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THE FCC AND THE PATENT SYSTEM: PROGRESSIVE IDEALS, JACKSONIAN REALISM, AND THE TECHNOLOGY OF REGULATION

JOHN F. DUFFY*

INTRODUCTION

The most interesting questions are the most fundamental. And they are also the most urgent. At the beginning of this new century, the important questions for the Federal Communication Commission—and indeed, for all administrative agencies—do not concern technical rules of accounting, nor the intricacies of the now fashionable *Chevron* doctrine, nor even the precise allocation of regulatory authority between state and federal authorities. The most important questions are whether the agency should continue to exist and, if so, what its mission should be.

For the FCC, these questions are immediate. If the agency had not already realized that, it was certainly given fair warning when one of the most prominent telecommunications lawyers inside the beltway, Peter Huber, recently called for the abolition of the FCC.¹ But the agency should not need Huber's

* Associate Professor of Law, Benjamin N. Cardozo School of Law. Copyright 1999 by John F. Duffy. All rights reserved. The author thanks Neal Devins, John McGinnis, Alan Meese, Anne Sprightley Ryan and Stephen F. Williams for helpful comments.

1. See PETER HUBER, *LAW AND DISORDER IN CYBERSPACE: ABOLISH THE FCC AND LET COMMON LAW RULE THE TELECOSM* (1997); see also Tom W. Bell, *Public Choice and Public Law: The Common Law in Cyberspace*, 97 MICH. L. REV. 1746, 1750, 1770 (1999) (reviewing HUBER, *supra*) (recognizing Huber as "a leading figure in telecommunications law and policy" and concluding that he makes a "strong case" for abolition of the FCC). A more cautious skeptic of the FCC, though perhaps not a fire-eating abolitionist, is Dean Krattenmaker. See Thomas G. Krattenmaker, *The Telecommunications Act of 1996*, 49 FED. COMM. L.J. 1, 48 (1996) ("I continue to believe that the case has never been made for maintaining a large, independent agency with industry-specific powers over telecommunications firms and markets.").

warning, for the FCC's regulatory mandate has been dissolving throughout the last decade.

When the FCC was originally created, it had two primary responsibilities. One was to regulate the prices and terms of service provided by communications common carriers.² That responsibility was largely inherited from the Interstate Commerce Commission ("ICC")—the paradigmatic regulatory agency for the Progressive and New Deal eras.³ Today, the ICC is no more, and traditional price regulation has fallen into disrepute. The FCC's second responsibility was to license radio spectrum in the "public interest."⁴ Today, spectrum auctions are poised to become the rule rather than the exception, and few telecommunications pundits view "public interest" regulation of the airwaves as anything other than an abject failure. Nor is there enthusiasm for conferring new regulatory responsibilities on the agency. To the contrary, a policy barring the Commission from assuming substantial regulatory control over the internet was included in the Telecommunications Act of 1996 (the "Act" or "Telecom Act").⁵

A shift in regulatory approach is not, of course, limited to the regulation of communications. Greater reliance on free market competition and a concomitant distrust of government control and planning are now general throughout the American, and indeed the world, economy.⁶ In fact, recent changes in regulatory philosophy have been so dramatic that momentous rhetoric is now a commonplace: The changes constitute a "great

2. See Communications Act of 1934, Pub. L. No. 416, § 201, 48 Stat. 1064, 1070.

3. See THOMAS MCCRAW, *PROPHETS OF REGULATION* 62 (1984) (noting that the ICC was the "prototypical federal regulatory agency" on which other agencies created in the next fifty years would be patterned).

4. See Communications Act of 1934, § 309(a), 48 Stat. at 1085.

5. See 47 U.S.C. § 230(b)(2) (Supp. III 1997) ("It is the policy of the United States to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation."). Commentators seem to agree with this policy choice. See, e.g., I. Trotter Hardy, *The Proper Legal Regime for "Cyberspace,"* 55 U. PITT. L. REV. 993, 1054 (1994) (concluding that any "top down" form of regulation would be inappropriate for the internet).

6. See DANIEL YERGIN & JOSEPH STANISLAW, *THE COMMANDING HEIGHTS: THE BATTLE BETWEEN GOVERNMENT AND THE MARKETPLACE THAT IS REMAKING THE MODERN WORLD* (1998) (detailing deregulatory, pro-market reforms across the world); Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 COLUM. L. REV. 1323, 1329-63 (1998) (detailing regulatory changes across a number of industries).

transformation,”⁷ a Kuhnian shift in “the basic regulatory paradigm,”⁸ and a “revolution.”⁹

None of this has escaped attention within the FCC. Chairman William Kennard recently promised that the agency was hard at work “reinventing itself to keep pace with our rapidly changing landscape.”¹⁰ The aspirations for the “reinvented FCC” stress markets, progress, and innovation. The Commissioners hope to “devot[e] their full attention to the achievement of a fully competitive, innovation-driven market in telecommunications”¹¹ and to “transform [them]selves from managers of regulation to leaders of revolution.”¹² They hope to make “a positive contribution to progress in communications”¹³ and “to establish new ground rules to promote innovation.”¹⁴ They even hope that in the future, their “primary task” will be to “create an environment that enables innovation to flourish, and ensures that all Americans can partake of the benefits.”¹⁵

Such rhetoric of reinvention—popularized in the 1992 book *Reinventing Government: How Entrepreneurial Spirit Is Transforming the Public Sector* by David Osborne and Ted Gae-

7. See, e.g., Kearney & Merrill, *supra* note 6, at 1323.

8. See Glen O. Robinson, *The Electronic First Amendment: An Essay for the New Age*, 47 DUKE L.J. 899, 929–30 (1998); see also MICHAEL K. KELLOGG ET AL., FEDERAL TELECOMMUNICATIONS LAW § 1.11, at 75 (1992) (contending that telecommunication regulation is “moving toward a new regulatory paradigm, one of competition rather than exclusive franchise, of competition rather than quarantine, of competition rather than price regulation, of plenty rather than scarcity”); DAVID OSBORNE & TED GAEBLER, *REINVENTING GOVERNMENT: HOW ENTREPRENEURIAL SPIRIT IS TRANSFORMING THE PUBLIC SECTOR* 321–25 (1992) (drawing an extended analogy to Kuhn’s theory of paradigm shifts).

9. See Michael K. Powell, *Communications Policy Leadership for the Next Century*, 50 FED. COM. L.J. 529, 529 (1998).

10. William E. Kennard, *Blazing a Trail: A Vision for the Twenty-First Century*, 1999 FCC LEXIS 5809 (Nov. 10, 1999); see also FCC Press Release: Chairman Kennard Calls for Change But Not Chaos, in *Outlining the FCC’s Pro-Consumer, Procompetitive Agenda at House Reauthorization Hearing*, 1999 FCC LEXIS 1086 (Mar. 17, 1999).

11. Powell, *supra* note 9, at 545.

12. *Id.* at 531.

13. James Quello, *Preface*, 6 COMMLAW CONSPECTUS 163, 163, 164 (1998) (hoping that the policies of the FCC are moving the industry toward “more innovation”).

14. William E. Kennard, *Preface to Symposium*, 7 COMMLAW CONSPECTUS 1, 1 (1999).

15. Susan Ness, *Preface to Symposium*, 7 COMMLAW CONSPECTUS 229, 229 (1999).

bler¹⁶—has been enthusiastically embraced by the Clinton/Gore Administration as an alternative to the vision of those who want to shrink or abolish government agencies.¹⁷ Thus, when Chairman William Kennard promises that “[i]n five years time, the FCC as we know it today will look very different,”¹⁸ he does not share Peter Huber’s vision of the agency’s future—oblivion. In that sense, the reinventionist course promised by the FCC’s leadership is strikingly different from the abolitionist proposals of Huber and others.

Yet the different visions for the future should not obscure the great commonality between the abolitionist and reinventionist reformers. Both movements posit that progress in industrial technology demand changes, even innovation, in the government structures inherited from earlier in the twentieth century. For Huber, the existing “commission law” has become obsolete precisely because it cannot keep up with a “technology [that] transforms itself every few months” and a “telecosm growing explosively all around.”¹⁹ So too, the reinventionists find “bureaucratic institutions developed during the industrial era . . . increasingly fail us” because “[w]e live in an era of breathtaking change” that has produced “an information society, in which people get access to information almost as fast as their leaders do,” and “a knowledge-based economy, in which educated workers bridle at commands and demand autonomy.”²⁰ Such an “environment demands institutions that are extremely flexible and adaptable,” and it has reduced “industrial-era institutions” to mere “wreckage.”²¹

16. OSBORNE & GAEBLER, *supra* note 8.

17. See, e.g., AL GORE, FROM RED TAPE TO RESULTS: CREATING A GOVERNMENT THAT WORKS BETTER AND COSTS LESS, at i (1993) (noting President Clinton’s instruction to all cabinet members “to create Reinvention Teams to lead transformations at their departments”).

18. Chairman William E. Kennard, A New Tomorrowland, Speech Before the National Association of Broadcasters Radio Show (Sept. 2, 1999), available in 1999 FCC LEXIS 4293, *10 (Sept. 2, 1999).

19. HUBER, *supra* note 1, at 8, 9; see also *id.* at 6 (finding “utterly implausible” fears that abolition could produce abuses of monopoly power because “the entire industry [is] in ferment,” “engineers [are] doubling the capacity of every medium every few years,” and “the telecosm [is] expanding at big-bang rates”).

20. OSBORNE & GAEBLER, *supra* note 8, at 15; see also *id.* at xviii (finding “industrial-era governments . . . not up to the challenges of a rapidly changing information society and knowledge-based economy”).

21. *Id.* at 15, 16.

A second similarity is that both groups of reformers share an overt admiration for, and seek inspiration for governmental reform in, the private world. For Huber, “[m]arkets constantly probe new technology, try out new forms of supply, and assess demand with a determination, precision, and persistence that no commission can ever match.”²² Because private markets have those strengths, Huber proposes permitting “private action [to] come [] first,” with governmental rules following only “when private conflicts arise and are brought to court.”²³ Moreover, Huber’s ideal process for formulating governmental rules—the common-law process—resembles the private market in that it is “decentralized,” “never planned,” and based on “common consent.”²⁴ The reinventionists also recognize “the superiority of market mechanisms over administrative mechanisms,” acknowledge that “[f]or profit businesses are more accustomed to innovating than public or nonprofit institutions,” and aspire to create “entrepreneurial governments” that “decentralize authority” and embrace both “competition” and “market mechanisms.”²⁵

Neither of these similarities is particularly troubling, or particularly helpful. It is no doubt true that changed industrial conditions may sometimes create a need for legal and governmental reforms, and a desire to update government is nothing less than the commendable ambition for progress in governance. But all this says little about the direction and degree of governmental reform. Seeking inspiration for governmental reform in private institutions is also commendable, for any comprehensive theory of regulation must encompass both private and public institutions. But the markedly different reforms suggested by the abolitionist and reinventionist camps demon-

22. HUBER, *supra* note 1, at 8.

23. *Id.* at 4–5.

24. *Id.* at 6, 206. Huber sees the common law process as permitting law to “evolve[] out of rulings handed down by many different judges in many different courtrooms” with “the good rules gain[ing] acceptance by the community at large.” *Id.* at 8.

25. OSBORNE & GAEBLER, *supra* note 8, at 299, 345, 19–20. To be sure, Osborne and Gaebler make clear that they view government and private business as “fundamentally different institutions” and that they are not arguing the government should be “run like a business.” *See id.* at 20. But they still expressly recognize their debt to business management theory, *see id.* at 21, and they acknowledge that their prescribed changes in government are “similar” to developments in private corporations. *See id.* at 12.

strate that here, too, the agreed point does not dictate the direction and degree of reform for the public.

A third similarity is, however, more vexing, for both groups of reformers seek to redeem government with idealized institutions that they lionized with heroic rhetoric. For Huber, the heroic institution is the common law system. Huber does not deny that government must perform regulatory functions in the communication industry, including creating enforceable rights to spectrum and limiting monopoly power. But he is convinced—intensely so, it seems—that courts acting in a common-law fashion can regulate best. The common law, we are told, is “adaptable,” “resilient,” capable of producing a “spontaneous order that is rational, efficient, and intelligent” and, ultimately, “far wiser” than “[s]clerotic” commission law, which “leads society down the road to serfdom.”²⁶ Indeed, the common law accounts for nothing less than “the most stable, decent, and consensual legal order on the planet.”²⁷

For the reinventionists, the heroic institution is the “entrepreneurial” government agency, which is “lean, decentralized, and innovative,” as well “flexible, adaptable, [and] quick to learn new ways when conditions change.”²⁸ The ambition for such institutions is no less than Huber’s aim for the common law, for entrepreneurial institutions “constantly use their resources in new ways to heighten both their efficiency and their effectiveness,” “liberate the enormous energies of public servants,” and provide “better education, better roads, and better health care, for the same tax dollar.”²⁹

Reformers can be expected, of course, to be enthusiastic about their proposals. Even such recondite matters as regulatory reforms can use a little salesmanship; perhaps such matters need it most. But a contrarian view also has its value, for there are dangers in overselling a reform. Institutions are rarely unqualified successes in all circumstances. If a new institution is touted as so clearly better than its antecedents, the reform may be pursued beyond its appropriate bounds, or the expectations for the institution could simply be too high, with inevitable disillusionment waiting in the future.

26. HUBER, *supra* note 1, at 6, 206.

27. *Id.* at 206.

28. OSBORNE & GAEBLER, *supra* note 8, at 2.

29. *Id.* at xix, xviii, 22.

Good cause exists for questioning the fervent optimism in either the common law or entrepreneurial governmental agencies. Peter Huber himself has provided case studies that temper enthusiasm for the common law. Over the past dozen years, Huber has delivered scathing indictments of two areas—the tort law and the rules governing admission of scientific evidence in court—that are controlled almost exclusively by common law, with only some very general legislative directions for the latter.³⁰ To say the least, Huber has not found the law in these areas to be “rational, efficient, and intelligent.” Indeed, the tort law of the late twentieth century, even though developed by “judges of the most respected state benches,” was for Huber “a mountain of pretentious failure” that “[a]cross the board . . . weighs heavily on the spirit of innovation and enterprise.”³¹

Moreover, Huber’s point in his earlier writings was not just that the common law courts had failed—all human institutions sometimes fail—but that common law courts were inferior to administrative agencies. Thus, Huber recommended that, in deciding the admissibility of scientific evidence, judges should look for guidance to the “authoritative” judgments of administrative agencies such as the “Food and Drug Administration” because “[s]uch institutions, established and funded to make difficult scientific calls, draw on the best and broadest scientific resources.”³² In the realm of public safety standards, Huber not only criticized the common law of torts for “freez[ing] out . . . public prescription through all government authority other than the courts;” he also praised the “expert” processes of the “EPA[,] . . . the FDA and other similar bodies” for replacing the “theater of the courtroom” with “sober, well-considered judgment.”³³

Nor should we inflate our expectations for entrepreneurial government. Even in championing entrepreneurial govern-

30. See PETER W. HUBER, *GALILEO’S REVENGE: JUNK SCIENCE IN THE COURTROOM* (1991); PETER W. HUBER, *LIABILITY: THE LEGAL REVOLUTION AND ITS CONSEQUENCES* (1988).

31. HUBER, *LIABILITY*, *supra* note 30, at 6, 11, 14; see also *id.* at 15 (claiming the modern common law of torts “ingrains a bias against innovation at all levels of the economy”); *id.* at 154 (claiming that “[a]s the tort system expanded, innovation was suppressed, not encouraged”).

32. HUBER, *GALILEO’S REVENGE*, *supra* note 30, at 201.

33. HUBER, *LIABILITY*, *supra* note 30, at 46.

ment, Osborne and Gaebler correctly realize that bureaucratic controls are imposed "to keep the politicians and bureaucrats from doing anything that might endanger the public interest or purse."³⁴ And they are also largely correct that "in solving one set of problems [bureaucratic controls have] created another."³⁵ Yet they do not explain why removing bureaucratic controls will not recreate the first set of problems—i.e., why decentralized "entrepreneurial" government will not re-endanger the public interest or purse. As one reviewer noted, Osborne and Gaebler's work could be viewed as merely "breezy management advice" based on "a series of inspiring stories about innovative officials who transformed moribund programs into successful operations."³⁶

There is another reason for at least caution, if not skepticism, in considering the reform proposals of today, for despite their common rejection of the Progressive-era style of government, both the abolitionists and the reinventionists share disquieting similarities to the Progressives. The Progressive reformers also predicated governmental innovation on technological change, admired the efficiency of the private industry, and proposed a heroic institution to cure the ills of the day. True, the Progressives lauded centralized, expert agencies rather than the decentralized institutions now in favor. But the appropriate lesson from the Progressive-era experience might have less to do with which type of government institution works, and more to do with how realistic governmental reform should be achieved.

A conscientious evaluation of the current reform proposals for the FCC should thus begin with a review of the Progressive era reforms, for the philosophy of that era accounts for the current structure and mission of the FCC. Part I of this paper undertakes that review and details the similarities to our own time. The Progressive era was the last great period of governmental reform, and the aspirations for change and progress in government then were no less than those of today. So, too, the expectations for new governmental institutions, and for the of-

34. OSBORNE & GAEBLER, *supra* note 8, at 14.

35. *Id.*

36. Daniel A. Farber, *Revitalizing Regulation*, 91 MICH. L. REV. 1278, 1279 (1993).

ficials who would run them, were not discounted by the possibility of failure.

When failure came—when the institutions did not fulfill the grand expectations of their champions—disillusionment crept in. Part II examines that disillusionment, which descended in the 1960s and dominated regulatory scholarship for the remainder of the century. Paradoxically, that period also defined a modest Renaissance for traditional governmental structure. For as the novel institutions of the Progressive era faltered, scholars of administration and regulation increasingly sought to reimpose on Progressive-era agencies' traditional features of government. Yet reimposing those structures did little to abate the disenchantment with the Progressive agencies. Dissolution of some agencies was inevitable. Those dissolutions marked the final abandonment of the Progressive-era model, which has made way for the new era of reform.

If our new era of reform is to do more than set a course for disillusionment fifty years hence, it should not ignore a more cautious, more humble, and perhaps more enduring model of regulation. Part III examines one such model—one precedent of regulation. It is the patent system, and it has been customarily ignored in studies of administrative regulation.³⁷ It should not be.

Longevity itself provides a good reason to study the administrative and regulatory structure of the patent system. For while the Progressive-era regulatory agencies have gone from fashionable innovations to antiquated relics during the twentieth century, the patent system continues to thrive with much the same structure that it was given in 1836. At least three other reasons recommend study of the patent system. First, the patent system has, by necessity, always been designed to accommodate technological change—a characteristic with particular relevance to the twenty-first century and to an agency such as the FCC, struggling to find sensible regulatory structures for an industry subject to a high rate of technical change. Second, agencies created in the twentieth and later part of the nineteenth centuries were influenced by then-

37. See, e.g., SUSAN ROSE-ACKERMAN, *RETHINKING THE PROGRESSIVE AGENDA* (1992) (containing not a single mention of the patent system of regulation in an otherwise comprehensive and engaging study of government regulation). A rare exception is classic work by LEONARD D. WHITE, *THE FEDERALISTS: A STUDY IN ADMINISTRATIVE HISTORY* 136–39 (1959).

fashionable political and regulatory philosophies, which radically overestimated the abilities of public agencies. In contrast, the modern American patent bureaucracy was established during the Jacksonian era, which was nothing if not realistic about the abilities of government officers and institutions. Third, the patent system provides further cause to check the enthusiasm of today's reformers. For agency abolitionists who seek to idealize the common law, the patent system provides a well-documented failure of the common law to regulate effectively without the assistance of an administrative agency. For the reinventionists, the patent system shows a governmental agency traditionally laden with bureaucracy, and yet the agency is on the frontlines in encouraging innovation and entrepreneurial venture in private industry.

Finally, Part IV of the paper advances some specific hopes for the FCC as it enters the twenty-first century. One hope is that the agency gleans the correct lesson in regulation from the patent system. That lesson is emphatically *not* that government agencies should actively aid and abet innovation; indeed, the FCC's disastrous "pioneer's preference" program has already proven the folly of that course. The better lesson is that, while administrative regulatory systems can succeed in spurring private actors to serve publicly-minded goals, architects of those systems must be relentlessly realistic about the limited capabilities of government institutions.

That hope is modest. But we may also hope, with cautious audacity, for something more—for progress not only in the bits and bytes of communications technology, but also in the technology of regulation. The challenge for the new century will be not simply to create better regulatory structures, but to create a regulatory superstructure that encourages the betterment of regulatory technology itself. If that ambition shares in the fundamental optimism of the Progressives, and of today's reformers, it is an unavoidable similarity, for it is nothing less than the aspiration that government, like all things human, can improve.

I. THE FCC'S INHERITANCE FROM THE PROGRESSIVE ERA

The intellectual basis for an agency such as the FCC, an expert independent agency with a broad mandate to regulate in the public interest, was formulated in a period of great reform

centered about the last turn of a century. Understanding the dominant theories of regulation from that era is essential to understanding the current structure of the FCC, and to evaluating new proposals for reform.

A. *The Heroic Ambitions of the Progressive Era and the "Science of Administration"*

While the antecedents of "expert" regulatory agencies trace back to the period just following the Civil War, the theoretical justifications for such agencies did not become dogma until the Progressive era, at the end of the nineteenth century and in the early decades of the twentieth century. As has our own era, that era saw fantastic technical change, extensive transformations in government theory, and the dawn of a new century. But the Progressive era has more than just superficial similarities to our own.

As in our age, the reformers in the Progressive era postulated that recent technological advances required substantial changes in government. As in our age, the reformers of that time admired the efficiency of private industry and distrusted government institutions of the day. And as in our age, the reformers held a zealous confidence in the abilities of idealized institutions that were defended more with heroic rhetoric than with dispassionate consideration of the institutions' vulnerability to human foibles. But what the new administrative state lacked in the theoretical solidity, it made up in the rhetorical skill of its champions. They easily overcame the soft voice of doubt.

1. *Technological Change Begets Governmental Innovation*

The extensive technological developments of the late nineteenth and early twentieth centuries provided a convenient justification for the rise of the administrative state. It was a justification used often and early.

Charles Francis Adams, grandson of President John Quincy Adams, established the foundations of the argument shortly after the Civil War. His pioneering articles argued that

technological advance not only was reshaping American society, but was also demanding new forms of regulation.³⁸ Today, in our age of gigahertz computers and genetic engineering, we may think of steam power as primitive. But it was not so in 1867. Then, Adams could persuade his readers that steam power was more than just “a great result of science”—it was one of “the most tremendous and far-reaching engine[s] of social revolution which has ever either blessed or cursed the earth.”³⁹ “Our times are not as those of our fathers,” Adams could write with both accuracy and rhetorical flourish, “they have been years of another world.”⁴⁰

For Adams, new technologies of government were required to regulate the industries created by the new technology, the most important of which was the railroad industry. Adams first proposed the expert regulatory agency in embryonic form. Regulation would still be accomplished through legislative conditions imposed on individual corporate charters, which was an accepted form of public control prior to the rise of general incorporation statutes.⁴¹ The novelty proposed by Adams was

38. See MCCRAW, *supra* note 3, at 7; Harry M. Trebling, *Regulation of Industry: An Institutional Approach*, in 2 *EVOLUTIONARY ECONOMICS* 289, 291–92 (Marc R. Tool ed., 1988) (noting the influence of Adams and his arguments that technological changes were reshaping American society).

39. Charles F. Adams, Jr., *The Railroad System*, 104 N. AMER. REV. 476, 480 (1867). While this article was published anonymously, the author's identity was well known in the intellectual circles of Boston. See MCCRAW, *supra* note 3, at 312–13 n.16. For Adams, only the invention of the printing press and the discovery of the New World had wrought social changes as significant as those brought by the harnessing of steam. See Adams, *The Railroad System*, *supra* at 483; see also Charles F. Adams, Jr., *Railroad Commissions*, 2 J. OF SOCIAL SCI. 233, 233 (1870) (also an anonymous article attributed to Adams, see MCCRAW, *supra* note 3, at 312–13 n.16, that identifies “steam power” as the “leading element of modern progress” and as a challenge to government because “no community can rely on competition to correct any abuses which may creep into [the rail industry]”); *id.* at 235 (hoping that early state commissions of experts “will throw some light on this very complicated problem”).

40. Adams, *The Railroad System*, *supra* note 39, at 483. Predicating reform on great advances in technology suffers from at least one serious weakness: the great technological advances have occurred under the regime sought to be reformed. Adams appreciated this problem, acknowledging that “[a]ll these [technological] revolutions have been worked . . . through the machinery of private corporations.” *Id.* at 496. To overcome the problem, Adams tapped into popular antipathy against the railroads, claiming that “the charge now advanced against the corporate system is not a light one, nor is it supported by doubtful evidence.” *Id.*

41. See *Legislative Control of Railway Charters*, 1 AM. L. REV. 451 (1867); see also *The Pennsylvania College Cases*, 80 U.S. 190, 213 (1872) (noting that

merely to replace the “spasmodic” and “superficial hearings before legislative committees” with more orderly investigations by “bureaus of railroad statistics, under the superintendence of competent commissioners.” Such commissions would “shed a flood of light” on the industry and allow the legislature to formulate more “intelligent railroad legislation.”⁴²

But Adams soon abandoned that modest reform as unrealistic. Regulation by the legislatures was not only “lax and confused,” but also “corrupt[ed] the whole political system” because the railroad monopolies became “omnipresent in legislatures.”⁴³ The legislature was “overwhelmed with business it cannot do and tainted with jobbery of which it cannot rid itself.”⁴⁴

The “solution” to this problem—the “innovation in our system” that Adams proposed—was the creation of tribunals having both “the judicial and discretionary action under the general law.”⁴⁵ The legislature would enact a general rule, “but the degrees of discretion which varying circumstances exact in the application of the rule must constitute a trust necessarily delegated to others.”⁴⁶

The connection established by Adams between “the great result of science” and the “innovation” of government became one of the standard arguments in the Progressive era. For example, the introduction to Gerard Henderson’s classic 1924 study of the Federal Trade Commission (“FTC”) postulated that

state legislatures frequently make a corporate charter conditional or reserve a power to modify or alter an act of incorporation); *Charles River Bridge v. Warren Bridge*, 36 U.S. 420, 423–24, 548 (1837) (noting that the act of incorporation for a bridge company regulated, *inter alia*, the toll rates that the company was allowed to charge); Gerard C. Henderson, *Railway Valuation and the Courts*, 33 HARV. L. REV. 902, 907 (1920) (discussing Justice Harlan’s theory that public rate regulation could be viewed as legislative control over implicit terms in corporate charters). Among other possibilities, Adams thought that the legislature might repeal the corporate charter of a railroad after a term of years, and then either take over the road and compensate the shareholders of the corporation, or regrant the corporate charter with new conditions attached. See Adams, *The Railroad System*, *supra* note 39, at 476. Adams compared his proposed regulatory technique to copyright law, which permits a “monopoly” for a term of years, but thereafter “the public has rights in it.” *Id.* at 476.

42. Adams, *The Railroad System*, *supra* note 39, at 497–98 n.*.

43. Charles F. Adams, Jr., *The Government and the Railroad Corporations*, 112 N. AM. REV. 31, 53 (1871).

44. *Id.* at 55–56.

45. *Id.* at 56, 31.

46. *Id.* at 56.

“a steady extension of legal control” in the Progressive era merely “reflected” “[t]he vast changes wrought . . . during the nineteenth century”—particularly “the introduction of new mechanical forces, the penetrating influence of science, large scale industry and progressive urbanization.”⁴⁷ “[A]dministrative instruments” helped to extend control, it was thought, because that legal technology was superior to the “machinery of the criminal law,” which was “rigid, cumbersome and inevitably ineffective.”⁴⁸

By the time of the New Deal, administrative “regulation had become accepted as the natural response to the development of new technologies.”⁴⁹ Thus, in 1938, James Landis—then Dean of the Harvard Law School, formerly the Chairman of the Securities and Exchange Commission, formerly a member of the Federal Trade Commission, and always the quintessential New Dealer⁵⁰—asserted with ease that “the administrative process springs from the inadequacy of a simple tripartite form of government to deal with modern problems” and “modern needs,” especially the need to control the new “economic forces that invention had released.”⁵¹ “[M]ethods of government different in kind than those that had prevailed in the past” developed in response to “the era of mechanical invention,” with all its “advances in transportation, communication, and mass production.”⁵²

2. Admiring the Private While Reforming the Public

In seeking the “innovation” of new “administrative instruments,” the reformers of the late nineteenth and early twentieth centuries were not advocating public ownership of industry. To the contrary, a reformer such as Adams vigorously opposed such a course, arguing that “[g]overnments cannot economi-

47. GERARD C. HENDERSON, *THE FEDERAL TRADE COMMISSION: A STUDY IN ADMINISTRATIVE LAW AND PROCEDURE* at v (1924).

48. *Id.*

49. Robert L. Rabin, *Federal Regulation in Historical Perspective*, 38 *STAN. L. REV.* 1189, 1262 (1986).

50. Carl McFarland, *Landis' Report: The Voice of One Crying Out in the Wilderness*, 47 *VA. L. REV.* 373, 374 n.2 (1961) (summarizing Landis's career).

51. JAMES M. LANDIS, *THE ADMINISTRATIVE PROCESS* 1, 9 (1938).

52. *Id.* at 7. Landis also looked to “the rise of democracy” as another factor that, coupled to and interwoven with the technological change, helped to explain the growth of the administrative state. *See id.*

cally manage large and complex interests,” that “government is the most expensive way of not doing things,” and that “self-interest is necessary to the wise and economical management of all property.”⁵³ It may seem curious today that a grandfather of the modern administrative state believed that “[i]t is rapidly becoming throughout the world—and the more rapidly the better—a cardinal principle of the polity, that the more the functions of government can be reduced, the better,” but those were in fact Adams’s views.⁵⁴ Most of all, he feared that government-owned companies would “inevitably tend to jobbery and corruption; they would become disturbing elements in party politics, and the great interests of the community [would be] made the footballs of faction.”⁵⁵ And he provided a vivid image to depict those fears: “One might imagine the perennial glee of the New York ‘rings’ and bar-room politicians on hearing that the Hudson River or Erie road was to be given over to their pure hands and tender mercies, or to those of any board connected with their incomparable city!”⁵⁶

Adams’s distrust of existing government institutions reveals a deep paradox that would persist in administrative theory: Adams wanted a regulatory institution that was both a

53. Adams, *The Railroad System*, *supra* note 39, at 508.

54. *Id.*; see also Charles F. Adams, Jr., *Railroad Inflation*, 108 N. AM. REV. 159 (1869).

In America, particularly, the whole instinct of the people leads them to circumscribe rather than to enlarge the province of government. This policy is founded in wisdom. Government by the people is apt at all time to degenerate into government by the politicians and the caucus; and the people, if wise, will keep the province of government within reasonable limits.

Id.; see Adams, *supra* note 43, at 50 (“That the government should engage in any business, whether as producers, as carriers, as bankers, or as manufacturers, is opposed to the whole theory of strictly limited governmental functions.”); see also RICHARD HOFSTADTER, *THE AGE OF REFORM: FROM BRYAN TO F.D.R.* 238 (1955) (noting that Progressives distanced themselves from Socialism and that “if the Socialist said that the growing combinations of capital . . . must be met by expropriating their owners, the typical Progressive was only spurred all the more to find ways of limiting or regulating monopoly within the capitalist framework”).

55. Adams, *The Railroad System*, *supra* note 39, at 508.

56. *Id.*; see also HOFSTADTER, *supra* note 54, at 254 (describing Progressive antipathy toward existing political institutions and noting that “[i]f big business was the ultimate enemy of the Progressive, his proximate enemy was the political machine”); Adams, *supra* note 43, at 49 (describing the experience of States that attempted to construct railroads as “uniformly end[ing] in failure” in part because “[l]og-rolling’ and legislative ‘truck and dicker’ were rapidly developed into an intricate study and lucrative profession”).

private and a public entity simultaneously. He recognized the inefficiency and corruption attending government economic management, but he also wanted a check on the unbridled private interests of corporations. He sought an institution that would have the efficiency of a private corporation, including the "self-interest . . . necessary to the wise and economical management of all property," and yet also be responsive to the larger public interest—all while still "preserving the separation between the body politic and all private industry."⁵⁷ The goal would, to say the least, be difficult to achieve. But mundane difficulties in implementation did not then hamper the ideal; instead, by the time of the New Deal, the ideal had been elevated to constitutional theory.

More than a half century later, when James Landis gave a justification for breaching the constitutional separation of powers doctrine, his argument was based on the same ideal of bringing the efficiency of private business into government:

If in private life we were to organize a unit for the operation of an industry, it would scarcely follow Montesquieu's lines. As yet no organization in private industry either has been conceived along those triadic contours, nor would its normal development, if so conceived, have tended to conform to them.⁵⁸

Agencies should follow the private model because "the problems of operating a private industry resemble to a great degree those entailed by its regulation."⁵⁹ And so, "when government concerns itself with the stability of an industry," Landis explained, "it is only intelligent realism for it to follow the industrial rather than the political analogue." The government must grant to the administrative authority all "necessary powers" and "not [be] too greatly concerned with the extent to which such action does violence to the traditional tripartite theory of governmental organization."⁶⁰

The paradox here is palpable: the independent expert agency was to emulate the private world even to the extent of doing violence to the traditional theory of American govern-

57. Adams, *supra* note 43, at 51.

58. LANDIS, *supra* note 51, at 10.

59. *Id.*

60. *Id.* at 12.

ment. Yet the agency would still be subservient to that tripartite government structure, and it would also be missing crucial elements that enforce efficiency in private business—profit incentives and market discipline. This paradox lay at the heart of the Progressive and New Deal agencies, and it would be both a blessing and a curse in the years to come.

3. The Heroic Institution

From the time of Adams through the New Deal, however, the paradox was solved by the heroic virtue of a new type of administrative agency that straddled the public and private worlds without being beholden to either. Adams himself did at least consider the questions: “Who will guard the virtue of the [administrative] tribunal? Why should the corporations not deal with them as with the legislatures?”⁶¹ His answer was devastatingly simple—“somewhere and at some point, put on all the checks and balances that human ingenuity can devise, we must come back and rely on human honesty at last”—and human honesty could be cultivated in the virtuous tribunals provided that one rule was observed, that “where the most direct responsibility exists, there will the best conduct be found.”⁶²

Public boards of trade and railroad commissions had failed in the past, Adams admitted, but that was because those bodies had “possessed a mere simulacrum of power,” and therefore had attracted as appointees “very inferior and, not seldom, corrupt men.”⁶³ To remedy this problem, Adams proposed that “[t]he duties, the responsibilities, and the characters of those composing these boards should . . . be brought up to the highest standard,—to an equality, in short, with those of the judges of our courts.”⁶⁴ Salary was also important, for “inadequate” pay would not attract competent individuals.⁶⁵ But with sufficient

61. Adams, *supra* note 43, at 58.

62. *Id.*

63. *Id.* at 59.

64. *Id.*

65. Adams, *Railroad Commissions*, *supra* note 39, at 235–36 (concluding that, in creating a federal commission, Congress should not “seek to procure a man competent to deal with these questions, on behalf of a great nation, on a salary so very inadequate as \$3,000 a year”). Compensation of the commissioners was always an important issue to the reformers, perhaps in part because they envisioned themselves as ultimately being commissioners.

money and power, the positions would attract persons "fully competent to represent the interests of the State with an experience and ability, a knowledge of details, and a zeal in their occupation equal to that ever so conspicuously displayed by the agents of the corporations."⁶⁶

In essence, Adams argued for the conferring *more responsibility* on institutions acknowledged to have failed in the past; indeed, greater duties and responsibilities was the very remedy for failure.⁶⁷ If this bold argument demonstrates a seemingly unjustified confidence in the abilities of the new class of commissioners whom Adams hoped to attract, we must remember that the confidence was very much a *self-confidence*. Adams was not a disinterested observer. In 1869, he had been appointed as a commissioner of the newly created Massachusetts Board of Railroad Commissioners, and he desperately wanted the new agency to prosper.

Though the new confidence in administrative experts may have begun more as self-confidence, it was infectious. By the Progressive era, faith in expert commissions was endemic, as is well demonstrated by Adolf Berle's 1917 article *The Expansion of American Administrative Law*:

66. Adams, *supra* note 43, at 60.

67. Curiously, Adams did not propose to confer enforcement powers on the independent commission. He proposed only that the commission be authorized to obtain information, to study the problem, and to place its results "before legislatures for intelligent action." Adams, *Railroad Commissions*, *supra* note 39, at 236; see also ROBERT E. CUSHMAN, *THE INDEPENDENT REGULATORY COMMISSIONS* 47 (1972) (noting that Adams testified in 1885 before Congress in favor of a commission that would merely provide "observations" that "might be of value in leading gradually to the building up of legislation"). In fact, the Massachusetts commission created by legislation that Adams helped to write possessed only "a mere simulacrum of power," for it had no enforcement powers other than persuasion and publicity. Trebling, *supra* note 38, at 292. Thomas McCraw describes Adams's limitation on commission enforcement powers as "one of the most ingenious and calculated self-denials in the entire history of regulation." MCCRAW, *supra* note 3, at 20. But Adams's support for a such a "sunshine commission" may have been less of a self-denial than it first seemed. Adams's main concerns throughout his writing appear to be: first, to establish some form of new supervisory public body; and second, to secure himself a post on the new body. Adams may very well have believed that the chances to achieve his goals were higher if he proposed a weak commission that would function as an advisory body to the legislature. Indeed, Adams's support for a sunshine commission seems inconsistent with his views that the legislature already had been captured by the railroads and that responsibility attracted competence.

[T]here arise problems which require peculiar and expert handling; a striking example is that of railway regulation. The popular will cannot be expressed by Congress, because the popular will does not discover a method. A result is wanted—better service and rates, freedom from discrimination and tyranny. No general body can reach that result: it takes an expert economist to formulate a rule. Accordingly, we must construct a *special* administrative body—a commission, like the Interstate Commerce Commission—and charge this body with the duty of investigating the problem and of laying down the rule which will reach the given result.⁶⁸

As Berle noted, neither the legislature nor the general populace had any idea how to solve the problem—namely, how to get better service *and* better rates. But the lack of any apparent solution did not suggest the impossibility of getting more for less. Rather, the solution must exist, though “the only hope” of finding it “is to turn a body of experts loose on a question, instructing them to use their best trained judgment, their undoubted accessibility and consequent simplicity of procedure, and a wide range of powers designated in the statute creating the commission, without technical checks.”⁶⁹

68. A.A. Berle, Jr., *The Expansion of American Administrative Law*, 30 HARV. L. REV. 430, 439 (1917). Berle published this article just one year after he left the law school as its youngest graduate ever. See JORDAN A. SCHWARZ, LIBERAL: ADOLF A. BERLE AND THE VISION OF AN AMERICAN ERA 16 (1987) (noting Berle’s prodigious achievement); *id.* at 50 (describing the Harvard article as a “prescient piece” that “celebrated regulatory bodies such as the Interstate Commerce Commission for combining legislative, judicial, and executive functions”). Berle’s father, Adolf Sr., was a leading social reform advocate in Boston and a close friend of Louis Brandeis, and Adolf Jr. was pushed from an early age into social activism and the intellectual aristocracy of Boston. See *id.* at 5–11. Thus, like Adams, Berle’s confidence in expert, Progressive agencies cannot be wholly separated from the expectation that those agencies would be dominated by people like him and the members of his social circles. Later in life, Berle would recognize a “conflict between the idea of administrative law developed at Harvard and the idea of self executed law as we try to think of it at Columbia.” Diary entry of Adolf A. Berle (Dec. 6, 1937), in NAVIGATING THE RAPIDS 1918–1971: FROM THE PAPERS OF ADOLF A. BERLE 150, 150 (Beatrice Bishop Berle & Travis Beal Jacobs eds., 1973) (discussing a conversation with Harvard President James B. Conant).

69. Berle, *supra* note 68, at 441–42; see also HOFSTADTER, *supra* note 54, at 232 (describing the Progressive aspirations for government institutions that would “be severely neutral among all the special interests in society, subordinating each to the common interest and dealing out even-handed justice to all”); *id.* (noting that, for the Progressives, “[t]he government’s heightened power was to represent not its more intimate linkage with any of these [self-seeking] interests,

Berle's description of agencies broadly authorized to solve problems "without technical checks" was the blueprint for the Progressive- and New Deal-era agencies delegated broad power to regulate in the "public interest." Moreover, in exercising that power, the expert administrators were to remain divorced from the political process: "The only expression of the popular will by Congress," Berle believed, would be "the utterance of a desire to have an expert body solve a problem. Then the function of the general body—Congress—stopped, and that of the special body—the commission—began."⁷⁰ As either a description or an aspiration for the political process, that view may seem inaccurate, naïve and even undesirable today, after a century of administrative agencies, but it became a shibboleth in the Progressive era.⁷¹

but rather its ability with greater effectuality to stand above them, and where necessary against them").

70. Berle, *supra* note 68, at 439.

71. When Congress was considering the Interstate Commerce Act just prior to the Progressive era, dissenters still questioned the wisdom of the independent regulatory commission. For example, Representative Caldwell, who was no friend of the railroads, predicted what today would be called agency capture:

Upon the commissioners here in Washington will be focalized the headlights of all the railroads in the Union, with their command over the facts, and their expert knowledge, and without indulging in degrading suspicions of the venality of men, it would be next to impossible for such a tribunal not to be unduly influenced by the superior skill of fence and facility of massing facts upon them that the railroads would possess.

17 CONG. REC. 7292 (1886). The solution, for Rep. Caldwell as it would be for Huber in our day, was the common law:

It is no reckless experiment to go to the perfection of human reason, the common law, under which every other interest has prospered, under which the glorious plant of Anglo-Saxon liberty and law has grown and flourished time whereof the memory of man runneth not to the contrary, to try and make effective its time-honored principles for the protection of the people against the tyranny and rivalry of giant corporations.

Id. at 7293; *see also id.* (viewing law not as "not a revelation" but as "a growth" and asking rhetorically "[w]here can you get a more healthy and approved stock upon which to ingraft the new growth requisite for our new wants if not in the common law?"). Similarly, Representative O'Ferrall decried the proposed Commission:

I must say that in my judgment a more troublesome and intricate and inefficient piece of legal machinery was never suggested. If the most fertile minds of either House of Congress could have been employed to devise means to retard, embarrass, mystify, hinder, and delay the redress of wrongs and the punishment of violations of law they could not in my opinion have succeeded better than the distinguished framer of the Senate bill. It is the very thing the railroads want . . . I want no commis-

4. Progressive Ascendency

The political philosophy of the Progressives did not take long to reflect in the decisions of the courts—and in the strategies of industry. Thus, by 1910, the Supreme Court held that the powers of the greatest of the new agencies, the ICC, “are expected to be exercised in the coldest neutrality,” with the “training” and “comprehensive knowledge” possessed by the agency “guard[ing] against the accidental abuse of its powers.”⁷² The titan was not only coldly neutral; it was also intelligent; it could be expected not to shrug.

But industry too began to accommodate the Progressive philosophy—and later, it would be said, to capture the titan. Again, in 1910, Theodore Vail, chairman of AT&T, possessed the Machiavellian business acumen to suggest that industry would tolerate regulation with a quid pro quo: “If there is to be state control and regulation, there should also be state protection—protection to a corporation striving to serve the whole community . . . from aggressive competition which covers only that part which is profitable.”⁷³ Whether this philosophy of government and its relation to industry would wear well with time remained to be seen.

B. Foreshadowing: Super-Men, the Science of Administration, and the Inflationary Bureaucracy

Within the ranks of the Progressives, Gerard Henderson first raised a quiet voice of doubt about the capabilities of the new expert commissions. In the conclusion to his 1924 study of the FTC, Henderson cautioned that “it cannot be expected that a government commission, paying modest salaries and exposed to the vicissitudes of political life, can command the services of those super-men whose decisions are always made of the sub-

sion. The Congress of the United States is the commission created by the people for the enactment of laws, and the courts of the country the tribunals for their enforcement.

Id. at 7296.

72. *Interstate Commerce Comm'n v. Chicago, Rock Island & Pac. Ry.*, 218 U.S. 88, 102 (1910).

73. GERALD W. BROCK, *THE TELECOMMUNICATIONS INDUSTRY: THE DYNAMICS OF MARKET STRUCTURE* 159 (1981) (alteration in original).

stance of justice and wisdom.”⁷⁴ Rather than relying on “super-men,” Henderson urged the development of a “science of administration”—one that acknowledged “most government affairs are run by men of average capabilities” and that sought “a formal procedure which may indeed at times clip the wings of genius, but which will serve to create conditions under which average men are more likely to arrive at just results.”⁷⁵

In questioning whether expert commissioners could be “super-men,” Henderson cast doubt on the core of the Progressive ideal. The experts that Progressives such as Berle so wanted to turn loose “without technical checks” could hardly be expected to solve the unsolvable if they were but average men. Moreover, Henderson’s proposals to change the FTC—which would have required the agency to emulate the formality of judicial opinions and to separate prosecutorial and adjudicative functions even at the highest level of the agency—changes never instituted—suggested that his “science of administration” might begin to remake expert agencies in the image of the traditional tripartite government foresworn by Progressives.

Yet Henderson himself was not wholly immune to the infectious belief in the capabilities of the independent commission. After studying the FTC’s enforcement of the Clayton Act, Henderson realized that the usual case “involved merely a conflict of interests between different economic groups,” rather than “a conflict between right and wrong,” and that “[s]uch a conflict calls for adjustment rather than for a moral crusade.”⁷⁶ Political actors might, however, be tempted to turn such a matter into a crusade because that “is more spectacular than a scientific inquiry” and “has greater political value.”⁷⁷ Resisting that temptation “calls for a certain degree of abnegation on the part of the men engaged in administering the law,”⁷⁸ and that was the very reason for entrusting the law “to a non-partisan commission . . . composed of men of training and experience whose tenure would not depend upon political considerations.”⁷⁹ Like Berle, Henderson thought that a separation could be maintained between the contentious political

74. HENDERSON, *supra* note 47, at 328.

75. *Id.*

76. *Id.* at 340–41.

77. *Id.*

78. *Id.* at 341.

79. *Id.*

branches—which would step into action only “[w]here a crusade is necessary”—and the lofty “expert tribunal” which, though populated by “men of average capabilities,” would nonetheless itself remain “of steady tenure and scrupulous judicial poise, firm in the public interest but impartial as between the private economic groups.”⁸⁰

Toward the end of the New Deal, however, even Henderson’s insightful observations had been perverted by the champions of the administrative state. In 1938, James Landis was willing to concede Henderson’s point that administrators could not be expected to be “super-men.” Rather than accept the procedural constraints that might be a step back toward Montesquieu’s triadic lines, Landis turned Henderson’s critique into a reason for bureaucratic inflation. To Landis, administrative success depended on regulatory expertise. If agencies were staffed by men of average capabilities, “the demand for expertness” would have to be satisfied by creating more and more administrative agencies.⁸¹ Such bureaucratic expansion would ensure the “expertness” that “springs *only* from that continuity of interest, that ability and desire to devote fifty-two weeks a year, year after year, to a particular problem.”⁸²

Landis’s call for bureaucratic inflation was more a description than a prediction in 1938. The burgeoning bureaucracy created in the New Deal was capable of spending “year after year”—some might say *year after year after year*—on a particular problem. Yet if the inflationary bureaucracy was hard to reconcile with “efficiency in the processes of governmental regulation,” Landis’s stated goal,⁸³ it was also a subtle departure from the intellectual origins of the expert, independent commission. In the late nineteenth century, Charles Adams had proposed *concentrating* power and responsibility to prevent corporations from capturing the commissions (“deal[ing] with them as with the legislatures”).⁸⁴ Bureaucratic inflation diminished each agency’s compass of responsibility and made more difficult attracting the “fully competent” individuals who could equal in ability, knowledge, and zeal “the agents of the corporations.” Indeed, bureaucratic inflation was a recipe for

80. *Id.*

81. See LANDIS, *supra* note 51, at 23–24.

82. *Id.* at 23.

83. *Id.* at 24.

84. Adams, *supra* note 43, at 58.

disaster: The agencies would be more likely to be captured by concentrated industry interests and, once captured, they would be unhindered by “technical checks” in doing industry’s bidding.

The Progressive ideal for an expert agency was eroding in other ways too, most obviously in the commitment to political isolation. For example, Landis found “the practice of patronage outstanding” because it helped “to cement alliances” with the other departments of government, upon which the administrative agency was dependent.⁸⁵ He also urged agencies “to give adequate and effective publicity to [their] achievements” because such “fanfare” would allow the agency to “achieve the active or, at least, tacit acceptance of the industrial group affected.”⁸⁶ But if dependent on patronage and spin doctors, could the expert commission really claim superiority to traditional political institutions?

Though the intellectual basis for the independent, expert regulatory agency was dissolving, the confidence of the agencies’ champions was not. For Landis in 1938, “the growth of the administrative process” swaggered with “the vigor that attends a lusty youth.”⁸⁷ Upon the expert agencies rested nothing less than “the realization of claims to a better livelihood” and the preservation of “the current of American living.”⁸⁸ Like Adams, the confidence was in great part *self*-confidence for, as a consummate New Dealer, Landis fully expected that he, or men like him, would always be the commissioners. For the champions of the expert independent agency, their heroes were themselves.

1. The Creation of the FCC in the Progressive Mold

The FCC had the fortune—or perhaps misfortune—to have been formed during the ascendancy of Progressive-era aspirations for administrative agencies, and the history of the FCC’s origins provides a case study in the influence of those aspira-

85. See LANDIS, *supra* note 51, at 62. Landis still, however, followed the prevailing wisdom that an agency should enjoy broad “freedom from interference” not only in adjudicating disputes, but also in initiating complaints and in formulating policy. See *id.* at 116.

86. *Id.* at 62–63.

87. *Id.* at 4–5.

88. *Id.* at 122.

tions. The relevant history can be divided into four parts, each with lessons essential for an analysis of the FCC's continued role in the our new century. The first part of that history—the enactment of the Radio Act of 1912 (the “1912 Act”) and the period of traditional regulation that followed—demonstrates that even radically new technologies—as “wireless” was at the beginning of the twentieth century—do not necessarily require new technologies of regulation. The regulatory crisis of 1926, the second part of the history, occurred only after the Executive Branch deliberately ceased enforcing the 1912 Act. The crisis does not show a flaw in the traditional regulatory approach employed by the 1912 Act, nor does it show that a common-law system alone is as effective a regulator as its champions today would have us believe. Finally, the last two parts of the history—the creation of Federal Radio Commission in 1927 and, curiously enough the least important part, the passage of the Communications Act of 1934—demonstrate the triumph of Progressive-era thought, a triumph that would ultimately to disappointment.

2. The Introduction of Traditional Regulation With the Radio Act of 1912

Federal regulation of radio spectrum began with the Radio Act of 1912.⁸⁹ At that time, radio technology was both new and, in the view of Congress, highly complex. Indeed, the 1912 Senate Report cautioned its readers that radio “involv[es] considerable scientific knowledge, and the regulations [for the field] necessarily must in part be expressed in scientific terms which would not be understood by many Senators or Representatives in Congress without long explanation almost impossible in terms ordinarily intelligible.”⁹⁰ Despite the technical complexity of the field, Congress did not consider delegating regulatory power over radio to an expert regulatory commission in the Progressive mold.

The 1912 Act began humbly with bills introduced in 1910. Radio communications were then seen as useful only for mari-

89. Act of Aug. 13, 1912, ch. 287, 37 Stat. 302 (repealed 1927).

90. S. REP. NO. 62-698, at 4 (1912).

time, military, and other government communications.⁹¹ Aside from those uses, the technology was seen as little more than a toy. Indeed, the 1910 Report on the House's bill described the technology as "an infant art and industry" and, without any apparent sense of irony, focused on whether the bill's licensing provisions would be too burdensome for the "industrious, inventive American boys" to whom radio was a "harmless and improving pastime."⁹²

Perhaps because Congress did not yet view radio as an important industry, the 1910 bills proposed not creating an independent regulatory commission, but instead delegating to the President a fairly broad discretionary power to establish "regulations by designation of wavelengths or otherwise to govern said private or commercial stations," though the sweep of this power was limited by the requirement that the regulations be "[f]or the purpose of preventing or minimizing interference."⁹³ For the "infant" technology, Congress was willing to trust the "responsibility" and "judicial temperament" of the President to provide "absolute guarantees that the system of regulation to be inaugurated will be both prudent and effective."⁹⁴

Two changes occurred between 1910 and 1912. First, Congress seemed increasingly aware of the potential commercial value of radio. By 1912, radio legislation was seen as affecting "very large commercial interests."⁹⁵ Delegating power to the President may have seemed more appropriate if radio had been mainly a concern of the high seas and the military than if sig-

91. See *id.* at 3 (containing a letter from acting Secretary of Commerce and Labor predicting radio communication "in the immediate future will be usually interchange of messages between seagoing vessels"). Most other references in the report are to maritime or governmental communications. See *id.*

92. H.R. REP. NO. 61-924, at 6-7 (1910). The Report promised "fair play" for the boys but, in a paternal tone, suggested that "[i]n learning wireless these boys may well at the same time study their duties to others and the obligation of an American citizen to obey the law." *Id.*

93. *Id.* at 5 (quoting provision in the House proposal); see also S. REP. NO. 62-698, at 3 (noting that the proposal from 1910 delegated broad power to the President); H.R. REP. NO. 61-924, at 6 (noting that the President's power was restricted to preventing interference but that the regulatory power was not limited merely to designating wavelengths).

94. H.R. REP. NO. 61-924, at 5. Congress was particularly certain that the President would be in "cordial accord" with the interests of those "inventive American boys" who so concerned the committee. *Id.* at 7.

95. See 48 CONG. REC. 7574 (1912) (statement of Rep. Alexander).

nificant private domestic interests were at stake.⁹⁶ Second, the mid-term elections of 1910 brought political change in Congress. Democrats gained control of the House, while anti-Taft Republican progressives held the balance of power in the Senate.⁹⁷ The reconstituted Congress was no longer willing to confer as much regulatory authority on President Taft's Executive Branch.⁹⁸

Nevertheless, Congress in 1912 still showed no interest in creating an independent expert body. Rather, it conferred on the Secretary of Commerce and Labor a nondiscretionary licensing power without a general rulemaking power.⁹⁹ Despite

96. See S. REP. NO. 62-698, at 3 (explaining the elimination of the rulemaking power, because the power could be exercised arbitrarily and the delegation "left those who should be subject to its exercise entirely in the dark as to what they could or could not do without thwarting the purpose of Congress"); 48 CONG. REC. 6015 (1912) (statement of Sen. Bourne that, rather than conferring a rulemaking power, "[t]he committee thought it would be much better to have in the bill itself the exact confines of the activities of private interests").

97. See generally PAOLO E. COLETTA, *THE PRESIDENCY OF WILLIAM HOWARD TAFT* 119 (1973) (describing the political shift caused by the 1910 elections).

98. It sometimes has been suggested that the Titanic disaster of April 15, 1912, contributed to the passage of the 1912 Radio Act. See, e.g., CUSHMAN, *supra* note 67, at 298; J. Roger Wollenberg, *The FCC as Arbiter of "The Public Interest, Convenience and Necessity,"* in A LEGISLATIVE HISTORY OF THE COMMUNICATIONS ACT OF 1934, at 62 n.3 (Max D. Paglin ed., 1989) (describing the Titanic disaster as providing "impetus for passage of the Act"). The influence of the Titanic should not, however, be overstated. In 1910, the Senate had passed, and the House had favorably reported, radio legislation containing licensing provisions similar to those in the 1912 Act. See S. REP. NO. 62-698, at 2 (1912) (providing history of the legislation). Moreover, the bill resulting in the 1912 Act was introduced in 1911, and Senate hearings were held in March. While the Senate Committee on Commerce reported the bill to the full Senate on April 19, four days after the accident, the Titanic is not mentioned in the Committee Report and it seems doubtful that the Senate would have known so quickly that better radio communications might have provided a rescue for the sinking ship. At best, the Titanic disaster might have provided an additional reason for passing legislation that already had good prospects for enactment. See, e.g., H.R. REP. NO. 62-741, at 1 (1912) (containing a brief report urging "speedy passage" because of the "importance of enacting this legislation into law"); 48 CONG. REC. 6016 (1912) (statement of Sen. Burton); *id.* at 5317 (statement of Sen. Hitchcock suggesting that the Titanic disaster provides a reason to pass the bill quickly).

99. See 1912 Act §§ 1-2, 37 Stat. at 302-03; see also H.R. REP. NO. 62-582, (1912) (stating that the bill would not give the Secretary "discretionary power over the issue of licenses"); 48 CONG. REC. 6015 (statement of Sen. Bourne, Chairman of the Senate Committee on Commerce, that "[i]t is compulsory with the Secretary of Commerce and Labor that upon application these licenses shall be issued"); 29 Op. Att'y Gen. 579, 581 (1912) (opinion of Attorney General Wickersham that the Secretary's licensing power did not contain discretion to refuse a

the changes between 1910 and 1912, Congress's regulatory approach had not shifted much. The 1910 proposal had limited the President's rule-making power to measures for minimizing interference, and the 1912 Act provided that each license issued by the Secretary was to establish "a wave length or wave lengths authorized for use by the station *for the prevention of interference* and the hours for which the station is licensed for work."¹⁰⁰ Both delegations of administrative authority fit comfortably within the traditional models of delegation that were common prior to the rise of the independent regulatory agencies at the end of nineteenth century.

In 1912, the independent regulatory commission was still a relatively recent innovation in government yet used only once on the federal level. It may have been thought too novel and too expensive for the relatively pedestrian regulation that Congress wanted to impose. Even in 1927, when Congress finally would create an independent regulatory commission, it was at first only a temporary commission, and the expense of creating a new commission was considered in the floor debates.¹⁰¹

Nevertheless, the history of the 1912 Act—with Congress's failure to consider the independent commission form—suggests that "the era of mechanical invention" in no way required "methods of government different in kind than those that had prevailed in the past."¹⁰² Technical complexity did not prevent Congress from using a traditional administrative regulatory structure, with narrow delegations of authority to ordinary executive officers. Moreover, the regulation imposed by the 1912 Act was remarkably effective and enduring. For the next four-

license to a corporation alleged to be controlled by foreign capital and that the Secretary "is given no general regulative power" under the Act).

100. 1912 Act § 2, 37 Stat. at 303 (emphasis added). Another provision of the 1912 Act proscribed licensees from "willfully or maliciously interfer[ing] with any other radio communication." *Id.* § 5, 37 Stat. at 308. Also, the legislative history shows that Congress intended to "minimize the possibility of any interference." 48 CONG. REC. 6015 (statement of Sen. Bourne).

101. *See, e.g.*, 68 CONG. REC. 2582, (1927) (statement of Rep. Hudson) (arguing against creating a permanent commission because the government is "hobbled and controlled by bureaus and commissions" that are constantly "appeal[ing] for larger staffs and personnel" but acceding to the creation of a temporary radio commission because of "absolute necessity"); 67 CONG. REC. 5498 (1926) (statement of Rep. Bland) (asking whether creating a new radio commission was worth the "extra expense"); *id.* (statement of Rep. Black) (answering Bland in the affirmative, provided "the expense is reasonable").

102. LANDIS, *supra* note 51, at 7.

teen years, radio flourished under licenses issued by the Secretary.

3. The Crisis of 1926

Though the political and economic causes of the event have been much debated, undeniably a breakdown in radio regulation occurred in 1926. For the purposes of this article, two points about the crisis of 1926 are important. First, the regulatory failure of 1926 was caused not by a flaw in the traditional administrative system embodied in the 1912 Act. Second, the common-law courts were probably not as capable of establishing property rights in radio spectrum as a federal administrative agency.

The crisis of 1926 conventionally has been traced to two court decisions, but really only the second was damaging. In the first decision, *Hoover v. Intercity Radio*, the Court of Appeals of the District of Columbia ruled that, in licensing radio stations under the 1912 Act, the Secretary of Commerce could not deny a license to a qualified applicant.¹⁰³ The court, however, stated that the Secretary, at the time Herbert Hoover, had discretion to "select[] a wavelength, within the limitations in the statute, which, in his judgment, will result in the least possible interference."¹⁰⁴

The *Intercity Radio* decision was blamed for creating crowded airwaves because, without a power to deny qualified applicants, the Department of Commerce kept having to shoe-horn more and more licensees into a finite amount of spectrum. Yet under the 1912 Act, private radio stations could be licensed on all electromagnetic frequencies over 500 kilohertz.¹⁰⁵ There are, of course, an infinite number of a frequencies over 500 kilohertz. To be sure, some frequencies would be less economical at any given level of technological development. But the *Intercity Radio* decision expressly allowed the Secretary of Commerce, not the applicant, to select the frequency, or wavelength, needed to avoid interference.

103. See *Hoover v. Intercity Radio Co.*, 286 F. 1003, 1007 (D.C. Ct. App. 1923).

104. *Id.*

105. See 1912 Act § 4, 37 Stat. at 304 (regulations "first" and "second"). The Act authorized private radio stations to use all wavelengths under 600 meters, which is equivalent to all frequencies over 500 kilohertz.

Coupled with the Department of Commerce's pre-existing first-in-time, first-in-right system for assigning frequencies, the rule in *Intercity Radio* could have been used to push the spectrum licensing to more marginal frequencies—at the time, the higher frequencies. There would have been no lack of frequencies, because the government would have been licensing frequencies that were barely useable with current technology or were undesirable for other reasons. Far from creating a crisis, *Intercity Radio's* interpretation of the 1912 Act could have expanded the frontiers of useable spectrum in much the same way that land grants pushed back the Western frontier, or in the way that patents push back technological frontiers.

A second decision, however, destroyed that possibility. A district court in the Northern District of Illinois held that the time and wavelength restrictions in radio licenses were unenforceable in the 1926 decision in *United States v. Zenith Radio Corp.*¹⁰⁶ Because the 1912 Act seemed expressly to authorize the Secretary to include time and wavelength restrictions in licenses,¹⁰⁷ the *Zenith Radio* court resorted to the nondelegation doctrine to bend the meaning of the statute. The court reasoned that, if the time and wavelength restrictions in the license were valid, the 1912 Act might be unconstitutional because Congress had not provided a sufficient "rule or standard . . . to control the Secretary of Commerce in the exercise of his discretion."¹⁰⁸

The nondelegation doctrine analysis of the *Zenith Radio* seems wildly wrong, because the 1912 Act was built on a perfectly intelligible, narrow principle—the prevention of interference.¹⁰⁹ Nevertheless, after *Zenith Radio*, the Acting Attorney General issued an opinion agreeing with the district court's result, although for different legal reasons, and advising Secre-

106. 12 F.2d 614 (N.D. Ill. 1926). The defendants in the case were charged with violating both the time and wavelength restrictions on the station's license. *See id.* at 617.

107. *See* 1912 Act § 2, 37 Stat. at 303 (authorizing the Secretary of Labor and Commerce to issue licenses "stat[ing] the wave length or wave lengths authorized for use by the station for the prevention of interference and the hours for which the station is licensed for work").

108. *Zenith Radio*, 12 F.2d at 618.

109. *See supra* text accompanying notes 99–100; *see also* Thomas W. Hazlett, *Physical Scarcity, Rent Seeking, and the First Amendment*, 97 COLUM. L. REV. 905, 913–14 n.31 (1997) (noting that the 1912 Act could support a rational system of regulation based on the prevention of interference).

tary of Commerce Hoover that he had no power to enforce time, wavelength, or power restrictions on licensees.¹¹⁰ *Zenith Radio* was not appealed, and the radio spectrum began to teem with interference as licensees ignored the limitations on their licenses. Congress responded to the crisis with the Radio Act of 1927, which created an independent regulatory commission with broad authority to license stations "in the public interest, convenience or necessity." It is thus an extreme irony, not frequently noted, that Congress would respond to *Zenith Radio's* nondelegation holding by creating an independent commission vested with a far broader delegation of power to license stations in the "public interest, convenience or necessity."¹¹¹

Under the conventional view, the crisis of 1926 was caused by the inadequacy of 1912 Act, and new legislation was "imperative" to remedy a threat to "the very existence of the industry."¹¹² Indeed, that was essentially the conclusion of the 1926 opinion of the Acting Attorney General.¹¹³

The conventional view, however, seems impossible to defend. The licensing scheme of the 1912 Act had prevented chaos in radio during at least five years of commercial broadcasting, and in the earlier *Intercity Radio* decision, the D.C. Court of Appeals had confirmed the Secretary's power to select the frequencies to avoid interference between licensees. The regulatory failure of 1926 was precipitated not by a flaw in 1912 Act, but by the bizarre interpretations placed on the Act by the *Zenith Radio* court and by Acting Attorney General.

Recently, Thomas Hazlett has questioned that view, arguing that the breakdown in radio regulation in 1926 may have been "invited" by Secretary Hoover, who sought greater power over broadcasters as a political asset, and welcomed by Con-

110. See 35 Op. Att'y Gen. 126 (1926).

111. Radio Act of 1927, ch. 169, § 9, 44 Stat. 1162, 1166.

112. E. PENDLETON HERRING, PUBLIC ADMINISTRATION AND THE PUBLIC INTEREST 160 (1936). See, e.g., W. JEFFERSON DAVIS, RADIO LAW 32 (1929); Woltenberg, *supra* note 98, at 62 (stating that the 1912 Act "soon proved inadequate").

113. See 35 Op. Att'y Gen. at 132.

It is apparent from the answers contained in this opinion that the present [1912] legislation is inadequate to cover the art of broadcasting, which has been almost entirely developed since the passage of the 1912 Act. If the present situation requires control, I can only suggest that it be sought in new legislation, carefully adapted to meet the needs of both the present and the future.

Id.

gress, which sought to censor the new medium.¹¹⁴ While hard evidence is missing to prove Secretary Hoover “invited” the *Zenith Radio* decision,¹¹⁵ Professor Hazlett seems correct in suggesting that the administration and Congress may very well have viewed the chaos of 1926 as “a welcome opportunity for achieving greater regulatory discretion over radio licenses.”¹¹⁶ That thesis explains why the Acting Attorney General relied on such shaky legal reasoning and concluded with a recommendation that Secretary Hoover seek new legislation which, as the Attorney General knew, Hoover already had been doing for years.¹¹⁷

Hazlett also suggests that common law courts were already beginning to resolve the crisis of 1926 by assigning property rights in radio frequencies,¹¹⁸ but the available evidence suggests that the common law courts provided a solution more in theory than in practice. When the administration ceased enforcing the Act in 1926, chaos resulted precisely because the common law courts could not effectively deter “wave-jumping” by opportunistic stations. During the seven-month period between the cessation of enforcing the 1912 Act (July 1926) and the enactment of the Radio Act (February 1927), only a single court decision, *Tribune Co. v. Oak Leaves Broadcasting Station*,¹¹⁹ had enforced a property right in radio spectrum, and there is no evidence that the decision significantly deterred “wave-jumping” by radio stations. Moreover, because commercial radio at the time was limited to the “AM” frequencies—which can easily travel thousands of miles at night—the most

114. See Hazlett, *supra* note 109, at 917, 922, 912.

115. A Senate Report describes the *Zenith Radio* case as having been “brought by the Secretary of Commerce,” although the case report lists an assistant United States attorney as the prosecutor. Compare S. REP. NO. 69-772, at 1 (1926), with *Zenith Radio*, 12 F.2d at 615. Even if Hoover had pressed for the prosecution, however, this action would not prove that he invited the result of the case.

116. See Thomas W. Hazlett, *The Rationality of U.S. Regulation of the Broadcast Spectrum*, 33 J.L. & ECON 133, 148-51 (1990).

117. See CUSHMAN, *supra* note 67, at 298 (noting that the Radio Conference convened by Hoover in 1922 proposed legislation that would have authorized a greater degree of government control over radio licensing); *id.* at 299-302 (detailing federal legislation proposed from 1924 to 1926 and Hoover’s support for such legislation).

118. See Hazlett, *supra* note 109, at 917-18.

119. *Tribune Co. v. Oak Leaves Broad. Station* (Cir. Ct., Cook County, Ill., Nov. 17, 1926), available in 68 CONG. REC. 216 (1926).

difficult problems of interference were interstate.¹²⁰ Jurisdictional limitations would either have precluded state courts from remedying those problems or, at a minimum, have provided effective remedies very difficult where, unlike in the *Oak Leaves* case, the two interfering stations were in different states.¹²¹

The crisis of 1926 probably did demand a federal solution, but it did not dictate the form of that solution. In selecting a regulatory commission with a broad delegation of power, Congress might very well have been motivated, as Professor Hazlett has argued, by a desire to exercise some control over the new medium. But Congress's choice can also be attributed, at least in part, to the pervading influence of Progressive-era notions concerning the competence and desirability of such commissions as solutions to modern economic problems.

4. The 1927 Radio Act: The Quest for "Men of Big Abilities and Big Visions"

Prior to 1927, Congress had created four expert, independent agencies in the Progressive style.¹²² The Federal Radio Commission would be the fifth. If the practice was not yet routine, it was certainly no longer unusual, and the legislative record shows the extent to which the Congress, and even the conservative Coolidge Administration, had come to accept the Progressive-era mythology of independent, expert commissions.

While the House, the Senate, and the Coolidge Administration (through Secretary Hoover) all supported the creation of a federal radio commission, the Senate's proposal was the most aggressive: It would create an independent commission

120. For example, the licensing restrictions at issue in *Zenith Radio* were designed to prevent interference between a station in Denver and the defendant's station in Chicago. See *Zenith Radio*, 12 F.2d at 617-19; see also 68 CONG. REC. 2576 (1927) (remarking that, while in his home state of Tennessee, Rep. Davis was unable to receive any intrastate stations but could receive stations from Pittsburgh, Chicago, Cincinnati, and St. Louis).

121. See 68 CONG. REC. 2574-75 (1927) (statement of Rep. Davis that the *Zenith Radio* defendant "is still operating on the wave length he 'pirated'"); see also THOMAS G. KRATTENMAKER & LUCAS A. POWE, JR., REGULATING BROADCAST PROGRAMMING 16-17 (1994) (contending that jurisdictional limitations would have made a common law solution impossible).

122. The four were the ICC (created 1887), the Federal Reserve Board (1913), the Federal Trade Commission (1914), and the United States Shipping Board (1916). See CUSHMAN, *supra* note 67, app. at 760-61.

with comprehensive regulatory power over radio.¹²³ The Senate Committee's justification for creating such a powerful commission began with the familiar Progressive theme that the commission form was needed to handle "the many new and complex problems" presented by a modern technology such as radio.¹²⁴ Moreover, like Progressive-era theorists, the Senate Committee distrusted government, believing that radio regulation "is fraught with such great possibilities that it should not be entrusted to any one man nor to any administrative department of the Government."¹²⁵ Instead, the Senate put its faith in "one independent body" to which would be granted "full and complete authority over the entire subject of radio."¹²⁶ Here the paradox of Progressive theory is overt—for, in vesting regulatory power in an independent commission, the Senate believed that it would *avoid* trusting any administrative department of government.

The key to solving that paradox—the charm that allowed the regulatory commission to transcend its creation by political government—was the valiant leadership of the commission. The commissioners would be "men of big ability and big vision,"¹²⁷ who would "study every phase of the subject" so that the commission would become "an expert authority on radio communication" and would be "able to assist and encourage development of the art."¹²⁸ To attract such great figures, the Senate bill proposed paying the high salary: \$12,000 per year, which was a full twenty percent more than the salary then earned by the Senators themselves.¹²⁹ Such a generous salary, coupled with the broad power to be vested in the office, would attract individuals capable of carrying out "the exercise of a high order of discretion and the most careful application of the

123. See S. REP. NO. 69-772, at 2 (1926).

124. *Id.*

125. *Id.*

126. *Id.*

127. 67 CONG. REC. 12,354 (1926) (statement of Sen. Dill); see also S. REP. NO. 69-772, at 3 (hoping that "men of big ability" would staff the commission).

128. S. REP. NO. 69-772, at 3.

129. See *id.*; see also 2 U.S.C. § 31 (1926), reprinted in 44 Stat. (pt. 1) at 4 (setting salaries for both members of Congress and Senators at \$10,000 per annum). The proposed salary was, however, consistent with the amount paid to members of the lofty ICC. See 49 U.S.C. § 18(1) (1926), reprinted in 44 Stat. (pt. 1) at 1666.

principles of equitable treatment to all the classes and interests affected.”¹³⁰

The House also proposed creating a federal radio commission and, though it was slightly weaker than the Senate’s proposal and the Federal Radio Commission ultimately created, the House’s commission was still very much in the Progressive mold. Under the House bill, the Secretary of Commerce would assign licenses and regulate radio broadcasting, but any person interested in or aggrieved by any decision of the Secretary had a right to appeal to the commission.¹³¹ The commission would review the Secretary’s decision *de novo*, so that, in practical terms, the commission would have a significant, possibly pre-eminent, role in the administrative scheme.¹³² Consistent with the Progressive ideal of insulating expert commissions from political influences, the House bill required the membership of the radio commission to be “bipartisan” and conferred a lengthy seven-year tenure in office.¹³³

Even Secretary Hoover supported creating a radio commission to oversee the assignment of spectrum. For Hoover, radio regulation presented two issues. The first was an issue of “traffic control,” which was “an administrative job” that could confidently be placed “in a single responsibility.”¹³⁴ The second issue was “the determination of who shall use the traffic channels and under what conditions.”¹³⁵ Hoover believed that task to be a “very large discretionary and semi-judicial function which should not devolve entirely upon any single official.”¹³⁶ For such semi-judicial function, even the conservative Hoover endorsed the prevailing Progressive-era view that “obviously, questions of a semijudicial or semilegislativ character, that develop under an assignment of authority by our Congress,

130. S. REP. NO. 69-772, at 3.

131. See H.R. REP. NO. 69-404, at 4 (1926) (explaining the commission’s power).

132. See *id.* The House bill also permitted judicial review of the commission’s decisions, but under a deferential standard of review.

133. See *id.*

134. See *Hearing Before the Senate Comm. on Interstate Commerce on S.1 and S.1754*, 69th Cong., 1st Sess. 57 (1926), reprinted in CUSHMAN, *supra* note 67, at 306–07.

135. *Id.* at 307.

136. *Id.* Hoover also believed that license allocation was “a matter in which each local community should have a large voice—should in some fashion participate in a determination of who should use the channels available for broadcasting.” *Id.*

should be in the hands of commissions.”¹³⁷ Indeed, “assigning such functions to individuals” was “foolishness.”¹³⁸ Ordinary “individuals” could not be trusted, but a commission could. The bureaucratic entity could transcend not only politics, but even the individuality of its members.

The debate on the 1927 Radio Act confirms that the Congress’s choice was not between an independent commission and no commission at all, but rather between a slightly stronger and slightly weaker independent commission.¹³⁹ The debate on the strength of the commission followed predictable lines: Democrats, who would naturally fear Hoover’s regulation of radio, and Senators, who would have power in confirming appointments to an independent commission, tended to favor the stronger commission. Republican members of the House favored conferring more power on the Secretary of Commerce. More important than the predictable political alignments, however, are the justifications that supporters of a strong commission employed in the effort—ultimately a successful effort—to

137. *Hearings Before the House Comm. on Merchant Marine and Fisheries on H.R. 5589*, 69 Cong., 1st Sess. 14 (1926), reprinted in CUSHMAN, *supra* note 67, at 307.

138. *Id.* An early version of the House legislation provided that the Secretary would have discretion to control appeals to the commission, but Hoover himself testified against such discretionary appeals, stating: “I have felt that that provision for a [commission] should be . . . tightened up over the present construction of the bill; in other words, that any question of dispute as to who shall enjoy the radio privilege may be referred to that body, not through the volition of the Secretary of Commerce but by either applicant or disputant in the question.” H.R. REP. NO. 69-404, at 20–21 (1926) (minority views) (quoting Hoover’s testimony before the House Committee).

139. Only a few scattered comments in the legislative history opposed any creation of a radio commission. See, e.g., 68 CONG. REC. 2570 (1927) (statement of Republican Rep. Lehlbach) (opposing the creation of a radio commission); 68 CONG. REC. 2582 (statement of Republican Rep. Hudson) (same). For party affiliations of these opposing Representatives, see U.S. CONGRESS JOINT COMMITTEE ON PRINTING, BIOGRAPHICAL DIRECTORY OF THE UNITED STATES CONGRESS 1226, 1361 (1989). Other speakers did not bother debating this point with these critics of the commission form; one of the critics himself hedged in his remarks on the commission, noting that he “appreciate[d] that there is some force in the contention that such conflicts of interest involving rights of a very substantial value out not to be left to the ultimate determination of a single office of the Government and that a commission sitting as a quasi-judicial body to hear and determine conflicting claims more nearly meets the needs of the situation.” 68 CONG. REC. 2570 (statement of Rep. Lehlbach, who also noted that “the radio commission may function usefully in dealing with its peculiar problems”). Furthermore, even the opponents of a commission did not challenge the grant of very broad discretionary authority to license and regulate in the “public interest.”

persuade their colleagues. The justifications were the Progressive arguments for commission, complete with the normal faith in experts.

Opposition to the weak commission proposed in the House bill originated in the House Committee itself, with the minority views on the committee report filed by Representative Ewin L. Davis, a Democrat from Tennessee.¹⁴⁰ Arguing for a stronger radio commission, Davis advanced two claims that were by then standard pieces of the Progressive canon. First, Davis contended that, because radio regulation “embrace[d] highly technical and complex questions,” it could “not be intelligently and efficiently determined without a broad and accurate knowledge of radio problems.”¹⁴¹ Second, Davis argued that the commission provided by the House bill “would probably be a spineless, inactive commission,” and that the commission’s “restricted functions” would contribute its inability to perform adequately.¹⁴²

The latter argument, of course, echoed Charles Adams’s view that diffusing responsibility would undermine the integrity of a commission. The solution was more power, more prestige and more money. Higher salaries were needed to attract “men of the proper caliber.”¹⁴³ Further, the commissioners should be full-time government employees—the House bill authorized commissioners to work only 120 days per year—because the commissioners “should be able to devote all of their time and thought to” questions of radio regulation.¹⁴⁴

Davis’s arguments—and the Progressive-era philosophy underlying them—would be invoked repeatedly by champions of a strong, independent commission. For example, Representative Eugene Black from Texas argued that, although he was

140. See BIOGRAPHICAL DIRECTORY OF THE UNITED STATES CONGRESS, *supra* note 139, at 877.

141. H.R. REP. NO. 69-404, at 21 (minority views).

142. *Id.*

143. *Id.*

144. *Id.* Davis went so far as to suggest (presciently) that “there should be established a Federal communications commission, having jurisdiction over all wire public utilities, including the telephone, telegraph, and cable, as well as over radio utilities,” and that such a commission should be given “the authority, the time and the opportunity to deal with these question fairly and intelligently.” *Id.* at 22–23. As chair of the Committee on Merchant Marine, Radio, and Fisheries in 1932, Davis reported a bill creating the FCC to the House. See 75 CONG. REC. 3680 (1932). Though that bill was passed by the House and Senate, it was pocket vetoed by President Hoover. See Wollenberg, *supra* note 98, at 68.

“reluctant” to allow new commissions generally, he nonetheless thought that “we must deal with new conditions as new conditions arise.”¹⁴⁵ For Black, the forms of government from the 1776 era of “coach and horseback” could not be applied to the 1926 world of transoceanic cables, which “have chained the continents together, making the seas vast whispering galleries.”¹⁴⁶ In such a brave new world, it did no good to “sigh for the ‘good old days’ when there was not so much Government regulation,” for “we are living in the electrical age and this age calls for new methods.”¹⁴⁷ Like the Progressive theorists, Black championed a regulatory form that would lie somewhere between “too much Government regulation” and the “grasping selfishness of private monopoly.” He believed that “sound regulation is designed not to operate the industry by the Government, but to point out the things it may not do in disregard of the public interest.”¹⁴⁸

Similarly, after describing radio regulation as an “extremely complicated,” “highly technical and complex subject,” the Democratic Representative Schuyler Bland endorsed Davis’s proposal to confer “wider powers to . . . a permanent radio commission,” in the hope that the commission could “deal with, and perhaps solve, many of the problems which now perplex us.”¹⁴⁹ Even though the tenure of the commissioners under the House proposal was equal to that of the ICC commissioners,¹⁵⁰ Bland also feared that a part-time commission might “register the will of the Secretary of Commerce or somebody in the Department of the Secretary of Commerce,” or become “a buck-passing commission.”¹⁵¹ Though it is possible that part-time commissioners might be less intimidated by threats of re-

145. 67 CONG. REC. 5498 (1926). As might be expected, Black, a Democrat, thought that the Secretary of Commerce “ought not to be vested with powers such as those . . . in this particular bill.” *Id.*; see also BIOGRAPHICAL DIRECTORY OF THE UNITED STATES CONGRESS, *supra* note 139, at 625 (noting Rep. Black’s party affiliation).

146. 67 CONG. REC. 5498.

147. *Id.*

148. *Id.*

149. 67 CONG. REC. 5486 (1926); see also BIOGRAPHICAL DIRECTORY OF THE UNITED STATES CONGRESS, *supra* note 139, at 632 (noting Bland’s Democratic party affiliation).

150. The House proposed a seven-year term for radio commissioners, a tenure equal to that of ICC commissioners. See H.R. REP. NO. 69-404, at 4 (1926); see also CUSHMAN, *supra* note 67, at 760 (noting tenure for ICC commissioners).

151. 67 CONG. REC. 5486, 5498 (1926).

moval, because they would have other employment to support themselves, Bland followed Adams in arguing that greater power and prestige would help insulate commissioners from the political process.

Significantly, even those in favor of a weak commission did not challenge one major tenet of the Progressive canon—that the commission needed a broad, general delegation of power. Thus, for example, Representative White, Republican author of the original House bill, had stated as early as 1922 that “[i]t seems to be that all Congress can do is to lay down some general rules and to delegate some full powers on a regulatory body,” which would then “work out the details of the regulation.”¹⁵² Thus, the differences between the two sides were quite narrow, and both subscribed to Progressive views on the appropriate structure of government regulatory bodies.

In the final legislation, the proponents of a stronger commission won. The 1927 Radio Act conferred all licensing power on the newly created Federal Radio Commission (“FRC”) and, although the licensing power was to revert to the Secretary of Commerce after one year, subsequent statutes pushed back the time of the reversion, and eventually made the Commission’s power permanent.¹⁵³ For the rest of the century, the world of telecommunications would rest on the shoulders of “men [and women] of big ability and big vision.”¹⁵⁴

5. The Communications Act of 1934

The Communications Act of 1934 (“the 1934 Act”) did not create significant new regulatory authority, but merely transferred to a single new commission regulatory power that al-

152. Wollenberg, *supra* note 98, at 64 & n.17 (quoting United States Dept. of Commerce, Conference on Radio Telephony, Minutes of Open Meeting 53, 93 (Feb. 27–28, 1922)).

153. See Radio Act of 1927, ch. 169, 44 Stat. 1162–64 (establishing the Commission, defining the Commission’s licensing powers, and providing for transfer of those powers to the Secretary of Commerce after one year); Act of Mar. 28, 1928, ch. 263, 45 Stat. 373 (approving one year extension of Commission’s licensing powers); Act of Mar. 4, 1929, ch. 701, 45 Stat. 1559 (same); Act of Dec. 18, 1929, ch.7, 46 Stat. 50 (making the Commission’s powers permanent). As the proponents of a strong commission had wanted, Congress also gave Commissioners a high salary, equal to the amount paid to Senators and members of Congress. See Radio Act of 1927, ch. 169, 44 Stat. 1162–63 (authorizing \$10,000 salaries for commissioners); see also *supra* note 129 (noting congressional salaries).

154. 67 CONG. REC. 12,354 (1926) (statement of Sen. Dill)

ready had been given to one of two independent, Progressive-style commissions, the ICC and the FRC.¹⁵⁵ Thus, predictably, the debates leading up to the enactment of the legislation generally did not broach fundamental issues concerning the structure of the regulatory agency.¹⁵⁶ Those issues had, for the most part, already been resolved. The Progressives had won; the domain of the expert independent commission was not challenged.

Two features of the 1934 Act's legislative history are, however, worth noting. First, the Progressive aspirations to construct public institutions with the efficiencies of private business again would be important, but this time the aspiration was a blessing. Nationalization of radio *was* considered during the hearings leading to the passage of the 1934 Act.¹⁵⁷ Yet that

155. The ICC was thought to be "so busy regulating the railroads" that it did not have "time to give real consideration to the problems in connection with rate regulation of telephones and telegraph." 78 CONG. REC. 4139 (1932) (statement of Sen. Dill). Thus, transferring the ICC's regulatory powers into the new communications commission was justified as providing "some chance of getting the rates lowered." *Id.* Consistent with theories of agency capture, members of the telecommunications industry did not oppose centralizing regulatory authority in a single agency, which might be easier for the industry to influence. *See, e.g.,* A LEGISLATIVE HISTORY OF THE COMMUNICATIONS ACT OF 1934, *supra* note 98, at 552 (testimony of R.B. White, President of Western Union, stating, "if we are to be regulated it is essential that such regulation be administered by a commission which is specially [sic] organized and equipped and alone authorized to deal with communication companies, and which would be familiar by training and experience with our specialized problems"); *see also id.* at 241, 199 (statements of Sothenes Bernes, President of ITT, and Walter Gifford, President of AT&T, acquiescing in President Roosevelt's proposal to create a centralized communications agency).

156. A colloquy between Congressmen Davis and Beck in 1932 provides one of the few exchanges in which members of Congress did address more fundamental issues of governmental structure. In arguing that disappointed radio license applicants should have broad rights to judicial review, Beck decried the nearly complete insulation of the commission's findings of fact as "more evidence of the trend on the part of the Government to transfer judicial functions to the executive departments." 75 CONG. REC. 3683 (1932). Davis countered with the argument that radio was "different from any other subject" and, because of the complexities of interference issues, courts would be unable to understand the issues "from the record in a particular case." *Id.* Davis was also able to reject Beck's challenge by noting that limited judicial review on factual issues "is in accordance with law in existence in almost every State of the Union." *Id.* Thus, the hegemony of the Progressive model made a sustained response unnecessary.

157. Nationalization of the stations was proposed by Josephus Daniels who, as Secretary of the Navy during World War I, had controlled all radio broadcasting pursuant to the government's nationalization of radio in the war. *See* PHILIP T. ROSEN, *THE MODERN STENTORS: RADIO BROADCASTERS AND THE FEDERAL*

alternative, anathema as it was to the ideals of the Progressive era, did not receive significant support.¹⁵⁸

Second, the legislative record shows an embryonic dissatisfaction with agencies and agency discretion. For example, Republican Representative Louis McFadden charged that the two largest chain broadcasters, National Broadcasting Company ("NBC") and the Columbia Broadcasting System ("CBS"), "seem to dominate the [Radio] Commission," and that both the Hoover and Roosevelt administrations had used, and latter were still using, the Radio Commission "for political purposes."¹⁵⁹ Representative Horr, another Republican, acknowledged that Congress had "created a commission which plays up to you if you have the influence," and that "[i]f any of you desire to secure a wave length, take plenty of us on this side of the Chamber and plenty on the other side of the Chamber, and then you will get your wave length."¹⁶⁰

GOVERNMENT, 1920-1934, at 175-76 (1980); *see also id.* at 21-22 (noting Daniels' management of radio as Secretary of the Navy).

158. *See, e.g., Study of Communications by an Interdepartmental Comm.*, 73d Cong., 2d Sess. 5-6 (1934), *reprinted in* A LEGISLATIVE HISTORY OF THE COMMUNICATIONS ACT OF 1934, *supra* note 98, at 109-10 (considering and rejecting the option of government ownership of communication companies); *Hearings before the Senate Comm. on Interstate Commerce*, 73d Cong., 2d Sess. 165-66 (1934), *reprinted in* A LEGISLATIVE HISTORY OF THE COMMUNICATIONS ACT OF 1934, *supra* note 98, at 287-88 (testimony of Captain S.C. Hooper, Director of Naval Communications, United States Navy, noting that, while former Secretary Daniels had "recommended Government ownership of all radio," the Navy was opposed to that position). *See also* ROSEN, *supra* note 157, at 176 (noting that nationalization was considered "entirely unacceptable" to the members of the administration and Congress who served on the interdepartmental committee convened by Roosevelt's Secretary of Commerce Daniel C. Roper to study further regulation of telecommunications).

159. 78 CONG. REC. 10307 (1934). McFadden quoted an article from a broadcasting trade journal in which the Democratic Party designated Herbert Pettey, then serving as the secretary of the Radio Commission, as the party officer authorized to handle all "requests" for radio time on behalf of the party. *See id.*; *see also* BIOGRAPHICAL DIRECTORY OF THE UNITED STATES CONGRESS, *supra* note 139, at 1462 (noting McFadden's party affiliation); Eddie Dowling, *Radio Needs a Revolution*, *reprinted in* 78 CONG. REC. 8835-37 (1934) (describing the author of the article, who served as the chairman of the Democratic Party's stage, screen and radio division during the 1932 campaign, recounting the numerous "tempting opportunities" offered by industry after the 1932 election to democrats "thought to possess political influence," and observing "[t]he dispensation of the radio privilege offers many opportunities for favors").

160. 75 CONG. REC. 3688 (1932) (statement of Rep. Horr) (considering H.R. 7716, a predecessor of the 1934 legislation). Horr's statement was made in 1932, when the Commission was still controlled by Republicans. *See* BIOGRAPHICAL

So even at this early stage, reality was beginning to erode the Progressive mythology. But there was no alternative vision. Those decrying the industrial and political influences over the agency either made smallish suggestions or sought even more regulation. Thus, after delivering his indictment of the commission, Representative Horr proposed merely that broadcasters be able to keep their licenses while seeking judicial review after revocation by the Commission,¹⁶¹ and Republican Representative McFadden, after vehemently criticizing the cozy partnership between industry and government, proposed an amendment that would have restricted broadcasters' editorial discretion in a manner similar to the Fairness Doctrine.¹⁶² Dissatisfaction with agency bureaucracy would grow over the next five decades, and the suggested solutions would become more dramatic.

II. DISILLUSIONMENT AND DISSOLUTION: THE PESSIMISTIC RENAISSANCE AFTER 1960

The Progressive-era philosophy would not endure. As government officials, regulatory scholars, and the country at large gained experience with Progressive-era agencies, reality curbed idealistic enthusiasm in heroic administrators. The last four decades of the twentieth century would bring increasing disillusionment with the ideal of a broadly authorized regulatory agency that would will itself free from both the political process and industry influence.

Though this period saw the decline of the Progressive ideals for government, it also saw a modest renaissance for traditional governmental structures. Thus, James Landis, who earlier sought to explode the tripartite structure of government, advocated tying agencies closer to the President to boost agency

DIRECTORY OF THE UNITED STATES CONGRESS, *supra* note 139, at 1211 (noting Rep. Horr's Republican party affiliation).

161. *See* 75 CONG. REC. 3689.

162. *See* 78 CONG. REC. 10308-09 (1934) (proposing an amendment that would prohibit radio stations from discriminating on the basis of viewpoint in broadcasting speech for hire); *see also* 78 CONG. REC. 8834-35 (statement of Republican Sen. Hatfield) (claiming that the administration has large political control over broadcasters, but suggesting only that "educational institutions be given a specified portion of the radio facilities of the country"); BIOGRAPHICAL DIRECTORY OF THE UNITED STATES CONGRESS, *supra* note 139, at 1152 (noting Sen. Hatfield's Republican party affiliation).

morale. And Louis Jaffe, a young rising star at the end of the New Deal era who had become one of the nation's most prominent administrative law professors by 1960, celebrated judicial review of agencies' action as a necessary check on arbitrary agency behavior. All of this was, of course, radically inconsistent with the Progressive-era philosophy. Titans were not supposed to need politicians to boost their morale, nor courts to catch them if they shrugged. The renaissance had a deep strand of pessimism, and it would do little to halt the looming dissolutions.

A. *The Path to Dissolution*

By the early 1960s, the vigor of expert agencies' "lustly youth" was dwindling. Pessimism was replacing the simple optimism of earlier days. True, rumblings about the problems with agencies began earlier. They were even present, if not highlighted, in the legislative debates over the Communications Act of 1934.¹⁶³ Yet discontent was becoming common even among the friends of the administrative form. As Louis Jaffe lamented in 1965:

Americans are a people not notably endowed with the historic sense. They are given to enthusiasm, and that is good because enthusiasm moves mountains. But enthusiasts are prone to violent disillusion: mountains are sometimes stubborn, and even when they yield, the view on the other side may be displeasing. The administrative agency is a case in point.¹⁶⁴

Nowhere was the violent disillusionment of an enthusiast more obvious than in the work of the great New Dealer, James Landis.

163. See *supra* notes 155–62 and accompanying text. For other early expressions of skepticism about the effectiveness of expert independent agencies, see MARVER H. BERNSTEIN, *REGULATING BUSINESS BY INDEPENDENT COMMISSION* (1955) (arguing that agencies progress through a "life cycle" in which at first they regulate effectively in the public interest and only later are captured by the regulated industry); Samuel P. Huntington, *The Marasmus of the ICC: The Commission, the Railroads, and the Public Interest*, 61 *YALE L.J.* 467, 470 (1952) (identifying a "decline of the ICC" caused by the agency's alignment with the interests of the railroads).

164. LOUIS JAFFE, *JUDICIAL CONTROL OF ADMINISTRATIVE ACTION* 10 (1965).

In December of 1960, Landis wrote an influential report on the problems of administrative agencies for President-elect John F. Kennedy.¹⁶⁵ Landis still had faith in administrative agencies; indeed, he thought that “[t]heir continued existence is obviously essential for effective government.”¹⁶⁶ His faith was based on the old Progressive argument linking modern industrial innovations with the innovation in government: “The advent of atomic energy, of telecommunications, of natural gas, of jet aircraft,” he noted, “all call for greater surveillance by government.”¹⁶⁷ Nonetheless, even Landis had to acknowledge that there were “fundamental problems . . . too serious to be [any] longer ignored” that were threatening the administrative edifice once hoped to be “the wise and efficient solution of the many new problems posed by a growingly complex society and a growingly benevolent government.”¹⁶⁸

The litany of problems identified by Landis suggested a basic flaw in the Progressive-era ideal of an independent institution that, through sheer force of intelligence, training and will, could merge the best of the private world—efficiency and immunity from politics—and the best of the public—broad accountability and public spiritedness. Rather than being efficient and insulated from undue political and industrial pressure, agencies were costly, dilatory, poorly organized, unable to formulate policy *and* subject to “[s]pectacular instances of executive, legislative and industry interference.”¹⁶⁹ Landis even observed the techniques of agency capture—“the subtle but pervasive methods pursued by regulated industries to influence regulatory agencies by social favors, promises of later employment in the industry itself, and other similar means.”¹⁷⁰ In sum, experience had proven that the expert independent

165. See STAFF OF SUBCOMM. ON ADMINISTRATIVE PRACTICE AND PROCEDURE TO THE SENATE COMM. ON THE JUDICIARY, 86TH CONG., REPORT ON REGULATORY AGENCIES TO THE PRESIDENT-ELECT (1960) (written by James M. Landis) [hereinafter Landis Report]; see also McFarland, *supra* note 50, at 373 (discussing the importance of the report).

166. Landis Report, *supra* note 165, at 1.

167. *Id.* at 1–2.

168. *Id.* at 5.

169. *Id.* at 1; see also *id.* at 5–9 (detailing the problems of delay in, and high cost of, agency proceedings).

170. *Id.* at 14. Landis also described “the daily machine-gun-like impact on both agency and its staff of industry representation that makes for industry orientation on the part of many honest and capable agency members as well as agency staffs.” *Id.* at 71.

agency tended to combine the *worst* elements of the public and private worlds: It was inefficient, subject to petty political influence dealing, unprofessional, and, in the end, unable to protect the elusive public interest from determined industrial manipulation.

Although Landis proposed solutions to these problems, his solutions only showed the intellectual disintegration of the Progressive-era philosophy, and the quiet reassertion of older principles. For example, Landis asserted that, in reforming the agencies, “[m]ere generalities will be useless” and any “guide for action must have concreteness.”¹⁷¹ But that was deeply inconsistent with the entire Progressive theory that the legislature should delegate power with generalities—that it should, in Berle’s words, merely “turn a body of experts loose on the question, instructing them to use their best trained judgment.”¹⁷² For if the agency could not organize itself efficiently without concrete direction, then how could it be trusted to organize an entire industry without direction?

Similarly, Landis proposed that the President should increase supervision over the work of the agencies, because such Presidential concern would “draw good men into [the agencies] service,” check “the centrifugal tendencies inherent in the ‘administrative branch’ of the government,” and bolster “the morale of the agency,” because the agencies would “then realize how important their activities are to the national scene.”¹⁷³ But this view—that the agencies would function better if *closer* to a political actor—was a reversal of the Progressive ideal of agency independence.¹⁷⁴

171. *Id.* at 2.

172. Berle, *supra* note 68, at 441–42. Landis continued to espouse the Progressive dogma on delegation, apparently without realizing the inconsistency between it and his demand for concreteness. See Landis Report, *supra* note 165, at 2 (noting that sweeping delegations to agencies are based “upon the conviction that the problems in a particular area were so manifold and complex that the Congress simply had neither the time nor the capacity to handle them”).

173. Landis Report, *supra* note 165, at 82. Simultaneously, however, Landis decried “the morale-shattering practice of permitting executive interference in the dispositions of causes and controversies delegated to the agency for decision.” *Id.* at 36.

174. To address the problem of agency capture, Landis proposed “the device of the public counsel,” who would be given the right to intervene in agency proceedings to represent public interests. *Id.* at 72. Again, the necessity of that device seems directly contrary to the Progressive ideal that the agency itself would represent the public interest. Moreover, Landis gave no reason not to suspect

More than any other point, however, Landis decried the “deterioration in the quality of our administrative personnel.”¹⁷⁵ Better personnel was the “prime key to the improvement of the administrative process,” for “[g]ood men can make poor laws workable,” while “poor men will wreak havoc with good laws.”¹⁷⁶ In returning to this theme again and again,¹⁷⁷ Landis revealed the extent to which the Progressive and New Deal champions of expert agencies really had relied on “supermen.” For when those agencies failed, the old adherent to the faith blamed personnel because, to him, government could not be regarded “as simply a government of laws and not of men, but rather a government of laws *by men*.”¹⁷⁸

Yet Landis could suggest little to improve the agency personnel. His proposal that commissioners be given an entertainment allowance so that they would gain “prestige” by “entertain[ing] rather than . . . suffer[ing] entertainment” by the industry was as niggling as it was haughty.¹⁷⁹ In exhorting political leaders to appoint better people and to foreswear repaying political obligations through appointments, Landis might

that if industry groups could capture the agency members, who were supposed to protect the public interest, they would also be able to capture the public counsel.

175. *Id.* at 11.

176. *Id.* at 66.

177. *See id.* at 3 (“Although the mechanisms we create for administration may be more or less well adapted to a particular task, the individuals that operated them singly or as a group have the ultimate responsibility of guidance and control.”); *id.* at 12 (recognizing that “[t]op administrative positions appear to have been sought frequently as stepping stones to further political preference or to positions of importance within the industries subject to regulation”); *id.* at 35 (claiming that any advances in administrative law “have been nullified by the appointment of members of these agencies on political grounds”); *id.* at 36 (“Largely on political grounds, outsiders lacking necessary qualification for their important tasks have been appointed.”); *id.* at 54 (recommending that the only solution for the problems of the FCC is to “giv[e] it strong and competent leadership”); *id.* at 58 (recommending as a solution to the problems of the Federal Power Commission that “qualified and dedicated members with the consumer interest at heart must be called into service”); *id.* at 66–68 (general recommendations concerning appointments).

178. *Id.* at 3 (emphasis added).

179. *Id.* at 67. Landis’s other incremental solutions to the personnel problem included increasing the retirement benefits of commissions and increasing the tenure of the positions. Increases in retirements benefits seem unlikely to work fundamental change, particularly since Landis himself acknowledged that even a 25% increase in salary was unlikely to change matters. Moreover, as Louis Jaffe noted, increased tenure would “only make matters worse if appointments are based not on competence but on politics.” Louis Jaffe, *James Landis and the Administrative Process*, 78 HARV. L. REV. 319, 325–26 (1964).

as well have been directing the moon to change its orbit or the tides to change their rhythms. The mixing of politics and appointments undoubtedly was personal for Landis, because he, a former Dean of Harvard Law School and Chairman of the SEC, was denied a reappointment as Chairman of the humble Civil Aeronautics Board in 1947 for political reasons.¹⁸⁰ Yet Landis's own experience should have suggested the futility of hoping for Herculean commissioners unsullied by the ordinary business of politics. Time and experience had proven that ideal unattainable.

The Landis Report is significant because Landis was a pre-eminent *friend* of the administrative process and an *optimist* of the future of agencies. Obviously, if those are the views of an optimist, the agencies were in trouble. And so they were.

Throughout the 1960s and 1970s, the intellectual climate turned dramatically against the Progressive era ideal of an expert independent agency.¹⁸¹ On one front, the enemies of administrative regulation were growing in number. Chicago School economists, especially Milton Friedman and George Stigler, argued that administrative regulation was rarely conducted in the public interest and that it was typically worse than unregulated monopoly.¹⁸² Other scholars also saw in administrative agencies tendencies for maximizing their own power and protecting industrial privilege—in short, to do many things but protect the public interest.¹⁸³

Even friends of administrative agencies began to acknowledge new constraints on the administrative process. Louis Jaffe wrote in 1964 of the limits of the administrative process—that an agency could not achieve “basic reform” because that “is

180. See Jaffe, *supra* note 179, at 324 (noting that the denial of reappointment “taught him that the administrative process is as vulnerable as any other part of government” and that, “[f]or one who had looked to the administrative process with such exalted expectations, it must have been a peculiarly bitter experience”).

181. A thorough review of the scholarly views on agencies during this period can be found in Thomas Merrill, *Capture Theory and the Courts: 1967–1983*, 72 CHI.-KENT L. REV. 1039 (1997).

182. See generally MILTON FRIEDMAN, *CAPITALISM AND FREEDOM* (1962); GEORGE J. STIGLER, *THE CITIZEN AND THE STATE: ESSAYS ON REGULATION* (1975).

183. See M.H. BERNSTEIN, *REGULATORY BUSINESS BY INDEPENDENT COMMISSION* (1955); GABRIEL KOLKO, *RAILROADS AND REGULATION 1877–1919* (1965); THEODORE J. LOWI, *THE END OF LIBERALISM* (1969); WILLIAM A. NISKANSEN, JR., *BUREAUCRACY AND REPRESENTATIVE GOVERNMENT* (1971).

not a matter of technique or expertise."¹⁸⁴ Only the legislature or the executive could bring real reform, because those branches had the capacity to resolve "major power conflicts."¹⁸⁵ That concession was itself sea-change from the Progressive ideal, but Jaffe also concluded "that the administrative process was not the proper organ for the shaping and enforcement of industrial policies"; the administrative sphere was limited to "planning the *regulation* of an industry."¹⁸⁶ While Jaffe left undefined the crucial difference between planning industrial *regulation* and planning industrial *policy*, his acknowledgment of a limit on administrative competence, coupled with his admonition against always recommending "more regulation" to cure the "ills of a regulated industry," made clear that the ambitions of the administrative state were contracting.

To be sure, administrative law scholars proposed reforms. For example, Jaffe and others suggested increased judicial review to improve the administrative process.¹⁸⁷ But here again, the proposed remedy only demonstrates further deterioration in the Progressive and New Deal administrative philosophy, and the return to older views. Progressive agencies were supposed to be free from substantial judicial interference; indeed, they were designed to combine all functions of government so that they could solve the industrial problem expeditiously. The change was especially apparent in comparing Jaffe's 1965 opus, *Judicial Control of Administrative Action*, in which he championed a "presumption of judicial review"—an intellectual invitation to the courts to oversee the administrative process—with his earlier work as a young New Dealer fighting with Attorney General Tom Clark to minimize Congress's efforts to expand judicial review in the then-new Administrative Procedure

184. Jaffe, *supra* note 179, at 324.

185. *See id.*

186. *Id.* at 322. Jaffe claimed that this limit on administrative business was seen by Progressive hero Louis "Brandeis, that old preacher of the gospel of *laissez faire*," but "we young ones patronized his quaint wisdom." *Id.* Jaffe's colorful account reveals a difference between the Progressives, who, if not students of *laissez faire*, nonetheless did admire the efficiency of private enterprise, and New Dealers, who were much more willing to expand government into industry. *See id.*

187. *See* JAFFE, *supra* note 164, at 336-53 (constructing the legal argument for recognizing, as a matter of administrative common law, a presumptive right to judicial review of agency action).

Act.¹⁸⁸ Significantly, however, even the proposed reformations of administrative processes met with skepticism within the community of scholars.¹⁸⁹ The intellectual crisis in administrative law could not be disguised.¹⁹⁰

In the late 1970s, deregulation of industry and a parallel dissolution of regulatory agencies began in earnest. The Civil Aeronautics Board was the first to go, as Congress chose in 1978 to free the airline industry from almost all administrative regulation.¹⁹¹ Throughout the 1980s, the pattern of deregulation continued, with major legislative or administrative acts of regulatory forbearance.¹⁹² This trend of deregulation obviously called into question the need for Progressive-era agencies designed to carry out the very form of regulation that is now vanishing. The most important cue for the fate of such agencies did not, however, occur until 1996, when Congress, at the request of a Democratic President, abolished the model Progressive agency, the ICC.¹⁹³ The FCC was modeled on the ICC and can trace one-half of its regulatory jurisdiction back to that agency. It could follow the same path.

B. Disillusionment (and Dissolution?) at the FCC

I invite you to sit down in front of your television set when your station goes on the air and stay there without a book, magazine, newspaper, profit-and-loss sheet or rating book

188. See Letter from Louis L. Jaffe to Tom C. Clark, Attorney General (Nov. 1, 1945) (letter available in the Truman Library) ("earnestly hop[ing] that if the [Administrative Procedure] bill is enacted into law it will not hinder effective administration").

189. See Richard B. Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1667 (1975).

190. See, e.g., Robert L. Rabin, *Administrative Law in Transition: A Discipline in Search of an Organizing Principle*, 72 NW. U. L. REV. 120 (1977).

191. See The Airline Deregulation Act, Pub. L. No. 95-504, 92 Stat. 1705 (1978).

192. See Natural Gas Wellhead Decontrol Act of 1989, Pub. L. No. 101-60, 103 Stat. 157 (completing the process of natural gas deregulation begun by the Natural Gas Policy Act of 1978, Pub. L. No. 95-621, 92 Stat. 3350); Syracuse Peace Council, 2 F.C.C.R. 5043, 5052 (1987) (administratively abolishing the Fairness Doctrine); Motor Carrier Act of 1980, Pub. L. No. 96-296, 94 Stat. 793 (substantially deregulating the trucking industry).

193. See ICC Termination Act of 1995, Pub. L. No. 104-88, 101, 109 Stat. 803, 804 (abolishing the ICC effective Jan. 1, 1996); President's Address Before a Joint Session of Congress on the State of the Union, 31 WKLY COMP. PRES. DOC. 96, 99 (Jan. 24, 1995) (discussing proposed abolition of the ICC).

to distract you—and keep your eyes glued to that set until the station signs off. I can assure you that you will observe a vast wasteland.

You will see a procession of game shows, violence, audience participation shows, formula comedies about totally unbelievable families, blood and thunder, mayhem, violence, sadism, murder, Western bad men, Western good men, private eyes, gangsters, more violence and cartoons. And, endlessly, commercials—many screaming, cajoling and offending. And most of all boredom.¹⁹⁴

FCC Chairman Newton Minow spoke those words in 1961. He was speaking at the height the FCC's power—before auctions of spectrum were anything other than the idea of few visionaries, before a Democratic President would declare an end to the era of Big Government, before “public interest” regulation of industry had fallen into general disrepute. He was speaking during what is now called the Golden Age of Television.¹⁹⁵

Writing more than a third of a century later, Minow claimed that his speech was “a failure” because people had remembered the wrong part of the speech: “The two words I wanted people to remember from that speech were not ‘vast wasteland.’ The two words I cared about were ‘public interest.’”¹⁹⁶ But if that was his goal, then perhaps he succeeded. Minow's Wasteland Speech is an archeological find reminding us not only that there never was a true golden age of television,¹⁹⁷ but that there never was a golden age of public interest regulation either. The concept was always an intellectual wasteland. For “public interest” regulation, as it is known in our legal system, means not merely any structure of regulation that serves public interests. It means the form of regulation embodied in the Communications Act. It means, in Berle's words, “turn[ing] a body of experts loose on a ques-

194. Newton N. Minow, Speech to the National Association of Broadcasters (May 9, 1961), reprinted in NEWTON N. MINOW & CRAIG L. LAMAY, *ABANDONED IN THE WASTELAND* 188 (1995).

195. See, e.g., ARTHUR SHULMAN, *THE GOLDEN AGE OF TELEVISION* (1974).

196. MINOW & LAMAY, *supra* note 194, at 4 (1995).

197. See KRATTENMAKER & POWE, *supra* note 121, at 305–09; see also LOUIS JAFFE, *THE ROLE OF GOVERNMENT, FREEDOM AND RESPONSIBILITY IN BROADCASTING* 39 (John Coons ed., 1961) (noting that the poor quality of material on television is due in part to the rarity of high quality content in comparison to the amount of television air time to be filled).

tion . . . without technical checks.”¹⁹⁸ The one policy that has most clearly proven itself not to be in the public’s interest is that form of administrative regulation. No agency proves the point better than the FCC itself.

Even before the inception of the FCC, the brief experience with the FRC had raised doubts as to whether such commissions would always tend to be an institution that “plays up to you if you have the influence.”¹⁹⁹ The next sixty years of experience would confirm those doubts. Just months prior to Minow’s Wasteland Speech, Dean Landis concluded that the FCC was “far too subservient” to congressional subcommittees on communications, that the agency’s licensing decision “form[ed] no decipherable pattern,” and that the leadership in the field had been “left to the commercial interests.”²⁰⁰ Subsequent studies have suggested that the FCC has been beholden to the politically powerful, and that its policies protected the interests of local broadcasters while entrenching the three major networks.²⁰¹

Just as with administrative agencies generally, disenchantment has taken hold even among with those who previously crafted the FCC’s regulatory approach. Newton Minow, for example, came to recognize that “the reforms of the 1960s, however just or well intentioned, had done very little to clarify the meaning and application of the public-interest standard in the Communications Act. In some respects, they had made matters worse.”²⁰² The fundamental problem, as Minow per-

198. Berle, *supra* note 68, at 441–42.

199. 75 CONG. REC. 3688 (1932) (statement of Rep. Horr).

200. See Landis Report, *supra* note 165, at 53, 22, 54. Landis, of course, had no suggestion to remedy these problems other than calling for “the incubation of vigor and courage in the Commission by giving it strong and competent leadership.” *Id.* at 54.

201. See, e.g., STANLEY M. BESEN ET AL., MISREGULATING TELEVISION 176–78 (1984) (concluding that the FCC policies benefiting local network affiliates “may result from the fact that affiliates have sufficiently concentrated interests and yet are sufficiently numerous that they represent a powerful political force,” and that the “net effect of FCC policies has been to entrench, not dissipate, the power of the dominant networks”); *id.* at 170 (noting that “the FCC has exhibited a remarkably consistent propensity for devising solutions that do not work”); *id.* at 174 (describing as “schizophrenic” the FCC’s approach of “substitut[ing] monopoly for competition and then [seeking] to achieve public interest benefits by detailed regulation of firms shielded by marketplace competition”).

202. MINOW & LAMAY, *supra* note 194, at 99. The reforms, which Minow had helped institute, merely provided “a thin veneer of public participation” that “served almost no one well.” *Id.*

ceived, was the public interest standard in the Communications Act, which “stands as a monument to the mistake of writing into law vaguely worded *quid pro quos*.”²⁰³ Similarly, Henry Geller, hardly a traditional foe of public interest regulation, has nonetheless concluded that the entire project of regulating private broadcasters in the public interest “is not the best way to proceed.”²⁰⁴

On the common carrier side of the FCC’s jurisdiction, the judgment in the court of history also has not been kind to the agency. The dozen years of telecommunications regulation from Judge Greene’s courtroom was, more than anything else, a repudiation of decades of FCC telecommunications regulation.²⁰⁵ Despite the agency’s recent victory in the Supreme Court, the Telecommunications Act of 1996 did not lean toward the FCC in redrawing state-federal jurisdictional lines. The FCC’s common carrier jurisdiction devolved from the defunct ICC, and that ancestry highlights the question of the FCC’s solvency.

The weakness of the FCC’s record, the apologetic tones of its defenders, and the deterioration of the Progressive-era ideals on which the FCC was founded all make inevitable calls for the abolition of the FCC such as that forcefully advanced by Huber. Huber’s challenge is particularly deserving of attention because of the breadth of his thesis, for he challenges not only the FCC but very idea of “commission law”: “Like Communism, commission law has failed. It is rigid, slow, and—despite all the earnest expertise of bureaucrats—ignorant.”²⁰⁶

The new hero proposed by Huber is the common-law system which, in regulating private markets, produces “spontane-

203. *Id.* at 5.

204. Henry Geller, *Public Interest Regulation in the Digital TV Era*, 16 CARDOZO ARTS & ENT. L.J. 341, 362 (1998) (elaborating that the public interest regulation of private broadcasters “will always remain a behavioral content scheme that seeks, with First Amendment strains, to make the broadcaster act against its business interests by providing much less remunerative public service”); see also HENRY GELLER, A MODEST PROPOSAL TO REFORM THE FEDERAL COMMUNICATIONS COMMISSION 2 (1974) (identifying “over-identification with the industries regulated” as “the root cause of dissatisfaction” with the FCC).

205. See Joseph D. Kearney, *From the Fall of the Bell System to the Telecommunications Act: Regulation of Telecommunications Under Judge Greene*, 50 HASTINGS L.J. 1395 (1999) (demonstrating that regulatory failure was the premise of the government’s lawsuit against the Bell System and of the resulting decree).

206. HUBER, *supra* note 1, at 8.

ous order that is rational, efficient, and intelligent.”²⁰⁷ It would be unfair to dismiss Huber’s challenge to the FCC on grounds of inconsistency, though in his earlier writings he has found the “sober, well-considered judgment” of administrative agencies preferable to the “theater of the courtroom” inherent in a common-law system.²⁰⁸ Disenchantment with the FCC and administrative agencies goes beyond a single commentator.

The better point is that we should resist the temptation to replace the fallen heroes of the Progressive era with new idols. Unchecked pessimism in the administrative form is as unjustified as the unbridled optimism of the Progressives. Even critics of agencies acknowledge the utility of administrative form in some circumstances. Courts and agencies have different strengths and weaknesses; neither institution is *a priori* superior to the other. Agencies, courts, and other governmental structures should be evaluated, as best as possible, on their records, and the tasks assigned to them should be based on realistic assessments of their capabilities.

III. ENLIGHTENMENT ERA REGULATION AND A JACKSONIAN ADMINISTRATIVE AGENCY

The Progressive era’s ideal of a powerful expert agency generally authorized to pursue the public interest “without technical checks”²⁰⁹ was an innovation—an experiment—and, at some point, the political process must assay the results of that experiment. In this instance, the innovation has failed. Such “public interest” regulation is not in the public’s interest. That conclusion does not mean that all regulation, or even all administrative regulation, is undesirable. But it does mean that our ideals for a regulatory system should change.

A new paradigm is needed to replace the Progressive model and, in developing the new model, we can profit from re-considering an older one. Before the Progressive era, before the creation of the ICC, before the late nineteenth century’s faith in Herculean expert regulatory agencies, a different kind of regulatory system was created. It was a bureaucracy created not with faith in bureaucrats, but with skepticism. And it was

207. *Id.* at 206.

208. HUBER, LIABILITY, *supra* note 30, at 46.

209. *See* Berle, *supra* note 68, at 442.

a system of public regulation that nonetheless exalted the private over the public.

Like any regulatory system, the patent laws address a perceived market failure, specifically, the failure of markets to produce an efficient level of a particular public good—technical information that easily can be appropriated once created. A patent system administered by an executive branch agency is not the only regulatory solution to this market failure. Other solutions have been considered and, indeed, implemented. But the creation of a centralized, bureaucratic agency to assist in regulating the patent system marked a milestone in the history of government economic regulation, and that administrative solution has been both long enduring and widely imitated.²¹⁰

Lessons from the administration of the patent system fall into two general categories: the choice between agencies and courts as regulators, and the appropriate structure of government regulation. Both are relevant in considering any fundamental reform of a Progressive-era administrative agency such as the FCC.

A. *The Limits of Common-Law Court Competence: Good News for the Agencies*

One important question for the future of the FCC is whether the unique forms of property rights needed for communications can be better defined and policed by an administrative agency or, as Peter Huber and others contend, by common-law courts. Here, experience with the patent system provides important insights.

From 1793 until 1836, the courts alone defined property rights in technological innovations. The administrative function during this period was essentially identical to the Department of Commerce's function during the period of chaos just prior to enactment of the 1927 Radio Act—it was limited to the ministerial task of registration. The system proved so inefficient and unreliable that Congress abandoned it.

210. As noted by one commentator, the administrative system established by Congress in 1836 "created a pattern that was later followed by modern industrialized countries which hold to the theory that the public interest is advanced by rewarding inventors who have in fact contributed to the public welfare a new and useful concept." Lawrence C. Kingsland, *The United States Patent Office*, 13 LAW & CONTEMP. PROBS. 354, 360 (1948).

The first patent statute, enacted in 1790, created an administrative Patent Board consisting of the Secretary of State, the Attorney General, and the Secretary of War, any two of whom were given discretion to issue a patent “if they shall deem the invention or discovery sufficiently useful and important.”²¹¹ Determining the merits of claimed inventions, however, soon proved too time-consuming and burdensome for the members of the Patent Board. Secretary of State Thomas Jefferson, in particular, worried that time pressures were forcing him “to give undue & uninformed opinions” on patent applications that “require a great deal of time to understand & do justice by them.”²¹² In 1793, Congress abolished the Patent Board, delegated the task of issuing patents solely to the Department of State, and, significantly, eliminated the requirement that the executive branch first determine that the applicant’s claimed invention was “sufficiently useful and important” to merit a patent.²¹³

The next forty-three years constituted the “era of registration” in the administration of the patent laws.²¹⁴ Patent rights

211. Act of April 10, 1790, 1 Stat. 109, 110. After the Letters Patent were made out, the Attorney General was required to examine them for form and then forward them to the President for endorsement with the “Seal of the United States.” *See id.* No judicial review from an administrative denial was provided.

212. Letter from Thomas Jefferson to Hugh Williamson (Apr. 1, 1792), reprinted in 6 THE WORKS OF THOMAS JEFFERSON 459 (Paul Leicester Ford ed., 1904). Because of his interest in science and technology, “Jefferson took the lead in the activities of the board.” Kingsland, *supra* note 210, at 356.

213. *See* Patent Act of 1793, § 1, 1 Stat. 318. The Act also eliminated the three-member board and substituted the Secretary of State as the official authorized to receive petitions for Letters Patent. *See id.*

214. *See* EDWARD C. WALTERSCHEID, TO PROMOTE THE PROGRESS OF USEFUL ARTS: AMERICAN PATENT LAW AND ADMINISTRATION, 1787–1836, at 243 (1998). Registration was the norm during this period, even though the Patent Act, unlike the Radio Act of 1912, did not expressly impose a nondiscretionary duty on the executive branch but merely provided that “it shall and may be lawful for the said Secretary of State to cause Letters Patent to be made out in the name of the United States.” Patent Act of 1793, § 1, 1 Stat. at 318 (emphasis added). Nevertheless, both the executive branch and the courts took the position that the Secretary of State had no discretion in the matter. *See* Grant v. Richmond, 31 U.S. 218, 241 (1832) (“The Secretary of State may be considered in issuing patents as a ministerial officer. If the prerequisites of the law are complied with, he can exercise no judgment on the question of whether the patent shall be issued.”); 2 Op. Att’y Gen. 435 (1831) (advising that the Secretary of State acts “rather ministerially than judicially in granting patents” and that patent must issue “without entering into an examination of the question of right”); William Thornton (Superintendent of Patents), *Account of the Method of Obtaining Patents*, 2 EMPORIUM ARTS & SCI. 274, 276 (1813) (noting that “there is at present no discre-

during this period were granted freely by the executive officials charged with administering the system, and the courts were left to sort the good patents from the bad in enforcement actions. That forty-three-year period demonstrates that the courts are not always more efficient than an administrative agency in defining property rights.

As early as 1812, John Redman Coxe, a patent holder and a professor of chemistry at the University of Pennsylvania, argued that many of the “great number of patents annually granted by the United States . . . would not be capable of sustaining a just claim for the exclusive privileges acquired; and [that] the public is really injured under such circumstances.”²¹⁵ That proliferation of invalid patents was directly related to the courts’ inability to manage the property rights system. If the courts had been able to administer the patent system effectively, then the incentive to obtain an undeserving patent would be eliminated. Indeed, Thomas Jefferson, in 1813, expressly drew the connection between growing problems with the registration system and the limits of judicial competence:

Instead of refusing a patent in the first instance, as the [patent] board was authorised to do [under the 1790 Act], the patent now issues of course subject to be declared void on such principles as should be established by the courts of law. This business however is but little analogous to their [the courts’] course of reading, since we might in vain turn over all the lubberly volumes of the law, to find a single ray which would lighten the path of the mechanic or mathematician; it is more within the information of a board of academic professors, and a previous refusal of a patent would

tionary power to refuse a patent, even where no just claim exists,” and “caution[ing] the purchaser of patent rights against the supposition, that the invention patented is always valuable, or new, or that it interferes with no previous patent”).

215. John Redman Coxe, *Of Patents*, 1 EMPORIUM ARTS & SCI. 76, 76 (1812) (editor’s note). Coxe’s intended audience was the class of “artists and manufacturers” in the United States. See *id.* at vii (describing purposes of the journal). Coxe was also a patent holder; see also John Redman Coxe, *Description of an Improvement in the Common Bedstead*, 2 EMPORIUM ARTS & SCI. 283, 283–89 (1813) (reproducing Coxe’s patent on an improved bedstead). As a partial remedy to the proliferation of unsustainable patents, Coxe proposed to publish in the *Emporium* a list of all patents granted by the United States and Great Britain since 1796, so that “reference may readily be made . . . to check any improper proceedings which may take place on the part of patentees for similar objects.” Coxe, *Of Patents, supra* at 76 n.†. The journal, however, ended publication in 1813.

better guard our citizens against harrassment by law suits.²¹⁶

Similarly, in 1814, Thomas Cooper, another scientist, complained that the courts were unable to comprehend technical subject matter and proposed establishing “a board of scientific men, to whom should be submitted, in the first instance, all applications for patents.”²¹⁷

Of course, if only patentees and potential patentees were dissatisfied with the registration system, then public choice theory might suggest that the critics were dissatisfied not because the courts were inept but because the courts were harder to capture than an administrative agency would be. Yet the historical record is not consistent with that explanation, for the critics of the registration system included many non-patentees. As mentioned, Jefferson was one of the critics and, though he was certainly an innovator, Jefferson never patented any of his many innovations because of his intellectual qualms about patent rights. Other non-patentees also criticized the system. In 1818, for example, Congress was presented with a “petition by sundry inhabitants of Pennsylvania,” praying for relief from “the many and great impositions to which they are subjected, in consequence of the number of unjust, absurd, and frivolous patents, which have been granted to a set of speculators, and praying that additional restrictions may be imposed on the issuing of patents.”²¹⁸ And in 1830, a senator arguing to raise the fee for obtaining a patent—not a measure that would have been favored by patentees—claimed that unscrupulous persons were using the registration system to obtain patents on articles

216: Thomas Cooper, *On Patents*, 2 EMPORIUM ARTS & SCI. (n.s.) 431, 452 (1814) (reproducing Jefferson’s letter of Aug. 13, 1813).

217. *Id.* at 454. Cooper was a professor of Chemistry, Natural Philosophy, and Mineralogy at Dickinson College. See 1 EMPORIUM ARTS & SCI. (n.s.) ii (1813). Cooper also proposed an innovative form of judicial review, whereby if the board rejected the patent, the applicant would still be allowed to

take out his patent at his own risk; but accompanied with the reasons of the board for rejecting it; which reasons should be evidence for consideration of a court and jury, in case the claim should be contested; and double costs awarded in all cases of final judgment against the patentee of an application thus rejected.

Cooper, *supra* note 216, at 454.

218. 14 ANNALS OF CONG. 843 (1817); see also *id.* at 870 (also noting the petition). Congress did not act on the petition.

“of common and daily use.”²¹⁹ Even the courts themselves were no fans of the system. In 1826, a federal judge observed that “[i]nterfering patents are constantly presented to our observation, and patentees are everywhere in conflict.”²²⁰ He blamed the “very alarming facility with which patents are procured” as the cause of the problem.²²¹

The final catalyst to change the registration system came in 1836, when a Senate select committee chaired by Senator John Ruggles was appointed to consider reform. The committee’s report identified the absence of administrative discretion in defining the rights as the most serious defect in the law.²²² The report found both patentees and the public harmed, for both tried to avoid the “expensive lawsuits” needed to establish the validity of the property right.²²³ For the public, that meant paying “unjust and iniquitous” “tribute” to the holders of questionable patents, and for deserving patentees, it meant foregoing part of “the reward which the law was intended to secure” because “patents even for new and meritorious inventions are so much depreciated in general estimation that they are of but little value.”²²⁴

219. 4 CONG. DEB. 380 (1830).

220. *Thompson v. Haight*, 23 F. Cas. 1040, 1041 (C.C.S.D.N.Y. 1826) (No. 13,957).

221. *Id.*

222. *See* S. REP. NO. 24-338 (1836) [hereinafter *Ruggles Report*]. The Ruggles Report found, inter alia, that a “considerable portion of all patents granted are worthless and void, as conflicting with, and infringing upon one another, or upon, public rights not subject to patent privileges,” that “[o]ut of this interference and collision of patents and privileges, a great number of lawsuits arise, which are daily increasing in an alarming degree, onerous to the courts, ruinous to the parties, and injurious to society,” and that the problem of outright fraud had “become extensive and serious.” *Id.* at 3.

223. *See id.* at 3.

224. *Id.* at 3–4. The Report contended that problems with the system were “increas[ing] and multiply[ing],” and empirical data tends to confirm that view. In the years prior to the 1836 reforms, the number of patents granted had been increasing steeply. Between 1808 and 1824, the number of patents issued per year had fluctuated in a range of 150 to 250. After 1824, patent grants climbed in every year except one, and in 1835, over 750 patents were issued. The Ruggles Report found that in the first quarter of 1836, 274 patents had already issued, thus producing an annual rate in excess of 1000. *See id.* at 5. Even with the enactment of the statute conferring administrative discretion on the Patent Office on July 4, 1836, the number of patents granted in the year still exceeded 700, though most were probably granted in the first half of the year. In 1837, the first full year in which the Office had discretion to deny applications, the number of granted declined to 426, and the number of grants remained between 400 and 515 per year for the next ten years. *See Historical Patent Statistics, 1791–1961*, 46 J.

The description in the Senate report is consistent with a poorly defined, uncertain system of property rights. As a remedy, the report recommended authorizing the Patent Office to play a much more active role in defining property rights²²⁵—a recommendation followed in the 1836 Patent Act.²²⁶ As predicted by the Report, the number of patents issued “somewhat diminished,” but there was “more confidence in those . . . granted.”²²⁷

Undoubtedly property rights in innovation and in spectrum are not identical, but there are enough similarities that the experience during the era of patent registration should give pause to any exuberant calls to abandon the FCC in favor of a purely common-law process. Like patent rights, spectrum rights are intangible rights that cannot be defined properly without a high degree of technical competence. Defining rights in spectrum does not involve merely specifying a frequency and geographic area within which the property owner holds the absolute right to use the frequency.²²⁸ Complications go far be-

PAT. [& TRADEMARK] OFF. SOC'Y 89, 112 (1964). The dramatically higher numbers of patent grants prior to the enactment of the 1836 statute support the view that many invalid patents were being granted.

225. See *Ruggles Report*, *supra* note 222, at 4, 6. The Report recognized that this proposal would require the Office to hire officers “of much scientific acquirement and knowledge,” because “[t]he competency and efficiency of [the Office’s] officers should correspond with their responsibility, and the nature and importance of the duties required of them.” *Id.* at 4.

226. See Act of July 4, 1836, 5 Stat. 117. The 1836 legislation appears to have resulted from a consensus that the registration system had failed to produce reliable patents, and not from a political victory of one economic interest over another. One historian who has studied the enactment of the legislation found “no evidence to suggest that mechanics or manufacturers exerted any influence on Congress” in the matter. Daniel Preston, *The Administration and Reform of the U.S. Patent Office, 1790–1836*, 5 J. EARLY REPUBLIC 331, 347 (1985). But patentees and those interested in obtaining patents did seem to have more interest in the legislation. Most obviously, Senator Ruggles had an interest as a prospective patent holder. After the legislation recommended by his Report was enacted, he obtained the first patent issued by the new Patent Office.

227. *Ruggles Report*, *supra* note 222, at 6; see also *supra* note 224 (detailing the decline in number of issued patents). In its 1838 report to Congress, the Patent Office itself attributed the decline in issued patents “chiefly to the operation of the new law, which subjects all applications for patents to a careful examination as to the originality of the invention claimed.” REPORT OF THE COMMISSIONER OF PATENTS, S. DOC. NO. 25-105 (1838).

228. The complications in defining rights to radio spectrum, whether property rights or license rights, can be seen even in the 1912 Radio Act, which, as the Senate Report accurately stated, included regulations “expressed in scientific terms which would not be understood by many Senators or Representatives in

yond the basic point that any broadcast centered about a particular frequency will “spill over” into neighboring frequencies.²²⁹ For example, because of a phenomenon known as “intermodulation interference,” broadcasts on two different frequencies can cause interference on a third, entirely distinct frequency.²³⁰ A system of property rights must therefore take account of many different possible combinations of interference between all of the rights holders. Specifying a geographic area compounds the complications because the propagation of radio waves depends on variables such as the time of day, weather conditions, ground conductivity and the presence or absence of natural and man-made obstructions.²³¹ Furthermore, radio propagation characteristics are so dependent on the frequency of waves themselves that a system of property rights designed for one set of frequencies may not be suitable for another.²³²

These complications do not mean that a property rights system is unworkable, or even that a licensing system is better. Both property rights and licensing systems have to confront the same set of technical complications. But the complications are relevant for determining whether the courts can manage a system of property rights alone, without assistance from an administrative agency. Indeed, one of the first articles to set forth a specific proposal for spectrum property rights (published after Coase’s theoretical article) required co-authorship by three economists, an engineer and a law professor.²³³ Those authors—who were quite optimistic about the ability of courts

Congress without long explanation almost impossible in terms ordinarily intelligible.” S. REP. NO. 62-698, at 4 (1912). For example, the 1912 Act specified that “[a]t all stations the logarithmic decrement per complete oscillation in the wave trains emitted by the transmitter shall not exceed two-thirds.” Act of Aug. 13, 1912, ch. 287, § 4, 37 Stat. 302, 305 (repealed 1927).

229. See Arthur S. De Vany et al., *A Property System for Market Allocation of the Electromagnetic Spectrum: A Legal-Economic-Engineering Study*, 21 STAN. L. REV. 1499, 1515 (1969).

230. See *id.* at 1521.

231. See *id.*; see also 47 C.F.R. § 73.190 (1999) (setting forth, in figure R3, a chart of the estimated effective ground conductivity across the United States for purposes of defining transmission rights in the AM radio band); 47 C.F.R. § 75.333 (setting forth figures 4 and 5, which define the “terrain roughness factor” and the “terrain roughness correction” for purposes of defining transmission rights in the FM radio band).

232. See De Vany et al., *supra* note 229, at 1512 n.33.

233. See *id.* at 1499, n.† (setting forth author’s qualifications).

to enforce spectrum property rights²³⁴—nonetheless acknowledged that “the legal, economic, and engineering problems” in *defining* property spectrum rights required “the collaboration of three disciplines” and “could not have been solved by any one of [the authors] alone.”²³⁵ A need for combined legal, economic and engineering skill is, of course, a good reason to prefer a specialized body such as an administrative agency over a generalist common-law court.

Finally, like patent rights, spectrum rights are closely tied to innovation. At the time of the *Oak Leaves* decision, only “AM” radio spectrum (about one megahertz of spectrum) was used for commercial broadcasting, while today, seventy-four years later, that spectrum is only a minuscule fraction (less than 0.1 percent) of the commercially exploited frequencies.²³⁶ Technical progress is not ending. Indeed, spread spectrum technologies could soon alter the standards by which interference and the capacity of spectrum are measured. The best institutions to assign rights in such an advancing medium may not be courts that, it must be remembered, have so misunderstood the medium that they have accepted “scarcity” arguments to justify the application of different constitutional rules to the area.

234. The authors believed that although “courts may not have as much experience in electromagnetic engineering as the FCC,” they could still enforce spectrum property rights effectively because “courts regularly try technical issues and seem to do a competent job.” *Id.* at 1549. Other commentators have questioned the competence of common law courts in trying technical issues. *See, e.g.*, HUBER, GALILEO’S REVENGE, *supra* note 30, at 10–13. But even if courts can ably try technical issues in enforcing property rights, an administrative agency might be needed to define the rights. Indeed, such is the division of responsibility between agency and courts in the patent system.

235. De Vany et al., *supra* note 229, at 1499 n.*.

236. *See* THOMAS G. KRATTENMAKER, TELECOMMUNICATIONS LAW AND POLICY 41 (2d ed. 1998) (noting that the technologically usable spectrum had expanded to 40 gigahertz, or 40,000 megahertz, by the end of World War II); *id.* at 45 (setting forth allocation table for several hundred megahertz of spectrum); *id.* at 82 (noting the allocation of spectrum in the 2 gigahertz range for personal communication service (“PCS”) telephones).

B. The Limits of Government Competence: Enlightenment Regulation and a Jacksonian Administrative Agency vs. Progressive-Era Ideals

Establishing a positive case for an administrative role in communications regulation does not deny that the FCC and its methods of regulation can be improved. The FCC was founded on the deeply flawed Progressive ideal that relied on “men of big abilities and big visions” to regulate industry with both public spiritedness and the efficiencies of private business. No such defect infects the regulatory technology of the patent system. The modern American patent bureaucracy was established under an 1836 law signed by President Jackson, who cannot be faulted for overconfidence in centralized government.²³⁷ Moreover, the entire system was based on a political philosophy that, while cautiously optimistic about the possibilities for government regulation, was also deeply skeptical of the abilities of government institutions. The combination, curiously enough, resembled the views of some post-Progressive administrative scholars during the pessimistic Renaissance after 1960.

By the end the eighteenth century, patents were a young and still controversial regulatory technology.²³⁸ General laws authorizing the issuance of patents were then still rare. Even in Great Britain, which had one of the most developed patent

237. Jackson “strongly urge[d] the necessity of a rigid economy and an inflexible determination . . . not to increase the wants of the Government by necessary and profuse expenditures,” and argued that “[t]he great mass of legislation relating to our internal affairs was intended to be left where the Federal Convention found it—in the State governments.” ANDREW JACKSON 1767–1845: CHRONOLOGY, DOCUMENTS, BIBLIOGRAPHICAL AIDS 81 (Ronald E. Shaw ed., 1969) (reprinting Jackson’s fifth annual address to Congress, Dec. 3, 1833); *id.* at 26 (reprinting Jackson’s first annual address to Congress, Dec. 8, 1829). Jackson was not, however, an implacable foe of government. He believed that “[t]here are no necessary evils in government,” but rather that “[i]ts evils exist only in its abuses.” *Id.* at 52 (reprinting the message accompanying the veto of the rechartering of the Second Bank of the United States).

238. The law of patents originated in fifteenth century Italy. See BRUCE W. BUGBEE, GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW 23 (1967) (crediting the Venetian Republic with “the world’s first patent system”); Giulio Mandich, *Venetian Patents (1450–1550)*, 30 J. PAT. [& TRADEMARK] OFF. SOC’Y 166, 169 (1948); F.D. Prager, *The Early Growth and Influence of Intellectual Property*, 34 J. PAT. [& TRADEMARK] OFF. SOC’Y 106, 107–08 (1952) (noting that the system of patent monopolies was perfected in Italy, mainly in Venice, during the fifteenth century).

systems, the mechanism was very expensive, produced only a few dozens patents per year, and had as its legal basis merely the royal prerogative to grant monopolies, coupled an exception in the Statute of Monopolies (which otherwise limited royal monopolies).²³⁹ The constitutional power to operate such a system drew opposition from Thomas Jefferson, who argued that, while patents may create “incitements to ingenuity,” nonetheless “the benefit even of limited monopolies is too doubtful to be opposed to that of their general suppression.”²⁴⁰ In rejecting Jefferson’s view and authorizing a patent regulatory system, the framers of the Constitution showed optimism about government power.

Yet if the authorization for such a regulatory system shows optimism in some forms of government regulation, the details of the system reveal a profoundly different conception of government from the Progressive-era ideal. Unlike the sweeping delegations conferred in the Progressive and New Deal eras, the delegations of governmental power for the patent system were, and still are, extraordinarily narrow. The constitutional

239. See, P.J. Frederico, *Outline of the History of the United States Patent Office*, 46 J. PAT. [& TRADEMARK] OFF. SOC’Y 89, 102 (1964). Less than one hundred British patents were issued per year in the last decade of the eighteenth century. See *id.* at 112. The procedure for obtaining a patent was both “costly and time-consuming, involving ten major stages and over thirty separate operations.” MOUREEN COULTER, *PROPERTY IN IDEAS: THE PATENT QUESTION IN MID-VICTORIAN BRITAIN* 16 (1991). The substantial fees levied at each step in the process were used as a means to support otherwise unsalaried staffs in a number of government offices. See *id.*; see also *id.* at 18–23 (detailing popular discontent with the cost of the British patent procedure); A.A. Gromme, *Patent Practice of the 18th Century: The Diary of Samuel Taylor, Threadmaker and Inventor, 1722–1723*, 19 J. PAT. [& TRADEMARK] OFF. SOC’Y 256, 263–65 (1937) (setting forth the ten major steps under eighteenth century British patenting procedure and recounting one inventor’s expenses in obtaining a patent).

240. Letter from Thomas Jefferson to James Madison (July 31, 1788), reprinted in 1 *THE REPUBLIC OF LETTERS: THE CORRESPONDENCE BETWEEN THOMAS JEFFERSON AND JAMES MADISON 1776–1826*, at 545 (James Morton Smith ed., 1995). See also Jefferson’s letter to Jeudy de l’Hommande, in which Jefferson states:

Tho’ the interposition of government in matters of invention has it’s [sic] use, yet it is in practice so inseparable from abuse, that they [my countrymen] think it better not to meddle with it. We are only to hope therefore that those governments who are in the habit of directing all the actions of their subjects by particular law, may be so far sensible of the duty they are under of cultivating useful discoveries, as to reward you amply

Letter from Thomas Jefferson to Jeudy de l’Hommande (Aug. 9, 1787), reprinted in 12 *THE PAPERS OF THOMAS JEFFERSON* 11 (Julian P. Boyd et al. eds., 1955).

grant of legislative authority was itself kept very narrow. The clause includes not only the goal to be served—"to promote the Progress of Science and useful Arts"—but also the specific means to achieve the goal—"by securing the for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."²⁴¹ The specificity of the constitutional delegation is particularly striking because the convention was committed to drafting the constitution with "general propositions" and "essential principles" to avoid "clog[ging]" government with "provisions permanent and unalterable, which ought to be accommodated by time and events."²⁴²

The narrow delegation in the Constitution established a pattern that would be followed in the congressional approach to the regulation of innovation. While the patent act passed in the first Congress did create a Patent Board consisting of three high government officers, the Board's function was limited to determining whether the applicant had created an invention "sufficiently useful and important" to warrant a patent.²⁴³ That discretionary authority, modest by twentieth-century standards, was eliminated within three years as Congress opted for a registration system. When, forty-three years later, the 1836 Patent Act restored some discretionary power to the Executive Branch, the power was limited: unlike agencies in the twentieth century, the Patent Office was given no power to issue substantive regulations—a limitation that continues to have significant legal implications.²⁴⁴ The power was checked further by an administrative appeal process and by judicial review²⁴⁵

The patent system's approach to regulating and encouraging innovation was not adopted simply because it was the only system proposed at the time. In 1791, Congress was pre-

241. U.S. CONST. art. I, § 8, cl. 8.

242. 2 THE RECORDS OF THE FEDERAL CONVENTION OF 1787, at 137 (Max Farrand ed., 1937). The narrow scope of the constitutional clause seems deliberate. Early proposals at the convention included additional authorizations for the new federal government "[t]o encourage, by proper premiums and provisions, the advancement of useful knowledge and discoveries;" and "[t]o establish public institutions, rewards and immunities for the promotion of agriculture, commerce trades, and manufactures." *Id.* at 321–22. Those additional provisions, however, were dropped.

243. See Act of April 10, 1790, 1 Stat. 109, 110.

244. See *Merck & Co. v. Kessler*, 80 F.3d 1543, 1549–50 (Fed. Cir. 1996) (holding that the courts do not afford *Chevron* deference to the Patent and Trademark Office because the agency has no substantive rulemaking power).

245. See Patent Act of 1836, §§ 7, 15, 5 Stat. 117, 119–120 & 123.

sented with a much different plan by then-Secretary of the Treasury Alexander Hamilton, who proposed to establish a "Board . . . for promoting Arts, Agriculture, Manufactures and Commerce" having broad powers

to defray the expences of the emigration of Artists, and Manufacturers in particular branches of extraordinary importance—to induce the prosecution and introduction of useful discoveries, inventions and improvements, by proportionate rewards, judiciously held out and applied—to encourage by premiums both honorable and lucrative the exertions of individuals, and of classes, in relations to the several objects, they are charged with promoting—and to afford such other aids to those objects, as may be generally designated by law.²⁴⁶

Hamilton's Board would be "placed under the management of Commissioners, not less than three," who would exercise "proper discretionary direction" not hindered "by general rules."²⁴⁷

Hamilton's proposal for a Board of Manufactures never made any progress in Congress.²⁴⁸ In part, the failure can be attributed to transient political considerations.²⁴⁹ But the failure also must be attributed to the two fundamental differences between the form of government regulation envisioned by Hamilton and a form, such as the patent system, that was acceptable in the era.

First, Hamilton's Board of Manufactures contemplated the type of thoroughgoing economic planning that James Landis preached. It would be constantly planning the future of indus-

246. 10 THE PAPERS OF ALEXANDER HAMILTON 338 (Harold C. Syrett et al. eds., 1966).

247. *Id.* at 338, 339, 340.

248. See STUART GERRY BROWN, ALEXANDER HAMILTON 77 (1967) (noting that "neither Federalists nor Republicans in Congress were much interested in his subsidy program"); BROADUS MITCHELL, ALEXANDER HAMILTON: THE NATIONAL ADVENTURE 1788-1804, at 139 (1962) (noting that the Report on Manufactures "was the one of [Hamilton's] proposal not acted on forthwith").

249. Jefferson and his followers saw the proposal as a threat to their agrarian ideals, and even those in business community were divided on the plan. See BROWN, *supra* note 248, at 77 (noting that "many businessmen were also shipowners or otherwise engaged primarily in foreign commerce; to them the subsidy of domestic manufactures had no appeal at all"); FORREST McDONALD, ALEXANDER HAMILTON: A BIOGRAPHY 232-33, 242-43 (1979) (noting Hamilton's rejection of agrarian ideals in the Report and Jefferson's opposition to the Report).

try, and evaluating the claims of various enterprises for government support. In contrast, the patent system attempts only a specific correction of the market by restructuring private incentives in a technologically neutral manner. Such a regulatory approach has two great advantages. First, it does not demand that the government predict technological or industrial winners and losers. Government probably is not competent to make such decisions and, moreover, centralized decision making has no special advantage in the task. Second, government regulation does not become obsolete when technology changes. Both of these advantages can be seen in the patent regulation—a system that has changed only slightly since 1836 despite massive technological changes, and that has succeeded in providing incentives for innovation even though the government regulatory agency could not itself predict the course of technological development.

Indeed, comparing the patent system to Hamilton's Board of Manufacturers illustrates a distinction endorsed by Louis Jaffe during the pessimistic Renaissance of the 1960s. To Jaffe, administrative agencies were competent only to provide "the *regulation* of an industry," not to shape "industrial policies."²⁵⁰ Hamilton's Board would have tried to plan the policies and development of industry. With the patent system, the government does less. It provides structural regulation and otherwise leaves the course of economic and technological development to private trial and error. Planning such development—deciding which technologies will succeed and which will fail—is a notoriously difficult task. Even private firms, with strong incentives to guess correctly, have nonetheless made colossal blunders. The expensive failure of the Iridium system of communications is but one recent example.²⁵¹ If private firms can err, so much more so government agencies, which have, at best, weak and imperfect incentives. As Louis Jaffe rightly concluded, "[n]either in the past nor under the New Deal had regulatory agencies planned for the well-being or normal development of an industry; and there is little in our experience to indicate that they are capable of doing so."²⁵²

250. Jaffe, *supra* note 179, at 322.

251. See generally *Iridium Files for Chapter 11 Bankruptcy Protection*, COMM. DAILY, Aug. 16, 1999.

252. Jaffe, *supra* note 179, at 321.

A second major difference between the patent system and Hamilton's Board of Manufactures involves the views implicit in each system about the capabilities of, and the temptations for, government officers. Hamilton understood that efficacy of his proposed Board would depend on its being "properly administered" and "rightly applied," and that one of the chief objections would be that such systems "are difficult to be managed and liable to frauds."²⁵³ Yet on the crucial point of how to prevent such abuses, Hamilton had no answer; he merely asserted that "[i]f the principle shall not be deemed inadmissible the means of avoiding an abuse of it will not be likely to present insurmountable obstacles."²⁵⁴

If Hamilton's answer to the problem of administrative abuse—that it was not "likely" to be an "insurmountable" problem—is unsatisfactory and incomplete, it is also quite similar to the answers given by Charles Adams and other Progressives that their administrative structures would have to "rely on human honesty"²⁵⁵ and the integrity of "men of big ability and big vision."²⁵⁶ In failing to confront the problems of inept and abusive government regulators, Hamilton was taking much the same tack as the Progressives, for whom difficult analysis of institutional competence and agency costs was replaced by heroic faith in government regulators. But such an approach did not gain much following in the final decade of the eighteenth century, for that was an era imbued with the notion that external and internal controls were essential for "a government which is to be administered by men over men."²⁵⁷

In contrast to Hamilton's system for encouraging innovation, the patent system reflects an intellectual history steeped in realism about the possibility for administrative abuse. The registration period in the patent system corresponds to a period, beginning with the Washington Administration, during which the Executive Branch sought to establish "a tradition of permanence and stability in the public service of the federal

253. 10 THE PAPERS OF ALEXANDER HAMILTON, *supra* note 246, at 339, 336.

254. *Id.* at 336. Hamilton stated that "there are useful guides from practice in other quarters," but he gave no indication to what he was referring. *Id.*

255. See Adams, *supra* note 43, at 58.

256. 67 CONG. REC. 12,354 (1926) (statement of Sen. Dill).

257. THE FEDERALIST NO. 51, at 322 (James Madison) (Clinton Rossiter ed., 1961).

government.”²⁵⁸ Because of the long tenure of federal administrators during this period, Congress dramatically limited—or even, as in the case of the patent system, withdrew—discretionary authority conferred to the executive branch because of the “fear[] that an aristocracy or oligarchy of some sort might develop in the nation.”²⁵⁹ The fear, in other words, was precisely that the government would be captured by “men of big abilities and big visions.”

President Jackson changed expectations of long tenure in office by advocating rotation in office.²⁶⁰ Rotation made Congress more willing to delegate discretionary authority to administrators, because the power of officers would be checked by their brief tenure. But it also meant that officers could not be viewed as experts at their job, or as apolitical.²⁶¹ The assumptions about the capability of officers had to be modest. The duties of an office had to be made “so plain and simple that men of intelligence may readily qualify themselves for their performance.”²⁶² And the possibility for error had to be acknowledged.

Thus, in 1836, when Congress conferred a limited administrative power to the Patent Office, it consciously designed institutional constraints—including an administrative appeals process and judicial review—so that granting patents would itself “be regulated and guarded, to prevent injustice through mis-

258. LEONARD D. WHITE, *THE JACKSONIANS: A STUDY IN ADMINISTRATIVE HISTORY 1829–1861*, at 300 (1954); see also Daniel Preston, *The Administration and Reform of the U.S. Patent Office 1790–1836*, 5 *J. EARLY REPUBLIC* 331, 349 (1985) (“The National Republican-Whigs, holding to certain beliefs of Jefferson, believed that the government should be administered by men of great talent—public-spirited individuals who would apply their abilities for the benefit of the nation.”).

259. Preston, *supra* note 258, at 349 (citing the Patent Administrator’s lack of discretionary power as one example).

260. See *id.* (noting that the Jacksonian Democrats “rejected the Jeffersonian ideal of government by the intellectual elite and attempted to make federal positions available to men of common intelligence,” and that “[h]aving discounted the basic Republican tenets of administration, the Jacksonians replaced them with a single theory: rotation in office”).

261. See *id.* (noting that Jackson’s rotation proposal allowed the “legislative restraints on executive power [to be] broken”). The rotation system did, of course, permit political patronage, so officers could not be presumed to be apolitical. See *id.* at 350 n.35 (“Needless to say, public patronage also performed an important function in party politics.”).

262. ANDREW JACKSON, *supra* note 237, at 25 (quoting Jackson’s first annual address).

take of judgment or otherwise.”²⁶³ Such institutional constraints would be rediscovered in the pessimistic Renaissance of the 1960s, but they were part of the “technical checks” that the Progressives were loath to impose on their masterful agencies.²⁶⁴

In contrast to the late eighteenth and early nineteenth centuries, the Progressive era seems hopelessly naïve in believing that long-tenured administrators with broadly delegated powers could be trusted to pursue “the public interest.” For example, Jackson’s view on personal integrity—that it can protect better against overt improprieties than against more subtle abuses²⁶⁵—is far more nuanced and accurate than Adams’s view, which relied on personal integrity to protect even against the subtle temptations that an industry could present to its supervising agency. Similarly, the pre-Jacksonian era, while accepting long tenure, restricted delegations of administrative authority for a reason similar to Jackson’s for limiting tenure. It was a fear that even long-tenured administrators with good intentions might begin to pursue other goals—particularly, aggrandizement of their own power—rather than public interests.²⁶⁶ The political philosophy of the late eighteenth and early nineteenth century demanded that the creators of regulatory institutions give thought to, and provide concrete measures to regulate the institution itself. The Progressives lost sight of that tradition.

The failure of the Progressive-era agencies should not, therefore, be attributed to the aspiration to develop a “science

263. *Ruggles Report*, *supra* note 222, at 4.

But as it may not be thought proper to intrust [the] final exercise [of the power to confer patents] to the department, it is deemed advisable to provide for an occasional tribunal to which an appeal may be taken. And as a further security against any possible injustice, it is thought proper to give the applicant in certain cases, where there may be an adverse part to contest his right, an opportunity to have the decision revised in a court of law.

Id.

264. *See* Berle, *supra* note 68, at 442.

265. Jackson and his followers would have thought long tenure undesirable, though not because public officials would become overtly corrupt—“[t]heir integrity may be proof against improper considerations immediately addressed to themselves.” ANDREW JACKSON, *supra* note 237, at 25. Rather, officers of long tenure “are apt to acquire a habit of looking with indifference upon the public interests.” *Id.*

266. *See* Preston, *supra* note 258, at 349.

of administration.” The failure occurred because the Progressives constructed heroic institutions that, with their broad delegations, long-tenured officials, absence of effective constraints on self-interested activity, and impossibly ambitious regulatory agenda, were doomed to fail. In other words, the failure occurred because the Progressives were poor scientists.

IV. THE CHALLENGE FOR THE TWENTY-FIRST CENTURY: IMPROVING THE TECHNOLOGY OF REGULATION

With the disintegration of the Progressive regulatory model, the FCC and other agencies are searching for a new regulatory paradigm. The claim of the FCC Commissioners of “establish[ing] new ground rules to promote innovation,” their promises to “create an environment that enables innovation to flourish,” and similar rhetoric of innovation demonstrate a sense at the agency that the economy of the twenty-first century will owe more to Joseph Schumpeter’s theories than to those of John Kenneth Galbraith. The capitalism of the new century will be the process of creative destruction, not the “New Industrial State.” And the regulatory regimes that survive in such an age will have more in common with the patent system than with the ICC.

The FCC and other regulators can hope for two things as they enter this new era. The first, a modest hope, is that the agencies can glean from the patent system the correct lesson in regulation. That lesson is *not* that government agencies should actively aid and abet innovation. It is that government should strive to devise regulatory systems that create incentives for serving public-regarded goals without imposing unrealistic burdens on the administrative process. That is, or should be, the goal in the “science of administration.”

The FCC has not always understood this point, as is shown by the agency’s now-defunct pioneer’s preference program of the 1990s. Indeed, that program, though designed to encourage innovation, is a perfect model of how not to accomplish that aim.

The idea behind the pioneer’s preference program was simple enough. The program would award spectrum licenses for new communications services to innovators or “pioneers”

who had developed the new service or “brought out the capabilities or possibilities” of the service.²⁶⁷ The FCC expressly compared the program to “the patent system of the United States” and identified the goals of the program as “reward[ing] those who develop new frequency-based services” and “encourag[ing] entrepreneurs and venture capitalist to invest time and money in new services and any related technologies.”²⁶⁸

But the FCC drew the wrong lesson from the patent system. As noted earlier, the genius of the patent system is that it allows the government to do less: It allows the government to encourage progress without predicting technological winners and losers. If a patent is issued for a technological loser, the patent is worthless. The patent is thus, in some measure, a self-correcting reward. Not so with the pioneer’s preference. The rewards conferred by the FCC were *spectrum*, which would have value even if the technology developed by the preference winner was, in fact, worthless. Thus, the pioneer’s preference program resembled the patent system only superficially; it had much more in common with the audacious regulation of Progressive-era regulation and with Hamilton’s proposed Board of

267. Establishment of Procedures to Provide a Preference to Applicants Proposing an Allocation for New Services, 6 F.C.C.R. 3488, 3498 (1991) (codified at 47 C.F.R. § 1.402(a) (1999)) [hereinafter *Final Rule*]. The program was named “pioneer’s preference” because, under the Commission’s rules, the spectrum award took the form of a “preference” in favor of the pioneer that would exclude consideration of all other applicants. See 47 C.F.R. § 1.402(b). The pioneer would then receive a license for the spectrum provided that it met all other requirements for FCC licensees.

268. Establishment of Procedures to Provide a Preference to Applicants Proposing an Allocation for New Services, 5 F.C.C.R. 2766, 2766–67 (1990) [hereinafter *Proposed Rule*]. The pioneer’s preference program also provides further evidence of the disintegration of the pre-existing regulatory regime, for the FCC established a program to remedy a problem created by the Commission’s own cumbersome licensing procedures: Innovators with new ideas for spectrum-based communications services “cannot simply arrange for developmental funding and try [their] idea[s] on the market.” *Id.* at 2766. Instead, they “must first request that the Commission allocate spectrum . . . and then compete with other parties for a license.” *Id.* By forcing the innovator to make its idea public and then to compete with others in highly uncertain comparative licensing hearings, the Commission’s spectrum allocation and licensing processes “undermine[d] the competitive edge that would normally accrue to the innovator” and “ma[de] it more difficult and expensive for an innovator to bring a new communication service to market.” *Id.* Thus, the preference program was the Commission’s attempt to reduce a “regulatory burden” that it acknowledged to be “excessive.” See *Final Rule*, *supra* note 267, at 3490.

Manufactures, because the FCC undertook the ambitious task of trying to predict the course of technological development.

As Hamilton had noted, systems for subsidizing the development of new industrial technologies “are difficult to be managed.” The pioneer’s preference program proved no exception. For the most lucrative preferences awarded while the program was in place—the preferences for broadband Personal Communication Service (“PCS”) licenses—the process of awarding the preferences generated a flurry of lobbying efforts at the FCC,²⁶⁹ years of litigation in the federal courts, and even congressional intervention.²⁷⁰ At best, the awards were conferred by government engineers with weak incentives to determine technical merit; at worst, they were conferred by lawyers, judges, political appointees, and elected officials.

Time also has proven the program’s selection of winning technologies quite fallible. Pioneer’s preference licenses included a requirement that the licensee “substantially use” the technology for which it was awarded its preference. The enforcement—or, more accurately, the nonenforcement—of this requirement provides insight into the success of the pioneer program.

Four years after the award of the pioneer’s preferences in broadband PCS—three preferences collectively worth about \$400 million²⁷¹—a group petitioned to present evidence demon-

269. The lobbying efforts at the FCC generated a controversy over whether any of the Commission’s rules limiting *ex parte* contacts had been broken, although the Commission ultimately rejected all allegations of impropriety. *See* Review of the Pioneer Preference Rules, 9 F.C.C.R. 4055, 4064 ¶ 37 (1994) (adopting findings of the Commission’s Managing Director). But the relevant point is simply that the large number of *ex parte* lobby efforts made by the prospective pioneers demonstrates the difficulty of administering the program.

270. Congress intervened in two statutes. The first, the GATT legislation of 1994, terminated challenges to the Commission’s preference awards to three pioneer by legislatively confirming the Commission’s decision. *See* Uruguay Round Agreements Act, Pub. L. No. 103-465, § 801, 108 Stat. 4809, 5051 (1994) (codified at 47 U.S.C. § 309(j)(13)(E)(i) (1994)). The GATT legislation mandated that the preference program end in 1998, but that sunset date was pushed forward to 1997 by a second legislative intervention. *See* Balanced Budget Act of 1997, Pub. L. No. 105-33, § 3002(a)(1)(F), 111 Stat. 251, 259 (amending 47 U.S.C. § 309(j)(13)(F) (1984)).

271. The spectrum licenses were awarded to the preference winners at a discount over the prices for identical licenses sold at auction. The three preference winners, Cox Communications, American Personal Communications (“APC”), and Omnipoint Communications, received licenses at the following discounts:

strating that one of the preference winners, Omnipoint Communications, was not substantially using its preference-winning technology in constructing its PCS system.²⁷² But the Commission was not interested. Indeed, rather than evaluating the evidence on the merits—which would have forced the Commission to consider the possibility of its own failure in evaluating the technology—the Commission erected a nifty procedural barrier. It held that the petition would be denied because the petitioning group would not have had standing in an Article III court.²⁷³ That ruling seemed, to say the least, unusual, since the Commission routinely notes that “Article III standing restrictions do not apply to proceedings before administrative agencies.”²⁷⁴

Pioneer	License Area	Preference Price	Auction Price	Discount
Cox	Los Angeles	\$ 251,918,526	\$493,500,000	\$241,581,474 (49%)
APC	Washington, DC	\$102,343,539	\$211,771,000	\$109,427,461 (52%)
Omnipoint	New York	\$347,518,309	\$442,712,000	\$95,193,691 (22%)

See *In re American Personal Communications*, 11 F.C.C.R. 12,384, 12,386–87 ¶ 4 (1996). A fourth pioneer’s preference in broadband PCS was awarded to Qualcomm in 1999 after the D.C. Circuit reversed the Commission’s denial of a preference to Qualcomm. See *Qualcomm Inc. v. FCC*, 181 F.3d 1370 (D.C. Cir. 1999). However, because all broadband PCS spectrum had auctioned to others in 1995, Qualcomm has not still not received any spectrum for its pioneer’s preference. See *Wireless Telecommunications Bureau Seeks Comment on Qualcomm Incorporated’s Petition for Declaratory Ruling Seeking 700 Mhz Band License Pursuant to Ruling of U.S. Circuit Court of Appeals, No. 00-219*, 2000 FCC Lexis 506 (Feb. 4, 2000).

272. See *In re Omnipoint Communications, Inc.*, 11 F.C.C.R. 10,785 (1996).

273. See *id.* at 10,788–89 ¶¶ 7–8.

274. *In re Implementation of the Cable Television Consumer Protection and Competition Act of 1992: Development of Competition and Diversity in Video Programming Distribution and Carriage*, 10 F.C.C.R. 1902, 1930 ¶ 62 (1994); see *In re Application of DCR PCS, Inc.*, 11 F.C.C.R. 14,478, 14,483 n.38 (1996) (noting that “a party may have standing before an administrative agency but not necessarily have standing before an Article III federal appeals court”); *In re Amendment of Part 22 of the Commission’s Rules Relating to License Renewals in the Domestic Cellular Telephone Service*, 8 F.C.C.R. 6288, 6288 n.2 (1993) (same); *Connecticut Cable Television Ass’n, Inc.*, 4 F.C.C.R. 476, 476 ¶ 6 (1988) (same) (citing *Gardner v. FCC*, 530 F.2d 1086, 1090 (D.C. Cir. 1976)). While it may have had discretion to impose rigorous administrative standing requirements, the Commission does not appear ever to have applied the rigorous standing rules of Article III prior to

Four years later, however, the Commission was forced to address the merits of the “substantial use” issue after Omnipoint applied to transfer its licenses as part of a corporate merger. Omnipoint conceded that its preference-winning technology “ha[d] not been commercially successful” and that only thirty-seven percent of its own service area was covered by the technology.²⁷⁵ It nonetheless argued that compliance with the substantial use requirement should turn on “what Omnipoint has done to deploy the technology, and not whether customers have accepted the technology.”²⁷⁶

The Commission agreed, holding that “substantial use” requires only that “the licensee made an earnest effort to commercialize the technology.”²⁷⁷ Moreover, as an alternative holding, the Commission ruled that it would waive the substantial use requirement rather than “mandat[e] the use of a technology that is not interoperable with any other PCS system in any other market.”²⁷⁸ In other words, the Commission would waive the requirement if a preference-winning technology was such a colossal market failure that it was not being used anywhere.

Thus, for the preference awarded to Omnipoint, the government conferred a reward worth nearly \$100 million for a commercially worthless technology. At best, the \$100 million reward produced nothing for the public. At worst, it saddled over one-third of Omnipoint’s customers with an inferior technology. While official decisions concerning the success—or failure—of the other preference winners’ technologies would be interesting for academics, the *Omnipoint* ruling makes future Commission decisions highly unlikely. No party will ever have an incentive to raise the “substantial use” point again, for the Commission has already indicated that even a complete failure

the Omnipoint rule to deny administrative standing. Indeed, the Commission had previously denied administrative standing only where the petitioner’s alleged harm was “patently tenuous.” See *In re* Petition of Telocator Network of America, 1 F.C.C.R. 509, 509 ¶ 5 (1986). Even in that case, the Commission considered the merits of party’s arguments as an alternative basis for its ruling. See *id.* at 510 ¶ 6.

275. See *In re* Applications of Voicestream Wireless Corporation or Omnipoint Corporation, No. 00-53, 2000 FCC Lexis 673, at ¶ 38 (Feb. 15, 2000).

276. *Id.* at ¶ 38.

277. *Id.* at ¶ 42.

278. *Id.* at ¶ 43.

can constitute a success—if the preference winner tried earnestly—or, in any event, would be grounds for a waiver.

In contrast to the pioneer's preference program, the FCC's spectrum auctions provide a good example of a program with a true kinship to the patent system. Like the patent system, auctions establish an incentive structure that spurs private actors to serve public-regarding goals without demanding Herculean administrative tasks. Auctions do this in at least three ways. First, and most obviously, the auction creates an incentive for private actors to fill the federal treasury.²⁷⁹ Because government must be funded by some means, and other means of raising revenue create costly economic distortions, auction revenue itself is a public good. Second, auctions provide incentives for private firms to acquire spectrum only where the firm is the highest-value user of the spectrum. Allocative efficiency is thus served, and consumer surplus increased.²⁸⁰ Third, by creating rights in spectrum that closely approximate property rights—though the official policy is that spectrum remains controlled by the United States with no private ownership²⁸¹—auctions create private incentives for developing technologies that increase the value of the spectrum.²⁸²

The FCC's record with spectrum auctions bodes well for the continuation, and even expansion, of this regulatory tech-

279. Since the advent of auctions in 1993, the FCC has recorded over \$23 billion in winning bids. See H.R. REP. NO. 105-149, at 558 (1997) (noting auction totals); *FCC Auction Summary* (visited Mar. 15, 2000) <<http://www.fcc.gov/wtb/auction/summary/aucsum.pdf>> (listing auction results). Although the FCC has had difficulty collecting some on some of the winning bids, it nevertheless had reaped \$10 billion by 1997. *Id.*

280. This goal could be served merely by making spectrum rights freely transferable after initial assignment, but the social costs of assigning the rights could be greater than auction if the assignment process may be influenced by the expenditure of resources, such as the lawyer's time spent in the comparative hearings that predated auctions.

281. See 47 U.S.C. § 301 (1994) (prohibiting *de jure* private ownership of spectrum); 47 U.S.C. § 309(j)(6)(B) (confirming continued applicability of § 301 to auction licenses).

282. Where property rights exist in assets likely to rise as the result of innovation, an innovator can profit from a new technology if he purchases the assets prior to revealing the new technology to the market. See generally Jack Hirshleifer, *The Private and Social Value of Information and the Reward to Inventive Activity*, 61 AM. ECON. REV. 561 (1971). As Hirshleifer noted, this effect exists even where the innovation is not protected by intellectual property rights. See *id.* at 571.

nique in the new century.²⁸³ Already, auctions are being expanded from their original function—allocating among users spectrum designated for a particular use (such as the auction of spectrum designated for broadband PCS)—to a new broader function—allocating spectrum among both users and *uses*. Thus, the Commission's recent 700 Mhz auction will allow bidders to buy spectrum that is not restricted to a particular type of use.²⁸⁴ Such an auction structure allows the Commission to be agnostic about the path of future technological development. That is not a heroic regulatory stance, but it is a realistic one.

As with the FCC's auctions, regulation in the twenty-first century may often entail creating property rights because, while not inevitably the best solution to every regulatory problem, property rights are a regulatory form that has withstood the test of time. Yet property schemes will not be the only successful regulatory structure to resemble the patent system. For example, the section 271 process holds out the promise of relief from a regulatory restriction on competing in long-distance telephony.²⁸⁵ Yet the different incentive should not obscure the underlying unity between this form of regulation and the patent system. Both systems provide incentives for private actors to create public goods—in one case, the public good of technical knowledge; in the other, the public good of a competitive market. Moreover, both systems are conducted at a level far removed from everyday decision making in the industry. Like the patent system, section 271 is consonant with Louis Jaffe's ideal of an administrative process that, while planning "the *regulation* of an industry," nonetheless eschews "the shaping and enforcement of industrial policies."²⁸⁶

Perhaps the most telling feature of section 271 is the delegation of administrative authority. The statute imposes a specific checklist of requirements that the FCC may not, by rule or

283. Auctions have successfully allocated spectrum worth over billions of dollars. See *supra* note 279.

284. See *In re* Service Rules for the 746–764 and 776–794 MHz Bands, No. 99-168, 2000 FCC LEXIS 127, at *26–27 ¶ 19 (Jan. 7, 2000); see also *id.* at *3, ¶ 2 (finding "that a flexible, market-based approach is the most appropriate method for determining service rules in this band"); *In re* Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium, No. 99-354, 1999 FCC LEXIS 6032, at *6 ¶ 9 (Nov. 22, 1999) (embracing "relaxed service rules" to increase the efficiency of spectrum markets).

285. See 47 U.S.C. § 271 (Supp. III 1997).

286. Jaffe, *supra* note 179, at 322.

otherwise, limit or extend.”²⁸⁷ Such a narrow delegation harkens back to the Jacksonian theories of administration undergirding the patent system. Great hopes may be pinned on the system of regulation, but not on the genius of the administrators within that system. The administrative duties, if not “so plain and simple that men of intelligence may readily qualify themselves for their performance,”²⁸⁸ are at least sufficiently concrete and definite that ordinary professionals can comprehend them. Gone are the days of Adolf Berle, when “the only hope” was “to turn a body of experts loose on a question . . . without technical checks.”²⁸⁹

Of course, even well-structured regulation can lead to disappointments. The incentives created by the system may be insufficient to spur creation of the desired public good, or the process can take longer than hoped. Here again, section 271 may be a good example, as creation of competition in local telephone service has taken longer than many had hoped. But regulation of the sort formulated in the Progressive era knew disappointment too. Newton Minow and James Landis could testify to that.

Moreover, when structural regulation produces disappointment, it generates information rather than recriminations. Disappointment with Progressive-era regulation inevitably generated accusations of poor administrative leadership. It is easy to understand why: Failure in a system that purports to rely on “men of big abilities and big visions” is likely to be interpreted as a personal failure before the entire system is called into question. Yet when a system of well-structured incentives fails, the fault cannot be attributed to the lapse of a Herculean administrator. The failure reveals that the underlying problem may be much more difficult than previously thought. We would like to have competitive, well-functioning markets in local telephony, just as we would like to have cures for cancer and AIDS. If our incentive-based systems of regulation have not yet achieved those public goods, the delay tells us something about the magnitude of the problems.

287. 47 U.S.C. § 271(d)(4); *see also* 47 U.S.C. § 271(c)(2)(B) (setting forth the competitive checklist).

288. ANDREW JACKSON, *supra* note 237, at 25.

289. Berle, *supra* note 68, at 430, 441–42.

But all of this goes only to the hope that the FCC learns the lessons of the past. A second, far more audacious hope is that regulation can progress. The challenge for the new century is not simply to create better regulatory structures, but to create a regulatory superstructure that encourages the betterment of regulatory technology itself. In other words, the challenge is to create a realistic system capable of creating incentives, not merely to produce industrial innovations and better functioning markets, but to generate *innovations of regulation*. Such a goal is consistent with the central lesson of the patent system because, like easily appropriated technical information, an efficient system of regulation *is* a public good.²⁹⁰ As the patent system shows, the goal of government regulation need not be to create such a public good directly, but merely to create incentives that spur other actors to generate the public good.

It is, of course, not a new idea to create an overarching structure that encourages the improvement of regulation. The political concept of federalism is such a structure.²⁹¹ Federal regulation of securities markets—which police “self-regulatory organizations” that are responsible for most of the day-to-day regulation of the markets—may be seen as another.²⁹² Nor is it very new to see the connection between the structures and the mechanisms of technological progress. In describing states as the “laborator[ies]” for “novel social and economic experiments,” Justice Louis Brandeis made that point obvious more than sixty years ago.²⁹³

But the overall project of creating a science not merely of regulation, but of meta-regulation, remains in its infancy. Existing structures, such as federalism, do not necessarily generate strong incentives for efficient regulation. Those structures have produced only faltering progress in developing the tech-

290. See Nathaniel O. Keohane et al., *The Choice of Regulatory Instruments in Environmental Policy*, 22 HARV. ENVTL. L. REV. 313, 326 (1998) (noting “the public good nature of regulation”); John O. McGinnis, *The Original Constitution and Its Decline: A Public Choice Perspective*, 21 HARV. J.L. & PUB. POL’Y 195, 196 (1997) (noting the “rule of law” as one public good).

291. The effect of federalism on regulatory structures has been particularly well studied in the field of corporate law. See, e.g., ROBERTA ROMANO, *THE GENIUS OF AMERICAN CORPORATE LAW* (1993).

292. See generally Paul G. Mahoney, *The Exchange as Regulator*, 83 VA. L. REV. 1453 (1997).

293. *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

nology of regulation.²⁹⁴ As one scholar of administrative law has noted:

The mark of a science is that a person of ordinary intelligence in one generation can understand the insights of a genius in the prior generation. The ability to assemble insights so that they build on one another has helped to give science and other organized bodies of knowledge their extraordinary power. By comparison, legal scholarship is an extremely disorganized body of knowledge. Legal scholars continually discover, lose, and reinvent in new words, the insights of their predecessors.²⁹⁵

The task for regulators of the twenty-first century is to overcome that weakness—to develop a science of administration that does not need to reinvent itself with each new generation.

To help meet that challenge, the FCC should envision itself less as a regulator of communications firms, and more as regulator of other regulators. Those other regulators may be traditional state agencies; they may be wholly private firms, such as arbitration firms or “verification firms”;²⁹⁶ or they may be new types of entities. As one concrete step in that direction, the FCC could take steps to create markets for spectrum rights in which parties could not only sell rights, but also reconfigure the rights by combing, or dividing, the rights conferred by licenses as technological needs dictate. Such a market would leave the FCC with the power to define rights in the first instance, and to resolve disputes between conflicting claims, but it would also create private incentives for competing markets to develop allocative mechanisms. The goal is not to establish another layer of regulation, it is to create competition among regulators and a market for regulation. Then such a market can both discipline regulators and encourage them to innovate. Nor should it be imagined that regulators are incapable of in-

294. See William W. Bratton & Joseph A. McCahery, *The New Economics of Jurisdictional Competition: Devolutionary Federalism in a Second-Best World*, 86 GEO. L. REV. 201, 267–77 (1997).

295. E. Donald Elliot, Jr., *The Dis-Integration of Administrative Law: A Comment on Shapiro*, 92 YALE L.J. 1523, 1524 (1983) (footnote omitted).

296. See, e.g., 47 C.F.R. § 64.1150(d) (1999) (providing that, as one alternative method of verifying consumer changes in long distance carriers, the carrier can rely upon an “appropriately qualified independent third party,” which may confirm the customer’s oral authorization).

novation. Despite all its missteps in regulation, the twentieth century did see sophisticated new ideas in regulation. The absence of market rewards for regulatory innovations may have meant that those ideas were sometimes slow in coming or poorly executed upon arrival.²⁹⁷ But that is precisely the problem that needs to be remedied.

On this final point, the patent system can provide more than inspiration; it can provide an essential part of the structure, for intellectual property protection can extend to innovations in regulation.²⁹⁸ If a well-functioning market for regulation can be constructed, regulatory entities would be able to compete with each other on the basis of their regulatory technology. In such competition, and in the careful, incremental advances that such competition ferments, lies the best hope for advance in the technology of regulation.

V. CONCLUSION

At the beginning of the twenty-first century, reformers of government are again on the march. The targets of reform—large bureaucratic agencies such as the FCC—are the products of the last great period of reform, the Progressive era. Yet the similarities between the two times should not be overlooked. In both, vast technological change provides a key justification for reform. In both, the reformers of government look with admiration at the efficiency of private organizations, although the model of efficiency then was a large corporation with centralized command and now it is a small, entrepreneurial firm. And in both, the proponents of reform champion idealized gov-

297. For an example of a brilliant regulatory innovation that was badly mismanaged in implementation, see OLIVER WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* 352–64 (detailing the disastrous experience in CATC franchise bidding by the City of Oakland, California).

298. See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999); cf. Ian Ayres, *Supply-Side Inefficiencies and Competitive Federalism: Lessons from Patents, Yachting, and Bluebooks*, in *INTERNATIONAL REGULATORY COMPETITION AND COORDINATION: PERSPECTIVES ON ECONOMIC REGULATION IN EUROPE AND THE UNITED STATES* 239, 246 (William Bratton et al. eds., 1996) (assuming that patent protection is unavailable for innovations in regulation but musing that “the idea of given protection to true innovations [in regulation] should not provoke such a visceral gag reflex”).

ernment institutions with a zeal that is not likely to survive throughout a century.

One important difference between our age and the Progressive era lies in our day's amazement at the apparently accelerating pace of technological development. The sense of accelerating progress, and the desire for even more, has tinged the current reforms with the rhetoric of innovation. The reformers of our age must promise not only new government structures that can manage the technology of today, but also government structures that can adapt to, and hopefully even encourage, the innovations of tomorrow. But if our age is both fascinated with innovation and dedicated to lasting reform of, and progress in, government institutions, then we would be remiss to ignore the lessons that two centuries of patent administration can provide.

The experience of the patent system provides challenges to the several reformers of our time. For the occasional champions of common-law courts, the patent system provides good evidence that the courts are not always capable of effectively administering a property rights system involving complicated technology. For the champions of entrepreneurial government, the patent system shows a lumbering bureaucracy mired in institutional constraints that is nonetheless able to spur innovation and entrepreneurialism in the private world.

For all reformers, however, the patent system also provides an example of a cautious governmental reform that has survived. The administrative structure created in 1836 has seen the rise and the fall of the mighty ICC. It has seen the passing of the Progressive era and of the pessimistic renaissance in the second half of the twentieth century. It will likely see the reform of the future that will abolish the reforms of today. For scholars of regulation and administrative law who aspire to develop a "historic sense,"²⁹⁹ to escape the cycle of discovering, losing, and reinventing the insights of the past,³⁰⁰ and to construct a lasting "science of administration"³⁰¹ that advances the technology of regulation, the patent system provides hope.

299. See JAFFE, *supra* note 164, at 10.

300. See Elliot, *supra* note 295, at 1524.

301. See HENDERSON, *supra* note 47, at 328.

