vacuum. The overriding assumption of this Part is that early space-law commentary sought only incidentally to state a coherent doctrine of space law. The equitable distribution of craters on the moon was not its primary concern. Rather, Apollo-era space law was cultural work. It sought to affirm the legal estate’s “capacity to persuade people that the world described in its images and categories is the only attainable world in which a sane person would want to live.”¹⁵⁷ This meant the extension of legal images and categories, of legal discourse, into the discursive field of outer space. For better or worse, it meant the strange “imbrication” of legal meaning into a culture of space exploration.¹⁵⁸

Section A considers space law’s attempt to establish a boundary between atmospheric space and outer space. Section B discusses the attempt to codify space law. Section C concludes by examining early space law’s effort to defend the legal rights of extraterrestrial civilizations.

A. “Who Owns the Universe?”

In the early years of space law, variations on this question entitled innumerable popular and scholarly publications throughout the West,¹⁵⁹

153. Anthony Carty, *English Constitutional Law from a Postmodernist Perspective*, in DANGEROUS SUPPLEMENTS: RESISTANCE AND RENEWAL IN JURISPRUDENCE 182, 196 (Peter Fitzpatrick ed., 1991).

154. Anthony Carty, *Introduction: Post-Modern Law*, in POST-MODERN LAW: ENLIGHTENMENT, REVOLUTION AND THE DEATH OF MAN, *supra* note 147, at 1, 6.

155. CLIFFORD GEERTZ, *LOCAL KNOWLEDGE: FURTHER ESSAYS IN INTERPRETIVE ANTHROPOLOGY* (1983).

156. Euthymène Georgiades, *Du Nationalisme Aérien à l’Internationalisme Spatial ou le Mythe de la Souveraineté Aérienne*, 16 REVUE FRANÇAISE DE DROIT AÉRIEN [R.F.D.A.] 129, 135 (1962) (“Les juristes, paraît-il, comme la Nature, ont horreur du vide.”).

157. Robert W. Gordon, *Critical Legal Histories*, 36 STAN. L. REV. 56, 109 (1984).

158. See Austin Sarat & Thomas R. Kearns, *The Cultural Lives of Law*, in LAW IN THE DOMAINS OF CULTURE 1, 6-8 (Austin Sarat & Thomas R. Kearns eds., 1998) (discussing the production of legal meaning as a constitutive force in culture).

159. See, e.g., Sidney Katz, *Who Owns It, Anyway?*, MACLEAN’S, Jan. 18, 1958, at 13; Arnold W. Knauth, *If We Land There Soon, Who Owns the Moon?*, 45 A.B.A. J. 14 (1959); Willy Ley, *Who’ll Own the Planets?*, GALAXY SCIENCE FICTION, May 1957, at 51; Nicolas Mateesco, *A Qui Appartient le Milieu Aérien?*, 12 LA REVUE DU BARREAU DE LA PROVINCE DE QUÉBEC

much to the chagrin of Chairman Krushchev, who declared himself too historically advanced to consider the issue.¹⁶⁰ Of course, Krushchev had a point. The question of ownership tended to function in the West as the catchall for a wide variety of inquiries into more specific issues relating to extraterrestrial sovereignty, jurisdiction, conflict of laws, and property rights. Such inquiries typically began with a question that remains unresolved to this day: Where does sovereign airspace end and outer space begin?

The question of atmospheric sovereignty received "more attention from the legal writers than any other space law problem."¹⁶¹ In the process, it provoked a chaos of unsatisfactory answers, indeed "a complete lack of authoritative prescriptions."¹⁶² The most bizarre of such prescriptions was the notion of space-cone sovereignty, in which the classical doctrine *cujus est solum, ejus est usque ad coelum* ("he who owns the land, owns it to the skies") enjoyed an enormously expansive and latter-day Ptolemaic reading.¹⁶³ This view made the Soviet Zadorozhnyi's claim seem

[R.B.P.Q.] 227 (1952); *Who Owns the Moon?*, SAT. REV., Dec. 7, 1957, at 32; *Who Owns the Unknown?*, 180 ECONOMIST 727 (1956).

160. To a reporter's question concerning whether Luna 2's impact on the surface of the moon signaled a Soviet intent to claim possession, Krushchev responded:

I do not want to offend anybody, but we represent different continents and different psychologies, and I would say that this question reflects capitalist psychology, of a person thinking in terms of private ownership.

But I represent a Socialist country, where the word "mine" has long receded in the past and the word "our" has taken its place, and therefore when we launched this rocket and achieved this great thing, we look upon this as our victory, meaning the victory not only of our country but of all countries of all mankind.

Texts of Khrushchev Speech at National Press Club and Questions, N.Y. TIMES, Sept. 17, 1959, at 18; see also Ronald Christensen, *Soviet Views on Space Law—A Comparative and Critical Analysis*, in AMERICAN ROCKET SOCIETY, SPACE FLIGHT REPORT TO THE NATION (1961); Robert D. Crane, *The Beginnings of Marxist Space Jurisprudence?*, 57 AM. J. INT'L L. 615 (1963).

161. Martin Menter, *Astronautical Law*, in SYMPOSIUM 1961, *supra* note 7, at 349, 365; see also Hal H. Bookout, *Conflicting Sovereignty Interests in Outer Space: Proposed Solutions Remain in Orbit!*, MIL. L. REV., Jan. 1960, at 23, 25 ("Since commencement of the venture into upper areas of space—marked by the blast-off of Sputnik I on October 4, 1957—the pages of law reviews and political journals have been drenched with writings concerning the problem of the extent of national sovereignty into space.").

162. Gorove, *supra* note 140, at 328.

163. "This hypothesis is accomplished by projecting a nation's boundaries upward perpendicularly to the earth's surface from the center of the earth through the nation's boundaries to infinity." Joe C. Savage, Note, *Legal Control of Outer Space*, 52 KY. L.J. 404, 409 (1964). Of the concept of space-cone sovereignty, C. Wilfred Jenks observed: "Such a projection into space of sovereignties based on particular areas of the earth's surface would give us a series of adjacent irregularly shaped cones with a constantly changing content. Celestial bodies would move in and out of these cones all the time." C. Wilfred Jenks, *International Law and Activities in Space*, 5 INT'L & COMP. L.Q. 99, 103 (1956); see also *United States v. Causby*, 328 U.S. 256, 261 (1946) (declaring that the *cujus est solum* doctrine has "no place in the modern world.").

Still, the notion of the space cone had its uses. Consider, for example, the reasoning of Franco Fiorio:

But the "size and power" criteria, too, lose significance in the true space age, because the cone of space rising over the vertical of the territory of a small country like the Republic of San Marino, expands to infinite size at the outer reaches of the universe

reasonable, that Sputnik did not orbit over the United States, but rather that the United States rotated under Sputnik.¹⁶⁴ Most commentators, in contrast, sought to establish an altitudinal boundary between sovereign airspace and the *res nullius*, *res communis*, or *res extra commercium* of outer space. To do so, they typically began with the alleged constants of geophysical and astronomical science. A common proposition was that airspace sovereignty should simply end where "airless outer space"¹⁶⁵ begins—notwithstanding the fact that, as Arthur C. Clarke observed at the time, it is no more possible to establish "where the atmosphere ends than one can define the moment when a musical note ceases."¹⁶⁶ A related and equally suspect proposal sought to limit sovereignty to the "point of nullity of the field of gravity."¹⁶⁷ Other commentators sought to calibrate sovereignty according to technological variables. Thus, sovereignty should end at the minimum altitude necessary for orbit,¹⁶⁸ at the maximum altitude at which aerodynamic lift is available,¹⁶⁹ or at the farthest technological reach of the subjacent nation¹⁷⁰ or of any nation.¹⁷¹ Still others propounded elaborate regimes of "zones" or "belts." Arnold Knauth, for example, envisioned a scheme of as many as ten zones, starting with the "altitude to which an aircraft can lift a weight or cargo or military weapon," progressing through such boundaries as the "known orbit of the moon," and ending with "trans-lunar space (*ad infinitum*)."¹⁷² William Hyman urged the establishment of "Neutralia," which would function as a "buffer zone" between airspace

just the same way as the cone of space rising from the territory of a large nation such as the United States of American [sic] or the Soviet Republic.

Space is therefore a great equalizer and we feel that each nation, large or small, including San Marino, has the right to stand up and be heard on space problems.

Franco Fiorio, *Space Law—Point of View of a Small Country*, in INTERNATIONAL ASTRONAUTICAL FEDERATION, PROCEEDINGS OF THE FOURTH COLLOQUIUM ON THE LAW OF OUTER SPACE 111 (1963) [hereinafter FOURTH COLLOQUIUM]. Fiorio was the Consul General of the Republic of San Marino in Washington, D.C., at the time he wrote this.

164. See G. Zadorozhnyi, *The Artificial Satellite and International Law*, U.S. AIR FORCE PROJECT RAND 4 (Anne M. Jones trans., 1957).

165. Alex Meyer, *Legal Problems of Outer Space*, in SYMPOSIUM 1961, *supra* note 7, at 500, 506. For a survey of the various altitudes proposed as the outer limit of the atmosphere, see REPORT TO NASA, *supra* note 29, at 11-18.

166. ARTHUR C. CLARKE, *THE MAKING OF A MOON* 51 (rev. ed. 1958).

167. ALVARO BAUZA ARAUJO, *HACIA UN DERECHO ASTRONAUTICO* 125 (1957) ("Esta uniformidad sobre la base exacta del criterio de la nulidad del campo de gravedad, tendría la enorme ventaja de asegurar una situación neta, precisa y definida, así como proporcionaría a los Estados subyacentes una solución favorable para la protección de sus fronteras."); Joseph Kroell, *Eléments Créateurs d'un Droit Astronautique*, 16 REV. GEN. DE L' AIR 222, 230 (1953).

168. See John Cobb Cooper, *International Control of Outer Space*, 9 ZEITSCHRIFT FÜR LUFTRRECHT UND WELTRAUMRECHTSFRAGEN [Z.L.W.] 288, 290 (1960).

169. See Cooper, *supra* note 92, at 321; Andrew G. Haley, *Survey of Legal Opinion on Extraterrestrial Jurisdiction*, in THIRD COLLOQUIUM, *supra* note 140, at 37, 40.

170. See HANS KELSEN, *GENERAL THEORY OF LAW AND STATE* 217-18 (1961).

171. See Ming-Min Peng, *Le Vol a Haute Altitude et l'Article 1 de la Convention de Chicago*, 1944, 12 R.B.P.Q. 277, 292 (1952).

172. Arnold Knauth, Comment, in INTERNATIONAL LAW ASS'N, REPORT OF THE FORTY-NINTH CONFERENCE 264, 264-65 (1961).

and outer space.¹⁷³ Finally, some commentators simply proposed arbitrary limits on airspace, at 30 miles,¹⁷⁴ 50 miles,¹⁷⁵ 100 miles,¹⁷⁶ or, as a 1961 Note in the *Harvard Law Review* suggested, 50,000 miles.¹⁷⁷

The boundary theorists were often ridiculed for their various efforts to maintain “astrolegal” appearances. Writing in the *American Bar Association Journal*, Senator Keating was among the first to express dismay at the boundary theorists’ “too-anxious desire to resolve at once the thorniest legal question-mark conjured up by our prototype activities in space”¹⁷⁸ Others shared in Keating’s frustration. Harold Caplan feared that law would cede outer space to science: “The indications are that scientists, left largely to themselves, could evolve a code of human conduct for peaceful activities in space. . . . Will scientists leave the jurists stranded on the earth interminably arguing about the upper altitude limit for sovereignty?”¹⁷⁹ The aviation authorities Sir William Hildred and Sir Frederick Tymms equated the efforts of the boundary theorists with the notorious failures of early twentieth-century air law, in which the height of the Eiffel Tower and the vertical range of artillery had been proposed as the altitudinal extent of sovereignty.¹⁸⁰ Inevitably, the *Wall Street Journal* was left smugly to compare the sovereignty debate to the Old World’s apparently futile attempt to divide up the territories of the New.¹⁸¹

Yet the question of atmospheric sovereignty dominated early legal headlines on outer space, and elaborate maps of the proposed legal divisions of near-Earth outer space appeared throughout the literature.¹⁸² Why? Sputnik alone may provide the answer. Orbiting on the periphery, the artificial satellite nevertheless threatened to take over—or at least, define—the center. It had to be legalized. That much was obvious. What is peculiar, however, is the *form* of legalization that so many early space-law commentators proposed. Rather than regulate conduct according to some theory of functional sovereignty,¹⁸³ rather than control for such specific activities as surveillance or militarization, the preponderance of legal thought sought, in the first instance, to map space, to provide “purely

173. WILLIAM A. HYMAN, *MAGNA CARTA OF SPACE* 199-202 (1966).

174. See Murphy, *supra* note 91, at 33.

175. See C.L. Sulzberger, *Brush-Fire Peace—An Attainable Goal*, N.Y. TIMES, Nov. 19, 1960, at 20.

176. See Charles Herzfeld, *For U.S. Control of Outer Space*, NEW LEADER, Dec. 30, 1957, at 9.

177. See Note, *National Sovereignty of Outer Space*, 74 HARV. L. REV. 1154, 1172 (1961).

178. Kenneth B. Keating, *Reaching for the Stars—Space Law and the New Fourth Dimension*, 45 A.B.A. J. 54, 55 (1959).

179. Harold Caplan, *Law and Science in the Space Age*, J. BUS. L., Jan. 1959, at 102, 105.

180. See William Hildred & Frederick Tymms, *The Case Against National Sovereignty in Space*, in SYMPOSIUM 1961, *supra* note 7, at 264, 266.

181. See Editorial, *supra* note 42, at 10.

182. See, for example, the various maps in COX & STOIKO, *supra* note 82.

183. See NICOLAS MATEESCO MATTE, *AEROSPACE LAW* 63 (1969).

spatial solutions.”¹⁸⁴ Perhaps this was simply an attempt at consolidation: Inside the limits of the atmosphere was the rule of law; outside was the “law of the jungle.”¹⁸⁵ The “spatial turn” in legal thinking supports an alternative explanation: This act of mapping was an attempt—and a very traditional one—to expand the empire and circumscribe what lay beyond its frontiers.¹⁸⁶ Like the latitude and longitude of Western cartography, the map provided legal commentators on outer space with “a symbolic statement of power and dominion.”¹⁸⁷ It placed borders where science could not and renamed for the law the regions that science had always claimed as its own. In short, it inscribed the legal “topic” onto the scientific “place.”

The motivations that underlay law’s mapping of outer space help to explain something else: all the loose talk of ownership. The compulsive reference in the West to “who owns what”¹⁸⁸ and “what space is whose”¹⁸⁹ was more than just the panicked response of a capitalist ideology being overflowed by a Soviet satellite. In the improbable notion of ownership of a vacuum, the legal estate brought to bear on the phenomenon of space exploration perhaps the most persuasive rhetoric available to law, Western or otherwise: the rhetoric of property. Be it “mythic” in its political valence¹⁹⁰ or merely the lowest common denominator of popular legal culture,¹⁹¹ property talk had the power to reduce even Tranquillity Base to a question of legal possession. Notions of sovereignty may have been more appropriate, but they were a poor substitute for a mode of rhetoric in which, it has been suggested, “Property is Persuasion.”¹⁹²

184. George J. Feldman, *An American View of Jurisdiction in Outer Space*, in SYMPOSIUM 1961, *supra* note 7, at 454, 456.

185. Andrew P. Haley, *quoted in* Joyce, *supra* note 95, at 18.

186. *See generally* NICHOLAS K. BLOMLEY, *LAW, SPACE, AND THE GEOGRAPHIES OF POWER* (1994) (discussing the theory and practice of critical legal geography); EDWARD W. SOJA, *POSTMODERN GEOGRAPHIES: THE REASSERTION OF SPACE IN CRITICAL SOCIAL THEORY* (1989) (asserting the importance of spatial hermeneutics in critical social theory); *see also* Graham Huggin, *Decolonizing the Map: Post-Colonialism, Post-Structuralism and the Cartographic Connection*, in *PAST THE LAST POST: THEORIZING POST-COLONIALISM AND POST-MODERNISM* 125, 125 (Ian Adam & Helen Tiffin eds., 1990) (“The exemplary role of cartography in the demonstration of colonial discursive practices can be identified in a series of key rhetorical strategies implemented in the production of the map, such as the reinscription, enclosure and hierarchization of space, which provide an analogue for the acquisition, management and reinforcement of colonial power.”).

187. BLOMLEY, *supra* note 186, at 83.

188. William A. Hyman, *Who Owns What*, *SPACE WORLD*, June 1961, at 36.

189. Bookout, *supra* note 161, at 25.

190. JENNIFER NEDELSKY, *PRIVATE PROPERTY AND THE LIMITS OF AMERICAN CONSTITUTIONALISM: THE MADISONIAN FRAMEWORK AND ITS LEGACY* 246 (1990).

191. *See* Sally Engle Merry, *Concepts of Law and Justice Among Working Class Americans: Ideology as Culture*, 9 *LEGAL STUD. F.* 59, 67 (1985) (arguing that a paramount legal right in popular legal culture is the right “to control who is on one’s property and what happens on one’s property”).

192. CAROL ROSE, *PROPERTY AS PERSUASION: ESSAYS ON THE HISTORY, THEORY, AND RHETORIC OF OWNERSHIP* 297 (1994).

In a culture of space exploration, property talk served several purposes. At a basic level, it assisted in the law's cartographic ordering of chaos. It perpetuated an age-old process in which, as Fitzpatrick argues, "the joint advance of civilization and law in progressive opposition to various savage and barbaric stages is comprehensively mapped in terms of property."¹⁹³ Property talk also formed a kind of distraction from the utopian promise of the scientific frontier.¹⁹⁴ It told a story in which outer space would not function as a realm of infinite technological and libertarian plenitude—a realm where humankind might transcend its competition for resources, and perhaps even bring about the "gradual disappearance of the juridic element in human relationships."¹⁹⁵ Rather, space lawyers envisioned outer space as a finite common, already overcrowded with "sooners,"¹⁹⁶ that required strict borders, clear rules, and property-based incentives for efficient exploitation. Notwithstanding Krushchev's idealism, early space law in the West insisted on viewing outer space as a potential "tragedy of the commons" and predicted, to use a cyberlawyer's recent phrase, the "economics of constraint."¹⁹⁷ Space law did so in honor of where the rule of law begins and of what would be its "great and *chief end*."¹⁹⁸ Who owns the universe? Law owns the universe.

B. Codex Juris Spatialis: *The Legal-Humanist "Counterrevolution"*

By 1960, the failure of any nation to protest *Sputnik I* and its successors had effectively suspended the debate over the altitudinal extent of national sovereignty. Space law moved on, from the map to the code. The focus of the debate shifted to the question of customary law versus codification. Should lawyers "permit the concept of Space regulation to 'just grow,'"¹⁹⁹ or should they allow science to "stampede [them] . . . into attempting, prematurely, a statement of space law?"²⁰⁰ Those in favor of the

193. Fitzpatrick, *supra* note 147, at 95.

194. This idea of "distraction" is adapted loosely from Carol Rose, *Property As the Keystone Right?*, 71 NOTRE DAME L. REV. 329, 356-57 (1996), which describes, without endorsing, the "Distraction Argument" for the centrality of property rights, in which "[p]roperty protects all other rights because the pursuit of property makes politics seem boring."

195. EVGENY BRONISLAVOVICH PASHUKANIS, PASHUKANIS: SELECTED WRITINGS ON MARXISM AND LAW 46 (Piers Beirne & Robert Sharlet eds., Peter B. Maggs trans., 1980).

196. Richard N. Gardner, *Outer Space: A Breakthrough for International Law*, 50 A.B.A. J. 30, 30 (1964).

197. Lawrence Lessig, *Round Two: Response, Roundtable: Life, Liberty, and . . . the Pursuit of Copyright?*, ATLANTIC UNBOUND, (visited Mar. 10, 1999) <<http://www.theatlantic.com/unbound/forum/copyright/lessig2.htm>>.

198. JOHN LOCKE, TWO TREATISES OF GOVERNMENT 350-51 (Peter Laslett ed., 1988) (1690) ("The great and *chief end* therefore, of Mens uniting into Commonwealths, and putting themselves under Government, is the Preservation of their Property.").

199. Keating, *supra* note 137, at 432, 435.

200. *Law of Outer Space*, 1958 A.B.A. SEC. INT'L & COMP. L. 6, reprinted in SYMPOSIUM 1958, *supra* note 29, at 472, 477.

incremental development of space law, such as Myres McDougal and Leon Lipson, held by far the more sensible view, and the one vindicated by the pragmatic generalities of the Outer Space Treaty.²⁰¹ As astute observers of the space law scene, McDougal and Lipson saw in codification the cartographic impulse in a new form. They attributed to the codifiers the "vague hope that by throwing a net of legal controls into the vastness of the universe one may tame the disturbing unknown."²⁰² This Section discusses the hopes of those whom McDougal and Lipson criticized.

The desire to codify took many forms. As early as 1932, Vladimír Mandl published *Das Weltraum-Recht: Ein Problem der Raumfahrt*,²⁰³ in which he contemplated the establishment of rules regulating such matters as the placement in orbit of "Kunstmonde,"²⁰⁴ or artificial satellites, and the timing of death declarations and insurance arrangements for outer-space travelers.²⁰⁵ As a space-law theorist, Mandl lived before his time, but not by much. By the early 1960s, highly specialized debates had formed around such issues as extraterrestrial jurisdiction, radio-spectrum control, space torts, and the registration and identification of spacecraft (lest a launch be mistaken for a preemptive nuclear strike).²⁰⁶ Disputes also arose over which

201. McDougal was the leading exponent of the incremental development of space law. In *Perspectives for a Law of Outer Space*, he and Leon Lipson advocated "the slow building of expectations, the continued accretion of repeated instances of tolerated acts, and the gradual development of assurance that certain things may be done under promise of reciprocity and that other things must not be done on pain of retaliation." McDougal & Lipson, *supra* note 11, at 420 (citation omitted). The article forcefully rejected the feasibility of a comprehensive space code:

A durable agreement by explicit international convention on anything like a code of law for outer space is not, in our opinion, something now to be expected or desired. One may indeed expect with rather more confidence a series of agreements, gradually arrived at, on particular subjects . . .

. . . .

The modes of reaching such agreements cannot now be charted with any precision. Some agreements may be explicit and formal; some may be simply a consensus achieved by the gradual accretion of custom from repeated instances of mutual toleration. Some may be bilateral, others trilateral or multilateral; some may be within the framework of the United Nations, others within some other existing organization or some machinery yet to be set up.

Id. at 429-30. *Law and Public Order in Space* is essentially an elaboration on this theme. MCDUGAL ET AL., *supra* note 2. These opinions earned McDougal a great deal of criticism from other space-law theorists. See, e.g., ANDREW G. HALEY, *SPACE LAW AND GOVERNMENT* 24-26 (1963) (criticizing McDougal's system as nearly anarchic). Yet McDougal's expectations for the development of space law have proven to be largely accurate. See *supra* notes 14-23 and accompanying text. Indeed, as Walter A. McDougall writes, "[t]he most striking vindication of the [McDougal school of] realistic positivists was the fact that . . . secret [National Security Council] decisions [in 1958] had already rendered the space law debate academic." MCDUGALL, *supra* note 13, at 188.

202. McDougal & Lipson, *supra* note 11, at 415.

203. VLADIMÍR MANDL, *DAS WELTRAUM-RECHT: EIN PROBLEM DER RAUMFAHRT* [SPACE LAW: A PROBLEM OF ASTRONAUTICS] (1932).

204. *Id.* at 33.

205. See *id.* at 29.

206. A detailed survey of this literature is included in REPORT TO NASA, *supra* note 29, at 27-32.

international agency should interpret and enforce space regulations.²⁰⁷ Among the advocates for codification, the Canadian Maxwell Cohen was probably the leading voice. He argued that the accelerating pace of technology had rendered the methods of international customary law largely obsolete in outer space.²⁰⁸ William Hyman took a different tack. In his view, the “space law gap”²⁰⁹ was the result of “sheer cowardice on the part of the profession”²¹⁰ typified by the “anti-space law forces”²¹¹ within the American Bar Association. Those who opposed codification, such as the “collaborating pair of professors of law,”²¹² were no better than early opponents of child labor laws.²¹³ These were strong opinions, yet the alternatives to codification seemed unthinkable: the possibility of orbiting missile platforms or of Cold War tensions brought to the breaking point by surveillance satellite overflights.

In their own, peculiar effort to assert the continued vitality of the legal profession in the Space Age, the space-law codifiers presented lawyers as those professionals uniquely capable of investing outer space with the humanist values that it would otherwise lack. That is to say, having been stigmatized or “othered” by the science of the time, law stigmatized in turn. It represented science as amoral, antihumanist, and dystopian. In the process, it adjusted the traditional fatalism of “death of law” rhetoric to suit the age of technocracy and space exploration—and, later on, of civil disobedience and “culpable legicide.”²¹⁴ Arthur Selwyn Miller, for example, declared that “we have reached the point where the future must be planned for in a humanistic sense. Our future *is* being planned for us by the

207. See *id.* at 32-36 (surveying efforts by different organizations to coordinate a regulatory regime).

208. See Maxwell Cohen, *Introduction: Law and Politics in Space*, in *LAW AND POLITICS IN SPACE* 11 (Maxwell Cohen ed., 1964). Cohen compared space exploration to maritime exploration:

The traditional time-scales characteristic of the slow processes of customary or conventional law-making have been altered by the rate of technological advance in the management of space. . . .

. . . [W]hile man crossing the oceans could afford the luxury of two or three hundred years to evolve regimes of the high seas in the movement from *mare clausum* to *mare liberum*, and yet produce in consequence only five or six main principles—widely accepted, flexible and reasonable in their enforceability—no such leisurely pace is available to man exploring space. Here the urgencies, both positive and negative, require the early fashioning of agreed-upon rules which go beyond the capacity for effectiveness of broad customary principles standing alone.

Id. at 12-13.

209. HYMAN, *supra* note 173, at 283.

210. *Id.* at 291.

211. *Id.* at 289.

212. *Id.* at 293. The reference is to McDougal and Lipson.

213. *Id.* at 291-92.

214. Gidon Gottlieb, Comment, in *IS LAW DEAD?* 194, 206 (Eugene V. Rostow ed., 1971) (responding to Ronald Dworkin, *Taking Rights Seriously*, in *id.* at 168) (accusing American government officials of having destroyed the people’s trust in the law).

technocrats in the 'technostructures' of modern industry and government. A counterrevolution is necessary."²¹⁵ Oliver Schroeder agreed. The lawyer's role was no longer, in H.G. Wells's phrase, that of a "property tamer," but was now that of a "science tamer."²¹⁶

With the exception of William Hyman,²¹⁷ the codifiers were hardly the "lawyer militant[s]"²¹⁸ or science tamers that Miller or Schroeder had in mind. Still, they were not above coopting the countercultural rhetoric of antitechnology to defend their legal prerogative in outer space. Thus C. Wilfred Jenks cited the works of Franz Kafka and Eugène Ionesco to support the idea of codification.²¹⁹ Eilene Galloway quoted Arthur C. Clarke's *The Challenge of the Spaceship* to the effect that "[m]orals and ethics must not lag behind science, otherwise the social system will breed poisons which will cause its own [sic] destruction."²²⁰ And in a remarkable essay, in which he analyzed the spacepowers' "mutual exchange of scientific surveillance," Philip Yeager speculated that a space code might help stave off "the Orwellian nightmare of '1984.'"²²¹ Even Mandl, a self-styled technocrat of the 1930s,²²² warned of the prospect of overmechanization and a time when "machines would strangle all living things."²²³

The space-law codifiers may have sought to position the legal profession as, in some sense, the profession of the counterculture. Indeed, they may have welcomed the idea that, as one commentator put it, "devoting thought to developing space law is just a 'beatnik' manifestation of being 'far gone' and 'way out.'"²²⁴ Yet as their faith in codification itself

215. Miller, *supra* note 111, at 625.

216. Oliver Schroeder, Jr., *Introduction to Symposium: Science Challenges the Law*, 19 CASE W. RES. L. REV. 5, 6 (1967) ("Man can master science through enlightened law. Science will master man through traditional law. Here then is our challenge.").

217. See Hyman, *supra* note 108, at 206, 236 ("Science without the control of law is the enemy of mankind! Science under the control of law is the benefactor of mankind! Politics, national and international and beyond the control of law, ethics, and morals, disregarding rights of peoples in the world—is the antagonist of all society.").

218. Miller, *supra* note 111, at 629.

219. See JENKS, *supra* note 41, at 313 ("Capek, Kafka and Ionesco have taught us all to shudder in contemplation of robots coming to life, of science and technology as the thumbscrews and rack of an inhuman statecraft, and of human compassion and human dignity metamorphosed into the ways of the rhinoceros. We lawyers, as is our wont, have been less sensitive to the problem.").

220. Galloway, *supra* note 101, at 453 (quoting ARTHUR C. CLARKE, *THE CHALLENGE OF THE SPACESHIP* 11 (1953) ("Morals and ethics must not lag behind science, otherwise the social system will breed poisons which will cause its certain destruction.")).

221. Philip B. Yeager, *Space and Cogno-politics—a Third Force in World Affairs*, in INTERNATIONAL ASTRONAUTICAL FEDERATION, *PROCEEDINGS OF THE SECOND COLLOQUIUM ON THE LAW OF OUTER SPACE* 169, 175 (1960) [hereinafter *SECOND COLLOQUIUM*].

222. See VLADIMÍR MANDL, *ESSAYS OF A EUROPEAN TECHNOCRAT* (1936) (advocating technocratic solutions to societal ills).

223. MANDL, *supra* note 203, at 38 (describing a possible future in which "die Maschinen werden alles Lebendige erwürgen").

224. Wurfel, *supra* note 93, at 287.

suggests, the codifiers were not entirely free from the technocratic temptation. On the contrary, their search for what Myres McDougal called the "Big-Solution-Now"²²⁵ brought them squarely within the orthodoxy of the age, as did their appeal to the "machinery of detailed administration."²²⁶ If they believed the hype of the Space Age, the codifiers believed also in the rising tide of "comprehensive rationality" and "policy science."²²⁷ Thus they produced another characteristic graphic of early space law: the long, exhaustive outline of legal problems, both current and prospective, posed by space exploration.²²⁸ Like the map and the bibliography, the outline was a rhetorical device. It suggested that legal knowledge could schematize the full chaos of space, order it according to the "'A' to 'Z' in the lexicon of the law."²²⁹ As a code in embryonic form, the outline asserted that, at least for the law, the Space Age would remain a closed system.

C. *Brooding Omnipresences: The Legal Status of Extraterrestrial Civilizations*

If early space law defended the values of humanity in outer space, it claimed to defend the values of something else as well. Emboldened by a half-century of scientific writing on the possibility of exobiological life forms,²³⁰ and by an age-old literature, both fictional and philosophical, on the "plurality of worlds,"²³¹ space law populated the scientific object of outer space with legal, albeit extraterrestrial, subjects. True to its traditions, law's empire deduced the existence of the "other" and assumed that this "other" would be resolved, sooner or later, into a judicial question.

Most Apollo-era space-law commentators took for granted the need to formulate a legal theory of extraterrestrial life forms. Some went so far as to suggest that Earth law must now be subsumed within a still mysterious cosmic or interplanetary law.²³² The aerospace industrialist and lawyer

225. McDougal & Lipson, *supra* note 11, at 420.

226. Cohen, *supra* note 208, at 16.

227. See *supra* notes 71-76 and accompanying text.

228. See, e.g., Bohn, *supra* note 11, at 79.

229. Menter, *supra* note 161, at 363.

230. See NASA, EXTRATERRESTRIAL LIFE: A BIBLIOGRAPHY; PART II: PUBLISHED LITERATURE (1965) (providing an annotated bibliography of journal articles and books on the subject dating from 1900 to 1964).

231. See MICHAEL J. CROWE, THE EXTRATERRESTRIAL LIFE DEBATE, 1750-1900: THE IDEA OF A PLURALITY OF WORLDS FROM KANT TO LOWELL (1986) (surveying the debate from fifth-century-B.C. Greece to Percival Lowell's erroneous observation of artificial canals on Mars at the turn of the century).

232. See, e.g., Franz Gross, *Thoughts on the Importance and Task of Space Law*, in THIRD COLLOQUIUM, *supra* note 140, at 113, 113 ("[T]he legal problems of space can no longer be properly judged and solved from the starting point of earth but only from that of space itself. Thus

Andrew Haley was closely associated with this latter effort. A leading popularizer of space law during the 1960s, Haley told *The Washington Post* that “[o]ne of the very first professional men the prospective colonizer of outer space is going to have to consult . . . is a metalawyer.”²³³ Elsewhere in his writings, he explained why this would be the case: “The indefinite projection of a system of anthropocentric law beyond the planet Earth would be the most calamitous act man could perform in his dealings with the cosmos.”²³⁴ It would constitute the extension into space of “the bleak and devastating geocentric crimes of mankind.”²³⁵ It risked “galacticide.”²³⁶ Thus, the golden rule itself must yield to the new order of metalaw: “We must do unto others as they would have done unto them.”²³⁷

The majority of commentators had little regard for metalaw. Harold Lasswell, for example, seemed more concerned with the possibility that “[g]uided TV programs” might be used to establish “empathy . . . among all members of the astropolitical arena.”²³⁸ Still, those lawyers who wrote about extraterrestrial civilizations must have found Haley’s nearly messianic sensibility to be congenial. William Hyman spent much of his career propounding the *Magna Carta of Space*. Article 18 of this document stipulates that “[t]he peoples of the earth do hereby declare that they recognize the rights of sovereignty, ownership and control of any other planet by the inhabitants thereof.”²³⁹ Philip Yeager took this thinking to yet another level. He argued that it was one thing for a nation to claim jurisdiction over its adjoining islands, but it was something altogether different, and would, in fact, be “a rather cosmic-shaking event for one planet, or parts thereof, to assert dominion over another.”²⁴⁰ Such speculations inevitably led some Americans seriously to consider the possibility of a second American Revolution or the formation of independent states separate from Earth. In a 1958 address to the American Association for the United Nations, Arnold Knauth rejected the idea that there could be an “emperor or president of Outer Space,” but contemplated

we cannot simply apply terrestrial norms to space but must, on the contrary, see to it that the norms of space are valid on the earth.”).

233. Harry Gabbett, *Lawyer Blazes Cosmic Trail*, WASH. POST, Jan. 9, 1957, at B12.

234. HALEY, *supra* note 201, at 394.

235. *Id.* at 419.

236. Andrew Haley, *Space Law and Government—A Synoptic View*, in SYMPOSIUM 1958, *supra* note 29, at 150, 155.

237. HALEY, *supra* note 201, at 395; see also ERNST FASAN, RELATIONS WITH ALIEN INTELLIGENCES: THE SCIENTIFIC BASIS OF METALAW (1970) (discussing the development of the concept of metalaw and asserting its continued relevance); GEORGE S. ROBINSON & HAROLD M. WHITE, ENVOYS OF MANKIND: A DECLARATION OF FIRST PRINCIPLES FOR THE GOVERNANCE OF SPACE SOCIETIES 207-59 (1986) (same).

238. Harold Lasswell, *Anticipating Remote Contingencies: Encounters with Living Forms*, in FOURTH COLLOQUIUM, *supra* note 163, at 89, 98.

239. HYMAN, *supra* note 173, at 304A.

240. Yeager, *supra* note 7, at 760.

the possibility that “[t]he first groups who go may make their own Mayflower Compacts.”²⁴¹ Myres McDougal and Leon Lipson spoke of “wars of interplanetary independence.”²⁴²

What motivated this theorizing? Some tentative explanations may be proposed. Philip Yeager offers the beginnings of one. He urges that lawyers prepare for the possibility of life on the moon, if only because:

[I]t would have the virtue of humility. It would not cast lawyers and political scientists in the poor light which some physical scientists have achieved by their narrow assumptions that no intelligent life can exist in the Solar system, or anywhere in the universe, except under the physical conditions and according to the physical laws which they themselves have thus far managed to observe.²⁴³

Yet there was probably more to extraterrestrial space law than this professional one-upmanship over “physical scientists,” or over practitioners of earthbound law. As Yeager’s comment suggests, legal theory on extraterrestrials also participated in the era’s larger “culture of dissent”²⁴⁴ against, among other things, the totalizing knowledge-claims of the Rocket State. Recent work on American ufology in the 1950s and 1960s has shown how talk of extraterrestrials “established a space from which to resist the expert culture of containment and assert the authority of amateur and civilian opinion and research.”²⁴⁵ Whether already among us or yet to be encountered, extraterrestrial life forms bespoke scientific and spiritual mysteries undreamt of by systems analysis.²⁴⁶ In this sense, legal

241. Knauth, *supra* note 29, at 261. Earlier in the address, Knauth presented his vision of the politics of spacemen:

Outer space is going to be like the top of Mount Everest, a place to which a man goes briefly to conquer or to die, and to which he does not take his wife and children, nor where he sets up a stock exchange brokerage house. I do not know anyone who foresees a local political village life in outer space, or who expects to set up a grammar school, a high school, and a college there. These spacemen will follow their own ideas as to safety and will assume calculated and uncalculated risks; they will be hardy fellows, and are not likely to heed the recommendations of a Secretariat. If their enterprise fails, they will never face a board which wants to punish them; if they return safely, they will be heroes to many if not to all.

Id. at 257.

242. McDougal & Lipson, *supra* note 11, at 421.

243. Yeager, *supra* note 7, at 763.

244. MARGOT A. HENRIKSEN, *DR. STRANGELOVE’S AMERICA: SOCIETY AND CULTURE IN THE ATOMIC AGE passim* (1997) (tracing the development of a “culture of dissent” in America from the immediate postwar period through the atomic age of the 1960s).

245. JODI DEAN, *ALIENS IN AMERICA: CONSPIRACY CULTURES FROM OUTERSPACE TO CYBERSPACE* 41 (1998); *see also* ENGELHARDT, *supra* note 66, at 104 (“The ‘ufologists’ were also almost the only group at the time to take on the national security state directly, assailing the secrecy that surrounded the government’s UFO investigations and claiming a cover-up of information relating to the reality of space aliens.”).

246. *Cf.* ERIK DAVIS, *TECHGNOSIS: MYTH, MAGIC AND MYSTICISM IN THE AGE OF INFORMATION* 229 (1998) (“Keeping midcentury fears about nuclear apocalypse in mind, the

commentary on extraterrestrials expressed the full ambition of law's empire. It projected the rule of law and lawyers into the cosmos, and sought to establish legal knowledge over the unknown and the unimaginable. There would be no blank spaces on the law's map of outer space, no unregulated commons, no unregulated anything. Such principles as Ernst Fasàn's "eleven rules of Metalaw"²⁴⁷ would assimilate the universe itself, and those who still spoke of "natural law" simply lacked vision. Apollo-era legal theory on extraterrestrials thus constituted a kind of transcendental imperial principle: The "myth of modern law" became, in Andrew Haley's words, the "rule of law governing all creation."²⁴⁸

To view Apollo-era legal commentary on extraterrestrials through the lens of the postcolonial helps to explain perhaps the most striking peculiarity of early space law: that Latin American commentators figured so prominently in the movement, and formed in fact their own distinctive school of thought. Myres McDougal would probably have classified some Latin American nations as among those for whom effective control "would end at the treetops,"²⁴⁹ and, it is true, only Brazil had any space policy worth mentioning. Yet the likes of the Argentinian Aldo Armando Cocca, the Uruguayan Alvaro Bauza Araujo, and the Brazilians Hésio Fernandes Pinheiro and Haraldo Valladão were leading voices in international space law. Their work deserves an extended treatment, if only to recognize their practice of subverting the terminology of first-world space law, and international law with it. What must be noted here is their overriding concern with the rights of extraterrestrial civilizations. Against the backdrop of postwar decolonization, dependency, and, in smaller measure, liberation theology, these commentators found in space law a means of resisting "the ideas of sovereignty, predominance, appropriation of territories and enslaving of the respective inhabitants, which maculated the birth of International Law in the XVth and XVIth Century."²⁵⁰ For them, space exploration meant nothing less than *jus novum*, both in the heavens and on earth:

UFO must also be seen as a visionary projectile hurtling from the unconscious depths of the information age. . . . The UFO, it seems, is a rumor of God stitched into the fabric of the military-industrial-media complex, a complex whose cybernetic tentacles encircle us still.")

247. FASAN, *supra* note 237, at 71.

248. HALEY, *supra* note 201, at 411.

249. MCDUGAL ET AL., *supra* note 2, at 342 ("If every state were allowed to project its sovereignty upward and sideward in accordance with its effective power, there would inevitably arise countless conflicting claims with no criteria for their accommodation other than naked power. Moreover, for many underdeveloped states sovereignty would end at the treetops, while for a handful of the most powerful states, not even the sky would be the limit.").

250. H. Valladão, *The Law of Interplanetary Space*, in SECOND COLLOQUIUM, *supra* note 221, at 156, 159.

First of all, it is important to stress that Space Law is of a planetary nature as well the only truly universal law. It concerns human beings as such, either in the Earth or during cosmic travels, regardless of the geographical latitude or position in space. Space law does not take into account technological or economic development. No doubt it is a total law: a *jus humanitatis*, the law of mankind.²⁵¹

As voices of intervention in the dominant global narrative of technological advance, these commentators spoke from the visionary center of Apollo-era space law. Indeed, in the beginning, all of space law was, in some sense, Latin American.

IV. INFORMATIONAL FATE: WHO OWNS THE FUTURE?

Through all Eternitie so late to build
In Chaos

—John Milton, *Paradise Lost*²⁵²

This Note may seem a loser's history. The "golden age" of the *Corpus Juris Spatialis* passed as quickly as it came and is now for the most part forgotten. The Rocket State has developed ever more accurate ballistic missiles, but no *jus novum*. Modern space law has evolved, at its best, into a highly technical discourse spoken primarily by specialist practitioners. The futurist idealism remains in the literature, as does the insistence on lawyerly prerogative, but it is the message of telecommunications in space that pays for the medium.

Still, the legacy of Apollo-era space law remains vital, and for possibly obvious reasons. The millennial, recently apocalyptic rhetoric of the "Information Age" at least equals that of the Space Age. The implications for law's empire are thought to be as grave. Be it in the form of the borderless "electronic frontier" of cyberspace or the monster hypotheticals posed by the Human Genome Project, information technology challenges the competence and universalist ambition of legal knowledge, threatening a profound reversal in the law's "informational fate."²⁵³ Indeed, the "civilization of the Mind in cyberspace"²⁵⁴ has already declared its

251. Aldo Armando Cocca, *Fundamental Principles of Space Law: A Latin-American Viewpoint*, in *NEW FRONTIERS IN SPACE LAW* 61, 63 (Edward McWhinney & Martin A. Bradley eds., 1969).

252. JOHN MILTON, *PARADISE LOST* at vii:92-93, in *THE RIVERSIDE MILTON* 296, 540 (Roy Flannagan ed., Houghton Mifflin 1998) (1674).

253. J.M. BALKIN, *CULTURAL SOFTWARE: A THEORY OF IDEOLOGY* 294 (1998).

254. John Perry Barlow, *A Declaration of the Independence of Cyberspace* (visited Mar. 10, 1999) <http://www.eff.org/pub/Publications/John_Perry_Barlow/barlow_0296.declaration>.

independence from the “increasingly hostile and colonial measures”²⁵⁵ of the empire.²⁵⁶ In the world of “code,” explains one prominent commentator, new gods have begun to hand down new laws.²⁵⁷ The Rocket State of *Gravity’s Rainbow*²⁵⁸ has given way in the legal imagination to the cryptopia of *Neuromancer’s* Chiba City.²⁵⁹

Apollo-era space law speaks to the status of law in both places. It does so in defense of legal futurist imaging, particularly when that imaging accepts the future of technology at its most eccentric, and intervenes in that future at its most literal. The example of space law insists that, in our own age, the call for a “politics of intellectual property”²⁶⁰ is cultural work, and the notion of “limited common property”²⁶¹ as a “picture of the future”²⁶² of property is cultural persuasion. Though essentially visionary, such work is also intensely realistic, even pragmatic. It “gives a vision depth of field.”²⁶³ For better or worse, it counters technology’s anarchic propaganda of abundance, of constraint, legal or otherwise, transcended. Here, at its most expansive and experimental, legal knowledge surveys the farthest extremes of the utopian imagination and assimilates them to the “images and categories,” the grammar and lexicon, the “properties”²⁶⁴ of legal culture. Speaking at once of greatness and oblivion, it asserts possession of the future as an object of the law.²⁶⁵

255. *Id.*

256. *Id.* (“Your legal concepts of property, expression, identity, movement, and context do not apply to us. They are based on matter. There is no matter here.”).

257. See Lawrence Lessig, *Reading the Constitution in Cyberspace*, 45 EMORY L.J. 869, 897 (1996) (“The constraints of code in cyberspace are written by people; they are the constraints of the software that defines or constitutes cyberspace; while the constraints of technology in real space are not the constructions of people. At any one time, both constraints of technology (real and cyber) might function like a law of nature. But just as God may not plead the laws of nature as a defense, so too we, with respect to the technological constraints, or powers, of cyberspace, cannot plead ‘nature’ as a defense. With respect to the architecture of cyberspace, and the worlds it allows, we are God.”).

258. See *supra* note 53.

259. WILLIAM GIBSON, *NEUROMANCER* 3 (1984) (“Synonymous with implants, nerve-splicing, and microbiotics, Chiba was a magnet for the Sprawl’s techno-criminal subcultures.”).

260. James Boyle, *A Politics of Intellectual Property: Environmentalism for the Net?*, 47 DUKE L.J. 87, 89 (1997).

261. Carol Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 132 (1998).

262. *Id.* at 180.

263. Robert Cover, *The Supreme Court, 1982 Term—Foreword: Nomos and Narrative*, 97 HARV. L. REV. 4, 9 (1983) (“But law gives a vision depth of field, by placing one part of it in the highlight of insistent and immediate demand while casting another part in the shadow of the millenium.”).

264. See MARGARET JANE RADIN, *REINTERPRETING PROPERTY* 192 (1993) (“Attribute-property correlates with a personal-continuity thesis underlying stable expectations needed for self-constitution.”).

265. Cf. Jeanne L. Schroeder, *The End of the Market: A Psychoanalysis of Law and Economics*, 112 HARV. L. REV. 483 (1998) (critiquing the ideal of the perfect market within the framework of Lacanian notions of Eros and Thanatos).

Against whatever new enlightenment is being proclaimed by technology, legal knowledge thus tends to effect a romantic reaction, but one that is itself undertaken in the name of “righteousness, discipline, order, and well-articulated theory.”²⁶⁶ Ever the imperialist, it talks not so much *about* the future as *through* it. Ever the proprietor, it invokes law itself as the magic solving word that can rationalize chaos and whatever might lie beyond it. As what “[w]e live in and by”²⁶⁷ or, alternatively, “as reason encoded in the doings and dreams of power,”²⁶⁸ law insists all the while that its own talking cure is also curative of technological culture—and if not curative, than at least constitutive. A defense of the constitutional rights of genetic “sub-human” laborers,²⁶⁹ a vision of the human genome as the common heritage of humankind²⁷⁰—the profession should hardly judge these for the extent to which they manage a coherent statement of legal doctrine. The *lex ferenda*²⁷¹ that grows out of this futurist imaging may never be promulgated, let alone enforceable. Yet if the estate and its empire are to survive, then it must acculturate the future to the law even as it indoctrinates the present, and to do so, it must honor where the rule of law begins and what may continue to be its “great and *chief end*.”

266. GRANT GILMORE, *THE DEATH OF CONTRACT* 103 (1974) (“We have witnessed the dismantling of the formal system of the classical theorists. We have gone through our romantic agony—an experience peculiarly unsettling to people intellectually trained and conditioned as lawyers are. It may be that . . . some new Langdell is already waiting in the wings to summon us back to the paths of righteousness, discipline, order, and well-articulated theory.”).

267. RONALD DWORKIN, *LAW’S EMPIRE* at vii (1986).

268. ROBERTO MANGABEIRA UNGER, *WHAT SHOULD LEGAL ANALYSIS BECOME?* 189 (1996).

269. Rachel E. Fishman, *Patenting Human Beings: Do Sub-Human Creatures Deserve Constitutional Protection?*, 15 *AM. J.L. & MED.* 461, 461 (1989).

270. See Melissa L. Sturges, *Who Should Hold Property Rights to the Human Genome? An Application of the Common Heritage of Humankind*, 13 *AM. U. INT’L L. REV.* 219 (1997).

271. “Law as it ought to be.”

